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Historical Monetary Statistics for Norway – Part II

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Preface

In the fall of 2004 Norges Bank published the first volume in its series on Historical Monetary Statistics for Norway reporting the construction of consistent historical time series for a set of key macroeconomic variables for Norway. The aim of the project has been to stimulate research in the area of monetary history, and to foster empirical analysis of long runs of time series data. The first volume covered historical consumer prices, monetary aggregates, bond yields, exchange rates, stock and housing prices, as well as real GDP and main demand components. The time span covered by this book was mainly between 1819–2003. In addition to the voluminous documentation of data, the book also discussed some of the methodological issues involved in constructing historical time series spanning long periods of time, as well as some of the institutional aspects of financial markets in Norway during that period.

With the publication of this volume, Norges Bank completes its project of collecting and systematizing historical data of relevance for price stability and financial stability. The data series presented in this volume are complementary to the historical time series published in the first volume, a fact which is reflected in the name of the second volume. It has been the explicit purpose of the project to enhance the availability and to facilitate the use of historical data for economic research and analysis. Norges Bank has therefore made all data available in a downloadable format at its web-site www.norges-bank.no. The database will also be updated every year. The principles behind the construction of the historical data are outlined in the articles contained in the two volumes of Historical Monetary Statistics for Norway. The users should notice, however, that additional information about updates and revisions of the historical data may be available only on Norges Bank's web-site. We therefore strongly advice users of the historical database to check the update and revision status. Attached to the data there will be records over all main changes since the books were published.

In Chapter 1 Øyvind Eitrheim and Jan T. Klovland present Central Bank interest rates for the entire period of operation of Norges Bank back to 1818 and report time series for the yield of short term government T-bills for periods in the 20th century not previously covered by other studies. They also present interest rates for the embryonic money market from the early 1960s. In Chapters 2 and 3 Jan T. Klovland presents new historical information on the balance sheets of savings banks and commercial banks in the 19th century. On the basis of this information, the historical time series for aggregate money holdings and bank credit aggregates, which were presented in the first volume of the Historical Monetary Statistics project, are revised and extended.

A substantial part of the historical material presented in the two books on historical statistics for Norway would have been impossible to collect had it not been for the unique source of material gathered in the Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices kept at the Norwegian School of Economics and Business Administration in Bergen. Ola H. Grytten outlines the background and origin of the Wedervang Archive in Chapter 4. Grytten made extensive use of this archive in the first volume when he constructed a new consumer price index for the period from 1516 to 1871. In this volume Grytten completes his project on extracting data from the Wedervang Archive. In Chapter 5 he presents historical wage indices organized by occupation for more than 100 different types of employment in the Norwegian labor market from 1726 to 1940. In Chapter 6 data for daily, monthly and annual wages by occupation are aggregated into nominal series for annual wages organized by industry. These are spliced with other series for annual wages to form time series for annual wages between 1726–2006. Finally, in Chapter 7 we provide an informal cross check of the new historical data presented in the other chapters of this volume. First, we present time series for short term and long term real interest rates between 1820–2006 before discussing the size of revisions of the aggregate money holdings and bank credit aggregates. Finally, we compare real aggregate annual wages with GDP per capita for the period 1830–2006.

Norges Bank has followed two main principles in its pursuit to collect and systematize historical monetary statistics. First, we have followed the data in the sense that we have been searching for hitherto unexplored sources of historical data. We were lucky and stumbled upon the Wedervang Archive, which proved to be a rich data source for this project. Second, we decided to engage competent academics to provide the necessary documentation and discussion of methodological issues involved in constructing a historical database.

Finally, we want to thank Leif A. Alendal and Marius Gustavson for valuable research assistance, including the skillful typesetting of various draft versions of the book, proof reading and a final quality control of the historical databases.

Oslo, November 30 2007

Øyvind Eitrheim, Jan T. Klovland, and Jan F. Qvigstad

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Short term interest rates in Norway 1818–2007

Øyvind Eitrheim and Jan T. Klovland^{1,2}

One key area of responsibility of Norges Bank today is to set the interest rate on overnight sight deposits such that the inflation rate will return to the monetary policy target value of 2.5 per cent. The objective of the liquidity policy of the bank is to ensure that the desired interest rate is implemented in the money market. In a historical perspective it has always been an important task for a central bank to provide liquidity to the general public. During the first one and a half century after the birth of Norges Bank in 1816, the main channel for Norges Bank as a liquidity provider was through operations in the discount market. The main interest rate in this market was the discount rate which was set by Norges Bank. In the modern and more sophisticated financial markets which developed during the latter half of the 20th century, a host of instruments are available for the central bank's liquidity policy. This chapter gives an overview over the historical developments of short term interest rates of key importance for the implementation of monetary policy.

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²We are grateful for helpful and stimulating comments from Jannecke Ebbesen, Asbjørn Fidjestøl, Audun Grønn, Gunnvald Grønvik, Morten Jonassen, Jan F. Qvigstad and Anders Svor. We also want to thank Leif A. Alendal and colleagues in the Department for Market Operations and Analysis in Norges Bank for efficient research assistance. The responsibility for remaining errors and omissions rests solely with the authors.

1.1 Introduction

Information on the money market in Norway in the early period is mainly confined to the Central Bank discount market and the market for bank deposits. Short term securities with a maturity of one year or less were not issued until Treasury bills were introduced in May 1941 (see Section 1.4), and even in this case there were no regular market quotations and a well functioning secondary market until the Treasury bill market was reinvigorated in 1985. A rudimentary money market can be traced back to the late 1950s, but it was only in the 1970s that eurokrone,³ interbank and other money market instruments began to be more fully developed. This chapter gives an overview over the different markets which have been of most importance for the implementation of monetary policy since 1818.

Today Norges Bank uses the interest rate on *sight deposits* as its key interest rate for monetary policy. The Executive Board of Norges Bank makes decisions about the sight deposit rate in their interest rate meetings which are held about every six weeks. In order to implement the desired level of interest rate in the short term money market, the bank directs its liquidity policy to ensure that the marginal interest rate on Central Bank liquidity attains a level just above the sight deposit rate. The most important instrument used by the bank today for this purpose is through *F-loans*.⁴ The interest rate on F-loans are in most cases determined by multi-price auctions.

Modern interbank markets offer a host of instruments for the Central Bank to affect the liquidity in the short term money market in order to implement its monetary policy decisions. If we look at the previous two decades, Norges Bank has also used liquidity instruments like *F-deposits*, *foreign currency swaps*, *bank certificates (CDs)*, *T-bills* and *bond repurchase agreements* to fine-tune liquidity.

Historically, however, when Norges Bank started its operations in 1818, it provided short term liquidity through the discount market (see Section 1.2 for details). The discount market was the most important market for short term liquidity throughout the period up to World War II. After World War II, however, the discount rate ceased to function as a market instrument and was rather used to signal the lower end of the structure of administered interest rates.

Section 1.2 contains a description of the discount market in Norway before World War I and discusses Norges Bank's role in this market in the early years after its foundation and the following century. As the markets for deposits in savings banks and commercial banks were developed during the 19th century we also compare the discount rates with bank deposit rates. Section 1.3 compares interest rates in the discount market with bank deposits rates from 1914 onwards. In sections 1.4 and 1.5 we discuss developments in the short term money market and the market for short term government debt (Treasury bills) after World War II. Onshore and offshore money markets in Norwegian

³We use the term eurokrone rate as a general reference to the implicit rate of interest following from a swap operation in the currency market involving Norwegian kroner as one of the currencies. See Section 1.5 for further details.

⁴F-loans are fixed-rate loans with average maturity (January 2006–October 2007) typically less than one week, although some loans can be supplied with longer maturities. Since 1999 F-loans have been fully collateralized against a broad range of securities. See Kran and Øwre (2005) and Fidjestøl (2007) for a broader presentation of Norges Bank's liquidity policy.

kroner became gradually more integrated, in particular during the late 1970s and early 1980s. In the mid 1980s the T-bill market was reinvigorated in an attempt to develop a well functioning second hand market for short term securities. Section 1.6 provides an overview of the development of the marginal interest rate on Central Bank liquidity from the late 1950s onwards. Basically this covers a period where the institutional framework, in which Norges Bank operated, was first changed from a system based on more or less forced “cooperation” between the government and the banks (1950s and early 1960s), to a system of regulations which were codified in the new provisions of the Monetary and Credit Policy Act (late 1960s and 1970s), then to a gradually more deregulated system based on market oriented instruments (late 1970s and 1980s), and finally, to a predominantly market oriented system from 1990.⁵

⁵For more background information about Norwegian monetary policy and financial markets, see e.g. Norges Bank (2004, 1995) for a discussion of the past two decades. For an overview over the Norwegian monetary and credit system in the 1970s and 1980s, see Norges Bank (1989, 1985), extending the presentation in Eide and Holli (1980); Eide (1973).

Norges Bank liquidity instruments - Overview over markets.

1818	Regional discount markets	Norges Bank's branches would offer discount loans to endorsers of bills of exchange. ^a Norges Bank would typically pursue a cautious policy with respect to the solidity of the endorser.
1892	National discount market	The revised Norges Bank Act of 1892 ensures a unified discount loan policy across the different regions.
1941	T-bill market	The government introduced T-bills to withdraw excess liquidity from the banking sector. By the early 1950s T-bills had ceased to play any important role.
1965	Automatic lending facilities	A new Monetary and Credit Policy Act was introduced and an automatic lending facility was introduced for the banks. The lending system was subject to frequent adjustments from 1965 to 1985.
1979	Interbank market via foreign currency swaps and forward agreements,	In order to control bank liquidity Norges Bank entered the foreign exchange market buying and/or selling e.g. USD against kroner in the spot and/or forward market.
1985	T-bill market (reinvigorated)	The market for short term certificates issued by private banks, non-financial corporations or government sectors was reinvigorated. T-bills issued by the central government typically had 3, 6 and 12 months maturity.
1986	D-loans	The automatic lending facility in Norges Bank was revoked in March 1986 and replaced with a simpler system with a lesser degree of automatic lending. From December 1986 the overnight lending rate (D-loan rate) was used actively to stabilize the exchange rate. The D-loan rate was the key administered interest rate set by Norges Bank until the summer 1993.
1987	F-loans	Auction of F-loans with maturity up to 12 months. From 1994 the maturity of F-loans has only exceptionally been more than two weeks.
1991	Interest bearing sight deposits	From January 1991 private banks were offered a non-zero interest rate on their sight deposits in Norges Bank. From 1996 the sight deposit rate has been the key administered interest rate set by Norges Bank.
1992	F-deposits	Auction of F-deposits with maturity up to two weeks.

^aA bill of exchange is a written acknowledgement of the existence of debt, often linked to trade credit.

1.2 The discount rate of Norges Bank and deposit rates in private banks before 1914

A bill (of exchange) is a written acknowledgement of the existence of debt.⁶ Such debt instruments were often linked to trade credit, but the security may also have originated from purely financial transactions. Unless the bill was payable on demand the drawer of the bill had to wait until the bill matured (e.g. after ninety days or at a specific date) to get his money. If the owner of the bill wanted to raise money before this date, the bill might be sold to – which is to say discounted at – a commercial bank, a Central Bank or some other financier specializing in this kind of business. The purchaser of the bill would then charge the seller an amount of money for the period until the bill was due for payment. This amount, expressed as a rate of interest per annum, is referred to as the *discount rate*.

When Norges Bank started its lending activities in October 1818 the intention was that one fourth of the loan portfolio should be reserved for discount loans, the remainder was to be given as mortgage loans.⁷ But even this modest intention failed to materialize as the discount loan share was only about 10 percent until the mid 1830s, as shown in Figure 1.1. In 1838 several attempts were made to increase the volume of discount loans, but progress was slow until 1850. At that time the share had reached 20 per cent, after which the share of discount loans rose steadily and more rapidly than before.

There are several reasons for the rather peculiar composition of the assets of Norges Bank in this period. This issue was fiercely debated among Members of Parliament and businessmen at the time, and it has remained a controversial point in the monetary history of Norway ever since.⁸ The most important factor is probably the lack of other institutions offering mortgage loans in this period. It was not until 1851 that the Norwegian Parliament created Kongeriket Norges Hypotekbank with the sole purpose of providing mortgage loan to the general public, so in the meantime Norges Bank yielded to the pressure of the demand for such loans.⁹ The Central Bank adopted a cautious policy with respect to the solidity and number of the endorsers of the bills, which may have restricted its discounting business. Because loanable funds were allocated to the various branches of the Central Bank at fixed proportions it was often claimed that the Christiania¹⁰ branch was constrained in its discounting due to the lack of funds.¹¹

The Central Bank discount market was limited until the 1850s – the resources of the bank were

⁶See for example King (1936) and Aschehoug (1913) for a general introduction to the nineteenth century discount markets.

⁷Rygg (1918, pp. 164–165, 231–237).

⁸Important contributions include Aschehoug (1913); Rygg (1918); Keilhau (1952) and Sejersted (2002b,a).

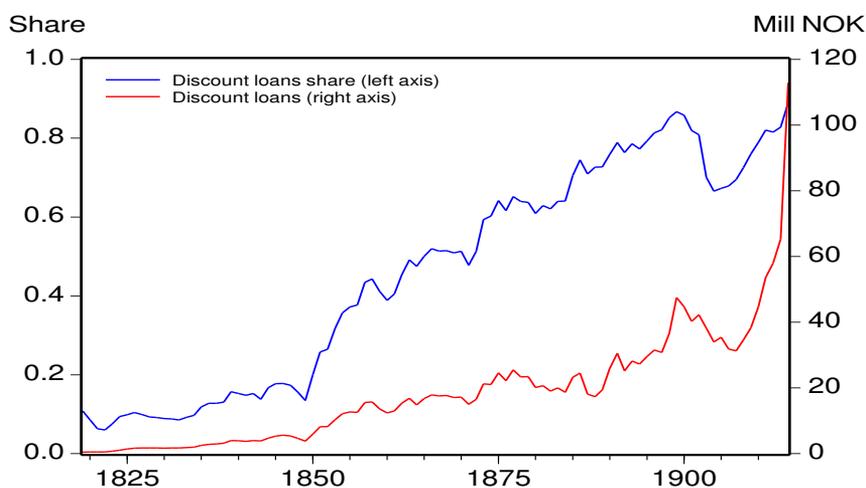
⁹The savings banks were reluctant to offer mortgage loans in this period, preferring instead renewable loans provided with personal endorsements. The usury laws, restricting mortgage loan rates to a maximum of four percent, is a crucial factor in connection with the lack of institutions supplying loans with a fixed collateral.

¹⁰The capital of Norway was named Christiania at the time when the Central Bank was founded in 1816. Its name was written Kristiania from 1877 and changed name back to its original name Oslo in 1925.

¹¹Sejersted (2002b) maintains that this argument was not always valid in the 1840s, when the Christiania branch during some periods actively sought new mortgage loans due to lack of suitable bills for discounting.

small and to a large extent it was preferred to invest in long-term loans backed by collateral rather than short-term bills. Furthermore, the discount loans were mostly in the form of renewable bills (*vekselobligasjon*) rather than two or three-month trade bills.¹²

FIGURE 1.1 The volume of Norges Bank discount loans and their share of total loans 1819–1914



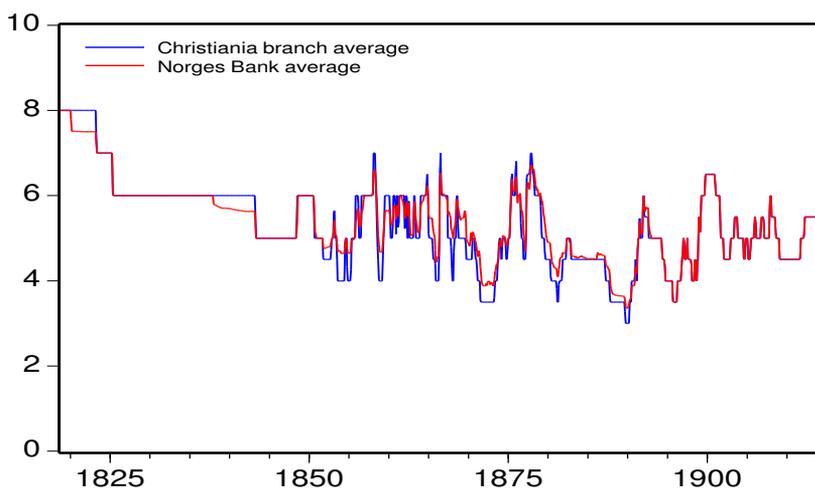
As seen in Figure 1.1, the discount business of Norges Bank expanded significantly from the early 1850s, both in absolute terms and as a share of the total loan portfolio, although the volume of discount loans did not surpass mortgage loans until February 1864. The share of discount loans rose to 87 per cent in the financial boom year of 1899 but fell back to 67 per cent in 1904. The temporary increase in mortgage loans and other types of long-term loans did not primarily reflect a strategy of reverting to mortgage lending; it was largely a consequence of the involvement of Norges Bank in the winding-up process after the banking difficulties in this period.¹³ At the eve of World War I discount loans once again accounted for well over 80 per cent of the total portfolio.

Monthly averages of the discount rate are shown in Figure 1.2 for the period October 1818 to July 1914. The monthly *average* series, which is tabulated in the appendix, differs from the ‘Norges Bank discount rate’, conventionally referred to in most previous work in two respects. First, in months with changes in the discount rate it represents a true monthly average – different rates are weighted

¹²Loans in the form of *vekselobligasjon* were in practice renewable against a payment of typically 10 percent of the loan sum each year, making them long-term loans with a floating interest rate. The basic reason for their widespread use was the usury laws, which did not apply to such bills.

¹³After the Christiania crash in 1899 the property market collapsed and a number of small banks in Christiania experienced liquidity and solvency problems, in most cases leading to failure. Norges Bank assisted in the liquidation process by purchasing assets from the troubled banks, thus temporarily locking up some of its resources in mortgage-backed loans. See Rygg (1954, pp. 248–276) for details.

FIGURE 1.2 Norges Bank Discount Rate, in per cent. Monthly Average. October 1818–July 1914.



Source: Statistiske oversikter (Historical Statistics) 1948, Statistisk Sentralbyrå (Statistics Norway).

by the fraction of the month during which they were in effect.¹⁴ As discussed in more detail below it should be borne in mind that before 1893 each branch of Norges Bank was allowed to fix the level of the discount rate at their own discretion. Conventionally, the discount rate of Norges Bank has been associated with the rate at the Christiania branch in this period, although this rate in general differed from the national average. Although the Christiania branch was the largest with respect to the amount of discount loans, its share of the total discount loan portfolio fell from about 50 per cent in the 1830s to about 30 per cent from the early 1850s. Thereafter it was mostly below this figure, even dipping below 16 per cent in 1888.¹⁵ The new series is considered to be more representative of the national level by weighting the rate set by individual branches by their outstanding loan portfolios at the end of the preceding year. Monthly data on the discount rates set by the various branches and the national average can be found in the appendix. Table 1.A.1 gives the end-of-month data series.

Discount rates at Norges Bank's branches 1818–1892

When the discounting began in October 1818 Norges bank had four branches: Christiania, Bergen, Christianssand and the main office in Trondhjem.¹⁶ The discount rate was set at eight per cent,

¹⁴For example, when the discount rate at the Bergen branch was increased from 5 to 6 per cent on 16 October 1856 (this was the only change during the month), the average is computed by weighting 5 per cent by 15/31 and 6 per cent by 16/31.

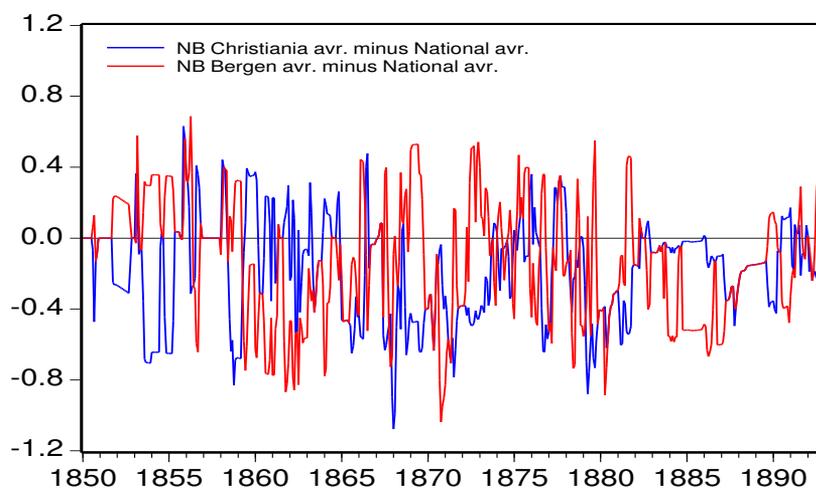
¹⁵At the end of 1848 and 1857 the discount portfolio of the Bergen branch was the largest, in 1872 Trondhjem and in 1888 Skien branch accounted for the largest share of discount loans.

¹⁶Norges Bank was founded in accordance with the Monetary Affairs acts of June 14 1816. The main office was located in Trondhjem until 1897 when it was moved to Oslo (Christiania).

which may have been well below the market rate at the time. At the Christiania branch this rate was maintained until April 1823, but it was reduced to seven per cent in February 1820 at the main office, and most likely also at the Bergen and Christianssand branches.¹⁷ Until about 1850 the rates prevailing at the various branches were changed infrequently. Some differences arose in 1838 when the new branches in Drammen and Skien opened. Bergen, Christianssand and Trondhjem maintained a rate of 5 per cent from January 1838 to May 1843, whereas the other branches kept it at 6 per cent. The different discount rates in this period reflect, at least in part, different liquidity positions at the various branches.

Around 1850 we see the beginning of a more active discount rate policy, both with respect to more frequent changes (cf. Figure 1.2) and more geographical differentiation. Figure 1.3 brings some information on the latter issue by graphing annual averages of the rates prevailing at the Bergen and Christiania branches minus the national average.

FIGURE 1.3 Annual averages of rates prevailing at Norges Bank's Bergen and Christiania branches minus national average rate. 1850–1892. Percentage points



By the 1850s the Board of Norges Bank was well aware of the fact that the level of discount rates set by the branches was affected by their liquidity positions.¹⁸ In the Board's report on the activities of the period 1854 to 1856, it was explained that the reduction in the discount rates at some

¹⁷The information on the discount rates set by the various branches and offices is not wholly complete. The data have been pieced together from information in the Norges Bank archive located at the Norwegian Public Record Office (*Riksarkivet*), various Parliamentary Papers, newspapers and Rygg (1950); see the appendix for further details on sources. The information was somewhat incomplete in the middle of the 1850s and particularly in the early years after a new branch had started its operations.

¹⁸The amount at the disposal of each branch for loan purposes depended on the amount deposited with the branch and some additional funds transferred from the Board at the main office.

branches in 1854, notably at Christiania and Drammen, was due to a surplus of liquid balances at these branches.¹⁹ The Drammen branch kept the rate low in 1855, which resulted in a strong demand for loanable funds which the local branch was unable to satisfy, leading to a request for transfer of more funds. This was declined by the Board, which rather openly indicated in their report that the rate had been set too low.

Figure 1.3 and the data series in the appendix show that some regional differences in discount rates did exist in the nineteenth century, which likely reflect local money market conditions. The discount rate at the Bergen branch was relatively low in the years from 1859 to 1865, the same situation was observed in Christiania between 1865 and 1874, and once again in 1879 to 1881. The average rates in Christiania and Bergen were lower than the national average in every decade except in the case of Bergen in the 1850s.²⁰ It is also evident that periods of local financial distress and possibly mismanagement of the discount business at the local branches contributed to regional differences in interest rates.²¹ The Skien branch held relatively high discount rates from 1887 and saw its share of the loan portfolio increase from about 10 per cent to above 17 per cent in 1888. It was also the last branch to bring the level of the discount rate down to the common national level when such a policy was to take effect when the law governing the activities of the Norges Bank entered into force in 1893.²² Regional variations in interest rates and their relationships to the discount policy of the Norges Bank branches and competition from private banking is an interesting topic that deserves further analysis, but is beyond the scope of the present study.

Bank deposit rates before World War I

The first savings bank (Christiania) was established in 1822 and the first commercial bank (Christiania Kreditkasse) in 1848. Although the commercial banks offered a wider choice of deposit accounts than the savings banks, including demand deposits and time deposits with a fixed maturity, the dominant deposit category was deposits at 'savings bank terms' even at commercial banks. Usually the terms formally stated that there was a period of notice of three months before withdrawal of funds could be effectuated. The terms of withdrawal seem to have been practiced in many different ways across banks in the early years, but from the middle of the century a common practice of waiving the three months' notice seems to have been fairly widespread.

We have monthly data on the rate on deposits on savings bank terms at the Christiania (later Oslo) Sparebank from June 1822, Den norske Creditbank from September 1857 (ending in January 1907) and Christiania Bank og Kreditkasse from November 1876. Until September 1857 the deposit rates at chartered savings banks were stipulated at a maximum of four per cent. In the 1850s some

¹⁹Norwegian Parliamentary Papers (1857), *Dokument no. 10*.

²⁰Discount rates in Christiania were some 15 to 20 basis points lower than the national weighted average in every decade from 1850 to 1892. In Bergen the discount rate was about 5 basis points higher than in Christiania for the whole period of 43 years but lower than in Christiania in two decades, the 1860s and the 1880s (to 1892).

²¹The losses at the various branches of Norges Bank in the 1880s are discussed in detail in Rygg (1954, pp. 169–197).

²²The discount rate at the Skien branch was reduced from 5.5 to 5 per cent on 28 January 1893. After this date the discount rate set by the Board applied to all branches. Even under the new law of 1892 it was technically feasible to have separate discount rates at individual branches, but this was not seen in practice. The issue is briefly discussed in Rygg (1954, p. 106).

savings banks decided to pay higher deposit rates, but could only do so at the expense of forsaking the privileges enjoyed by the chartered banks.²³ From September 1857 it is seen from our data that deposit rates at Christiania Sparebank generally were held at the same level and varied quite closely with those offered by Den norske Creditbank, although some differences did occur. There is much scattered evidence (not systematically sampled here) that the level of deposit rates at savings banks across the whole country could deviate from the rates offered in Christiania. The two commercial banks in the town, Den norske Creditbank and Christiania Bank og Kreditkasse did not succeed in reaching an agreement on a common deposit rate policy until the early 1880s, but any large differences between the rates of two banks did not seem to have been maintained for longer periods except during periods of financial turbulence such as in 1858 and 1859.²⁴

FIGURE 1.4 Difference between the Norges Bank discount rate and average savings deposit rate in Christiania, 1857–1914. Percentage points

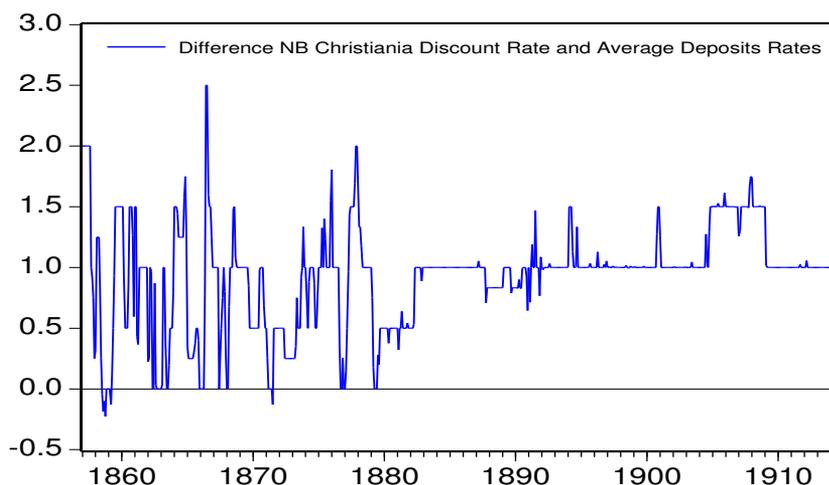


Figure 1.4 graphs the difference between the monthly average discount rate and the average of savings deposit rates in Christiania from 1857 to 1914. A structural change in the relationship seems to have taken place in the early 1880s, which is consistent with the discussion of competition in the commercial bank market in Hertzberg and Rygg (1907, pp. 163–167). Before this, it was evident that changes in the Central Bank's discount rate bore no firm relationship to what happened to deposit rates at savings and commercial banks. Indirectly the same conclusion applies to the relationship

²³The issue is discussed by Egge (1972). The first bank to circumvent the interest regulation on deposits was Akers Sparebank, which was a fast growing and business oriented savings bank under the leadership of Adolf Stabell, one of the founders of Den norske Creditbank in 1857. An excellent introduction to the contemporary debate and practice of deposit rate regulation in the 1850s is contained in Schreiner (1943, pp. 52–73).

²⁴See Hertzberg and Rygg (1907, pp. 163–167).

between the discount rate set by Norges Bank and the discount rate offered by the private banks, although we have no systematic evidence on the latter.²⁵ Although Norges Bank had some influence on the level of rates set by commercial and savings banks, the difference between the Central Bank and the private bank interest rates could vary substantially in the short run. A good example is the financially troubled year of 1866 when the discount rate was increased from 4 to 7 per cent in several steps in May and June, before it was reduced to 6 per cent in early August. Deposit rates, however, gradually edged upwards from July 1866, ending the year at 5 per cent. Delayed response to reductions in discount rates also resulted in deposit rates being higher than the Central Bank discount rate, which happened in several months in 1858 and once in 1859 and 1871.

From May 1882 the difference between the Central Bank discount rate and savings deposit rate remained at around one percentage point for extended periods of time. This observation is important from a monetary policy perspective – it implies that the Central Bank discount rate in this period had a more direct impact than previously on the interest rates set by private banks. Hence, Norges Bank achieved a much higher leverage of its interest rate policy. Between July 1904 and January 1909 the difference was increased to 1.5 percentage points. It appears that the widening of the difference is mainly due to an increased interest rate margin between loan and deposit rates at commercial and savings banks.²⁶

1.3 The discount rates and bank deposit rates 1914–1986

The monthly averages of the Norges Bank discount rate from 1914 until the end of 1986, when it officially ceased to exist,²⁷ are shown in Figure 1.5. It is evident from this figure that there was a marked change in the volatility of the discount rate over time. The discount rate was changed 21 times in the 1920s and 15 times in the 1930s (5 of which were in September and October 1931, when Norway abandoned the gold standard). In the interwar years the discount rate was still essentially functioning in the same way as it had before World War I. Changes in the discount rate had a powerful influence on other short-term rates, but it was in general set at a level consistent with market rates. The discount rate was reduced from 4.5 to 3 per cent in May 1940 and was maintained at that level throughout the war. The huge increases in money market liquidity during the war soon implied that even a historically low level of the discount rate of 3 per cent was not consistent with other interest rates of that time, such as e.g. the interest rate offered on T-bills which were considerably lower, cf. Figure 1.7 in Section 1.4 below.

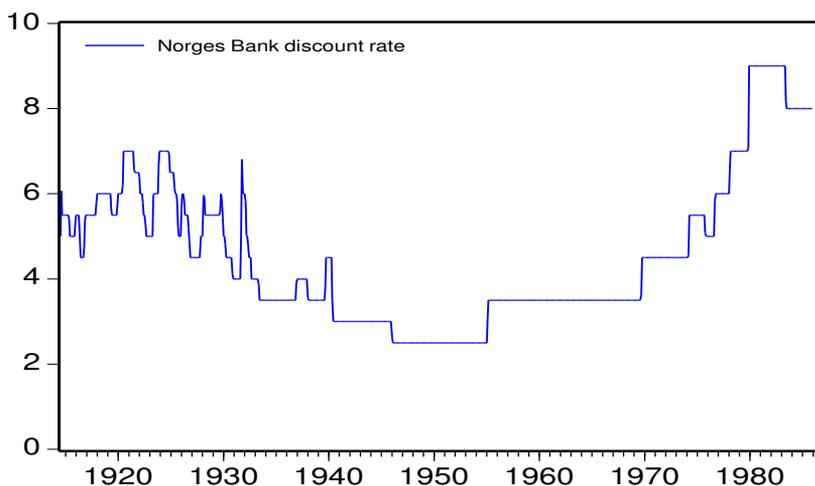
After the war there was only one discount rate change in each decade until 1970. The first one was in January 1946 fixing the level at 2.5 per cent, which was one of the key monetary policy decisions of the postwar government. In the postwar years the discount rate was no longer a market instrument in

²⁵Scattered evidence from the newspaper *Den Norske Handelstidende* in 1865 and 1866 confirms this conclusion.

²⁶See the Annual Commercial Bank Statistics (*NOS Private Aktiebanker*) of 1909, p14*.

²⁷No obituary of the more than 168 year old discount rate seems to have been published at the time – only a short notice in *Penger og Kredit*, no. 1, 1987 to the effect that it had been abolished.

FIGURE 1.5 Norges Bank discount rate, in per cent. Monthly average. 1914–1986.

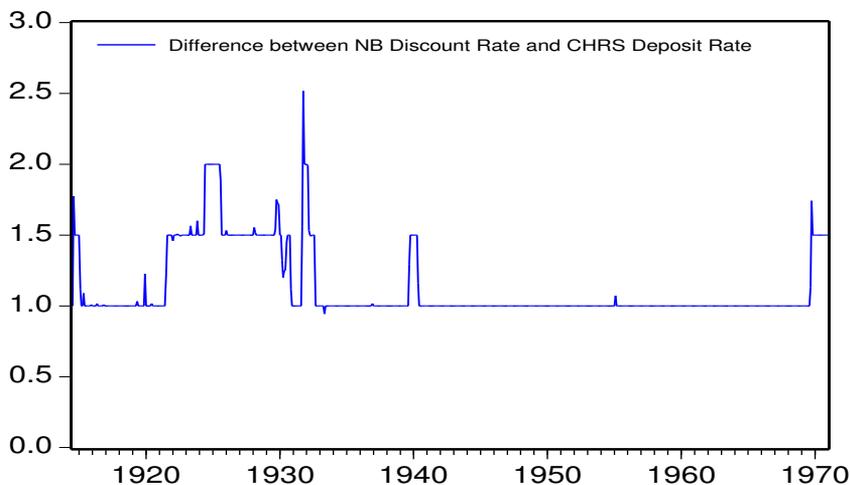


the sense that it generally reflected the market level of short-term rates; rather, it was a key signal rate indicating the lower end of the whole structure of administratively determined interest rates. When the pressure from the rationed demand for credit or interest rate hikes abroad became too strong, the discount rate was increased, usually as part of a larger package of credit restraint. This happened once in the 1950s (February 1955) and once in the late 1960s (September 1969), and several times in the 1970s, when the government was obliged to raise the discount rate to unprecedentedly high levels. From the second half of the 1960s, however, the discount rate came to play a diminished role in monetary policy. The marginal lending rate of the loan facilities of Norges Bank was the key rate affecting interest rates in the emerging money market of the late 1960s (discussed in detail in the next section).

Figure 1.6 shows the difference between the discount rate and savings deposit rate from 1914 to 1970. As illustrated, the difference between the two rates was predominantly 1 percentage point during the bulk of the period. The main exception took place between July 1921 and October 1930, when the difference was 1.5 percentage point or more, reaching a level of 2 percentage points from July 1924 to July 1925. One should view these developments in connection with the severe banking crisis of the 1920s. In addition, there are some short periods when the deposit rate did not follow the discount rate increases. One is from September 1931 to August 1932, a period that comprises both the departure from gold and the renewed concern about banking difficulties following the debt moratorium granted to Bergens Privatbank and Den norske Creditbank in December 1931. The outbreak of war in August 1914 and September 1939 triggered similar situations, both lasting a few months. In general, however, there was a firm link between the discount rate and the bank deposit

rate, implying that the discount rate played a dominant role in affecting other key interest rates in this period.

FIGURE 1.6 Difference between the discount rate and savings deposit rate. 1914–1970. Percentage points



1.4 Treasury bill yields 1941–2007

Interest rates in the primary T-bill market 1941–1985

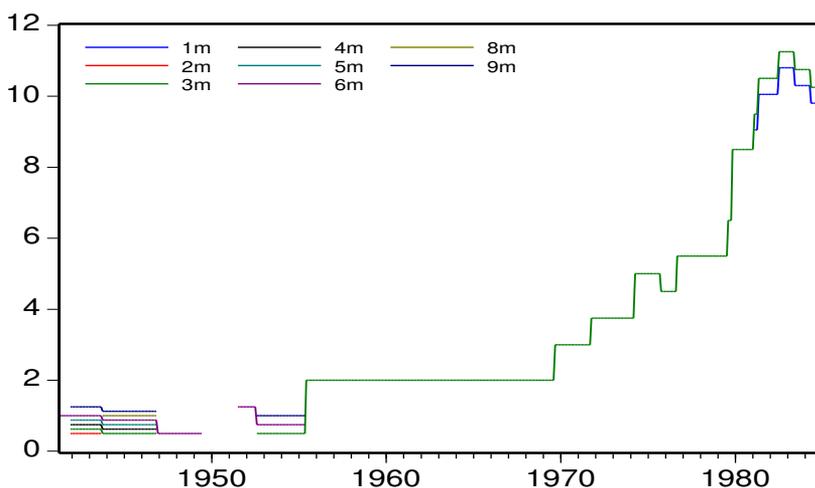
In May 1941 the government introduced Treasury bills as a means to withdraw excess liquidity from commercial and savings banks. The rates of interest at which Treasury bills were offered to commercial and savings banks are shown in Figure 1.7.²⁸ The interest rates are those fixed by the government in the primary market. As the bills were sold on tap in various maturities there was presumably no secondhand interbank market in these securities. The bills could only be bought by private banks in the primary market but it was not illegal for banks to resell them to customers, and to some extent insurance companies and large industrial firms did invest in these securities.²⁹

The bills were initially offered only at a maturity of six months, but the range of maturities was extended several times; from October 1943 there were eight different maturities ranging from 3 to 24 months. The bills could be rediscounted at Norges Bank and were thus highly liquid instruments. Although the terms at which they were initially offered, i.e. one per cent interest rate for the 6 month

²⁸The Treasury bill market during the war is described on pp. 66–69 in the official report on the activities of the Norges Bank during the war 1940–1945 (*Norges Bank under okkupasjonen, Oslo, 1945*).

²⁹There are no data on the amounts resold.

FIGURE 1.7 Interest rates on Treasury bills 1941–1985, in per cent



bill (reduced to 7/8 per cent in October 1943), were not considered attractive by the banks, the bills soon found a ready market. In addition to long-term government bonds they were in fact the only interest yielding investment of any size that the banks had in this period. The outstanding volume increased from NOK million 594 at the end of 1941 to NOK million 3951 at the end of 1945, which at this time represented 41.6 per cent of the total assets of commercial and savings banks.³⁰

The volume of Treasury bills was gradually diminished thereafter as a consequence of the reduction of the excess liquidity of the banks. At the end of December 1949 the amount outstanding had fallen to NOK million 380. By the early 1950s the Treasury bills had ceased to play any important role, but they continued to be on offer to the banks in the following decades, primarily used by banks to smooth seasonal fluctuations in bank liquidity. From February 1955 the interest rates on the Treasury bills was fixed at one half per cent below the discount rate until the early 1970s when there was some more variation relative to the discount rate. The Treasury bill interest rate series is primarily of importance during the 1940s, when it reflects the extreme liquidity of the money market. Together with the short end of the bond market, where we have market based yields on bonds with a maturity down to two years from the second-hand market,³¹ the Treasury bill rates present a more representative picture of the interest rates prevailing in the money market than the discount rate in this period.

³⁰See for example the *Annual Report of the Norges Bank 1949* p. 32.

³¹See Klovland (2004) for data on bond yields.

Interest rates in the secondary T-bill market 1985–2007

In January 1985 a new type of Treasury bill was launched with a view to creating a market for short-term government securities. Bills with maturities of 3 and 12 months were issued according to a regular time schedule to ensure that there always were issues with various maturities in the market. The bills were quoted on the Oslo Stock Exchange. In contrast to previous practice Norges Bank now actively encouraged trade in the second-hand market by acting as a market maker.³²

In the first years from 1985 onwards the volume of transactions was relatively modest. There are many reasons for this, the most important was perhaps that the banking sector was in an extreme liquidity squeeze in these years, borrowing heavily from Norges Bank. The coupon rates were fixed by the Ministry of Finance and these were probably not sufficiently attractive to other investors outside the banking sector.

In 1992 there was an increase in the transaction volume in the Treasury bill market which gained further momentum in 1993.³³ The private banks now moved towards a more balanced liquidity position, which led to more interest in these securities from the banks' side. From June 1993 the bills were sold in the primary market by multi-price auctions, which resulted in a closer alignment of yields in the primary and secondary markets. From October 2000 the bills were made zero-coupon instruments and sold in the primary market by single-price auctions.³⁴

There are several methods that can be used to estimate the term structure of interest rates which also applies for T-bills with maturities between 3 and 12 months. A widely used technique is to estimate spot yield curves (as well as forward rates) by econometric methods.³⁵ We decided to use a simplified version of the Nelson-Siegel model suggested by Svensson (1995).³⁶

The estimated yield series are reported for maturities 3, 6, 9 and 12 months in Table 1.B.2 in the appendix. We often denote this as synthetic yield series since they are based on model estimates which are calculated on the basis of the available T-bill observations in the market. The exact maturities for the market observations may deviate from the reported maturities of the synthetic series.³⁷

In this study we have used observations of the coupon, yield and remaining maturity for all T-bill loans traded on the Oslo Stock Exchange on the last trading day in every month since March 1985 to estimate the parameters in the restricted Nelson-Siegel model.

Admittedly, the available information from market observations of T-bills is quite limited since

³²Further details are given in *Annual Report of the Norges Bank 1985*, pp. 15–19.

³³*Annual Report of the Norges Bank 1993*, pp. 34–35.

³⁴See Jacobsen (2005) for a discussion.

³⁵See for example Anderson et al. (1996) for a general overview.

³⁶The regression format is a simplified version of the Nelson-Siegel model adopted by Svensson (1995). Let R be the yield and m the associated maturity. The yield equation can be written as

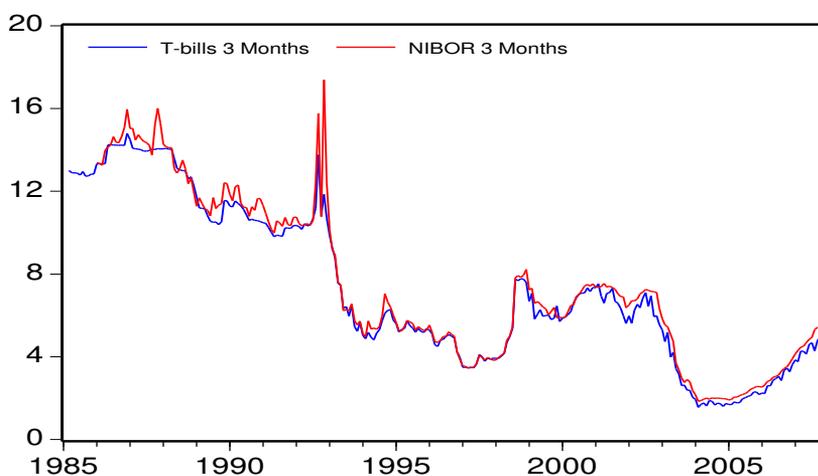
$$R = \beta_0 + \beta_1 \cdot \left[\frac{1 - \exp\left(-\frac{m}{\tau}\right)}{\frac{m}{\tau}} \right] + \beta_2 \cdot \left[\frac{1 - \exp\left(-\frac{m}{\tau}\right)}{\frac{m}{\tau}} - \exp\left(-\frac{m}{\tau}\right) \right],$$

where we have imposed the restriction $\beta_2=0$ during estimation due to limitations in data availability. The remaining parameters are estimated by a maximum likelihood procedure.

³⁷Norges Bank has published similar synthetic yield series for T-bills with maturities 3, 6, 9 and 12 months since January 2003. The two sets of time series may differ somewhat since they are based on different estimation procedures.

we typically find that only three to five loans are traded. In 1986 up to ten T-bill loans were traded simultaneously and in 1993 there were six or seven loans. Since around 1996 the T-bill loans have typically been issued on the IMM-dates³⁸ in order to smooth liquidity fluctuations. In addition T-bills have been issued in some periods to match main dates for tax payments. There is, however, in some periods, a problem with limited liquidity in the T-bill market. In particular, because of the limited activity in the Treasury bill market before 1993, some caution should be exercised with respect to considering the estimated yield as a sharply determined indicator of the yield of short-term government paper in this period.

FIGURE 1.8 Three months Treasury bill yields and three month NIBOR rate, March 1985– October 2007, in per cent



1.5 Money market interest rates 1959–2007

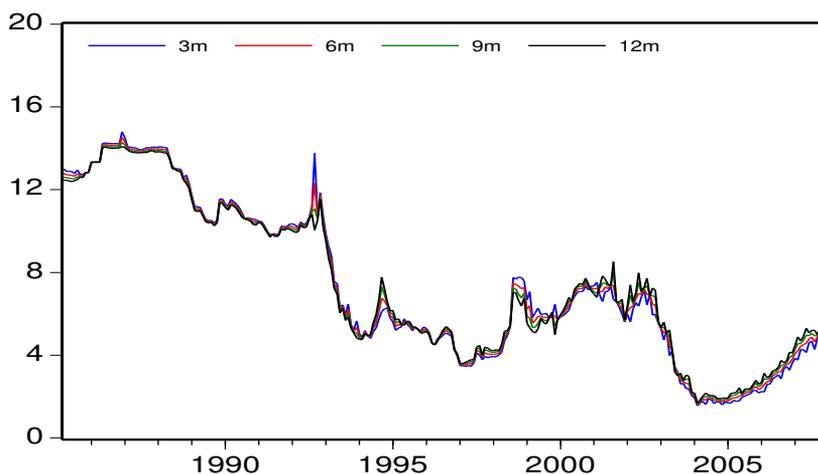
From the early 1980s, time series of the key money market rates of interest, NIBOR in particular, can already be found in publicly available sources.³⁹ A collection of these rates can be found in Tables 1.C.1 and 1.C.2 of the appendix.

The challenge, however, is to extend the eurokrone interest rate data backwards in time to cover the years before the 1980s and to present a broader set of money market rates. Because the offshore eurokrone market was not so well integrated with the onshore domestic money market at the time it

³⁸International Money Market dates are defined by the third Wednesday of the months March, June, September and December.

³⁹The Norwegian InterBank Offered Rate (NIBOR) is quoted as the (loan) interest rate in the (swap) eurokrone market. A monthly series of the 3 month NIBOR rate is available on the homepage of the Norges Bank (http://www.norges-bank.no/stat/renter/pmarked/renter_mmd.xls).

FIGURE 1.9 Treasury bill yields March 1985–October 2007, in per cent



is important to include the latter category as well.⁴⁰ From a variety of sources, most of which are previously unpublished, we have been able to extend some of the key time series back to cover the 1960s and the 1970s, with the data on the 3 month eurokrone rate starting in May 1959. These time series are found in Table 1.C.1 of the appendix.

We use the term eurokrone rate as a general reference to the implicit rate of interest following from a swap operation in the currency market involving Norwegian kroner as one of the currencies.⁴¹ NIBOR is more specifically referred to as the loan rate in the (swap) eurokrone market, NIBID is the deposit rate.⁴² The eurokrone rate i^{NOK} has been computed from data on the spot exchange rate against the US dollar S , the forward exchange rate against US dollar F , and the eurodollar interest rate i^{USD}

$$i_m^{NOK} = i_m^{USD} + \left(\frac{12}{m}\right) \cdot \left[\frac{F_d - S}{S}\right] \cdot \left(1 + \frac{m}{12} \cdot i_m^{USD}\right)$$

where the subscript m denotes the number of months of the contract period. In this period our series of the eurokrone rate is based on the average of bid and ask rates of exchange and on the average of loan and deposit eurodollar rates of interest at the end of the month, thus being in principle an average of the NIBOR and NIBID rate.⁴³ Note that the data for the period after 1985 in Table 1.C.2

⁴⁰For a discussion of the onshore/offshore terminology in the eurocurrency market, see Levich (2001, pp. 297–298).

⁴¹In practice the other currency of the swap is often US dollars, but in principle (disregarding transaction costs) the eurokrone rate can be derived from currency swaps between NOK and any other major currency.

⁴²The NIBOR rate represents the interest cost a borrower with access to the eurocurrency market would have to pay for borrowing NOK for a specific period of time by means of a currency swap. For a general introduction to the eurocurrency market see for example Allen (1997). An overview of eurokrone market and other money market rates in Norway can be found in Langbraaten and Thorstad (1998).

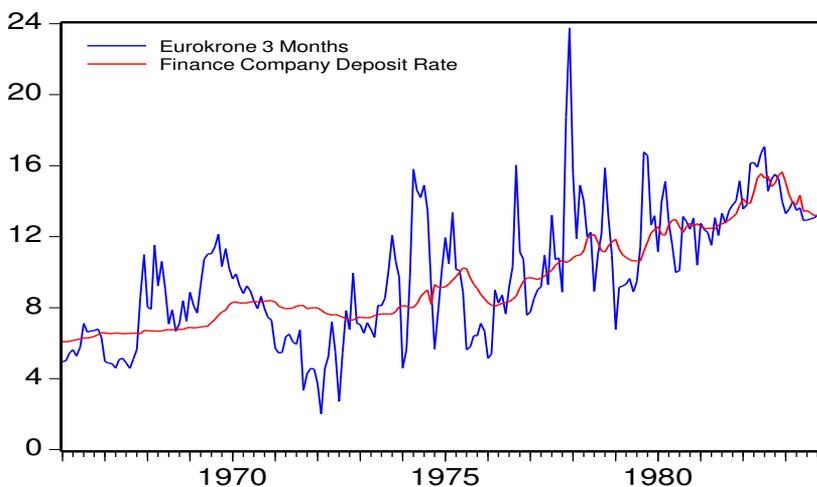
⁴³In the case of NIBOR rates the loan rate of eurodollar interest rate would be inserted in the above formula rather than the

are NIBOR rates, which are at a slightly higher level.

The quality of the eurokroner rate series before July 1972 is somewhat uncertain, and too much significance should not be attached to individual quotations. Nevertheless it is believed that the eurokroner data series present reasonably correct estimates of the course of market rates. Data referring to the two exchange rates involved had to be spliced from various sources, sometimes indicating slight differences in the level of the exchange rates, which creates some uncertainty. All data are in principle end-of-month data, but during certain periods eurodollar interest rates, on the one hand, and spot and forward exchange rates, on the other hand, originate from different sources, which may have created a time difference between the observations. In a volatile market situation, particularly in the currency markets, this is another noise factor.⁴⁴

Tables 1.C.1 and 1.C.2 also include three domestic money market rates, the most important of which are the deposit rates offered by finance companies and the overnight interbank rate.⁴⁵ A series representing deposit rates paid by finance companies is available between January 1966 and December 1983. This interest rate series originates from transactions solely in Norwegian kroner in the domestic money market and comprises a wider set of investors than the large banks involved in the eurocurrency market. The precise maturities of the deposits are not known, and may vary somewhat over time, but the information we have indicates that it largely concerns short-term time deposits up to three months maturity.

FIGURE 1.10 The finance company deposit rate and the three months eurokroner rate, in per cent. 1966–1983.



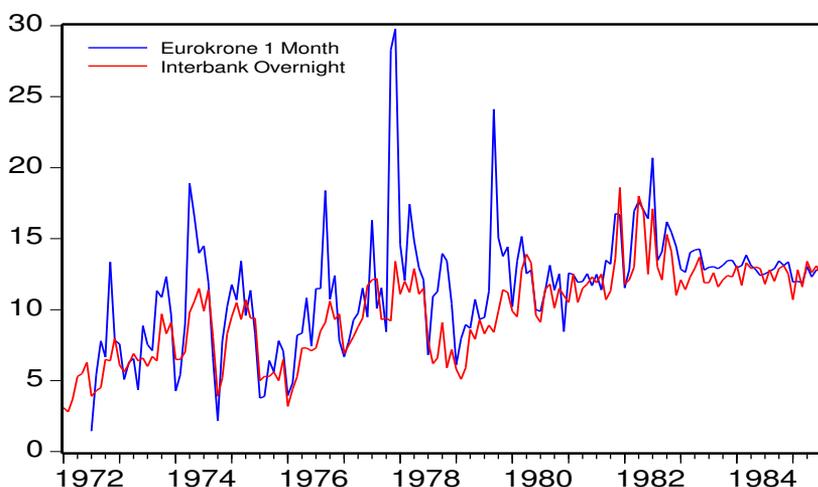
middle rates used here, and the ask rate in the forward market and bid rate in the spot currency markets would be used.

⁴⁴Closing rates of the last working day of the month have been used whenever possible.

⁴⁵Table 1.C.1 also includes a short series showing the rate of interest offered by banks to customers on deposits referred to as so-called 'special terms deposits', i.e. large deposits whose terms are determined after negotiations in each case.

The finance company deposit rate is shown in Figure 1.10 together with the three month eurokrone rate. These two interest rates represent different segments of the money market rate – the eurokrone rate is indicative of the offshore market involving large banks participating in the eurocurrency markets, the finance company deposit rate represents the onshore market.⁴⁶ How well integrated these two segments of the money market were is an important issue in this connection. Our hunch is that they were not well integrated in the middle of the 1960s when the first comparison can be made but that the degree of market integration grew over time. As seen in the figure the domestic rate is much smoother than the eurokrone rate in this period. Nevertheless, it is quite evident that there is some interdependence between the two series. Recurrent periods of turbulence in the currency markets cause some excess volatility in the eurokrone rate in the 1970s but by the early 1980s it appears that there is a fairly strong convergence between the two rates. However, it should be borne in mind that the deposit rate reflects transactions between financial intermediaries and customers while the eurokrone rate is an interbank rate, which may imply that Figure 1.10 is not an ideal basis for a comparison of the offshore-onshore differential.

FIGURE 1.11 One month eurokrone rate and overnight interbank rate, in per cent. January 1972–August 1985



Another comparison can be drawn from an inspection of Figure 1.11 showing the one month eurokrone rate and the overnight interbank rate. The latter series is also a pure domestic krone rate of interest determined in the daily ‘telephone’ market between domestic banks. In the domestic interbank market all banks could participate, including the small commercial banks and the large number of savings banks that were excluded from the euromarket. Once again the eurokrone rate

⁴⁶The term ‘offshore’ is misleading in the sense that the currency swaps involving transactions in Norwegian kroner may be performed by two domestic banks located within the country.

is more volatile than the domestic interbank rate, even if the latter is an overnight rate that typically should tend to be more volatile than one month rates in general. The excess volatility of the eurokrone rate is mostly occurring in periods of unrest in the currency markets and expectations of exchange rate realignments, as in the autumn of 1977.⁴⁷ A reform in 1978 had important consequences for the banks' ability to manage their liquidity via the FX market. After the introduction of the zero-position regulation, requiring banks to balance their net spot and forward position at the end of each month, those banks who were authorized to deal in foreign currency, could use currency swaps more actively than previously to manage their liquidity. The swap market soon developed into one of the most largest and most liquid parts of the money market. Since 1979 Norges Bank has used swap transactions as an additional instrument in controlling liquidity.⁴⁸

We see from Figure 1.11 that from the late 1970s there is a quite marked tendency towards convergence between the two rates, which is quite firm evidence to the effect that the various segments of the Norwegian money market had become more integrated by that time. The correlation between the two series is also quite high.

1.6 Norges Bank interest rates 1955–2007

This section gives an overview over interest rates which are administered directly by Norges Bank, like the discount rate discussed in section 1.2 above and the sight deposit rate which is today's key administered interest rate. We also include interest rates which are indirectly affected by the use of Norges Bank's liquidity instruments. The system through which Norges Bank has affected bank liquidity has been subject to large changes in this period, basically from a system based on direct and indirect regulatory instruments⁴⁹ to a system which is based on market oriented instruments. We describe the evolution of the Norges Bank lending facility and some of its interactions with reserve requirements and direct regulations of bank lending in some detail in the following sections. For the entire period 1955–2007 we have made an attempt to estimate the interest rate on marginal liquidity from Norges Bank, denoted as *marginal CB-liquidity* or the *marginal liquidity rate*. The principle behind the construction of this series will be discussed in the following sections and the precise definition is given in section 1.8. Before we discuss the evolution of the system of liquidity regulation since 1965 it may be useful to provide a bird's eye perspective on the development of the main interest rates affected directly or indirectly by Norges Bank over this period.

⁴⁷The high eurokrone rates in the autumn of 1979 may be a spillover from fluctuations in the value of the US dollar and interest rate increases in the United States. Thin forward markets in Norwegian kroner and structural changes in this market due to an increased level of oil taxes affecting the hedging demand by oil companies may also have contributed in this period.

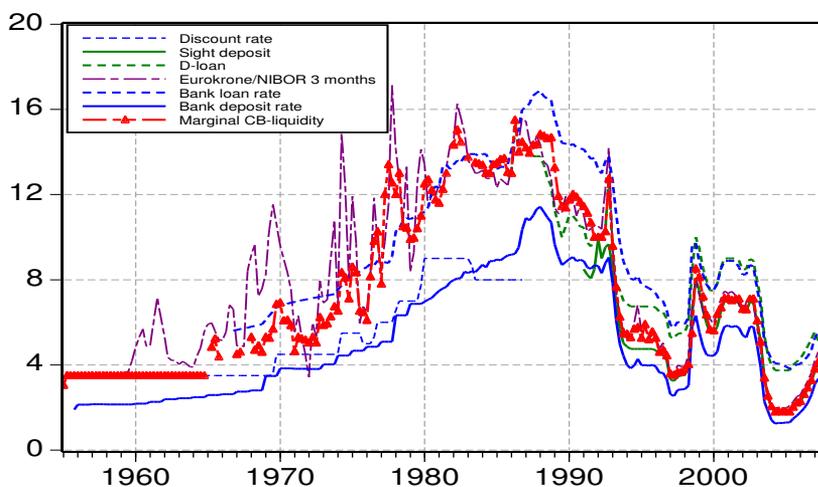
⁴⁸See Norges Bank (1989, Chapter 4) for a discussion of the Norwegian money market in the late 1970 and early 1980s.

⁴⁹In addition to the direct and indirect instruments which were available under the Monetary and Credit Policy Act of 1965, there were also several important changes in the Norges Bank lending facility during this period. This regime was gradually deregulated during the 1980s, see Grønvik (1994) for a discussion.

1.6.1 A bird's eye perspective on Norges Bank interest rates 1955–2007

The data are mainly recorded from various vintages of Norges Bank Quarterly Bulletin (*Penger og Kreditt*) and annual reports. For some periods we have supplemented the previously published data with additional information based on our own calculations. Figure 1.12 shows the development of the interest rate on marginal Central Bank liquidity from 1955 to 2007 (quarterly average). The interest rate on marginal CB-liquidity is combined from several different series which will be explained in the following sections.⁵⁰ In the period 1955–1965 the marginal liquidity rate is given by the Norges Bank discount rate. The new Norges Bank lending facility introduced in 1965, was an automatic lending system where loans to individual banks were divided into tranches at rising interest rates. The marginal liquidity rate soon increased to a level well above the discount rate.⁵¹ Some main observations about the developments in interest rates over the period 1955–2007 are noted below.

FIGURE 1.12 Norges Bank interest rates 1955–2007. The interest rate on marginal CB-liquidity is plotted against the interest rates on D-loans, sight deposits, money market interest rates and bank interest rates on deposits and loans. Quarterly averages, in per cent.



First, whereas the discount rate reaches its peak level around 1980-82 at 9 per cent we see that the marginal liquidity rate diverges from the discount rate and increases to a level around 15 per cent in 1982.

Second, we see that whereas the rate on marginal liquidity mainly stays within a corridor defined by the average interest rate on bank loans and bank deposits during the period 1965–1975, this is no

⁵⁰The data are documented in Tables 1.D.1–1.D.3 in the appendix.

⁵¹The discount rate becomes gradually less relevant as a monetary policy variable and its only role in the following years is that it establishes the lowest interest rate in the Central Bank lending facility.

longer the case for the period 1975–1986. In this time interval the marginal liquidity rate is frequently outside this corridor during periods when the short term money market interest rates are driven up by distress in the foreign exchange market. As these periods were quite frequent during the mid and late 1970s and early 1980s, money market rates (e.g. the 3 months Eurokrone interest rate), were quite volatile. Figure 1.12 illustrates that the rate of marginal liquidity shows similar volatility in this period. During the period 1965–1985 we have estimated the marginal liquidity rate on the basis of data for the *average* and *marginal* interest rate for banks' loans in Norges Bank and the yield on the market paper which Norges Bank issued during the period 1977–1985 as a market oriented liquidity instrument.⁵² After the automatic lending facility was revoked in March 1986 we have set the marginal liquidity rate equal to the D-loan rate. For a precise definition of the marginal liquidity rate in the rest of the period we refer to Section 1.8.

Third, we see that there is a significant change in the location of the marginal liquidity rate within this corridor from 1987 onwards. In comparison with the average interest rates on bank loans and bank deposits we see that both the interest rates on marginal CB-liquidity as well as the interest rate in the interbank market (the 3 months NIBOR) are located closer to the middle of the implicit interest rate corridor which defines the banks' interest rate margin.⁵³

Fourth, from January 1 1987 the Norges Bank discount rate was discontinued more than 188 years after its introduction in October 1818. The D-loan rate established the floor for the marginal liquidity rate until December 10 1992 when the krone was floated after excessive distress in the foreign exchange market during that fall. Interest bearing sight deposits were introduced from January 1 1991 but played no role until the banks' liquidity situation changed from a net borrowing position to a net deposit position in 1993. From 1987 Norges Bank introduced F-loans as an additional liquidity instrument. The interest rates on F-loans were mainly determined in auctions but there were a couple of exceptions when the interest rates on F-loans were set by Norges Bank directly.

Fifth, during the years 1993–1996 the interest rate on marginal liquidity fluctuated within the corridor defined by the administered interest rates on sight deposits and D-loans. From January 1993 the width of this corridor was 1 percentage point (100 basis points), and this width was gradually increased to 2 percentage points from August 1993 to promote improved functioning of the interbank market. Recently, in March 2007, the width of the corridor was decreased to 1 percentage point.⁵⁴ Between late 1993 and late 1996 the administered interest rates were subject to very few changes. F-deposits were introduced in 1992 as an additional liquidity instrument which was managed in a way similar to that of F-loans, i.e. with auctions initiated by Norges Bank. The marginal liquidity rate, however, as measured by the maximum of the interest rate on F-loans and F-deposits, showed significant fluctuations within the corridor spanned by the D-loan rate and the sight deposit rate during this period.

Sixth, from 1996 onwards the main changes in the interest rate on marginal liquidity have been

⁵²End-of month-observations of these interest rates are reported in Tables 1.D.1-1.D.2 in the appendix.

⁵³More details and analysis of the banks' behavior in this period is offered in Grønvik (1994).

⁵⁴A corridor of one percentage point is considered to be wide enough to secure efficient redistribution of liquidity in the interbank market, and this is also more in line with international practice.

initiated by changes in the administered interest rates on D-Loans and sight deposits, rather than by liquidity operations. The marginal liquidity rate has in this period remained quite close to the sight deposit rate.

Finally, whereas the interest rate margin for private banks was entirely made at the cost of depositors in the early and mid 1980s the interest rate margin has gradually shifted towards contribution from borrowers. There has been a downward shift in the interest rate margin on the average deposit rate and an increase in the corresponding margin on the average bank loan rate.

1.6.2 Liquidity instruments 1965–1986

In order to smooth seasonal fluctuations in bank liquidity, new regulations were introduced on April 1 1965. A new automatic lending facility (A-Loans) was introduced which gave the banks access to short-run liquidity from Norges Bank against securities as collateral. Bonds issued or guaranteed by the government could be used as collateral up to 95 per cent of their face value, although not exceeding their market value.

The lending facility was divided into tranches according to a rising interest rate schedule. Loans in the first tranche were charged with an interest rate equal to the discount rate. For the next tranches the bank was charged an additional 1.5 percentage point per tranche. For a bank which needed to extend its loans into the fifth tranche, the marginal interest rate was the discount rate + 6 percentage points. On top of this increasing marginal cost schedule, banks with special requirements could obtain so-called S-loans on terms to be decided separately. As this lending scheme evolved over time, adjustments were made as to how much each bank could borrow within each tranche as well as how many tranches were in use. We have explained the main structure of the new lending facility in the box below.

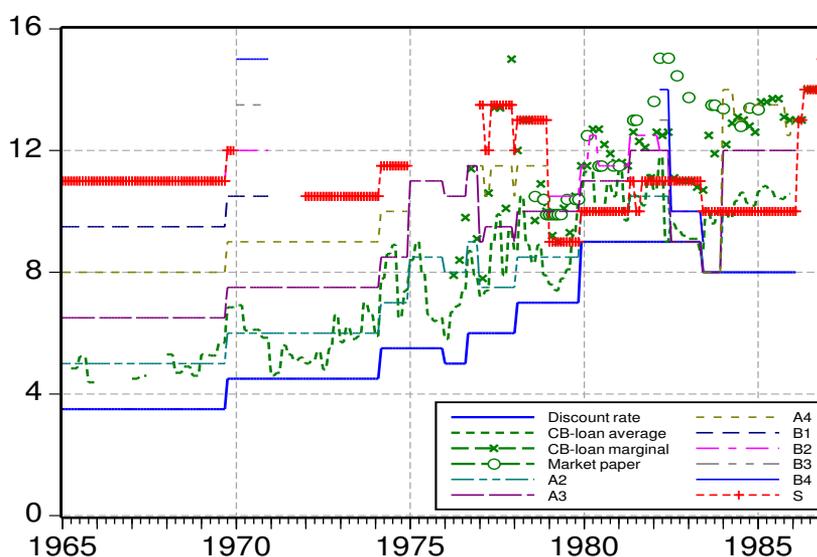
It turned out that the banks made extensive use of this lending facility, and utilized the facility over and above the level of the intended seasonal smoothing of liquidity. The regulations were therefore adjusted from January 1 1971. There were still five lending categories, each of which scaled by limits set as fractions of the banks balance sheet (measured as quotas for two-month periods), i.e. 5, 6, 9, 7 and 7 per cent respectively. The loans had to be held for a seven day period. The interest rate schedule was set as before. For the first tranche the interest rate was equal to the discount rate and then an additional 1.5 percentage point was added for each additional tranche.

Structure and major changes in the Norges Bank lending facilities 1965–1986

April 1965	Automatic loans in five tranches	Automatic loans were introduced to smooth fluctuations in bank liquidity.
January 1971	Truncated loan quotas (five tranches)	The banks made extensive use of the lending facility over and above the level justified by seasonal smoothing of liquidity. The quotas for two months lending were truncated.
January 1975	A-loan system with three tranches, no collateral	The term A-Loans was introduced. Fewer tranches with same capacity but increased interest rates implied a tightening of credit.
January 1977	Five tranches were reintroduced	Same interest rate structure as previous five-tranche system starting at the discount rate and adding 1.5 percentage point for each tranche.
April 1977	Steeper interest rate schedule	Increases in tranches 3-5 to the discount rate plus 3.5, 5.5 and 7.5 per cent respectively.
December 1978	Market paper arrangement	After a trial period from March 1 1977 the market paper arrangement was made permanent.
January 1979	Introduction of B-loans	The lending facility was split into one automatic part (A-loans) and one conditional part (B-loans). Direct lending control of banks in B-loan position.
1979-1981	Periods of suspension and truncation	In order to control banks' lending growth the monetary authorities tried to force banks into B-loan position.
May 1981	Increased interest rates	Direct regulations (§8 in the Monetary and) Credit Policy Act were introduced and interest rates increased.
1982–1983	Periods of suspension and truncation	A three tranche B-loan system was introduced. The same interest rates were introduced for all A-loans and B-loans (9 and 10 per cent resp.).
July 1983	B-loans suspended	The entire B-loan facility was suspended and replaced with a fourth A-loan tranche.
March 1986	Automatic lending system is revoked	A simpler system for Central Bank lending is introduced with a lesser degree of automatic lending.

In 1975 the rules were changed again. Instead of having five tranches of equal magnitude, the revised system consisted of three tranches of unequal size which added up to the same total lending capacity as the three first of the previous tranches. This represented a tighter lending facility than before. The interest rate for the first tranche was still equal to the discount rate and for the second and third tranche the bank was charged an additional 3 and 5.5 percentage points. The three-tranche system was dubbed the A-loan system and there was no required collateral for this lending facility. Figure 1.13 below shows the main structure of the Norges Bank lending facilities in the period from 1965 to 1986.

FIGURE 1.13 Interest rates in the Norges Bank lending facilities, in per cent 1965–1986.

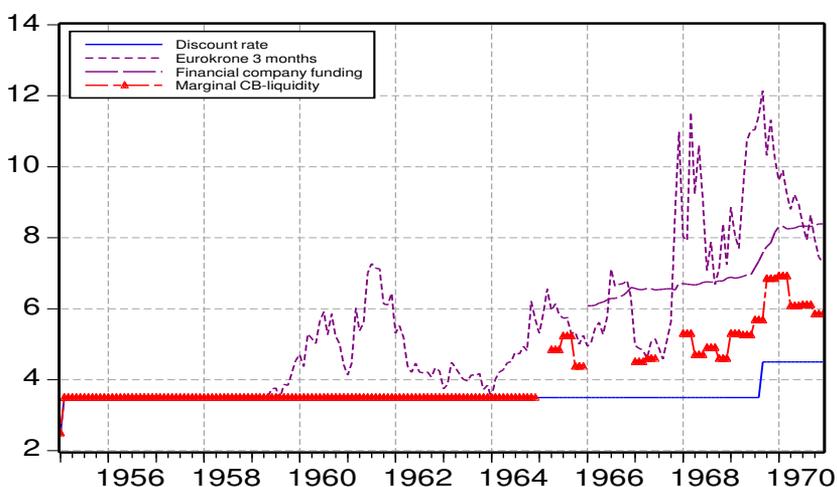


1.6.3 Norges Bank interest rates 1955–1970

The marginal rate of liquidity in the early years is given by the discount rate. From 1965 we have used the average interest rate on Central Bank loans. In Figure 1.14 we have also compared these interest rates with the three months Eurokrone rate and the finance company deposit rate reported in section 1.5. In the period 1965–1967 we see that the money market interest rate corresponds quite well with the estimated interest rate on marginal Central Bank liquidity. In 1968–1970, however, we see that our estimate of the marginal liquidity rate is considerably lower than the 3 months Eurokrone rate and the finance company rate. We have not been able to find data on the marginal interest rate for the banks' Central Bank loans before 1976. From February 1976 the marginal interest rate for each two-

months lending period were reported in Norges Bank's Quarterly Bulletin (*Penger og Kreditt*). We conclude that our estimate of the marginal liquidity rate may be on the low side during 1955–1970.

FIGURE 1.14 Norges Bank interest rates 1955–1970. The interest rate on marginal CB-liquidity is plotted against the 3 months Eurokroner rate and the funding rate of finance companies, in per cent.



1.6.4 The instruments in the new Monetary and Credit Policy Act of 1965

The new Monetary and Credit Policy Act of 1965 introduced a wide range of policy instruments in order to attain credit policy targets given by the central government. The banks were subject to primary reserve requirements and were required to hold a fraction of their portfolio in (low yield) T-bills or government bonds. In some periods the banks were also subject to direct regulation of lending. If their loans had grown above some predefined limit, the banks had to place an amount proportional to their excess lending in non-interest bearing Central Bank deposits (supplementary reserves).⁵⁵ In the 1960s and 1970s the banks' reserve requirements were used in order to attain a money market interest rate level corresponding to the prevailing interest rate norm. This meant a close interaction between the reserve requirements and the increasing interest rate schedule of the Central Bank lending facility. Table 1.1 shows how the different regulatory instruments were used in the years from 1966 to 1988.

⁵⁵The coefficient of proportionality was set to 1 in most years but in 1986–1987 this coefficient was replaced by an increasing schedule which penalized major excess lending more than minor excess lending.

TABLE 1.1
Direct and indirect regulations of banks in the years 1966-1988

	Primary reserves	Obligatory holding of bonds	Direct regulation of lending (§8)	B-Loans	Issuance control	Interest rate regulation	Guarantees
1966			X		X	X	
1967					X	X	
1968					X	X	
1969	X	X			X	X	
1970	X	X	X		X	X	
1971	X	X	X		X	X	
1972	X	X			X	X	
1973	X	X	X		X	X	
1974	X	X	X		X	X	
1975	X	X			X	X	
1976	X	X			X	X	
1977	X	X			X	X	
1978	X	X	X		X	X	
1979	X	X		X	X	X	
1980	X	X		X	X	X	
1981	X	X	X	X	X	X	
1982	X	X		X	X	X	
1983	X	X	X	X	X	X	X
1984	X	X			X	X	X
1985	X				X	X	
1986	X		X		X		X
1987	X		X		X		X
1988					X		X

Source: Gulbrandsen (1995)

The Monetary and Credit Policy Act of 1965 allowed for several types of direct and indirect regulations of the credit market. In addition there were interest rate regulations in the form of interest rate norms or interest rate declarations. The conditions for B-loans in the Central Bank were also a form of direct regulation of bank lending. In some periods interest rates were also subject to direct price controls.

A lending facility with five tranches was reintroduced in January 1977. For the period January–April 1977 the interest rate structure was as before, i.e. the discount rate for loans in the first tranche plus 1.5 percentage points for each additional tranche. On 9 May 1977 the interest rate charged in tranches 3–5 were raised to the discount rate plus 3.5, 5.5 and 7.5 percentage points respectively.

Figure 1.13 shows how the characteristics of the lending facilities changed during the two decades from 1965 to 1985. When the discount rate was changed in February 1978 there were also changes made for the third to fifth lending tranches.

1.6.5 Norges Bank market papers 1977–1985

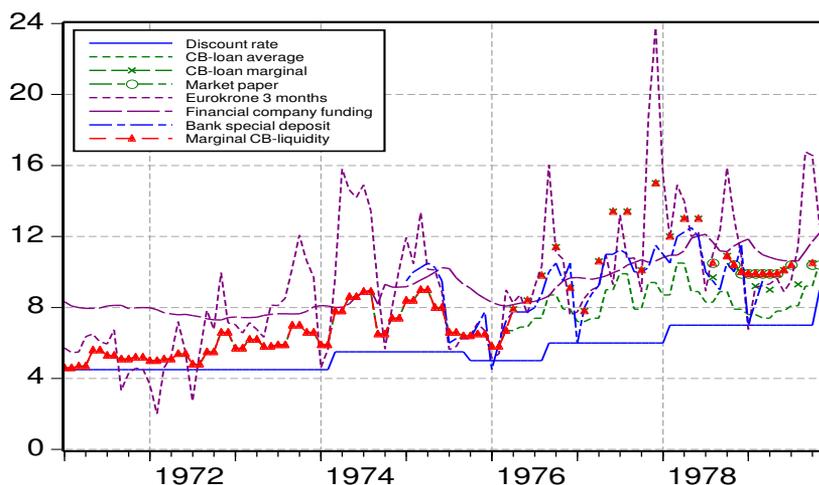
In 1977 Norges Bank started to issue a market paper with 90 days maturity. First as a trial arrangement from March 1 1977, but the arrangement was made permanent from December 1978. The purpose was to introduce a market oriented instrument which could be used in a flexible way to withdraw excess liquidity from the money market. From July 1982 the maturity could differ from 90 days and was decided discretionary by Norges Bank.⁵⁶ In August 1978 the banks were offered market papers (with 90 days maturity) in four rounds. The price quoted corresponded to effective yields of 10.5 per cent in round one (7 and 14 August), 10.4 per cent (November) and 9.9 per cent in the final round (December). In 1979 and 1980 the banks were offered market papers on a fairly regular basis, i.e. nine rounds in 1979 and five rounds in 1980. The banks' demand for the market paper declined in 1981 and only small volumes were traded. During 1982 through 1985 Norges Bank offered market papers to regulate bank liquidity, but since the liquidity situation in general was quite tight, only small volumes were traded. Norges Bank decided to phase this arrangement out in 1985.

1.6.6 Norges Bank interest rates 1971–1979

Figure 1.15 shows the average and marginal lending rates under Norges Bank's lending facilities. From August 1978 we also report the effective yield on Norges Bank's market paper. Before 1976, we have set the marginal liquidity rate equal to the average interest rate on Central Bank loans. This corresponds fairly well with the 3 months Eurokrone rate in this period, although the latter is significantly more volatile due to frequent episodes with distress in the foreign exchange markets in the 1970s. From February 1976 we have set the marginal liquidity rate equal to the marginal rate on Central Bank loans reported in Norges Bank's Quarterly Bulletin. For the period 1975–1978 we find these estimates to be reasonable compared with the 3 months Eurokrone rates and the interest rate on special deposits in banks which is available from January 1975 (cf. section 1.5 above and Table 1.C.1). The marginal liquidity rate picks up some of the fluctuations in the 3 months Eurokrone rate in 1976–1978 which are due to distress in the foreign exchange markets. From August 1978 we have used the maximum of the effective yield on Norges Bank's market paper and the marginal rate on Central Bank loans as our estimate of the marginal liquidity rate. This principle is followed until the automatic lending facility is revoked in March 1986.

⁵⁶See Circular (*Rundskriv*) 21/1982 and the Annual Report for 1982 (p. B32). For a detailed description see the Annual Report for 1977 (p. 43) and 1978 (p. 28).

FIGURE 1.15 Norges Bank interest rates 1971–1979. The interest rate on marginal CB-liquidity is plotted against the 3 months NIBOR rate and other money market interest rates, in per cent.



1.6.7 Revisions of Central Bank lending facilities in 1979 (A- and B-loans)

In January 1979 the automatic lending facility was subject to a major revision. The amount of total bank lending had shown a strong increase in 1978 despite attempts to curb lending using supplementary reserves. In order to limit bank lending and improve credit market regulations, but without resorting to §8 of the Monetary and Credit Policy Act,⁵⁷ the monetary authorities introduced a new lending facility called B-loans. The lending facility was split in an *automatic* part (A-loans) and a *conditional* part (B-loans). The availability of B-loans created an extra loan facility for banks which had fully exploited all tranches of the A-loan facility plus the liquidity buffer. The background for introducing B-loans was the view that quantitative regulations under §8 of the Monetary and Credit Policy Act were distortive as they affected all banks in a situation in which the monetary authorities only aimed at curbing bank lending for a couple of banks. Thus, the intention of B-loans was to introduce a more selective instrument which only affected banks who had already exploited their entire quota under the A-loan facility. These banks would have to accept quantitative restrictions on their lending growth for a period of six months once they entered the B-loan facility, and would hence selectively enter a control regime with quantitative regulations of their lending growth. In order to force a larger fraction of banks under direct lending control, the total loan liquidity quota under the

⁵⁷ §8 of the Monetary and Credit Policy Act provides the possibility for the monetary authorities to impose supplementary reserve requirements on banks. The supplementary reserves were proportional to excess growth in bank lending and were placed in non-interest bearing deposits in Norges Bank. In practice this worked like a direct regulatory instrument to curb bank lending.

A-loan facility was reduced by 55 per cent.⁵⁸

When Norges Bank changed its discount rate from 7 to 9 per cent on November 30 1979, the interest rate differentials between the different tranches under the A-loan facility were reduced to one percentage point.

1.6.8 Further revisions 1979–1986

In order to achieve further control over the banks' lending growth, the entire A-loan facility was suspended between November 1979 and February 1980 to force all banks into positive B-loan positions. When the suspension of the A-loan facility was lifted 1 March 1980, the size of each loan tranche was decreased by 50 per cent for the lending period March–April 1980. At the same time Norges Bank issued market papers with 12.5 per cent interest rate which was also the interest rate charged for B-loans. In order to smooth liquidity effects due to seasonal tax payments, an extra tranche was introduced for May–June 1980. When the 12.5 per cent market paper was redeemed on June 2, the interest rate on B-loans was reduced to 11.5 per cent (the discount rate + 3.5 per cent) simultaneously.

Norges Bank suspended the 2nd and 3rd loan tranche under the A-loan facility from September 1980 through December 1980 in an attempt to control growth in bank lending. However, these measures were inadequate and in January and February 1981 the lending facility was again truncated by cutting the three first loan tranches by 50 per cent. The lending facility was restored to its normal level on March 1 1981. This attempt to control bank lending was not successful and from May 1981 direct regulations (§8 in the Monetary and Credit Policy Act) were introduced. On May 15 the interest rates charged for tranches 2 and 3 were increased, and at the same time the interest rate on B-loans was increased from 11.5 to 12.5 per cent.

On March 1 1982 the Central Bank B-loan facility was changed into a three-tranche system with a corresponding increase in the severity of restrictions imposed by the monetary authorities. At the same time the liquidity buffer was suspended. On the background of relatively moderate lending growth from commercial banks in the first part of 1982, the §8-regulation was lifted for commercial banks and at the same time adjusted for savings banks to encompass all loans, not only loans to households. Total bank lending increased during the spring of 1982, and so did the banks' aversion against B-loans which would impose severe quantitative regulations (at the individual bank level) for a period of six months. The three B-loan tranches were significantly increased from July 1982 and the interest rate was set to the same level for all A- and B-loans respectively (9 and 10 per cent). From January 1 1983 the §8 regulation was removed also for savings banks. Bank lending continued to grow and during the summer of 1983 extensive use of §8 regulation was reintroduced. The entire

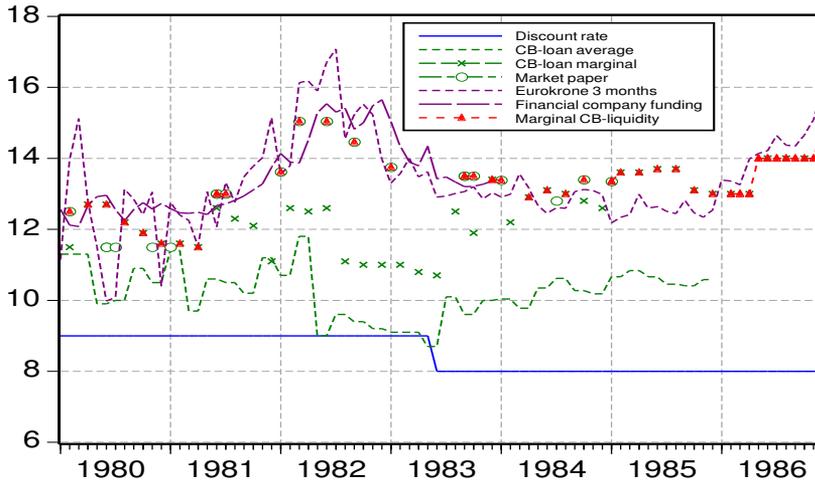
⁵⁸The A-loan facility was divided into three tranches with interest rates as before (discount rate, discount rate+1.5 per cent and 3 per cent respectively). On top of the A-loan facility a liquidity buffer was established where banks could borrow additional amounts in one of the next three two-month lending periods. The interest rate for this liquidity buffer was the discount rate + 3.5 per cent. Loans beyond the A-loan facility plus the liquidity buffer were given as B-loans and would automatically introduce additional regulations on the bank's lending growth. The interest rate on B-loans was set to the maximum of the discount rate + 3.5 per cent and the current yield on Norges Bank's market paper. Norges Bank also continued its lending facility on special terms (S-loans).

B-loan facility was suspended from July 1 1983 and replaced with a fourth A-loan tranche. The size of the extra A-loan tranche was twice the size of the ordinary ones. The respective interest rates for the four A-loan tranches was set to 8, 10, 12 and 14 per cent. In March 1986 the lending facility was changed completely and replaced by a simpler system, with a lesser degree of automatic lending.

1.6.9 Norges Bank interest rates 1980–1986

Figure 1.16 reports the marginal liquidity rate against the average and marginal Central bank loan rate under the automatic lending facility and compares these with the 3 months Eurokrone rate and the funding rate reported by some finance companies (cf. section 1.5 above and Table 1.C.1). Two points are worth mentioning. First, we note that in the 1980s the discount rate does not reflect the behavior of the marginal liquidity rate and from January 1987 the discount rate is discontinued. Second, whereas the marginal interest rate on Central Bank loans was a reasonable estimate of the marginal liquidity rate in the late 1970s we find that the gap between the yield on Norges Bank's market paper and the marginal interest rate on Central Bank loans widened significantly from mid 1981 to mid 1983. In this period we have seen that the lending facility was adjusted to force the banks into B-loans and direct lending control. The banks preferred higher funding costs in the money market to being forced into B-loans and we find that the marginal liquidity rate corresponds closely to the observed money market interest rates in this period. A tight liquidity policy was pursued throughout the period from 1983 to 1986 in order to curb the explosion in bank lending in this period. In this period the marginal liquidity rate was maintained at a high level (typically between 13 and 14 per cent). As we see from Table 1.1 the monetary authorities used all available regulatory instruments in 1983 in order to control bank lending, but as we have noted above, without success.

FIGURE 1.16 Norges Bank interest rates 1980–1986. The interest rate on marginal CB-liquidity is plotted against the 3 months NIBOR rate and other money market interest rates, in per cent.



1.6.10 Norges Bank interest rates 1987–2007

The banks' net borrowing position in Norges Bank was of moderate size until early in 1986. Norges Bank withdrew liquidity by selling foreign currency in the autumn of 1985 and the spring of 1986 to stabilize the krone exchange rate. The sharp drop in oil prices and the foreign exchange crisis in the spring of 1986 caused a dramatic outflow of capital. The automatic lending facility was discontinued and replaced with a simpler system with overnight loans (D-loans) with one tranche and an interest rate which, in principle, could change from day to day.⁵⁹ During the spring of 1986 Norges Bank supplied a substantial amount of liquidity without collateral in order to avoid a sharp increase in money market interest rates. This development is shown in Figure 1.17.

⁵⁹For each bank, a quantitative limit (tranche size) applied to the maximum amount of D-loans which was available within a time frame of one month. In 1991 this time frame was reduced from one month to a half month.

FIGURE 1.17 A decomposition of Norges Bank net supply of liquidity to banks 1982–2007, in billions NOK.

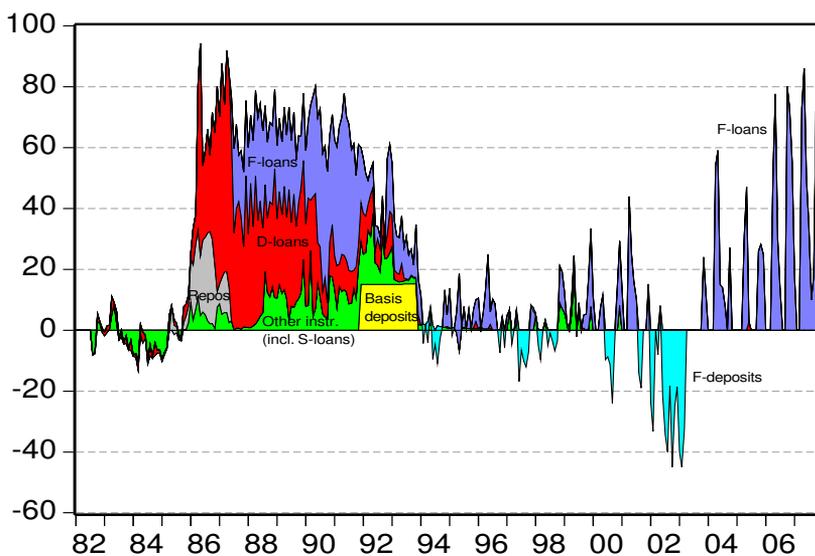
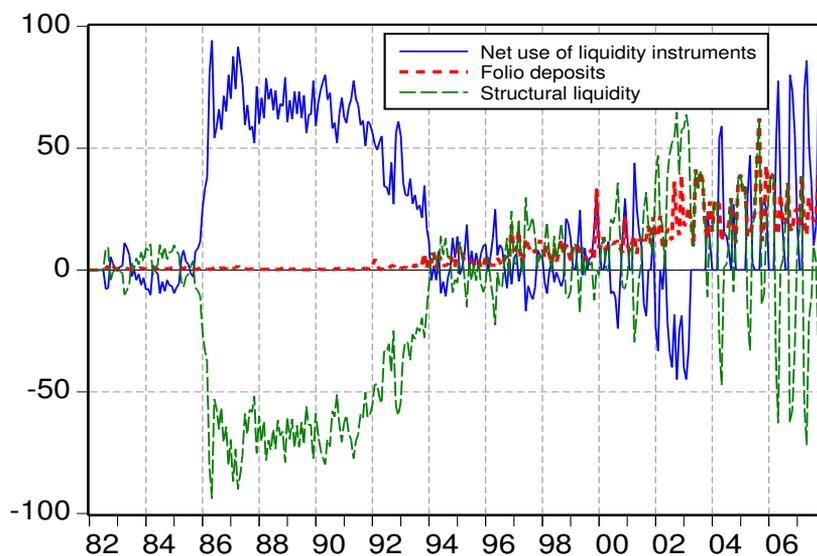


FIGURE 1.18 Structural liquidity 1982–2007 and its decomposition in folio deposits and net supply of Central Bank liquidity, in billions NOK.



In the fall of 1986 liquidity was also supplied through repurchase agreements and currency swaps. Due to reductions in the primary reserve requirements the banks had to hold more bonds to meet liquidity requirements stated in the banking acts. Repurchase agreements were therefore insufficient to supply the banks with necessary liquidity and this instrument has not been used as an instrument for liquidity control since 1987. In June 1987 Norges Bank introduced F-loans (fixed-rate loans) with maturities extending up to 12 months, to reduce the banks' dependence on overnight loans (D-loans), and help insulate the banks' lending rates against short term fluctuations in money market rates in times of turbulence in the foreign exchange market. F-loans were initially offered without collateral requirements. The foreign exchange crisis left Norges Bank with large, unsecured loans to banks when their solvency problems began in 1988. The banks' extensive debt to Norges Bank was first reduced in the fall of 1993 when banks' reverted to a net deposit position.

A requirement of collateral for D-loans was re-introduced in 1994 and a requirement of collateral for F-loans was introduced in 1999.⁶⁰ Figure 1.18 compares the development in the net use of liquidity instruments from 1982 to 2007 with the development in the banks' overnight deposits in Norges Bank and the bank *structural liquidity*, i.e. a liquidity measure net of Norges Bank's use of liquidity instruments.

Sight deposits became interest-bearing deposits as from 1 January 1991. Until summer 1993, however, the interest rate on banks' D-loans was Norges Bank's key rate. The banking system was in a permanent borrowing position vis-à-vis Norges Bank, and the interest rate on banks' D-loans formed a floor for short-term money market rates, see Figure 1.19. In the entire period from 1986 to 1993 the D-loan rate was the key administered interest rate set by Norges Bank. We have set the marginal liquidity rate equal to the interest rate on F-loans in this period, except in 1992 and the first five months of 1993 when we have used the D-loan rate. We see that the marginal liquidity rate picks up some of the variations in the 3 months NIBOR rate in this period, lying above the D-loan rate.

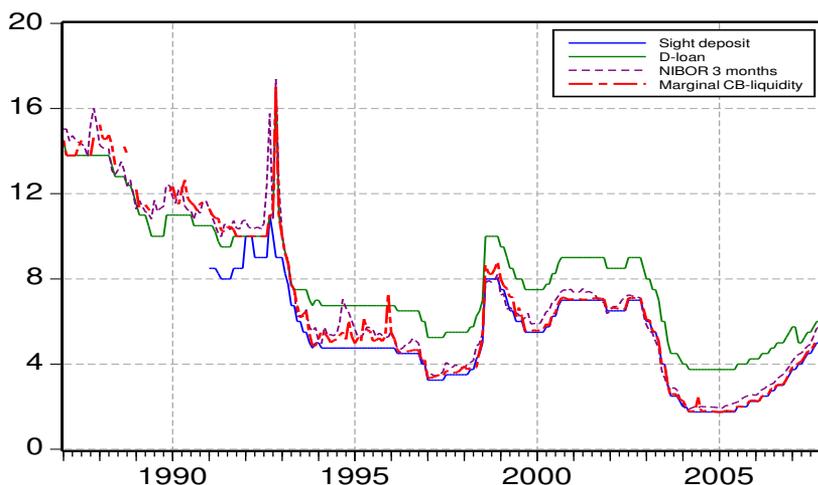
From autumn 1993 the banking system was generally in a net deposit position. Injections of liquidity through expansionary fiscal policy had gradually reduced the banks' need for Central Bank financing. Norges Bank started to manage short term money market interest rates within an interest rate corridor. The 'ceiling' of the interest rate corridor was the D-loan rate and the 'floor' was the sight deposit rate.⁶¹ The D-loan rate and the sight deposit rate were subject to several reductions through January–August 1993. In May 1993 the width of the corridor was increased to 1.5 percentage point to promote improved functioning of the interbank market, and since August 3 1993 the width has been 2 percentage points until it was reduced to 1 percentage point in March 2007.

The banks were still in a net borrowing position in the spring 1993 and the short term money market rates were higher than the D-loan rate. Thus, as there were no auctions in this period, we have set the marginal liquidity rate equal to the D-loan rate until May 1993. In June 1993, however, all money market rates were in the interior of the interest rate corridor and for this month we decided

⁶⁰See Bøhn and Selnes (1995, p. 19) and Gerdrup (2005) for further discussion of Norges Banks liquidity policy and its role as lender of last resort.

⁶¹See Bøhn and Selnes (1995) for a more detailed discussion.

FIGURE 1.19 Norges Bank interest rates 1987–2007. The interest rate on marginal CB-liquidity is plotted against the interest rates on D-loans, sight deposits and the 3 months NIBOR rate, in per cent.



to set the marginal liquidity rate equal to the midpoint between the D-loan rate and the sight deposit rate.⁶² From July 1993 onwards we have set the marginal liquidity rate equal to the maximum of the interest rate on F-loans and the interest rate on F-deposits. In the following years, Norges Bank frequently used fine-tuning liquidity instruments with a view to keeping the krone exchange rate stable, and we observe substantial fluctuations in marginal liquidity rates within the interest rate corridor.

We see from Figure 1.19 that between late 1993 and late 1996 there were only a few changes in this corridor. In November 1996 and January 1997 the administered interest rates were lowered to stabilize the exchange rate against a strong appreciation pressure. We see that the marginal liquidity rate follows the sight deposit rate quite closely in this period. In the second half of the 1990s, the banking system's sight deposits in Norges Bank were large, and money market rates fell towards the floor of the interest rate corridor. From 1996 onwards the main changes in the interest rate on marginal liquidity have been initiated by changes in the administered interest rates on sight deposits and D-loans, rather than by liquidity operations. The marginal liquidity rate has only temporarily deviated from the sight deposit rate in this period, typically in periods such as 1998–1999 when oil prices dropped significantly and we experienced a prolonged period with turbulence in the foreign exchange markets. Since then, short-term money market rates have for the most part remained somewhat above the sight deposit rate.

⁶²See Chart 1.4 in Bøhn and Selnes (1995, p. 16) and data in Table 1.C.2 and Table 1.D.2 in the appendix.

1.7 Summary of key interest rates set by Norges Bank

Norges Bank liquidity instruments and their interest rates.

1818	Regional discount rates	Regional branches of Norges Bank set the discount rate which could differ between the different regions.
1892	National discount rate	A revised Norges Bank Act was introduced in 1892. A common discount rate applied to all branches.
1965	New Central Bank lending facilities.	A new Monetary and Credit Policy Act was introduced in 1965 along with substantial changes in the Central Bank lending system. The banks were subject to a lending system based on two-month lending periods and an increasing interest rate schedule which depended on the banks' utilization of Central Bank credit. The lending system was subject to frequent adjustments.
1977	Norges Bank market paper	Norges Bank started to issue market papers with 90 days maturity in order to promote the use of <i>market-oriented</i> liquidity instruments.
1979	Foreign currency swaps and forward agreements	In order to control bank liquidity Norges Bank entered the foreign exchange market buying and/or selling e.g. USD against kroner in the spot or forward market, ^a
1985	T-bill yields	The market for short term certificates issued by private banks, non-financial corporations or government sectors was reinvigorated. T-bills issued by the central government were typically for 3, 6 and 12 months.
1986	D-loan rate	From December 1986 the overnight lending rate (D-loan rate) was used actively to stabilize the exchange rate. The D-loan rate was the key administered interest rate set by Norges Bank until the summer of 1993.
1987	F-loan rate	Auction of F-loans with maturity up to 12 months. From 1994 the maturity of F-loans has only exceptionally been more than two weeks.
1991	Sight deposit rate	From January 1991 private banks earned a positive interest rate on sight deposits in Norges Bank. From 1996 the sight deposit rate has been the key administered interest rate set by Norges Bank.
1992	F-deposit rate	Auction of F-deposits with maturity up to two weeks.

^aWhereas spot transactions affect bank liquidity immediately, transactions in the forward market affect liquidity on a future date usually in one to three months. A swap transaction combines the two such that the spot transaction is reversed on a prespecified future date.

1.8 Notes and sources to appendix tables

Tables 1.A.1 and 1.A.1

Discount rates at the various branches of Norges Bank 1818–1892 A survey of discount rate changes at the various branches written in the early 1950s is in the archives of Norges Bank at the Norwegian Public Record Office (*Riksarkivet*), catalogued under the item *Direksjonsarkiv D2/0209*. There are some gaps in the list, particularly before 1858. Some additional information was obtained from the annual reports of Norges Bank regularly published in Norwegian Parliamentary Papers (*Stortingsdokumenter*), but prior to the the 1860s the information on discount rate changes was somewhat incomplete concerning several branches here as well – the Board’s report included only those discount rate changes that had been *reported* to the main office. This is by itself an interesting piece of evidence regarding the decentralized character of Norges Bank’s operations at the time. For the period between December 1853 and January 1858 information on discount rate changes of the Skien branch were found in the local newspaper *Correspondenten*. For the early years there is also some additional information in Rygg (1950).

Discount rates 1893–1986 A full list of discount rate changes from October 1818 to the end of 1979 (before 1893 at the Christiania branch only) was published in the Annual Report of Norges Bank in 1979, p. E10. For the years 1980–1986 such information was taken from various issues of *Penger og Kreditt*.

Deposit rates at savings banks terms The dates of changes in the savings deposits rate at the Christiania (Oslo) Sparebank up to 1921 can be found in Vogt (1922). Similar data can be updated from *Kierulfs håndbok over norske obligasjoner og aksjer*. Data for Den norske Creditbank are from Hertzberg and Rygg (1907), for Christiania Bank og Kreditkasse from Engebretsen (1948).

Tables 1.B.1 and 1.B.2

The interest rates fixed on Treasury bills 1941–1985 are taken from the annual reports of Norges Bank and the special report covering the war years (*Norges Bank under okkupasjonen*, Oslo, 1945).

Tables 1.C.1 and 1.C.2

Eurokrone rate Before July 1972 data on the three-month rate on Eurodollar deposits in London, middle-closing rates quoted on the last working day of the month, are taken from International Financial Statistics tapes and Bank of England Quarterly Bulletin, data on spot and forward exchange rates from International Financial Statistics tapes and quotations provided by Den norske Creditbank. From July 1972 to the end of 1986 all primary data (eurodollar rate, spot and forward exchange rates) are from the primary sources underlying the CUMIX database developed by Schilbred (1990).

Other money market rate Private information from finance companies (Jøtun, Nevi).

Table 1.D.1– 1.D.3

Variables recorded in Table 1.D.1 (end-of-month observations): *Discount rate* is recorded from Table A1.1, *CB-loan average* and *CB-loan marginal* are recorded from various vintages of Norges Bank Quarterly Bulletin (*Penger og Kreditt*) and annual reports. These are also the main sources for all individual interest rates in the Norges Bank lending facility 1965–1986.

Variables recorded in Table 1.D.2 (end-of-month observations): *Discount rate* is recorded from Table A1.1, *CB-loan average* and *CB-loan marginal* are taken from various vintages of Norges Bank Quarterly Bulletin (*Penger og Kreditt*) and annual reports. The same holds for the yield on Norges Banks *Market paper* over the period 1978–1985. The administered interest rates *D-loan* and *Sight deposit* are recorded from Norges Banks web-page. The monthly series for *F-loan* and *F-deposit* have been calculated on the basis of available auction data since the first F-loan auction was held in 1987. In total we have processed data from more than 1150 auctions according to the same principles as Norges Bank uses when it reports weighted F-loan and F-deposit data on a monthly basis in Norges Bank Quarterly Bulletin (*Penger og Kreditt*). The series for *Marginal liquidity* is a combination of data from *Discount rate* (before 1966), *CB-loan average* (1965:1–1976:3), *CB-loan marginal* (1976:4 1981:5) (with the following exceptions when we use *Market paper* (1978:8,1978:11,1979:1–1979:5,1979:7–1979:8,1980:2)). Then we use *Market paper* (1981:6–1985:1) with the following exceptions when we use the interest rate on *CB-loan marginal* (1983:12,1984:3–1984:8). *CB-loan marginal* is also used for 1985:2–1986:2 after which we set *Marginal liquidity* equal to *D-loan* (1986:3–1987:5) and *F-loan* (1987:6–1991:9). Then we use *D-loan* (1991:10–1993:5), $(D-loan+Sight\ deposit)/2$ (1993:6), and finally we set *Marginal liquidity* equal to $\max(F-loan,F-deposit)$ (1993:7–2007:10).

Variables recorded in Table 1.D.3 (quarterly averages): Calculated on the basis of data in Table 1.D.2.

Bibliography

- Allen, L. (1997). *Capital Markets and Institutions: A Global View*. Wiley, New York.
- Anderson, N., F. Breedon, M. Deacon, A. Derry and G. Murphy (1996). *Estimating and Interpreting the Yield Curve*. Wiley, Chichester.
- Aschehoug, T. H. (1913). *Socialøkonomik. Bind 3*. Aschehoug & Co., Oslo.
- Bøhn, H. and S. Selnes (1995). The money market and monetary policy. In *Norwegian monetary policy and financial markets, Norges Banks Occasional Papers No. 24, Ch. 1*. Norges Bank, Oslo.
- Egge, Å. (1972). Trekk av sparebankvesenet og sparebanklovgivningen i slutten av forrige århundre. In *Studier i sparing og sparebankvesen i Norge 1822-1972*, 101–153. Gyldendal, Oslo.
- Eide, L. (1973). *The Norwegian monetary and credit system*. Norges Bank Occasional Papers no. 1, Oslo: Norges Bank.
- Eide, L. and K. Holli (1980). *The Norwegian monetary and credit system*. Norges Bank Occasional Papers no. 9, Oslo: Norges Bank.
- Engebreetsen, E. (1948). *Christiania Bank og Kreditkasse 1848-1948*. Aschehoug, Oslo.
- Fidjestøl, A. (2007). Sentralbankens likviditetspolitikk i en oljeøkonomi. *Penger og Kreditt 2007/3*, 35, 102–110.
- Gerdrup, K. (2005). Norges Bank's role in the event of liquidity crises in the financial sector. *Economic Bulletin 2005/2*, 76, 80–88.
- Grønvik, G. (1994). Bankregulering og bankatferd 1975-1991. Norges Banks Skriftserie 22, Oslo: Norges Bank.

- Gulbrandsen, B. (1995). Utlån gjennom kredittinstitusjoner. In Vale, B. (ed.), *Norske finansmarkeder, norsk penge- og valutapolitikk, Norges Banks Skriftserie Nr. 23, Kap. 5*. Norges Bank, Oslo.
- Hertzberg, E. and N. Rygg (1907). *Den norske Creditbank 1857-1907*. Christiania.
- Jacobsen, T. S. (2005). Analyse av auksjoner i statskasseveksler i perioden fra oktober 2000 til utgangen av 2004. *Penger og Kreditt* 2005/2, 33, 28–36.
- Keilhau, W. (1952). *Den norske pengehistorie*. Aschehoug, Oslo.
- King, W. T. C. (1936). *History of the London Discount Market*. George Routledge, London.
- Klovland, J. T. (2004). Bond markets and bond yield in Norway 1820-2003. In Eitrheim, Ø., J. T. Klovland and J. F. Qvigstad (eds.), *Historical Monetary Statistics for Norway 1819-2003*, Norges Bank Occasional Paper no. 35, 99–180. Norges Bank, Oslo.
- Kran, L.-C. and G. Øwre (2005). Norges Bank's system of managing interest rates. *Economic Bulletin* 2002/1, 73, 65–70.
- Langbraaten, N. and H. Thorstad (1998). Det norske pengemarkedet. *Penger og Kreditt*, (2), 262–272.
- Levich, R. M. (2001). *International Financial Markets. Prices and policies*. Irwin: McGraw-Hill.
- Norges Bank (1985). *The Norwegian monetary and credit system*. Norges Bank Occasional Papers no. 15, Oslo: Norges Bank.
- Norges Bank (1989). *Norwegian credit markets. Norwegian monetary and credit policy*. Norges Bank Occasional Papers no. 17, Oslo: Norges Bank.
- Norges Bank (1995). *Norwegian monetary policy and financial markets*. Norges Bank Occasional Papers no. 24, Oslo: Norges Bank.
- Norges Bank (2004). *Norske finansmarkeder – pengepolitikk og finansiell stabilitet*. Norges bank occasional papers no. 34, Oslo: Norges Bank.
- Rygg, N. (1918). *Norges Banks historie. Første del*. Kristiania.
- Rygg, N. (1950). *Norges Bank i mellomkrigstiden*. Gyldendal, Oslo.
- Rygg, N. (1954). *Norges Banks historie. Del II*. Oslo.
- Schilbred, C. M. (1990). *Managing short term currency risk - CUMIX*. Tano, Oslo.
- Schreiner, J. (1943). *Akers Sparebank gjennom hundre år 1844-1944*. Grøndahl og Sønns Boktrykkeri, Oslo.

- Sejersted, F. (2002a). Fra monopolbank til sentralbank. In *Demokratisk kapitalisme*, 167–191. Pax, Oslo.
- Sejersted, F. (2002b). Norges Bank of høykonjunkturen i 1840-årene. In *Demokratisk kapitalisme*, 96–166. Pax, Oslo.
- Svensson, L. E. O. (1995). Estimating Forward Interest Rates with the Extended Nelson & Siegel Method. *Sveriges Riksbank Quarterly Review*, (3), 13–26.
- Vogt, N. (1922). *Christiania Sparebank gjennom hundrede aar*. Christiania.

1.A Norwegian short term interest rates

1.A.1 End-of-month data 1818–1986

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1818													
NB discount rate										8.00	8.00	8.00	8.00
NB Christiania										8.00	8.00	8.00	8.00
NB Trondhjem										8.00	8.00	8.00	8.00
NB Bergen										8.00	8.00	8.00	8.00
NB Chr.sand S										8.00	8.00	8.00	8.00
1819													
NB discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB Christiania	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB Trondhjem	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB Bergen	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB Chr.sand S	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
1820													
NB discount rate	8.00	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.55
NB Christiania	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB Trondhjem	8.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.08
NB Bergen	8.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.08
NB Chr.sand S	8.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.08
1821													
NB discount rate	7.51	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
NB Christiania	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB Trondhjem	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Bergen	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Chr.sand S	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
1822													
NB discount rate	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
NB Christiania	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB Trondhjem	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Bergen	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Chr.sand S	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Deposits CHRS						4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1823													
NB discount rate	7.50	7.50	7.50	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.12
NB Christiania	8.00	8.00	8.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.25
NB Trondhjem	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Bergen	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Chr.sand S	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CHRS 1824	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Christiania	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Trondhjem	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Bergen	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Chr.sand S	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Deposits CHRS 1825	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.33
NB Christiania	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.33
NB Trondhjem	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.33
NB Bergen	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.33
NB Chr.sand S	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.33
Deposits CHRS 1826	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1827	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1828	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1829	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CHRS 1830	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1831	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1832	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1833	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1834	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1835	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CHRS 1836	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1837	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1838	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	5.80	5.79	5.78	5.77	5.77	5.76	5.75	5.74	5.73	5.73	5.72	5.71	5.75
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS 1839	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	5.71	5.71	5.71	5.71	5.71	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS 1840	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	5.70	5.69	5.69	5.69	5.68	5.68	5.68	5.67	5.67	5.67	5.66	5.66	5.68
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1841													
NB discount rate	5.66	5.65	5.65	5.65	5.65	5.65	5.64	5.64	5.64	5.64	5.63	5.63	5.64
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1842													
NB discount rate	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1843													
NB discount rate	5.63	5.63	5.63	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.16
NB Christiania	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.25
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.25
NB Skien	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.25
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1844													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Christiania	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1845													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Christiania	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

TABLE I.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1846													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Christiania	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1847													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Christiania	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1848													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.38	5.51	6.00	6.00	6.00	6.00	6.00	5.49
NB Christiania	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.42
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50
NB Skien	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.42
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1849													
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1850													
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.53	5.39	5.08	5.08	5.00	5.67
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.58

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.92
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.67
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.58
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.75
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.75
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1851													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.77	4.76	4.76	4.94
NB Christiania	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.88
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1852													
NB discount rate	4.77	4.77	4.78	4.78	4.79	4.79	4.80	4.80	4.81	5.00	5.00	5.00	4.84
NB Christiania	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	5.00	4.62
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1853													
NB discount rate	5.00	5.54	5.21	5.07	5.07	5.07	4.66	4.70	4.70	4.70	4.70	4.64	4.92
NB Christiania	5.00	6.00	5.00	5.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00	4.58
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.17
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	4.00	4.50	4.50	4.50	4.50	4.50	4.71
NB Skien	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.83
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Tromsø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1854													
NB discount rate	4.64	4.64	4.64	4.64	4.64	4.64	4.96	5.00	5.00	4.65	4.65	4.65	4.73
NB Christiania	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	4.00	4.00	4.00	4.25
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	4.50	4.50	4.50	4.58
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

TABLE I.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Tromsø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Halden										5.00	5.00	5.00	5.00
Deposits CHRS 1855	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	4.65	4.65	4.65	4.96	4.96	4.96	4.96	4.97	5.00	5.31	5.44	5.44	5.00
NB Christiania	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	5.00
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	5.17
NB Drammen	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	4.67
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Tromsø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	5.17
Deposits CHRS 1856	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	5.61	5.61	5.30	5.24	5.19	5.19	5.51	5.59	5.66	5.77	6.00	6.00	5.56
NB Christiania	6.00	6.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	5.67
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	5.58
NB Drammen	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	5.58
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.42
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	5.17
NB Tromsø	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.67
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS 1857	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS Deposits DNC 1858	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	6.00	4.42
NB discount rate	6.49	6.67	6.68	6.69	6.21	6.21	5.65	5.16	5.08	4.70	4.69	4.67	5.74
NB Christiania	7.00	7.00	7.00	7.00	6.00	6.00	5.00	4.50	4.50	4.00	4.00	4.00	5.50
NB Trondhjem	7.00	7.00	7.00	7.00	7.00	7.00	6.00	5.00	5.00	5.00	5.00	5.00	6.08
NB Bergen	6.00	7.00	7.00	7.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.83

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Drammen	6.00	7.00	7.00	7.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.75
NB Skien	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.00	5.00	5.00	5.00	5.00	6.25
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.75
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	4.00	4.00	4.00	5.33
Deposits DNC	5.50	5.50	5.50	5.50	5.50	5.50	4.50	4.50	4.00	4.00	4.00	4.00	4.83
1859													
NB discount rate	4.68	4.68	4.68	5.03	5.17	5.61	5.61	5.65	5.65	5.65	5.65	5.65	5.31
NB Christiania	4.00	4.00	4.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.33
NB Trondhjem	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.67
NB Bergen	5.00	5.00	5.00	4.50	4.50	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.12
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.42
Deposits DNC	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.38
1860													
NB discount rate	5.67	5.67	5.30	5.31	5.31	5.32	5.76	5.76	5.77	5.77	5.41	5.77	5.57
NB Christiania	6.00	6.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	5.00	6.00	5.58
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits DNC	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
1861													
NB discount rate	5.77	5.77	5.42	5.90	6.00	6.00	6.00	6.00	5.87	5.87	5.70	5.70	5.83
NB Christiania	6.00	6.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.92
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.83
NB Bergen	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.42
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Chr.sand S	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.67
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Stavanger					6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00

TABLE I.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CHRS	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.92
Deposits DNC	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.92
1862													
NB discount rate	5.39	5.71	5.87	5.54	5.54	5.53	5.87	5.29	5.16	5.07	5.07	5.06	5.42
NB Christiania	5.00	6.00	6.00	5.00	5.00	5.00	6.00	5.00	5.00	5.00	5.00	5.00	5.25
NB Trondhjem	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.42
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.83
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.58
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.67
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.75
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1863													
NB discount rate	5.06	5.50	5.85	5.85	5.42	5.42	5.29	5.13	5.13	5.13	5.13	5.61	5.38
NB Christiania	5.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	5.33
NB Trondhjem	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.42
NB Bergen	4.50	5.00	5.50	5.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.04
NB Drammen	5.00	5.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	6.00	5.42
NB Skien	5.00	5.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	6.00	5.42
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Lillehammer									5.00	5.00	5.00	5.00	5.00
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.79
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.79
1864													
NB discount rate	5.80	5.86	5.86	5.87	5.93	6.00	6.00	6.00	6.00	6.42	6.04	6.04	5.98
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	7.00	6.00	6.00	6.08
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	5.00	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.79
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	7.00	6.00	6.00	6.08
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Lillehammer	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	6.25
Deposits CHRS	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits DNC	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.88
1865													
NB discount rate	5.47	5.47	5.47	5.46	5.46	5.48	5.18	5.11	5.11	4.85	4.59	4.43	5.17
NB Christiania	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.00	4.00	4.67
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	4.50	5.71
NB Bergen	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.00	4.83
NB Drammen	5.00	5.00	5.00	5.00	5.00	6.00	5.00	5.00	5.00	4.50	4.50	4.50	4.96
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.58
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.42
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.83
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.83
NB Lillehammer	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	4.50	5.46
Deposits CHRS	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.29
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50
1866													
NB discount rate	4.44	4.56	4.56	4.57	5.80	6.35	6.67	6.21	6.03	6.03	6.04	6.04	5.61
NB Christiania	4.00	4.00	4.00	4.00	6.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	5.50
NB Trondhjem	4.50	4.50	4.50	4.50	6.00	6.00	7.00	7.00	6.00	6.00	6.00	6.00	5.67
NB Bergen	4.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Drammen	4.50	4.50	4.50	4.50	6.00	6.00	7.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Skien	5.00	5.00	5.00	5.00	5.00	6.00	7.00	6.00	6.00	6.00	6.00	6.00	5.67
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Stavanger	5.00	5.00	5.00	5.00	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.25
NB Lillehammer	4.50	4.50	4.50	4.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.17
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50
1867													
NB discount rate	6.00	6.00	5.92	5.92	5.92	5.54	5.60	5.60	5.50	5.44	5.23	5.09	5.65
NB Christiania	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	4.50	4.00	5.29
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Bergen	6.00	6.00	6.00	6.00	6.00	5.00	6.00	6.00	5.00	4.50	4.50	4.50	5.46
NB Drammen	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.17
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.83
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Lillehammer	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.00	4.00	4.00	4.00	4.58

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.00	4.00	4.00	4.00	4.58
1868													
NB discount rate	4.98	4.99	5.27	5.27	5.34	5.56	5.92	5.92	5.66	5.61	5.54	5.35	5.45
NB Christiania	4.00	4.00	5.00	5.00	5.00	5.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00
NB Trondhjem	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.92
NB Bergen	5.00	5.00	5.00	5.00	5.50	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.50
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50
NB Skien	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.42
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Lillehammer	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.83
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.00	4.00	4.00	4.00	4.17
1869													
NB discount rate	5.48	5.47	5.47	5.47	5.47	5.47	5.65	5.64	5.04	4.91	4.90	4.90	5.32
NB Christiania	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.83
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	5.00	5.00	5.00	5.00	5.17
NB Bergen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	4.50	4.50	4.50	5.54
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.67
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.75
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.67
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Lillehammer	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1870													
NB discount rate	4.89	4.80	4.89	5.13	5.13	4.89	5.10	5.15	5.04	5.04	4.90	4.90	4.99
NB Christiania	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	4.50	4.50	4.67
NB Trondhjem	5.00	4.50	5.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.12
NB Bergen	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	4.00	4.00	4.00	4.00	4.42
NB Drammen	5.00	5.00	5.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.17
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	5.42
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Lillehammer	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	4.75
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1871													
NB discount rate	4.80	4.57	4.58	4.71	4.68	4.58	4.26	4.04	3.91	3.89	3.88	3.88	4.31
NB Christiania	4.50	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.79
NB Trondhjem	5.00	4.50	4.50	5.00	5.00	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.38
NB Bergen	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.00	3.50	3.50	3.50	3.50	3.92
NB Drammen	4.50	4.50	4.50	5.00	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.25
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.00	4.00	4.00	4.00	4.58
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	4.58
NB Tromsø	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	5.29
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.00	4.00	4.00	4.00	4.00	4.58
NB Stavanger	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50
NB Lillehammer	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.00	4.00	4.67
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50
1872													
NB discount rate	3.88	3.87	3.94	3.94	3.94	4.00	3.99	3.99	3.97	3.91	3.96	3.96	3.95
NB Christiania	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Trondhjem	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Bergen	3.50	3.50	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.00	4.50	4.50	4.17
NB Drammen	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Skien	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Chr.sand S	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Tromsø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Halden	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.83
NB Lillehammer	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.54
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Deposits DNC	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.29
1873													
NB discount rate	3.88	3.88	3.99	4.20	4.24	4.24	4.38	4.30	4.49	4.52	4.93	4.98	4.33
NB Christiania	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.50	4.50	5.00	5.00	4.12
NB Trondhjem	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	4.50
NB Bergen	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.00	4.50	4.50	4.50	5.00	4.38
NB Drammen	3.50	3.50	3.50	4.00	4.50	4.50	4.50	4.00	4.00	4.50	5.00	5.00	4.21
NB Skien	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.17
NB Chr.sand S	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50
NB Tromsø	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.83
NB Halden	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00	5.00	4.17
NB Stavanger	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Lillehammer	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.50	4.50	5.00	5.00	4.12
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.33

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits DNC	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.54
1874													
NB discount rate	4.95	4.80	4.80	5.06	5.07	5.02	5.04	5.01	4.86	4.84	4.78	4.96	4.93
NB Christiania	5.00	4.50	4.50	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	5.00	4.79
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Bergen	5.00	5.00	5.00	5.00	5.00	4.50	5.00	5.00	5.00	5.00	4.50	4.50	4.88
NB Drammen	4.50	4.50	4.50	5.50	5.50	5.50	5.00	4.50	4.50	4.50	4.50	4.50	4.79
NB Skien	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Tromsø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Stavanger	4.50	4.50	4.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.62
NB Lillehammer	5.00	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	4.50	4.50	5.00	4.79
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1875													
NB discount rate	4.96	5.04	5.23	5.87	5.92	6.57	6.20	6.10	6.10	6.10	6.10	6.50	5.89
NB Christiania	5.00	5.00	5.00	6.00	6.00	7.00	6.00	6.00	6.00	6.00	6.00	7.00	5.92
NB Trondhjem	5.00	5.00	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.71
NB Bergen	4.50	5.00	6.00	6.00	6.00	6.50	6.50	6.50	6.50	6.50	6.50	6.00	6.04
NB Drammen	4.50	5.00	5.00	6.00	6.00	7.00	6.00	6.00	6.00	6.00	6.00	7.00	5.88
NB Skien	5.00	5.00	5.00	6.00	6.00	7.00	7.00	6.00	6.00	6.00	6.00	7.00	6.00
NB Chr.sand S	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.75
NB Tromsø	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.67
NB Halden	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.75
NB Stavanger	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.58
NB Lillehammer	5.00	5.00	5.00	6.00	6.00	7.00	7.00	6.00	6.00	6.00	6.00	7.00	6.00
NB Bodø		5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.73
Deposits CHRS	4.00	4.00	4.00	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.71
Deposits DNC	4.00	4.00	4.00	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.71
1876													
NB discount rate	6.14	5.85	5.83	5.99	5.99	6.05	6.05	5.64	5.64	5.64	5.22	5.03	5.76
NB Christiania	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	4.50	4.50	5.50
NB Trondhjem	6.00	5.00	5.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	4.50	4.00	5.29
NB Bergen	6.00	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	5.00	4.50	5.62
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.83
NB Skien	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.08
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Tromsø	6.00	6.00	5.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.96
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Stavanger	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.00	6.92
NB Lillehammer	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	6.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Bodø	6.00	6.00	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	5.00	5.00	5.67
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.92
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.92
Deposits CBK											4.50	4.50	4.50
1877													
NB discount rate	5.03	4.98	4.76	5.89	6.21	6.29	6.31	6.15	6.15	6.68	6.72	6.71	5.99
NB Christiania	4.50	4.50	4.50	6.00	6.50	6.50	6.50	6.50	6.50	7.00	7.00	7.00	6.08
NB Trondhjem	4.00	4.00	4.50	5.50	6.00	6.00	6.00	5.00	5.00	6.00	6.00	6.00	5.33
NB Bergen	4.50	4.50	4.50	6.00	6.00	6.50	6.50	6.50	6.50	6.50	6.50	6.50	5.92
NB Drammen	5.00	5.00	4.50	6.00	6.50	6.50	6.50	6.50	6.50	7.00	7.00	7.00	6.17
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	6.25
NB Chr.sand S	6.00	6.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	6.17
NB Tromsø	6.00	6.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.92
NB Halden	6.00	5.00	5.00	5.00	6.00	6.50	6.50	6.00	6.00	6.00	7.00	7.00	6.00
NB Stavanger	6.00	6.00	5.00	6.00	6.00	6.50	6.50	6.50	6.50	7.00	7.00	7.00	6.29
NB Lillehammer	5.00	5.00	5.00	6.00	6.50	6.50	6.50	6.50	6.50	7.00	7.00	7.00	6.21
NB Bodø	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.67
Deposits CHRS	4.50	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.79
Deposits DNC	4.50	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.79
Deposits CBK	4.50	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.79
1878													
NB discount rate	6.55	6.63	6.63	6.48	6.38	6.22	6.15	6.16	6.17	6.05	5.99	5.99	6.29
NB Christiania	6.50	6.50	6.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.12
NB Trondhjem	6.00	6.50	6.50	6.50	6.50	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.92
NB Bergen	6.50	6.50	6.50	6.50	5.50	5.50	5.50	6.50	6.50	6.00	5.50	5.50	6.04
NB Drammen	7.00	7.00	7.00	7.00	7.00	6.50	6.50	6.00	6.00	6.00	6.00	6.00	6.50
NB Skien	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Chr.sand S	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.50	6.50	6.00	6.00	6.00	6.67
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	7.00	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.42
NB Stavanger	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
NB Lillehammer	6.50	6.50	6.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.12
NB Bodø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CBK	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.12
1879													
NB discount rate	6.07	5.96	5.83	5.88	5.75	5.53	5.46	5.34	5.17	5.07	4.93	4.90	5.49
NB Christiania	6.00	5.50	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.92
NB Trondhjem	6.00	6.00	6.00	6.00	5.50	5.00	5.00	5.00	5.00	5.00	4.50	4.50	5.29
NB Bergen	5.50	5.50	5.50	6.00	5.50	5.00	5.50	6.00	5.50	5.00	4.50	4.50	5.33
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50	5.00	5.00	5.00	5.00	5.62

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Skien	7.00	7.00	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	5.50	6.46
NB Chr.sand S	6.00	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.54
NB Tromsø	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB Halden	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.75
NB Stavanger	7.00	7.00	7.00	7.00	7.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.50
NB Lillehammer	6.00	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.58
NB Bodø	6.00	6.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.88
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.00	4.00	4.00	4.00	4.58
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.00	4.00	4.00	4.00	4.58
Deposits CBK	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.00	4.00	4.00	4.00	4.00	4.54
1880													
NB discount rate	4.91	4.89	4.89	4.86	4.67	4.53	4.37	4.38	4.37	4.31	4.31	4.30	4.57
NB Christiania	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.17
NB Trondhjem	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.17
NB Bergen	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.12
NB Drammen	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.00	4.00	4.00	4.62
NB Skien	5.50	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.79
NB Chr.sand S	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.75
NB Tromsø	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.42
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.00	4.00	4.00	4.62
NB Stavanger	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.42
NB Lillehammer	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.00	4.79
NB Bodø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sund N								5.00	5.00	4.50	4.50	4.50	4.70
Deposits CHRS	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.67
Deposits DNC	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.67
Deposits CBK	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.67
1881													
NB discount rate	4.30	4.18	4.10	4.10	4.33	4.45	4.55	4.54	4.54	4.67	4.65	4.65	4.42
NB Christiania	4.00	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.00
NB Trondhjem	4.00	4.00	4.00	4.00	4.00	4.50	5.00	5.00	5.00	5.00	5.00	5.00	4.54
NB Bergen	4.00	4.00	4.00	4.00	4.00	4.50	5.00	5.00	5.00	5.00	4.50	4.50	4.46
NB Drammen	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.33
NB Skien	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sand S	4.50	4.50	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.42
NB Tromsø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Halden	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.29
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Lillehammer	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.08
NB Bodø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Chr.sund N	4.50	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.79
Deposits CHRS	3.50	3.50	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	3.50

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits DNC	3.50	3.50	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	3.50
Deposits CBK	3.50	3.50	3.00	3.00	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	3.54
1882													
NB discount rate	4.65	4.65	4.66	4.86	5.00	5.00	5.00	5.00	4.90	4.90	4.77	4.58	4.83
NB Christiania	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.79
NB Trondhjem	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.83
NB Bergen	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.71
NB Drammen	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.79
NB Skien	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.83
NB Chr.sand S	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.79
NB Tromsø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.96
NB Halden	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.83
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Lillehammer	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.75
NB Bodø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.96
NB Chr.sund N	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Hamar	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.79
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.96
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.96
Deposits CBK	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.92
1883													
NB discount rate	4.58	4.58	4.58	4.58	4.54	4.54	4.58	4.54	4.54	4.54	4.55	4.55	4.56
NB Christiania	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Trondhjem	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Bergen	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.42
NB Drammen	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Skien	4.50	4.50	4.50	4.50	4.50	4.50	5.00	4.50	4.50	4.50	4.50	4.50	4.54
NB Chr.sand S	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Tromsø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Halden	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.67
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Lillehammer	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Bodø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sund N	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	4.75
NB Hamar	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits DNC	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1884													
NB discount rate	4.55	4.55	4.55	4.59	4.56	4.56	4.55	4.55	4.55	4.52	4.52	4.52	4.55
NB Christiania	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Trondhjem	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Bergen	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.00	4.00	4.00	4.12
NB Drammen	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Skien	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sand S	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Tromsø	4.50	4.50	4.50	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.62
NB Halden	4.50	4.50	4.50	4.50	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.58
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Lillehammer	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Bodø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sund N	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.67
NB Hamar	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits DNC	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1885													
NB discount rate	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.49	4.52
NB Christiania	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Trondhjem	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Bergen	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Drammen	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Skien	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sand S	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Tromsø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.46
NB Halden	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.92
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Lillehammer	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Bodø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sund N	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Hamar	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits DNC	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1886													
NB discount rate	4.49	4.52	4.66	4.67	4.60	4.60	4.63	4.63	4.63	4.60	4.60	4.60	4.60
NB Christiania	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Trondhjem	4.50	4.50	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.58
NB Bergen	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.00	4.00	4.00	4.12
NB Drammen	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Skien	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sand S	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Tromsø	4.00	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.88
NB Halden	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
NB Lillehammer	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.88
NB Bodø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sund N	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Hamar	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.92
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits DNC	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1887													
NB discount rate	4.60	4.58	4.44	4.35	4.35	4.34	4.27	4.27	4.27	3.99	3.89	3.81	4.27
NB Christiania	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.96
NB Trondhjem	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	3.50	4.21
NB Bergen	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.88
NB Drammen	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.96
NB Skien	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.38
NB Chr.sand S	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.12
NB Tromsø	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.00	4.00	4.83
NB Halden	5.00	5.00	5.00	4.50	4.50	4.00	4.00	4.00	4.00	4.00	3.50	3.50	4.25
NB Stavanger	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.96
NB Lillehammer	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.42
NB Bodø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sund N	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Hamar	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.50
Deposits CHRS	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.08
Deposits DNC	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.96
Deposits CBK	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.96
1888													
NB discount rate	3.73	3.69	3.69	3.68	3.68	3.66	3.66	3.66	3.65	3.65	3.65	3.65	3.67
NB Christiania	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Trondhjem	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Bergen	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Drammen	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Skien	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Chr.sand S	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.54
NB Tromsø	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Halden	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Stavanger	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.21
NB Lillehammer	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Bodø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
NB Chr.sund N	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Hamar	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits DNC	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CBK	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1889													
NB discount rate	3.65	3.65	3.65	3.64	3.64	3.64	3.64	3.63	3.40	3.37	3.36	3.36	3.55
NB Christiania	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.33
NB Trondhjem	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Bergen	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Drammen	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.33
NB Skien	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Chr.sand S	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Tromsø	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Halden	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
NB Stavanger	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Lillehammer	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.33
NB Bodø	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.29
NB Chr.sund N	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.88
NB Hamar	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.33
Deposits CHRS	3.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.54
Deposits DNC	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.00	2.00	2.00	2.38
Deposits CBK	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.00	2.00	2.00	2.00	2.33
1890													
NB discount rate	3.35	3.43	3.42	3.58	3.58	3.58	3.90	3.90	3.89	3.88	3.88	4.26	3.72
NB Christiania	3.00	3.00	3.00	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.50	3.67
NB Trondhjem	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.50	3.79
NB Bergen	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.54
NB Drammen	3.00	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.50	3.75
NB Skien	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.04
NB Chr.sand S	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.54
NB Tromsø	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	4.00	3.92
NB Halden	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	4.00	3.17
NB Stavanger	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Lillehammer	3.00	3.00	3.00	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.00	3.62
NB Bodø	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NB Chr.sund N	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.00	3.75
NB Hamar	3.00	3.00	3.00	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.00	3.62
Deposits CHRS	2.50	2.50	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	2.96
Deposits DNC	2.00	2.00	2.00	2.50	2.50	2.50	3.00	3.00	3.00	3.00	3.50	3.50	2.71
Deposits CBK	2.00	2.00	2.50	2.50	2.50	3.00	3.00	3.00	3.00	3.00	3.50	3.50	2.79
1891													
NB discount rate	4.34	4.17	4.17	4.97	4.98	5.03	5.46	5.17	5.08	5.08	5.30	5.95	4.98
NB Christiania	4.50	4.00	4.00	5.00	5.00	5.00	5.50	5.00	5.00	5.00	5.50	6.00	4.96
NB Trondhjem	4.50	4.50	4.50	5.00	5.00	5.00	5.50	5.00	5.00	5.00	5.50	6.00	5.04

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB Bergen	4.00	4.00	4.00	5.00	5.00	5.50	5.50	5.50	5.00	5.00	5.00	6.00	4.96
NB Drammen	4.50	4.50	4.50	5.00	5.00	5.00	5.50	5.50	5.50	5.50	5.50	6.00	5.17
NB Skien	4.50	4.50	4.50	5.00	5.00	5.00	5.50	5.50	5.50	5.50	5.50	6.00	5.17
NB Chr.sand S	4.00	4.00	4.00	5.00	5.00	5.00	5.50	5.00	5.00	5.00	5.00	6.00	4.88
NB Tromsø	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50	4.79
NB Halden	4.00	4.00	4.00	5.00	5.00	5.00	5.50	5.00	5.00	5.00	5.50	6.00	4.92
NB Stavanger	4.00	4.00	4.00	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.50	4.67
NB Lillehammer	4.50	4.00	4.00	5.00	5.00	5.00	5.50	5.00	5.00	5.00	5.00	6.00	4.92
NB Bodø	4.00	4.00	4.00	5.00	5.00	5.00	5.50	5.50	5.00	5.00	5.00	5.50	4.88
NB Chr.sund N	4.50	4.50	4.50	5.00	5.00	5.00	5.50	5.50	5.00	5.00	5.00	6.00	5.04
NB Hamar	4.50	4.00	4.00	5.00	5.00	5.00	5.50	5.00	5.00	5.00	5.50	6.00	4.96
Deposits CHRS	3.50	3.50	3.00	3.50	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50	3.88
Deposits DNC	3.50	3.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	5.00	3.92
Deposits CBK	3.50	3.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	5.00	3.92
1892													
NB discount rate	6.00	5.62	5.72	5.74	5.67	5.72	5.73	5.53	5.20	5.16	5.10	5.07	5.52
NB Christiania	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.00	5.33
NB Trondhjem	6.00	5.50	6.00	6.00	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.46
NB Bergen	6.00	5.50	5.50	5.50	5.50	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.50
NB Drammen	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50	5.50	5.00	5.00	5.75
NB Skien	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50	5.96
NB Chr.sand S	6.00	5.50	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.54
NB Tromsø	6.00	5.50	5.50	6.00	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.50	5.75
NB Halden	6.00	6.00	5.50	5.50	5.50	5.50	6.00	5.50	5.50	5.00	5.00	5.00	5.50
NB Stavanger	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.38
NB Lillehammer	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.38
NB Bodø	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.38
NB Chr.sund N	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.88
NB Hamar	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.38
Deposits CHRS	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.33
Deposits DNC	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.33
Deposits CBK	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.33
1893													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Deposits CBK	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1894													
NB discount rate	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.50
Deposits CHRS	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.38
Deposits DNC	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.38
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.29

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1895													
NB discount rate	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.83
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.50	2.83
Deposits DNC	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.50	2.83
Deposits CBK	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.50	2.50	2.79
1896													
NB discount rate	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50	5.00	4.04
Deposits CHRS	2.50	2.50	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.50	3.00
Deposits DNC	2.50	2.50	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	4.00	3.04
Deposits CBK	2.50	2.50	2.50	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	4.00	3.04
1897													
NB discount rate	5.00	4.50	4.50	4.50	4.50	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.62
Deposits CHRS	4.00	3.50	3.50	3.50	3.50	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.62
Deposits DNC	4.00	3.50	3.50	3.50	3.50	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.62
Deposits CBK	4.00	3.50	3.50	3.50	3.50	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.62
1898													
NB discount rate	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.00	4.00	4.50	4.50	5.50	4.29
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.00	3.00	3.50	3.50	4.50	3.29
Deposits DNC	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.00	3.00	3.50	3.50	4.50	3.29
Deposits CBK	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.00	3.00	3.50	3.50	4.50	3.29
1899													
NB discount rate	5.50	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.50	6.50	6.50	6.00
Deposits CHRS	4.50	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50	5.50	5.50	5.00
Deposits DNC	4.50	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50	5.50	5.50	5.00
Deposits CBK	4.50	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50	5.50	5.50	5.00
1900													
NB discount rate	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Deposits CHRS	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.38
Deposits DNC	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.38
Deposits CBK	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.38
1901													
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.50	5.00	5.00	5.00	5.00	5.62
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.00	4.00	4.00	4.00	4.62
Deposits DNC	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.00	4.00	4.00	4.00	4.62
Deposits CBK	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.00	4.00	4.00	4.00	4.62
1902													
NB discount rate	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	4.58
Deposits CHRS	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.58
Deposits DNC	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.58
Deposits CBK	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.58
1903													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.21

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.21
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.21
Deposits CBK	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.21
1904													
NB discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	5.00	5.00	5.00	4.92
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.75
Deposits DNC	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.75
Deposits CBK	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.75
1905													
NB discount rate	5.00	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	5.00	5.00	5.50	4.88
Deposits CHRS	3.50	3.00	3.00	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.33
Deposits DNC	3.50	3.00	3.00	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.38
Deposits CBK	3.50	3.00	3.00	3.00	3.00	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.38
1906													
NB discount rate	5.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50	5.50	5.50	5.17
Deposits CHRS	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	3.67
Deposits DNC	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	3.67
Deposits CBK	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	3.67
1907													
NB discount rate	5.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	5.21
Deposits CHRS	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	3.62
Deposits DNC	4.50												4.50
Deposits CBK	4.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.50	4.50	3.79
1908													
NB discount rate	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.00	5.29
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.79
Deposits CBK	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.79
1909													
NB discount rate	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.54
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1910													
NB discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
1911													
NB discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	5.00	5.00	4.67
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	3.62
Deposits CBK	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	4.00	3.67
1912													
NB discount rate	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.42
Deposits CHRS	4.00	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.38

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CBK	4.00	4.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.42
1913													
NB discount rate	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
Deposits CHRS	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CBK	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
1914													
NB discount rate	5.00	4.50	4.50	4.50	4.50	5.00	5.00	5.50	5.50	5.50	5.50	5.50	5.04
Deposits CHRS	4.00	3.50	3.50	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.00	3.79
Deposits CBK	4.00	3.50	3.50	3.50	3.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.83
1915													
NB discount rate	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50	5.21
Deposits CHRS	4.00	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.17
Deposits CBK	4.00	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.17
1916													
NB discount rate	5.50	5.50	5.50	5.50	4.50	4.50	4.50	4.50	4.50	5.00	5.50	5.50	5.04
Deposits CHRS	4.50	4.50	4.50	4.50	3.50	3.50	3.50	3.50	3.50	4.00	4.50	4.50	4.04
Deposits CBK	4.50	4.50	4.50	4.50	3.50	3.50	3.50	3.50	3.50	4.00	4.50	4.50	4.04
1917													
NB discount rate	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	6.00	5.54
Deposits CHRS	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	4.54
Deposits CBK	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	4.54
1918													
NB discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Deposits CBK	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
1919													
NB discount rate	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.50	6.00	5.71
Deposits CHRS	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.67
Deposits CBK	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.67
1920													
NB discount rate	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.58
Deposits CHRS	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
Deposits CBK	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.58
1921													
NB discount rate	7.00	7.00	7.00	7.00	7.00	7.00	6.50	6.50	6.50	6.50	6.50	6.50	6.75
Deposits CHRS	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50
Deposits CBK	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	5.00	5.00	5.00	5.50
1922													
NB discount rate	6.00	6.00	6.00	6.00	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.00	5.46
Deposits CHRS	4.50	4.50	4.50	4.50	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.96
Deposits CBK	4.50	4.50	4.50	4.50	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.96
1923													

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB discount rate	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00	7.00	7.00	5.83
Deposits CHRS	3.50	3.50	3.50	3.50	4.50	4.50	4.50	4.50	4.50	4.50	5.50	5.50	4.33
Deposits CBK	3.50	3.50	3.50	3.50	4.50	4.50	4.50	4.50	4.50	4.50	5.50	5.50	4.33
1924													
NB discount rate	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.50	6.50	6.92
Deposits CHRS	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.00	4.50	4.50	5.12
Deposits CBK	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	5.08
1925													
NB discount rate	6.50	6.50	6.50	6.50	6.00	6.00	6.00	5.50	5.00	5.00	5.00	5.00	5.79
Deposits CHRS	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	4.00
Deposits CBK	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	4.00
1926													
NB discount rate	6.00	6.00	6.00	5.50	5.50	5.50	5.50	5.50	5.00	4.50	4.50	4.50	5.33
Deposits CHRS	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	3.50	3.00	3.00	3.00	3.83
Deposits CBK	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.00	3.50	3.00	3.00	3.00	3.83
1927													
NB discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.00	5.00	4.58
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.08
Deposits CBK	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.50	3.08
1928													
NB discount rate	5.00	6.00	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
Deposits CHRS	3.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Deposits CBK	3.50	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
1929													
NB discount rate	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	6.00	6.00	5.50	5.00	5.54
Deposits CHRS	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.50	3.50	3.92
Deposits CBK	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.50	4.50	4.00	3.50	4.04
1930													
NB discount rate	5.00	5.00	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.50
Deposits CHRS	3.50	3.50	3.50	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.25
Deposits CBK	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.12
1931													
NB discount rate	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	8.00	6.00	6.00	6.00	4.83
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00	4.00	4.00	4.00	3.33
Deposits CBK	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	5.00	4.00	4.00	4.00	3.42
1932													
NB discount rate	6.00	5.50	5.00	5.00	4.50	4.50	4.50	4.50	4.00	4.00	4.00	4.00	4.62
Deposits CHRS	4.00	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.21
Deposits CBK	4.00	3.50	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.21
1933													
NB discount rate	4.00	4.00	4.00	4.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.67
Deposits CHRS	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.67

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CBK	3.00	3.00	3.00	3.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.67
1934													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CBK	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1935													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CBK	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1936													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.00	3.54
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	3.00	2.54
Deposits CBK	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	3.00	2.54
1937													
NB discount rate	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Deposits CBK	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
1938													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CBK	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1939													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.50	4.50	4.50	4.50	3.83
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	3.00	3.00	3.00	2.62
Deposits CBK	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	3.00	3.00	3.00	3.00	2.67
1940													
NB discount rate	4.50	4.50	4.50	4.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50
Deposits CHRS	3.00	3.00	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.33
Deposits CBK	3.00	3.00	3.00	3.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.33
1941													
NB discount rate	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Deposits CHRS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Deposits CBK	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1942													
NB discount rate	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Deposits CHRS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Deposits CBK	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1943													
NB discount rate	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Deposits CHRS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Deposits CBK	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1944													

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NB discount rate	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Deposits CHRS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Deposits CBK	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1945													
NB discount rate	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Deposits CHRS	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Deposits CBK	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1946													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1947													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1948													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1949													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1950													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1951													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1952													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1953													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1954													
NB discount rate	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Deposits CHRS	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1955													
NB discount rate	2.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.42
Deposits CHRS	1.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.42
1956													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1957													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1958													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1959													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1960													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1961													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1962													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1963													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1964													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1965													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1966													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1967													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1968													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
1969													
NB discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.50	4.50	4.50	4.50	3.83
Deposits CHRS	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	3.00	3.00	3.00	2.62
1970													
NB discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CHRS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
1971													
NB discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50

TABLE 1.A.1
Norwegian short term interest rates

End-of-month data 1818–1986

NB discount rate = Norges Bank rate of discount on short-term bills (1818–1892 national average)

Deposits = ordinary savings deposit rate (3 month notice)

CHRS = Christiania/Oslo Sparebank, DNC = Den norske Creditbank, CBK = Christiania Bank og Kreditkasse

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Deposits CHRS 1972	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
NB discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CHRS 1973	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
NB discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Deposits CHRS 1974	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
NB discount rate	4.50	4.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.33
Deposits CHRS 1975	3.00	3.00	3.00	3.00	3.00	3.50							3.08
NB discount rate 1976	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.38
NB discount rate 1977	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	5.33
NB discount rate 1978	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
NB discount rate 1979	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.92
NB discount rate 1980	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	9.00	9.00	7.33
NB discount rate 1981	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
NB discount rate 1982	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
NB discount rate 1983	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
NB discount rate 1984	9.00	9.00	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.42
NB discount rate 1985	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB discount rate 1986	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
NB discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

1.B Interest rates on Norwegian Treasury Bills

1.B.1 End-of-month data May 1941–January 1985

TABLE 1.B.1
Norwegian Treasury Bills

Interest rates on Treasury bills in the primary market

End-of-month data May 1941–January 1985

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1941													
2 months												0.50	0.50
3 months												0.63	0.62
4 months												0.75	0.75
5 months												0.88	0.88
6 months					1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9 months												1.25	1.25
1942													
2 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3 months	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
4 months	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
5 months	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
6 months	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9 months	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
12 months												1.38	1.38
24 months												1.50	1.50
1943													
2 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50				0.50
3 months	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.50	0.50	0.50	0.59
4 months	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.62	0.62	0.62	0.72
5 months	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.75	0.75	0.75	0.84
6 months	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88	0.97
8 months										1.00	1.00	1.00	1.00
9 months	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.12	1.12	1.12	1.22
12 months	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
24 months	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.62	1.62	1.62	1.53
1944													
3 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
4 months	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
5 months	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
6 months	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
8 months	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9 months	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
12 months	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
24 months	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
1945													

TABLE 1.B.1
Norwegian Treasury Bills

Interest rates on Treasury bills in the primary market

End-of-month data May 1941–January 1985

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
3 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
4 months	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62
5 months	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
6 months	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
8 months	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
9 months	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
12 months	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
24 months	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
1946													
3 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50		0.50
4 months	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63		0.62
5 months	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75		0.75
6 months	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.50	0.84
8 months	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00
9 months	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13		1.12
12 months	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.00	1.34
24 months	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63		1.62
1947													
6 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
12 months	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1948													
6 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
12 months	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1949													
6 months	0.50	0.50	0.50	0.50	0.50	0.50							0.50
12 months	1.00	1.00	1.00	1.00	1.00	1.00							1.00
1950													
12 months							1.00	1.00	1.00	1.00	1.00	1.00	1.00
1951													
6 months							1.25	1.25	1.25	1.25	1.25	1.25	1.25
12 months	1.00	1.00	1.00	1.00	1.00	1.00	1.50	1.50	1.50	1.50	1.50	1.50	1.25
1952													
3 months								0.50	0.50	0.50	0.50	0.50	0.50
6 months	1.25	1.25	1.25	1.25	1.25	1.25	1.25	0.75	0.75	0.75	0.75	0.75	1.04
12 months	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.25	1.25	1.25	1.25	1.25	1.40
18 months								1.50	1.50	1.50	1.50	1.50	1.50
1953													
3 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
6 months	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
12 months	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
18 months	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50

TABLE 1.B.1
Norwegian Treasury Bills

Interest rates on Treasury bills in the primary market

End-of-month data May 1941–January 1985

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1954													
3 months	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
6 months	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
12 months	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
18 months	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1955													
3 months	0.50	0.50	0.50	0.50	0.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.38
6 months	0.75	0.75	0.75	0.75	0.75								0.75
12 months	1.25	1.25	1.25	1.25	1.25								1.25
18 months	1.50	1.50	1.50	1.50	1.50								1.50
1956													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1957													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1958													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1959													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1960													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1961													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1962													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1963													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1964													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1965													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1966													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1967													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1968													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
1969													
3 months	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00	2.33
1970													
3 months	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
1971													

TABLE 1.B.1
Norwegian Treasury Bills

Interest rates on Treasury bills in the primary market

End-of-month data May 1941–January 1985

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
3 months 1972	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.75	3.75	3.75	3.19
3 months 1973	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
3 months 1974	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
3 months 1975	3.75	3.75	3.75	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.69
3 months 1976	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.50	4.50	4.50	4.88
3 months 1977	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	5.50	5.50	5.50	5.50	4.83
3 months 1978	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
3 months 1979	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
3 months 1980	5.50	5.50	5.50	5.50	5.50	5.50	5.50	6.50	6.50	6.50	8.50	8.50	6.25
3 months 1981	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50
1 month 1982		9.05	9.05	9.05	10.05	10.05	10.05	10.05	10.05	10.05	10.05	10.05	9.78
3 months 1982	8.50	9.50	9.50	9.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.08
1 month 1983	10.05	10.05	10.05	10.05	10.05	10.05	10.80	10.80	10.80	10.80	10.80	10.80	10.42
3 months 1983	10.50	10.50	10.50	10.50	10.50	10.50	11.25	11.25	11.25	11.25	11.25	11.25	10.88
1 month 1984	10.80	10.80	10.80	10.80	10.80	10.30	10.30	10.30	10.30	10.30	10.30	10.30	10.51
3 months 1984	11.25	11.25	11.25	11.25	11.25	10.75	10.75	10.75	10.75	10.75	10.75	10.75	10.96
1 month 1985	10.30	10.30	10.30	10.30	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.80	9.97
3 months 1985	10.75	10.75	10.75	10.75	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.42
1 month	7.80												7.80
3 months	8.25												8.25

1.B.2 End-of-month data March 1985–July 2007

TABLE 1.B.2
Norwegian Treasury Bills

Interest rates on Treasury bills in the secondary market

End-of-month data March 1985–July 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1985													
3 months			13.00	12.90	12.89	12.88	12.79	12.95	12.73	12.75	12.83	12.83	12.85
6 months			12.79	12.72	12.71	12.69	12.65	12.77	12.68	12.68	12.83	12.83	12.74
9 months			12.61	12.58	12.56	12.53	12.53	12.62	12.64	12.62	12.83	12.83	12.63
12 months			12.45	12.45	12.43	12.39	12.43	12.49	12.61	12.57	12.83	12.83	12.55
1986													
3 months	13.33	13.33	13.33	13.33	14.23	14.26	14.23	14.23	14.23	14.23	14.21	14.79	13.98
6 months	13.33	13.33	13.33	13.33	14.15	14.19	14.15	14.14	14.14	14.14	14.13	14.52	13.91
9 months	13.33	13.33	13.33	13.33	14.08	14.13	14.08	14.07	14.06	14.07	14.07	14.29	13.85
12 months	13.33	13.33	13.33	13.33	14.01	14.07	14.02	14.01	14.00	14.01	14.01	14.09	13.80
1987													
3 months	14.49	14.08	14.05	14.04	14.00	13.94	13.94	13.97	14.04	14.02	14.06	14.04	14.06
6 months	14.32	14.01	13.97	13.94	13.92	13.88	13.88	13.90	13.94	13.96	13.99	13.95	13.97
9 months	14.16	13.96	13.90	13.86	13.85	13.83	13.83	13.85	13.86	13.91	13.93	13.88	13.90
12 months	14.04	13.91	13.83	13.79	13.79	13.78	13.79	13.80	13.80	13.88	13.88	13.81	13.84
1988													
3 months	14.05	14.07	14.03	14.03	13.58	13.11	13.03	13.00	12.99	12.60	12.70	12.30	13.29
6 months	13.97	13.97	13.93	13.93	13.56	13.07	13.02	12.96	12.94	12.55	12.54	12.21	13.22
9 months	13.90	13.89	13.85	13.85	13.54	13.04	13.00	12.92	12.90	12.51	12.41	12.13	13.16
12 months	13.84	13.82	13.78	13.77	13.53	13.01	12.99	12.89	12.87	12.48	12.30	12.07	13.11
1989													
3 months	11.73	11.19	11.17	11.15	10.82	10.55	10.50	10.52	10.39	10.52	11.55	11.54	10.97
6 months	11.65	11.11	11.09	11.09	10.78	10.52	10.46	10.48	10.34	10.47	11.48	11.46	10.91
9 months	11.58	11.05	11.01	11.03	10.75	10.48	10.43	10.45	10.29	10.43	11.42	11.39	10.86
12 months	11.51	10.99	10.94	10.98	10.72	10.46	10.40	10.42	10.25	10.40	11.37	11.34	10.82
1990													
3 months	11.28	11.24	11.53	11.41	11.30	11.13	10.86	10.59	10.65	10.60	10.58	10.54	10.98
6 months	11.23	11.15	11.43	11.33	11.21	11.03	10.78	10.59	10.61	10.55	10.48	10.44	10.90
9 months	11.18	11.08	11.34	11.26	11.14	10.95	10.72	10.58	10.57	10.51	10.39	10.36	10.84
12 months	11.14	11.01	11.26	11.20	11.08	10.87	10.66	10.58	10.54	10.48	10.32	10.29	10.79
1991													
3 months	10.48	10.45	10.25	10.01	9.81	9.88	9.85	9.82	10.24	10.22	10.21	10.34	10.13
6 months	10.46	10.41	10.21	9.98	9.77	9.86	9.80	9.80	10.18	10.15	10.17	10.24	10.09
9 months	10.45	10.38	10.18	9.96	9.74	9.85	9.76	9.78	10.14	10.09	10.14	10.16	10.05
12 months	10.43	10.34	10.15	9.93	9.71	9.84	9.73	9.77	10.10	10.04	10.12	10.09	10.02
1992													
3 months	10.35	10.29	10.16	10.43	10.32	10.37	10.66	11.18	13.76	10.82	11.85	10.71	10.91
6 months	10.22	10.15	10.08	10.38	10.26	10.30	10.63	11.04	12.31	10.71	11.73	10.50	10.69
9 months	10.11	10.04	10.01	10.33	10.21	10.24	10.61	10.92	11.08	10.61	11.62	10.32	10.51
12 months	10.01	9.94	9.95	10.29	10.16	10.18	10.58	10.82	10.05	10.53	11.53	10.17	10.35

TABLE 1.B.2
Norwegian Treasury Bills

Interest rates on Treasury bills in the secondary market

End-of-month data March 1985–July 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1993													
3 months	9.85	9.27	8.78	7.55	7.47	6.34	6.43	5.97	6.46	5.46	5.23	5.65	7.04
6 months	9.73	9.04	8.52	7.43	7.27	6.23	6.36	5.86	6.22	5.39	5.17	5.34	6.88
9 months	9.62	8.85	8.30	7.32	7.10	6.13	6.30	5.77	6.01	5.34	5.12	5.07	6.74
12 months	9.53	8.69	8.12	7.23	6.95	6.04	6.24	5.69	5.84	5.30	5.07	4.84	6.63
1994													
3 months	5.03	4.88	5.19	4.93	4.82	5.13	5.31	5.75	6.11	6.25	6.28	5.77	5.45
6 months	4.93	4.83	5.13	4.93	4.90	5.31	5.56	6.13	6.75	6.61	6.39	5.91	5.61
9 months	4.84	4.79	5.08	4.93	4.96	5.46	5.76	6.45	7.30	6.92	6.49	6.03	5.75
12 months	4.77	4.76	5.04	4.93	5.02	5.58	5.94	6.73	7.77	7.18	6.57	6.14	5.87
1995													
3 months	5.61	5.20	5.32	5.36	5.76	5.50	5.39	5.19	5.38	5.23	5.18	5.36	5.37
6 months	5.82	5.40	5.49	5.42	5.64	5.56	5.48	5.26	5.36	5.24	5.13	5.26	5.42
9 months	6.01	5.56	5.63	5.47	5.54	5.60	5.56	5.31	5.35	5.25	5.09	5.16	5.46
12 months	6.17	5.70	5.75	5.51	5.45	5.64	5.63	5.36	5.35	5.26	5.06	5.09	5.50
1996													
3 months	5.29	5.11	4.58	4.50	4.81	4.83	4.99	5.08	5.01	4.90	4.23	3.99	4.78
6 months	5.24	5.06	4.58	4.50	4.76	4.89	5.08	5.19	5.11	4.99	4.26	4.02	4.81
9 months	5.20	5.02	4.58	4.50	4.71	4.94	5.15	5.29	5.20	5.06	4.27	4.05	4.83
12 months	5.16	4.98	4.57	4.51	4.67	4.98	5.21	5.38	5.28	5.13	4.29	4.08	4.85
1997													
3 months	3.49	3.49	3.46	3.50	3.46	3.64	4.11	4.01	3.79	3.94	3.88	3.94	3.73
6 months	3.54	3.53	3.54	3.58	3.59	3.70	4.22	4.19	3.88	4.11	4.06	4.05	3.83
9 months	3.58	3.57	3.60	3.66	3.69	3.74	4.31	4.34	3.96	4.27	4.21	4.15	3.92
12 months	3.62	3.60	3.66	3.72	3.78	3.78	4.39	4.47	4.02	4.39	4.34	4.24	4.00
1998													
3 months	3.92	3.93	4.03	4.17	4.70	4.96	5.37	7.75	7.68	7.77	7.75	7.59	5.80
6 months	4.04	4.06	4.11	4.31	4.88	5.05	5.39	7.47	7.42	7.33	7.22	7.27	5.71
9 months	4.13	4.17	4.18	4.43	5.03	5.13	5.41	7.23	7.21	6.97	6.76	7.00	5.64
12 months	4.22	4.27	4.23	4.53	5.15	5.20	5.43	7.03	7.02	6.65	6.38	6.77	5.57
1999													
3 months	6.68	7.06	5.82	6.06	6.27	5.95	6.00	6.02	5.80	5.87	6.45	5.71	6.14
6 months	6.23	6.39	5.56	5.68	5.89	5.88	5.83	5.82	5.81	5.95	5.89	5.73	5.89
9 months	5.85	5.82	5.34	5.36	5.56	5.82	5.69	5.66	5.82	6.01	5.41	5.74	5.67
12 months	5.53	5.33	5.15	5.08	5.28	5.76	5.57	5.52	5.83	6.07	5.00	5.76	5.49
2000													
3 months	5.86	5.92	6.03	6.18	6.60	6.84	7.04	7.08	7.09	7.33	7.15	7.35	6.71
6 months	5.90	6.01	6.18	6.42	6.60	6.97	7.16	7.23	7.21	7.48	7.26	7.26	6.81
9 months	5.93	6.10	6.31	6.62	6.60	7.08	7.26	7.36	7.32	7.61	7.35	7.18	6.89
12 months	5.96	6.17	6.42	6.79	6.60	7.18	7.35	7.47	7.42	7.72	7.42	7.11	6.97
2001													
3 months	7.34	7.52	6.93	6.59	7.06	7.09	7.31	6.68	6.59	6.34	5.98	5.61	6.75
6 months	7.19	7.24	7.09	7.07	7.30	7.22	7.34	7.39	6.58	6.42	6.26	5.65	6.90

TABLE 1.B.2
Norwegian Treasury Bills

Interest rates on Treasury bills in the secondary market

End-of-month data March 1985–July 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
9 months	7.07	7.00	7.21	7.48	7.50	7.33	7.36	7.99	6.57	6.49	6.50	5.68	7.02
12 months	6.97	6.79	7.32	7.83	7.67	7.42	7.38	8.52	6.56	6.56	6.70	5.71	7.12
2002													
3 months	5.98	5.62	6.24	6.54	6.37	6.83	7.11	6.43	6.94	5.94	5.98	5.56	6.30
6 months	6.12	6.31	6.38	6.73	6.99	6.94	7.18	6.93	6.91	6.44	6.43	5.59	6.58
9 months	6.25	6.89	6.50	6.90	7.52	7.03	7.24	7.36	6.88	6.88	6.82	5.61	6.82
12 months	6.36	7.40	6.60	7.04	7.98	7.11	7.29	7.73	6.86	7.25	7.15	5.63	7.03
2003													
3 months	5.30	4.73	5.18	3.98	4.21	3.43	3.16	2.61	2.64	2.39	2.38	2.04	3.51
6 months	5.32	5.07	5.13	4.46	4.23	3.34	3.10	2.81	2.70	2.64	2.62	2.10	3.63
9 months	5.33	5.35	5.09	4.87	4.23	3.26	3.05	2.98	2.75	2.86	2.82	2.15	3.73
12 months	5.34	5.60	5.06	5.22	4.24	3.19	3.01	3.12	2.80	3.04	2.99	2.19	3.82
2004													
3 months	1.95	1.56	1.70	1.77	1.62	1.88	1.85	1.67	1.77	1.72	1.60	1.75	1.74
6 months	2.03	1.60	1.76	1.87	1.83	1.96	1.93	1.82	1.83	1.79	1.72	1.82	1.83
9 months	2.11	1.63	1.80	1.95	2.01	2.02	2.00	1.94	1.88	1.85	1.83	1.88	1.91
12 months	2.18	1.66	1.84	2.02	2.16	2.08	2.05	2.05	1.92	1.89	1.92	1.93	1.98
2005													
3 months	1.70	1.69	1.82	1.78	1.79	1.97	2.03	2.10	2.13	2.30	2.30	2.17	1.98
6 months	1.79	1.87	1.95	1.94	2.04	2.04	2.16	2.20	2.23	2.41	2.49	2.34	2.12
9 months	1.86	2.02	2.07	2.09	2.25	2.10	2.27	2.29	2.31	2.51	2.65	2.48	2.24
12 months	1.92	2.16	2.17	2.21	2.43	2.16	2.36	2.37	2.37	2.59	2.79	2.60	2.34
2006													
3 months	2.25	2.22	2.60	2.60	2.87	2.95	3.06	2.85	3.34	3.46	3.27	3.62	2.92
6 months	2.42	2.57	2.72	2.76	3.01	3.08	3.20	3.20	3.46	3.56	3.61	3.82	3.12
9 months	2.57	2.87	2.82	2.89	3.14	3.19	3.32	3.49	3.55	3.65	3.89	3.98	3.28
12 months	2.70	3.13	2.91	3.01	3.25	3.29	3.42	3.75	3.64	3.72	4.13	4.12	3.42
2007													
3 months	3.85	3.76	4.27	4.26	4.13	4.60	4.68	4.28	4.80	4.93			4.36
6 months	4.09	4.20	4.43	4.51	4.59	4.79	4.88	4.64	4.88	5.09			4.61
9 months	4.29	4.57	4.57	4.72	4.97	4.94	5.05	4.94	4.94	5.22			4.82
12 months	4.46	4.88	4.68	4.90	5.31	5.07	5.20	5.20	5.00	5.33			5.00

1.C Money market interest rates

1.C.1 End-of-month data May 1959–December 1986

TABLE 1.C.1
Money market interest rates

End-of-month data May 1959–December 1986

Bank dep. spec. = Bank deposits special terms

Fin. comp. dep. = Finance Companies deposit rate

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1959													
Eurokrone 3 months					3.52	3.74	3.77	3.47	3.87	3.84	4.20	4.54	3.87
1960													
Eurokrone 3 months	4.71	4.37	5.29	5.16	5.02	5.66	5.92	5.27	5.86	5.22	5.02	4.42	5.16
1961													
Eurokrone 3 months	4.13	4.48	6.02	5.38	5.59	7.00	7.27	7.14	7.12	6.13	6.11	6.44	6.07
1962													
Eurokrone 3 months	5.31	5.52	5.19	4.38	4.21	4.47	4.21	4.19	4.22	4.08	4.34	4.25	4.53
1963													
Eurokrone 3 months	3.74	3.86	4.49	4.34	4.17	4.01	3.96	4.14	4.10	4.18	3.73	3.85	4.05
1964													
Eurokrone 3 months	3.46	4.01	4.22	4.28	4.48	4.51	4.78	4.72	4.94	4.82	6.21	5.70	4.68
1965													
Eurokrone 3 months	5.31	5.85	6.56	5.95	6.14	5.85	5.73	5.75	5.30	5.35	5.00	5.25	5.67
1966													
Eurokrone 3 months	4.95	5.02	5.45	5.62	5.28	5.78	7.12	6.63	6.69	6.71	6.80	6.33	6.03
Fin. comp. dep.	6.09	6.08	6.10	6.16	6.19	6.25	6.29	6.29	6.33	6.38	6.47	6.60	6.27
1967													
Eurokrone 3 months	4.96	4.88	4.83	4.60	5.07	5.15	4.89	4.58	5.11	5.64	8.59	10.98	5.77
Fin. comp. dep.	6.57	6.54	6.54	6.57	6.56	6.53	6.54	6.55	6.56	6.56	6.53	6.71	6.56
1968													
Eurokrone 3 months	8.03	7.92	11.53	9.23	10.60	9.03	7.08	7.88	6.68	7.11	8.39	7.24	8.39
Fin. comp. dep.	6.71	6.69	6.68	6.67	6.69	6.74	6.76	6.75	6.76	6.78	6.78	6.86	6.74
1969													
Eurokrone 3 months	8.86	8.10	7.70	9.30	10.73	11.02	11.04	11.43	12.14	10.32	11.32	10.23	10.18
Fin. comp. dep.	6.89	6.86	6.88	6.91	6.95	6.96	7.16	7.34	7.57	7.75	7.86	8.15	7.27
1970													
Eurokrone 3 months	9.62	9.90	9.23	8.80	9.22	8.95	8.39	7.94	8.64	7.95	7.45	7.30	8.62
Fin. comp. dep.	8.30	8.32	8.25	8.26	8.27	8.32	8.33	8.33	8.31	8.35	8.39	8.39	8.32
1971													
Eurokrone 3 months	5.71	5.45	5.49	6.36	6.51	6.07	5.94	6.74	3.33	4.29	4.58	4.54	5.42
Interbank O/N								4.90	5.00	4.30	3.90	5.30	4.68
Fin. comp. dep.	8.32	8.09	7.99	7.95	7.95	7.97	8.09	8.12	8.12	7.94	7.98	8.00	8.04
1972													
Eurokrone 1 month							1.44	5.44	7.79	6.67	13.35	7.83	7.09

TABLE 1.C.1
Money market interest rates

End-of-month data May 1959–December 1986

Bank dep. spec. = Bank deposits special terms

Fin. comp. dep. = Finance Companies deposit rate

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Eurokrone 3 months	3.70	2.01	4.58	5.25	7.20	5.50	2.71	5.44	7.84	6.76	9.96	7.13	5.67
Eurokrone 6 months							4.06	6.06	7.68	7.10	8.31	7.31	6.75
Interbank O/N	3.10	2.80	3.70	5.30	5.50	6.30	3.90	4.30	4.50	6.50	6.40	8.00	5.02
Fin. comp. dep.	7.98	7.87	7.70	7.63	7.59	7.61	7.54	7.47	7.36	7.31	7.30	7.43	7.57
1973													
Eurokrone 1 month	7.58	5.09	6.30	6.55	4.34	8.86	7.54	7.12	11.33	10.87	12.34	9.66	8.13
Eurokrone 3 months	7.03	6.56	7.15	6.76	6.32	8.13	8.11	8.52	10.18	12.08	10.61	9.72	8.43
Eurokrone 6 months	7.29	6.84	7.61	7.16	6.74	7.51	9.40	9.31	10.12	10.57	10.94	9.64	8.59
Interbank O/N	6.10	5.60	6.20	6.90	6.40	6.60	6.00	6.70	6.40	9.70	8.30	9.10	7.00
Fin. comp. dep.	7.46	7.43	7.43	7.45	7.55	7.61	7.64	7.64	7.63	7.64	7.78	8.04	7.61
1974													
Eurokrone 1 month	4.26	5.41	8.96	18.89	16.53	13.98	14.49	11.93	6.61	2.17	7.78	10.20	10.10
Eurokrone 3 months	4.60	5.62	9.69	15.80	14.62	14.20	14.90	13.45	9.24	5.66	7.93	10.14	10.49
Eurokrone 6 months	6.83	6.73	8.33	13.82	14.16	14.28	14.56	13.50	10.18	6.34	8.55	9.52	10.57
Interbank O/N	6.50	6.50	7.00	9.80	10.60	11.50	9.90	11.40	8.10	3.90	5.20	8.30	8.22
Fin. comp. dep.	8.11	8.08	8.00	8.02	8.21	8.61	8.84	9.00	8.19	9.30	9.15	9.14	8.55
1975													
Eurokrone 1 month	11.77	10.69	13.42	9.59	11.36	8.32	3.77	3.89	6.41	5.62	7.81	7.09	8.31
Eurokrone 3 months	11.94	10.47	13.35	10.15	10.11	8.87	5.63	5.79	6.43	6.42	7.12	6.69	8.58
Eurokrone 6 months	11.23	10.18	12.59	10.29	10.04	8.95	7.97	7.36	7.35	6.82	7.19	7.15	8.93
Interbank O/N	9.50	10.50	9.30	10.70	9.40	9.40	5.00	5.30	5.30	5.60	5.00	6.50	7.62
Bank dep. spec.	9.50	10.00	10.25	10.50	10.25	9.50	6.00	6.25	6.25	6.25	7.00	7.75	8.29
Fin. comp. dep.	9.17	9.33	9.55	9.74	9.99	10.24	10.19	9.68	9.32	9.08	8.75	8.50	9.46
1976													
Eurokrone 1 month	3.96	4.83	8.20	8.34	10.82	7.43	11.48	11.49	18.39	10.72	12.41	7.84	9.66
Eurokrone 3 months	5.14	5.39	8.99	8.26	8.71	7.64	9.18	10.31	16.03	11.13	10.73	7.58	9.09
Eurokrone 6 months	6.06	6.09	8.84	8.15	8.78	7.85	8.98	9.86	13.72	10.23	9.82	8.11	8.87
Interbank O/N	3.20	4.40	5.30	7.30	7.30	7.10	7.30	8.50	9.10	10.60	9.30	9.70	7.42
Bank dep. spec.	4.50	6.00	7.25	7.75	7.75	7.75	8.00	8.75	10.00	10.50	9.50	10.50	8.19
Fin. comp. dep.	8.28	8.14	8.07	8.16	8.24	8.29	8.34	8.47	8.65	9.11	9.49	9.66	8.58
1977													
Eurokrone 1 month	6.68	7.75	9.28	9.76	11.52	9.49	16.30	10.08	11.53	8.44	28.28	29.77	13.24
Eurokrone 3 months	7.76	8.52	9.00	9.18	10.95	9.29	13.21	10.71	10.80	8.88	18.74	23.76	11.73
Eurokrone 6 months	8.13	8.87	8.79	8.98	10.51	9.91	12.15	10.12	10.26	9.09	14.54	19.21	10.88
Interbank O/N	6.90	7.50	8.10	8.80	9.40	11.70	12.10	12.20	9.30	9.40	9.20	13.40	9.83
Bank dep. spec.	6.00	8.00	8.75	9.25	11.00	11.00	11.25	11.00	10.00	10.00	10.25	11.50	9.83
Fin. comp. dep.	9.69	9.64	9.59	9.66	9.78	9.96	10.11	10.39	10.53	10.69	10.54	10.62	10.10
1978													
Eurokrone 1 month	14.59	12.05	17.42	14.85	12.94	12.09	6.82	10.92	11.27	13.96	13.44	10.40	12.56
Eurokrone 3 months	15.55	11.88	14.90	14.01	11.99	12.25	8.92	11.02	12.15	15.87	13.10	10.93	12.71

TABLE 1.C.1
Money market interest rates

End-of-month data May 1959–December 1986

Bank dep. spec. = Bank deposits special terms

Fin. comp. dep. = Finance Companies deposit rate

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Eurokroner 6 months	15.36	11.34	13.36	13.68	12.04	12.61	10.13	11.36	11.79	15.82	13.35	11.78	12.72
Interbank O/N	11.10	12.00	11.20	12.90	11.10	11.50	7.80	6.20	6.60	9.10	5.90	7.20	9.38
Bank dep. spec.	11.00	10.50	12.00	12.25	12.50	12.00	10.00	9.50	9.00	10.50	10.00	11.50	10.90
Fin. comp. dep.	10.82	10.94	10.95	11.19	11.90	12.03	12.12	11.67	11.19	11.14	11.47	11.70	11.43
1979													
Eurokroner 1 month	6.11	7.96	8.95	8.68	10.72	9.33	9.44	11.32	24.11	15.06	13.76	14.42	11.65
Eurokroner 3 months	6.76	9.15	9.22	9.33	9.64	8.89	9.48	11.42	16.76	16.56	12.66	13.17	11.09
Eurokroner 6 months	7.35	9.67	9.04	9.00	9.06	8.93	9.77	10.90	14.38	14.11	12.37	12.47	10.59
Interbank O/N	5.80	5.10	5.90	8.60	7.90	9.30	8.30	8.90	8.40	9.90	11.40	11.20	8.39
Bank dep. spec.	7.00	8.25	9.50										8.25
Fin. comp. dep.	11.85	11.30	10.97	10.83	10.70	10.64	10.63	10.62	11.18	11.71	12.20	12.39	11.25
1980													
Eurokroner 1 month	10.21	13.40	15.16	12.53	12.79	10.00	9.88	11.25	13.13	11.38	12.52	8.45	11.72
Eurokroner 3 months	11.15	13.94	15.12	12.80	11.51	9.98	10.09	13.13	12.85	12.42	13.05	10.40	12.20
Eurokroner 6 months	11.14	13.71	14.12	11.70	11.68	10.53	10.51	12.26	12.02	12.23	13.13	11.45	12.04
Interbank O/N	9.90	9.50	12.80	13.90	13.30	9.60	9.10	11.40	11.80	10.10	11.50	11.00	11.16
Fin. comp. dep.	12.56	12.12	12.08	12.67	12.92	12.96	12.56	12.24	12.56	12.75	12.57	12.73	12.56
1981													
Eurokroner 1 month	12.58	12.48	11.92	11.98	12.53	11.68	12.49	11.39	13.48	13.21	16.76	16.68	13.10
Eurokroner 3 months	12.76	12.40	12.24	11.52	13.06	12.07	13.32	12.76	13.48	13.78	14.02	15.14	13.05
Eurokroner 6 months	11.88	12.36	11.95	11.44	13.29	12.61	13.71	12.81	14.01	13.78	13.78	14.93	13.05
Interbank O/N	10.50	12.50	10.50	11.50	11.80	12.30	11.90	12.50	10.70	11.30	13.60	18.60	12.31
Fin. comp. dep.	12.58	12.46	12.45	12.48	12.42	12.67	12.71	12.82	12.94	13.11	13.28	13.75	12.81
1982													
Eurokroner 1 month	11.53	12.82	16.93	17.62	17.02	16.39	20.68	13.45	14.09	16.18	15.45	14.43	15.55
Eurokroner 3 months	13.56	13.79	16.13	16.18	15.90	16.70	17.08	14.55	15.23	15.52	15.23	13.98	15.32
Eurokroner 6 months	13.81	13.91	15.76	15.57	15.94	16.56	16.51	14.51	14.61	15.01	14.91	14.20	15.11
Interbank O/N	11.80	12.10	13.00	18.00	16.90	12.50	17.10	13.00	12.10	15.30	14.10	11.00	13.91
Fin. comp. dep.	14.13	13.89	13.87	14.51	15.28	15.54	15.30	15.41	14.82	15.00	15.48	15.65	14.91
1983													
Eurokroner 1 month	12.84	12.63	14.02	14.20	14.26	12.79	12.98	13.03	12.89	13.13	13.45	13.47	13.31
Eurokroner 3 months	13.30	13.56	13.99	13.48	13.62	12.91	12.93	13.01	13.06	13.20	12.86	13.03	13.25
Eurokroner 6 months	13.72	13.51	14.03	13.42	13.61	13.10	13.10	13.07	12.97	12.91	12.76	12.99	13.27
Interbank O/N	12.10	11.40	12.30	12.90	13.70	11.90	11.90	12.60	11.60	12.10	12.40	12.30	12.27
Fin. comp. dep.	15.04	14.35	13.89	13.79	14.34	13.42	13.47	13.33	13.20	13.21	13.27	13.36	13.72
1984													
Eurokroner 1 month	12.96	13.10	13.85	13.09	12.83	12.41	12.52	12.70	12.89	13.43	13.11	13.37	13.02
Eurokroner 3 months	12.90	12.99	13.56	13.16	12.67	12.45	12.61	12.59	13.06	13.12	13.09	12.97	12.93
Eurokroner 6 months	12.82	12.93	13.12	12.87	12.85	12.50	12.53	12.56	13.06	12.96	12.99	12.93	12.84
Interbank O/N	13.10	11.70	13.30	12.90	13.00	12.90	11.80	12.80	12.00	12.90	13.10	12.50	12.67

TABLE 1.C.1
Money market interest rates

End-of-month data May 1959–December 1986

Bank dep. spec. = Bank deposits special terms

Fin. comp. dep. = Finance Companies deposit rate

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1985													
Eurokroner 1 month	11.94	11.99	11.88	13.05	12.31	12.82	12.69	12.13	12.80	12.27	12.38	12.98	12.44
Eurokroner 3 months	12.18	12.34	12.41	12.99	12.60	12.64	12.51	12.44	12.81	12.46	12.34	12.54	12.52
Eurokroner 6 months	12.17	12.40	12.48	12.86	12.68	12.57	12.46	12.37	12.67	12.52	12.43	12.72	12.53
Interbank O/N	10.70	12.80	11.60	13.40	12.60	13.10	12.30	12.70	11.80	11.80	12.20	12.50	12.29
1986													
Eurokroner 1 month	12.77	12.40	13.29	14.04	14.46	14.33	14.26	14.44	14.67	14.67	14.67	14.67	14.06
Eurokroner 3 months	13.00	13.04	13.14	14.12	13.67	14.01	14.88	14.34	14.33	14.55	15.18	15.60	14.16
Eurokroner 6 months	13.18	13.31	13.30	14.00	13.58	14.15	14.85	14.38	14.35	14.35	14.35	14.35	14.01
Interbank O/N	13.10	13.10	13.50	13.50	18.10						14.50	14.00	14.26

1.C.2 End-of-month data January 1986–January 2007

TABLE 1.C.2
Money market rates

End-of-month data January 1986–January 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1986													
Interbank O/N	13.90	13.70	13.60	15.70	15.60	14.30	14.70	14.90	14.00	14.60	14.50	16.60	14.68
NIBOR 1 week	13.52	13.59	12.93	14.19	15.33	14.28	14.86	14.50	14.32	14.48	14.43	17.16	14.46
NIBOR 2 week													
NIBOR 1 month	13.36	13.28	13.35	14.02	14.57	14.24	14.87	14.33	14.42	14.71	15.02	16.29	14.37
NIBOR 2 months													
NIBOR 3 months	13.38	13.36	13.25	13.98	14.14	14.21	14.64	14.37	14.34	14.65	15.08	15.96	14.28
NIBOR 6 months	13.40	13.54	13.31	13.91	14.14	14.25	14.84	14.41	14.52	14.55	14.94	15.94	14.31
NIBOR 9 months													
NIBOR 12 months	13.56	13.68	13.48	13.87	14.11	14.31	14.95	14.43	14.66	14.36	14.78	15.90	14.34
1987													
Interbank O/N	15.10	14.30	14.00	14.50	14.10	14.10	14.40	14.00	13.70	14.40	14.36	14.35	14.28
NIBOR 1 week	15.24	14.66	14.04	14.65	14.53	14.23	14.32	13.96	13.90	14.89	14.86	14.71	14.50
NIBOR 2 week											15.32	15.07	15.19
NIBOR 1 month	15.13	14.94	14.34	14.74	14.68	14.41	14.45	14.07	13.77	15.16	15.86	15.07	14.72
NIBOR 2 months											15.96	15.10	15.53
NIBOR 3 months	15.03	15.04	14.48	14.73	14.54	14.41	14.34	14.21	13.74	15.24	16.01	15.29	14.75
NIBOR 6 months	15.12	15.03	14.57	14.92	14.68	14.42	14.31	14.26	13.71	15.37	15.85	15.21	14.79
NIBOR 9 months													
NIBOR 12 months	15.14	14.98	14.95	15.14	14.88	14.64	14.63	14.34	13.79	15.27	15.66	15.11	14.88
1988													
Interbank O/N	14.19	13.78	14.00	14.00	13.35	13.17	13.00	12.68	12.81	12.67	12.94	11.87	13.21
NIBOR 1 week	14.02	13.94	13.94	14.21	13.22	13.07	13.03	12.98	12.81	12.54	12.70	12.36	13.23
NIBOR 2 week	14.16	13.98	14.02	14.14	13.24	13.06	12.99	13.08	12.79	12.53	12.71	12.42	13.26
NIBOR 1 month	13.99	13.81	13.95	14.06	13.18	12.75	12.93	13.04	12.52	12.32	12.25	12.22	13.09
NIBOR 2 months	14.15	13.99	14.11	14.14	13.10	12.82	13.09	13.45	12.99	12.29	12.35	12.05	13.21
NIBOR 3 months	14.28	14.15	14.11	14.10	13.08	12.88	13.11	13.51	13.09	12.36	12.66	12.00	13.28
NIBOR 6 months	14.55	14.36	14.24	14.22	13.12	12.79	13.08	13.84	13.49	12.30	12.69	11.91	13.38
NIBOR 9 months													
NIBOR 12 months	14.60	14.55	14.58	14.45	13.45	12.87	13.04	13.90	13.39	12.21	12.74	11.83	13.47
1989													
Interbank O/N	11.20	11.31	11.17	11.13	10.82	10.51	10.86	10.83	11.21	11.46	11.42	12.05	11.16
NIBOR 1 week	11.25	11.54	11.20	11.24	10.90	10.50	11.01	10.84	11.34	11.30	11.68	12.15	11.25
NIBOR 2 week	11.30	11.57	11.28	11.18	10.94	10.61	11.00	10.99	11.23	11.33	11.97	12.27	11.31
NIBOR 1 month	11.27	11.86	11.32	11.15	10.99	10.57	11.51	11.09	11.35	11.43	12.30	12.24	11.42
NIBOR 2 months	11.26	11.77	11.41	11.16	11.08	10.79	11.71	11.06	11.37	11.37	12.41	12.32	11.48
NIBOR 3 months	11.28	11.68	11.42	11.15	11.08	10.81	11.69	11.17	11.33	11.40	12.41	12.38	11.48
NIBOR 6 months	11.18	11.72	11.58	11.06	11.11	10.87	11.61	11.18	11.33	11.42	12.54	12.40	11.50
NIBOR 9 months													
NIBOR 12 months	11.16	11.63	11.58	10.88	11.10	10.89	11.55	11.14	11.10	11.37	12.30	12.17	11.41
1990													
Interbank O/N	11.40	11.47	11.64	12.59	11.73	10.94	11.56	8.07	12.35	11.15	11.11	17.22	11.77

TABLE I.C.2
Money market rates

End-of-month data January 1986–January 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NIBOR 1 week	11.45	11.42	11.91	12.43	11.33	10.98	11.45	10.44	11.58	11.00	11.30	11.52	11.40
NIBOR 2 week	11.55	11.44	11.99	12.41	11.34	11.03	11.41	10.43	11.49	11.01	11.34	11.55	11.42
NIBOR 1 month	11.68	11.43	12.24	12.20	11.29	11.12	11.23	10.42	11.33	11.04	11.56	11.41	11.41
NIBOR 2 months	11.72	11.50	12.18	12.23	11.38	11.14	11.26	10.65	11.23	11.07	11.57	11.66	11.47
NIBOR 3 months	11.84	11.54	12.21	12.30	11.42	11.22	11.21	10.79	11.25	11.08	11.65	11.65	11.51
NIBOR 6 months	11.86	11.59	12.18	12.33	11.58	11.41	11.27	11.10	11.29	11.14	11.66	11.68	11.59
NIBOR 9 months													
NIBOR 12 months	11.82	11.59	12.14	12.34	11.72	11.45	11.38	11.21	11.42	11.19	11.58	11.67	11.63
1991													
Interbank O/N	10.92	11.10	11.41	10.45	10.49	12.87	9.84	9.69	10.98	10.36	8.58	11.15	10.65
NIBOR 1 week	11.09	10.90	10.77	10.24	10.15	12.26	10.00	10.36	10.92	10.37	9.74	10.81	10.63
NIBOR 2 week	11.11	11.00	10.73	10.55	10.15	11.96	10.17	10.39	10.89	10.46	9.83	10.72	10.66
NIBOR 1 month	11.18	11.22	10.73	10.15	10.00	11.06	10.33	10.28	10.87	10.46	10.18	10.70	10.60
NIBOR 2 months	11.28	10.98	10.58	10.19	10.03	10.81	10.42	10.30	10.80	10.39	10.28	10.72	10.56
NIBOR 3 months	11.31	10.93	10.53	10.15	9.98	10.57	10.46	10.31	10.73	10.39	10.34	10.73	10.54
NIBOR 6 months	11.33	10.95	10.64	10.21	9.99	10.51	10.45	10.29	10.60	10.34	10.37	10.74	10.54
NIBOR 9 months										10.32	10.36	10.65	10.44
NIBOR 12 months	11.43	11.06	10.81	10.24	9.97	10.52	10.39	10.22	10.49	10.29	10.34	10.56	10.53
1992													
Interbank O/N	11.28	10.64	10.24	10.63	11.24	9.76	9.77	11.50	41.08	11.38	21.28	18.27	14.76
NIBOR 1 week	11.07	10.35	10.13	10.56	10.84	10.14	10.19	12.11	27.96	11.13	58.19	17.60	16.69
NIBOR 2 week	11.00	10.35	10.11	10.59	10.73	10.23	10.35	12.19	26.30	11.10	38.58	15.05	14.72
NIBOR 1 month	10.93	10.39	10.17	10.47	10.60	10.26	10.39	12.62	22.57	11.01	24.89	14.81	13.26
NIBOR 2 months	10.84	10.40	10.30	10.43	10.52	10.35	10.53	12.49	17.48	10.79	19.25	13.43	12.23
NIBOR 3 months	10.75	10.44	10.33	10.39	10.43	10.36	10.58	12.44	15.76	10.76	17.38	12.44	11.84
NIBOR 6 months	10.53	10.46	10.35	10.33	10.38	10.38	10.69	12.08	13.81	10.58	14.55	10.96	11.26
NIBOR 9 months	10.35	10.38	10.33	10.35	10.34	10.36	10.69	11.85	13.12	10.55	10.43	10.54	10.77
NIBOR 12 months	10.29	10.26	10.32	10.33	10.34	10.34	10.69	11.73	12.43	10.43	12.49	10.40	10.84
1993													
Interbank O/N	10.60	9.65	9.41	8.43	7.99	7.24	6.33	6.96	7.48	5.63	5.13	7.00	7.65
NIBOR 1 week	10.52	9.54	9.37	7.85	7.68	6.96	6.41	6.74	6.93	5.68	5.25	6.70	7.47
NIBOR 2 week	10.52	9.54	9.33	7.75	7.70	6.89	6.42	6.73	6.95	5.71	5.34	6.63	7.46
NIBOR 1 month	10.24	9.40	9.12	7.61	7.67	6.49	6.25	6.49	6.90	5.74	5.60	6.43	7.33
NIBOR 2 months	10.18	9.30	8.98	7.64	7.57	6.36	6.27	6.34	6.68	5.76	5.61	6.10	7.23
NIBOR 3 months	10.14	9.16	8.94	7.61	7.47	6.23	6.29	6.23	6.56	5.74	5.54	5.72	7.14
NIBOR 6 months	9.91	8.86	8.50	7.51	7.40	6.13	6.27	6.06	6.29	5.57	5.41	5.55	6.96
NIBOR 9 months	9.58	8.71	8.38	7.46	7.34	6.01	6.22	5.94	6.19	5.53	5.31	5.51	6.85
NIBOR 12 months	9.54	8.67	8.24	7.42	7.24	6.01	6.10	5.83	6.13	5.52	5.24	5.35	6.77
1994													
Interbank O/N	5.23	5.03	5.66	5.41	5.79	5.00	5.01	5.31	5.97	5.23	6.32	14.83	6.23
NIBOR 1 week	5.14	5.05	5.57	5.35	5.19	5.11	5.13	5.22	5.68	5.36	6.05	5.66	5.38
NIBOR 2 week	5.14	5.05	5.67	5.35	5.45	5.14	5.19	5.26	5.70	5.51	5.96	5.71	5.43
NIBOR 1 month	5.12	5.00	5.68	5.29	5.30	5.14	5.17	5.29	6.17	5.76	6.53	5.71	5.51
NIBOR 2 months	5.17	5.01	5.67	5.35	5.38	5.25	5.36	5.56	6.62	6.41	6.39	5.90	5.67
NIBOR 3 months	5.11	4.97	5.73	5.34	5.39	5.33	5.47	5.98	7.05	6.63	6.40	6.02	5.79

TABLE 1.C.2
Money market rates

End-of-month data January 1986–January 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NIBOR 6 months	5.12	4.95	5.71	5.41	5.59	5.65	5.86	6.55	7.36	6.84	6.62	6.25	5.99
NIBOR 9 months	5.09	4.93	5.71	5.65	5.77	6.02	6.09	6.71	7.54	7.10	6.86	6.41	6.16
NIBOR 12 months	5.05	4.94	5.72	5.81	5.97	6.26	6.35	6.89	7.77	7.34	7.16	6.68	6.33
1995													
Interbank O/N	5.34	5.08	5.13	6.07	6.70	5.49	5.22	5.13	5.53	5.38	5.88	6.84	5.65
NIBOR 1 week	5.41	5.06	5.18	5.86	6.33	5.45	5.36	5.17	5.46	5.34	5.63	6.05	5.53
NIBOR 2 week	5.45	5.07	5.10	5.84	6.24	5.58	5.44	5.20	5.46	5.37	5.57	5.85	5.51
NIBOR 1 month	5.46	5.02	5.15	5.56	5.99	5.55	5.44	5.22	5.37	5.28	5.71	5.51	5.44
NIBOR 2 months	5.55	5.12	5.15	5.47	5.87	5.60	5.49	5.28	5.41	5.36	5.37	5.31	5.41
NIBOR 3 months	5.66	5.27	5.24	5.47	5.75	5.69	5.60	5.29	5.46	5.35	5.27	5.27	5.44
NIBOR 6 months	6.08	5.67	5.67	5.59	5.65	5.89	5.76	5.47	5.52	5.39	5.18	5.20	5.59
NIBOR 9 months	6.27	5.79	5.92	5.77	5.76	6.05	5.87	5.56	5.59	5.39	5.19	5.17	5.69
NIBOR 12 months	6.53	5.90	6.12	5.97	5.80	6.11	6.00	5.68	5.70	5.48	5.23	5.18	5.81
1996													
Interbank O/N	5.74	5.33	5.25	5.08	5.14	4.95	4.85	5.04	4.97	4.88	4.53	3.92	4.97
NIBOR 1 week	5.82	5.31	4.94	4.98	4.96	4.88	4.92	5.08	4.94	4.93	4.37	4.08	4.93
NIBOR 2 week	5.83	5.27	5.02	4.89	4.93	4.92	4.89	5.09	4.92	4.93	4.39	3.96	4.92
NIBOR 1 month	5.63	5.11	4.77	4.80	4.81	4.91	4.86	5.03	4.85	4.76	4.24	3.86	4.80
NIBOR 2 months	5.60	5.17	4.74	4.74	4.79	4.95	4.94	5.08	4.91	4.88	4.22	3.88	4.82
NIBOR 3 months	5.53	5.18	4.73	4.70	4.79	4.98	4.99	5.20	5.09	4.98	4.23	3.90	4.86
NIBOR 6 months	5.49	5.21	4.76	4.69	4.93	5.10	5.19	5.41	5.31	5.11	4.26	3.92	4.95
NIBOR 9 months	5.44	5.22	4.78	4.70	4.97	5.15	5.38	5.58	5.38	5.19	4.31	4.00	5.01
NIBOR 12 months	5.38	5.23	4.83	4.75	5.08	5.22	5.48	5.68	5.48	5.27	4.38	4.13	5.08
1997													
Interbank O/N	3.91	3.68	3.96	3.54	3.61	3.61	3.73	3.61	3.70	3.77	3.77	3.71	3.72
NIBOR 1 week	3.67	3.53	3.44	3.38	3.49	3.65	3.81	3.78	3.61	3.75	3.74	3.72	3.63
NIBOR 2 week	3.62	3.54	3.43	3.56	3.50	3.66	3.83	3.79	3.63	3.78	3.75	3.72	3.65
NIBOR 1 month	3.53	3.46	3.38	3.41	3.39	3.55	3.83	3.75	3.64	3.69	3.61	3.66	3.58
NIBOR 2 months	3.56	3.47	3.40	3.46	3.47	3.61	4.02	3.91	3.74	3.87	3.85	3.72	3.67
NIBOR 3 months	3.56	3.54	3.46	3.47	3.49	3.65	4.08	3.97	3.84	3.96	3.91	3.83	3.73
NIBOR 6 months	3.67	3.65	3.62	3.65	3.68	3.83	4.30	4.22	4.03	4.18	4.14	4.08	3.92
NIBOR 9 months	3.72	3.72	3.76	3.74	3.80	3.96	4.41	4.35	4.13	4.35	4.31	4.24	4.04
NIBOR 12 months	3.77	3.78	3.90	3.87	3.90	4.08	4.54	4.49	4.25	4.51	4.45	4.42	4.16
1998													
Interbank O/N	3.88	4.08	4.02	4.02	4.60	4.87	5.44	8.51	8.27	8.44	8.81	8.85	6.15
NIBOR 1 week	3.73	3.98	3.91	4.04	4.65	4.78	5.35	9.04	8.15	8.29	8.50	8.54	6.08
NIBOR 2 week	3.75	4.00	4.00	4.06	4.67	4.87	5.38	9.07	8.15	8.26	8.48	8.79	6.12
NIBOR 1 month	3.72	3.95	3.98	4.03	4.67	4.85	5.39	8.37	8.12	8.16	8.45	8.71	6.03
NIBOR 2 months	3.80	3.92	4.06	4.10	4.75	4.92	5.42	8.02	8.03	7.95	8.07	8.46	5.96
NIBOR 3 months	3.85	3.96	4.08	4.17	4.82	4.98	5.45	7.82	7.92	7.84	7.95	8.22	5.92
NIBOR 6 months	4.05	4.13	4.22	4.39	4.94	5.18	5.51	7.37	7.57	7.41	7.42	7.56	5.81
NIBOR 9 months	4.21	4.27	4.34	4.54	5.08	5.27	5.55	7.26	7.29	7.04	6.93	7.12	5.74
NIBOR 12 months	4.34	4.42	4.45	4.68	5.18	5.37	5.59	7.14	7.01	6.79	6.61	6.83	5.70
1999													
Interbank O/N	8.27	8.21	7.75	7.47	7.27	6.71	6.86	6.46	5.93	5.92	5.95	6.13	6.91

TABLE I.C.2
Money market rates

End-of-month data January 1986–January 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NIBOR 1 week	8.01	8.09	7.63	7.44	7.16	6.49	6.69	6.47	5.76	5.81	5.83	5.89	6.77
NIBOR 2 week	8.04	8.00	7.34	7.37	7.14	6.47	6.62	6.48	5.85	5.85	5.89	5.82	6.74
NIBOR 1 month	7.85	7.78	7.11	7.10	6.88	6.47	6.46	6.31	5.75	5.82	6.04	5.85	6.62
NIBOR 2 months	7.42	7.52	6.75	6.80	6.69	6.44	6.37	6.15	5.77	6.59	5.89	5.91	6.53
NIBOR 3 months	7.24	7.31	6.58	6.67	6.55	6.41	6.31	6.03	6.19	6.39	5.88	5.91	6.46
NIBOR 6 months	6.62	6.74	6.13	6.15	6.23	6.35	6.28	6.17	6.06	6.23	5.85	5.95	6.23
NIBOR 9 months	6.25	6.35	5.88	5.93	6.04	6.16	6.17	6.04	6.03	6.17	5.88	5.98	6.07
NIBOR 12 months	6.02	6.16	5.74	5.72	5.89	6.08	6.10	6.06	6.02	6.13	5.91	6.08	5.99
2000													
Interbank O/N	5.93	5.95	5.96	6.26	6.26	6.58	6.52	6.89	7.38	7.39	7.30	7.80	6.69
NIBOR 1 week	5.91	5.89	5.92	6.31	6.24	6.52	6.51	6.93	7.24	7.30	7.35	7.70	6.65
NIBOR 2 week	5.91	5.88	5.91	6.31	6.26	6.50	6.61	6.97	7.24	7.32	7.36	7.64	6.66
NIBOR 1 month	5.78	5.83	5.90	6.33	6.30	6.57	6.70	7.03	7.25	7.36	7.43	7.52	6.67
NIBOR 2 months	5.78	5.84	6.03	6.38	6.39	6.77	6.84	7.07	7.30	7.46	7.37	7.51	6.73
NIBOR 3 months	5.88	5.92	6.16	6.47	6.50	6.91	7.01	7.21	7.41	7.50	7.41	7.53	6.83
NIBOR 6 months	5.94	6.09	6.30	6.62	6.67	7.20	7.25	7.38	7.42	7.57	7.38	7.51	6.94
NIBOR 9 months	6.03	6.20	6.52	6.79	6.85	7.36	7.40	7.46	7.53	7.64	7.38	7.43	7.05
NIBOR 12 months	6.17	6.38	6.65	6.92	6.98	7.46	7.53	7.55	7.62	7.72	7.36	7.37	7.14
2001													
Interbank O/N	7.37	7.25	7.52	7.54	7.20	7.60	7.25	7.28	7.58	7.29	7.26	6.79	7.33
NIBOR 1 week	7.33	7.22	7.25	7.46	7.18	7.34	7.14	7.11	7.32	7.00	7.10	6.67	7.18
NIBOR 2 week	7.33	7.22	7.36	7.50	7.17	7.37	7.16	7.15	7.25	7.02	7.09	6.71	7.19
NIBOR 1 month	7.35	7.29	7.36	7.58	7.21	7.37	7.19	7.12	7.17	7.04	7.05	6.57	7.19
NIBOR 2 months	7.34	7.33	7.37	7.55	7.27	7.38	7.23	7.23	7.07	7.02	6.97	6.47	7.19
NIBOR 3 months	7.37	7.37	7.39	7.55	7.37	7.41	7.35	7.26	7.06	6.91	6.90	6.37	7.19
NIBOR 6 months	7.31	7.32	7.40	7.48	7.43	7.47	7.39	7.27	6.93	6.69	6.61	6.10	7.12
NIBOR 9 months	7.23	7.30	7.41	7.45	7.46	7.51	7.42	7.24	6.81	6.55	6.48	5.99	7.07
NIBOR 12 months	7.17	7.27	7.40	7.44	7.56	7.57	7.41	7.21	6.71	6.46	6.41	6.00	7.05
2002													
Interbank O/N	6.74	6.70	6.86	6.81	6.78	6.85	7.24	7.22	7.25	7.24	7.25	6.80	6.98
NIBOR 1 week	6.67	6.59	6.70	6.68	6.69	6.91	7.16	7.09	7.15	7.14	7.13	6.72	6.89
NIBOR 2 week	6.64	6.56	6.69	6.68	6.70	6.98	7.17	7.12	7.15	7.23	7.13	6.74	6.90
NIBOR 1 month	6.66	6.65	6.69	6.72	6.70	7.03	7.20	7.13	7.14	7.13	7.22	6.61	6.91
NIBOR 2 months	6.55	6.67	6.70	6.73	6.90	7.06	7.24	7.17	7.14	7.14	7.15	6.46	6.91
NIBOR 3 months	6.50	6.71	6.70	6.79	7.04	7.12	7.25	7.22	7.16	7.14	7.11	6.34	6.92
NIBOR 6 months	6.48	6.77	6.72	6.91	7.25	7.24	7.32	7.25	7.07	7.01	6.95	6.05	6.92
NIBOR 9 months	6.53	6.82	6.80	7.05	7.40	7.31	7.38	7.22	6.96	6.85	6.78	5.87	6.91
NIBOR 12 months	6.60	6.88	6.87	7.15	7.50	7.35	7.37	7.17	6.85	6.74	6.72	5.83	6.92
2003													
Interbank O/N	6.23	6.09	5.74	5.33	5.46	4.32	4.24	3.24	2.97	2.88	2.92	3.15	4.38
NIBOR 1 week	6.13	5.88	5.69	5.22	5.15	4.24	4.20	3.20	2.86	2.82	2.74	2.57	4.22
NIBOR 2 week	6.13	5.75	5.70	5.23	5.21	4.21	4.01	3.21	2.85	2.84	2.75	2.57	4.21
NIBOR 1 month	6.10	5.69	5.67	5.22	5.07	4.17	3.67	3.11	2.81	2.84	2.90	2.48	4.14
NIBOR 2 months	5.91	5.67	5.52	5.18	4.86	3.93	3.45	3.02	2.77	2.94	2.83	2.39	4.04
NIBOR 3 months	5.84	5.54	5.45	5.08	4.74	3.70	3.36	2.99	2.76	2.90	2.79	2.37	3.96

TABLE 1.C.2
Money market rates

End-of-month data January 1986–January 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
NIBOR 6 months	5.64	5.37	5.28	4.92	4.44	3.40	3.24	2.98	2.79	2.89	2.82	2.32	3.84
NIBOR 9 months	5.54	5.21	5.19	4.85	4.31	3.29	3.24	3.03	2.86	2.95	2.91	2.35	3.81
NIBOR 12 months	5.50	5.13	5.17	4.83	4.24	3.29	3.33	3.18	2.97	3.05	3.04	2.43	3.85
2004													
Interbank O/N	2.32	2.28	2.06	2.14	2.20	2.22	2.14	2.14	2.22	2.05	2.18	2.10	2.17
NIBOR 1 week	2.23	2.15	1.94	1.96	2.07	2.01	2.03	1.96	2.04	1.97	2.03	1.94	2.03
NIBOR 2 week	2.25	2.12	2.00	2.01	2.07	2.05	2.05	2.01	2.04	2.01	2.05	1.99	2.05
NIBOR 1 month	2.20	1.96	1.94	1.95	2.02	1.96	2.02	1.98	2.01	1.99	2.00	1.96	2.00
NIBOR 2 months	2.17	1.91	1.90	1.94	2.03	1.92	2.03	1.99	1.98	1.99	1.99	1.95	1.98
NIBOR 3 months	2.16	1.85	1.89	1.95	2.01	1.95	2.02	1.99	2.01	1.99	1.98	1.97	1.98
NIBOR 6 months	2.16	1.76	1.87	1.98	2.06	2.03	2.07	2.01	2.02	2.00	1.98	2.03	2.00
NIBOR 9 months	2.22	1.77	1.92	2.10	2.16	2.16	2.14	2.06	2.07	2.04	2.03	2.12	2.07
NIBOR 12 months	2.31	1.83	2.02	2.24	2.32	2.34	2.25	2.16	2.16	2.13	2.09	2.22	2.17
2005													
Interbank O/N	2.09	2.05	2.09	2.16	2.06	2.24	2.27	2.15	2.46	2.44	2.59	2.55	2.26
NIBOR 1 week	1.90	1.88	2.06	2.00	2.01	2.18	2.20	2.16	2.26	2.39	2.46	2.42	2.16
NIBOR 2 week	1.91	1.92	2.07	2.04	2.05	2.17	2.26	2.19	2.28	2.43	2.48	2.46	2.19
NIBOR 1 month	1.90	1.91	2.04	1.99	2.04	2.15	2.17	2.18	2.27	2.43	2.48	2.49	2.17
NIBOR 2 months	1.90	1.94	2.04	2.01	2.09	2.15	2.19	2.25	2.35	2.48	2.50	2.51	2.20
NIBOR 3 months	1.91	1.94	2.05	2.05	2.13	2.18	2.22	2.32	2.44	2.50	2.56	2.56	2.24
NIBOR 6 months	1.97	2.06	2.16	2.18	2.27	2.27	2.37	2.43	2.49	2.62	2.68	2.70	2.35
NIBOR 9 months	2.07	2.17	2.32	2.34	2.40	2.36	2.47	2.55	2.63	2.79	2.86	2.88	2.49
NIBOR 12 months	2.16	2.29	2.46	2.46	2.53	2.44	2.58	2.68	2.73	2.94	3.02	3.02	2.61
2006													
Interbank O/N	2.63	2.52	3.18	2.96	2.98	3.00	3.00	3.30	3.41	3.50	3.54	3.91	3.16
NIBOR 1 week	2.41	2.37	2.87	2.86	2.93	2.93	2.92	3.16	3.33	3.49	3.46	3.79	3.04
NIBOR 2 week	2.44	2.43	2.90	2.85	2.97	2.97	2.94	3.20	3.36	3.52	3.53	3.82	3.08
NIBOR 1 month	2.43	2.49	2.87	2.78	2.94	2.94	3.01	3.17	3.29	3.50	3.64	3.82	3.07
NIBOR 2 months	2.48	2.57	2.80	2.80	2.96	2.99	3.06	3.20	3.37	3.50	3.66	3.88	3.11
NIBOR 3 months	2.53	2.64	2.81	2.86	3.01	3.05	3.12	3.31	3.43	3.52	3.69	3.91	3.16
NIBOR 6 months	2.64	2.74	2.89	2.98	3.11	3.19	3.29	3.43	3.57	3.70	3.86	4.11	3.29
NIBOR 9 months	2.77	2.84	3.01	3.12	3.26	3.38	3.46	3.58	3.72	3.85	4.05	4.30	3.45
NIBOR 12 months	2.90	2.94	3.15	3.25	3.39	3.53	3.62	3.73	3.86	3.99	4.23	4.50	3.59
2007													
Interbank O/N	4.04	4.09	4.45	4.45	4.60	4.82	4.88	5.07	5.69	5.43			4.75
NIBOR 1 week	4.00	3.99	4.36	4.30	4.47	4.76	4.72	4.98	5.51	5.36			4.65
NIBOR 2 week	4.05	4.04	4.41	4.32	4.53	4.75	4.74	4.91	5.50	5.40			4.67
NIBOR 1 month	4.03	4.13	4.40	4.31	4.53	4.75	4.82	4.90	5.55	5.41			4.68
NIBOR 2 months	4.05	4.23	4.41	4.41	4.62	4.78	4.85	5.19	5.58	5.65			4.78
NIBOR 3 months	4.14	4.31	4.46	4.52	4.69	4.85	4.94	5.31	5.68	5.73			4.86
NIBOR 6 months	4.34	4.49	4.64	4.71	4.87	5.08	5.17	5.52	5.76	5.79			5.04
NIBOR 9 months	4.55	4.66	4.79	4.89	5.06	5.26	5.33	5.61	5.77	5.83			5.18
NIBOR 12 months	4.74	4.79	4.92	5.04	5.22	5.45	5.49	5.67	5.80	5.88			5.30

1.D Norges Bank interest rates

TABLE 1.D.1
Details on Norges Bank lending facilities

Interest rates on liquidity instruments

End-of-month data January 1965–December 1986

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1965													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average				4.84	4.84	4.84	5.23	5.23	5.23	4.38	4.38	4.38	4.82
CB-Loan marginal													
A1	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
A2	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
A3	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
A4	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
B1	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50
B2	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
B3													
B4													
S	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
1966													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average													
CB-Loan marginal													
A1	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
A2	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
A3	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
A4	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
B1	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50
B2	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
B3													
B4													
S	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
1967													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average	4.50	4.50	4.50	4.60	4.60	4.60							4.55
CB-Loan marginal													
A1	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
A2	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
A3	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
A4	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
B1	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50
B2	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
B3													
B4													
S	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00

TABLE 1.D.1
Details on Norges Bank lending facilities

Interest rates on liquidity instruments

End-of-month data January 1965–December 1986

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1968													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average	5.30	5.30	5.30	4.70	4.70	4.70	4.90	4.90	4.90	4.60	4.60	4.60	4.88
CB-Loan marginal													
A1	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
A2	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
A3	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
A4	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
B1	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50
B2	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
B3													
B4													
S	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
1969													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.50	4.50	4.50	4.50	3.83
CB-Loan average	5.30	5.30	5.30	5.26	5.26	5.26	5.68	5.68	5.68	6.85	6.85	6.85	5.77
CB-Loan marginal													
A1	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.50	4.50	4.50	3.75
A2	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	5.25
A3	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	7.50	7.50	7.50	6.75
A4	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	9.00	9.00	9.00	8.25
B1	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	10.50	10.50	10.50	9.75
B2	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	12.00	12.00	12.00	11.25
B3													
B4													
S	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	12.00	12.00	12.00	11.25
1970													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	6.92	6.92	6.92	6.08	6.08	6.08	6.11	6.11	6.11	5.85	5.85	5.85	6.24
CB-Loan marginal													
A1	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
A2	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
A3	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
A4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
B1	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
B2	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
B3	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50
B4	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
S													
1971													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	4.60	4.60	4.70	4.70	5.60	5.60	5.30	5.30	5.10	5.10	5.20	5.20	5.08

TABLE I.D.1
Details on Norges Bank lending facilities

Interest rates on liquidity instruments

End-of-month data January 1965–December 1986

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
CB-Loan marginal													
A1	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
A2	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
A3	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
A4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
B1													
B2													
B3													
B4													
S													
1972													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	5.00	5.00	5.10	5.10	5.40	5.40	4.80	4.80	5.50	5.50	6.60	6.60	5.40
CB-Loan marginal													
A1	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
A2	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
A3	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
A4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
B1													
B2													
B3													
B4													
S	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
1973													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	5.70	5.70	6.20	6.20	5.80	5.80	5.90	5.90	7.00	7.00	6.60	6.60	6.20
CB-Loan marginal													
A1	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
A2	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
A3	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
A4	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
B1													
B2													
B3													
B4													
S	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
1974													
Discount rate	4.50	4.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.33
CB-Loan average	5.90	5.90	7.80	7.80	8.60	8.60	8.90	8.90	6.50	6.50	7.40	7.40	7.52
CB-Loan marginal													
A1	4.50	4.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.33
A2	6.00	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.83

TABLE 1.D.1
Details on Norges Bank lending facilities

Interest rates on liquidity instruments

End-of-month data January 1965–December 1986

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
A3	7.50	7.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.33
A4	9.00	9.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	9.83
B1													
B2													
B3													
B4													
S	10.50	10.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.33
1975													
Discount rate	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.38
CB-Loan average	8.40	8.40	9.00	9.00	8.00	8.00	6.60	6.60	6.40	6.40	6.50	6.50	7.48
CB-Loan marginal													
A1	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
A2	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50
A3	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
A4													
B1													
B2													
B3													
B4													
S													
1976													
Discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	5.33
CB-Loan average	5.80	5.80	6.70	6.70	6.90	6.90	7.40	7.40	8.70	8.70	7.90	7.90	7.23
CB-Loan marginal		5.00		7.90		8.40		9.80		11.40		9.10	8.60
A1	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	5.33
A2	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	9.00	9.00	9.00	9.00	8.33
A3	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	11.50	11.50	11.50	11.50	10.83
A4													
B1													
B2													
B3													
B4													
S													
1977													
Discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
CB-Loan average	7.20	7.20	7.40	7.40	9.00	9.00	9.90	9.90	7.90	7.90	9.40	9.40	8.47
CB-Loan marginal		7.80		10.60		13.40		13.40		10.10		15.00	11.72
A1	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
A2	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
A3	9.00	9.00	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.42
A4	11.50	11.50	10.50	10.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.33
B1													

TABLE I.D.1
Details on Norges Bank lending facilities

Interest rates on liquidity instruments

End-of-month data January 1965–December 1986

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
B2													
B3													
B4													
S	13.50	13.50	12.00	12.00	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.25
1978													
Discount rate	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.92
CB-Loan average	8.70	8.70	10.50	10.50	8.90	8.90	8.30	8.30	8.90	8.90	7.90	7.90	8.87
CB-Loan marginal		12.00		13.00		13.00		9.70		10.90	8.70	10.00	11.04
A1	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.92
A2	7.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.42
A3	9.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	9.92
A4	10.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.42
B1													
B2													
B3													
B4													
S	12.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	12.92
1979													
Discount rate	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	9.00	9.00	7.33
CB-Loan average	7.60	7.60	7.40	7.40	7.80	7.80	8.10	8.10	9.20	9.20	10.50	10.50	8.43
CB-Loan marginal	7.50	9.20	7.90	9.00	7.80	10.10	8.30	9.30	9.80	10.50	10.50	11.50	9.28
A1	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	9.00	7.17
A2	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	10.00	8.63
A3	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	11.00	10.08
A4													
B1													
B2	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	11.50	10.58
B3													
B4													
S	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	10.00	9.08
1980													
Discount rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
CB-Loan average	11.30	11.30	11.30	11.30	9.90	9.90	10.00	10.00	10.90	10.90	10.50	10.50	10.65
CB-Loan marginal	11.50	11.50	12.50	12.70	12.60	12.70	10.40	12.20	11.80	11.90	11.60	11.60	11.92
A1	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
A2	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
A3	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
A4													
B1													
B2	11.50	11.50	12.50	12.50	12.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.75
B3													
B4													

TABLE I.D.1
Details on Norges Bank lending facilities

Interest rates on liquidity instruments

End-of-month data January 1965–December 1986

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
S	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
1981													
Discount rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
CB-Loan average	11.40	11.40	9.70	9.70	10.60	10.60	10.50	10.50	10.20	10.20	11.20	11.20	10.60
CB-Loan marginal	10.90	11.60	10.20	11.50	12.50	12.60	11.00	12.30	10.60	12.10	11.30	11.10	11.48
A1	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
A2	10.00	10.00	10.00	10.00	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.33
A3	11.00	11.00	11.00	11.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	11.67
A4													
B1													
B2	11.50	11.50	11.50	11.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.17
B3													
B4													
S	10.00	10.00	10.00	10.00	11.00	11.00	10.00	10.00	11.00	11.00	11.00	11.00	10.50
1982													
Discount rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
CB-Loan average	10.70	10.70	11.80	11.80	9.00	9.00	9.60	9.60	9.40	9.40	9.20	9.20	9.95
CB-Loan marginal	11.90	12.60	12.50	12.50	12.20	12.60	10.90	11.10	10.90	11.00	11.00	11.00	11.68
A1	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
A2	10.50	10.50	10.50	10.50	10.50	10.50	9.00	9.00	9.00	9.00	9.00	9.00	9.75
A3	12.00	12.00	12.00	12.00	12.00	12.00	9.00	9.00	9.00	9.00	9.00	9.00	10.50
A4													
B1													
B2	12.50	12.50	12.00	12.00	12.00	12.00	10.00	10.00	10.00	10.00	10.00	10.00	11.08
B3			13.00	13.00	13.00	13.00	10.00	10.00	10.00	10.00	10.00	10.00	11.20
B4			14.00	14.00	14.00	14.00	10.00	10.00	10.00	10.00	10.00	10.00	11.60
S	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
1983													
Discount rate	9.00	9.00	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.42
CB-Loan average	9.10	9.10	9.10	9.10	8.70	8.70	10.10	10.10	9.60	9.60	10.00	10.00	9.43
CB-Loan marginal	11.00	11.00	10.60	10.80	10.00	10.70	11.80	12.50	8.90	11.90	10.50	13.40	11.09
A1	9.00	9.00	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.42
A2	9.00	9.00	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.42
A3	9.00	9.00	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.42
A4						8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
B1													
B2	10.00	10.00	10.00	10.00	10.00	9.00							9.83
B3	10.00	10.00	10.00	10.00	10.00	9.00							9.83
B4	10.00	10.00	10.00	10.00	10.00	9.00							9.83
S	11.00	11.00	11.00	11.00	11.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.42
1984													
Discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00

TABLE I.D.1
Details on Norges Bank lending facilities

Interest rates on liquidity instruments

End-of-month data January 1965–December 1986

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
CB-Loan average	10.04	10.04	9.78	9.78	10.35	10.35	10.62	10.62	10.27	10.27	10.19	10.19	10.21
CB-Loan marginal	11.10	12.20	10.40	12.90	11.30	13.10	9.90	13.00	10.60	12.80	10.90	12.60	11.73
A1	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
A2	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
A3	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
A4	14.00	14.00	14.00	14.00	13.00	13.00	13.00	13.00	13.50	13.50	13.50	13.50	13.50
B1													
B2													
B3													
B4													
S	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
1985													
Discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
CB-Loan average	10.67	10.67	10.84	10.84	10.66	10.66	10.46	10.46	10.41	10.41	10.58	10.58	10.60
CB-Loan marginal	10.00	13.60	10.60	13.60	12.70	13.70	11.30	13.70	9.90	13.10	12.40	13.00	12.30
A1	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
A2	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
A3	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
A4	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	12.50	12.50	13.33
B1													
B2													
B3													
B4													
S	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
1986													
Discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
CB-Loan average	13.20	13.00	13.00	13.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.80	13.75
CB-Loan marginal	8.00	8.00											8.00
A1	10.00	10.00											10.00
A2	12.00	12.00											12.00
A3	13.00	13.00											13.00
A4													
B1													
B2													
B3													
B4													
S	10.00	10.00	13.00	13.00	14.00	14.00	14.00	14.00	14.00	14.00	15.00	15.00	13.33

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1965													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average				4.84	4.84	4.84	5.23	5.23	5.23	4.38	4.38	4.38	4.82
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity				4.84	4.84	4.84	5.23	5.23	5.23	4.38	4.38	4.38	4.82
1966													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity													
1967													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average	4.50	4.50	4.50	4.60	4.60	4.60							4.55
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	4.50	4.50	4.50	4.60	4.60	4.60							4.55
1968													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
CB-Loan average	5.30	5.30	5.30	4.70	4.70	4.70	4.90	4.90	4.90	4.60	4.60	4.60	4.88
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	5.30	5.30	5.30	4.70	4.70	4.70	4.90	4.90	4.90	4.60	4.60	4.60	4.88
1969													
Discount rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	4.50	4.50	4.50	4.50	3.83

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
CB-Loan average	5.30	5.30	5.30	5.26	5.26	5.26	5.68	5.68	5.68	6.85	6.85	6.85	5.77
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	5.30	5.30	5.30	5.26	5.26	5.26	5.68	5.68	5.68	6.85	6.85	6.85	5.77
1970													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	6.92	6.92	6.92	6.08	6.08	6.08	6.11	6.11	6.11	5.85	5.85	5.85	6.24
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	6.92	6.92	6.92	6.08	6.08	6.08	6.11	6.11	6.11	5.85	5.85	5.85	6.24
1971													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	4.60	4.60	4.70	4.70	5.60	5.60	5.30	5.30	5.10	5.10	5.20	5.20	5.08
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	4.60	4.60	4.70	4.70	5.60	5.60	5.30	5.30	5.10	5.10	5.20	5.20	5.08
1972													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	5.00	5.00	5.10	5.10	5.40	5.40	4.80	4.80	5.50	5.50	6.60	6.60	5.40
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	5.00	5.00	5.10	5.10	5.40	5.40	4.80	4.80	5.50	5.50	6.60	6.60	5.40
1973													
Discount rate	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
CB-Loan average	5.70	5.70	6.20	6.20	5.80	5.80	5.90	5.90	7.00	7.00	6.60	6.60	6.20
CB-Loan marginal													

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	5.70	5.70	6.20	6.20	5.80	5.80	5.90	5.90	7.00	7.00	6.60	6.60	6.20
1974													
Discount rate	4.50	4.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.33
CB-Loan average	5.90	5.90	7.80	7.80	8.60	8.60	8.90	8.90	6.50	6.50	7.40	7.40	7.52
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	5.90	5.90	7.80	7.80	8.60	8.60	8.90	8.90	6.50	6.50	7.40	7.40	7.52
1975													
Discount rate	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.00	5.00	5.00	5.38
CB-Loan average	8.40	8.40	9.00	9.00	8.00	8.00	6.60	6.60	6.40	6.40	6.50	6.50	7.48
CB-Loan marginal													
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	8.40	8.40	9.00	9.00	8.00	8.00	6.60	6.60	6.40	6.40	6.50	6.50	7.48
1976													
Discount rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00	5.33
CB-Loan average	5.80	5.80	6.70	6.70	6.90	6.90	7.40	7.40	8.70	8.70	7.90	7.90	7.23
CB-Loan marginal				7.90		8.40		9.80		11.40		9.10	9.32
Market paper													
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	5.80	5.80	6.70	7.90		8.40		9.80		11.40		9.10	8.11
1977													
Discount rate	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
CB-Loan average	7.20	7.20	7.40	7.40	9.00	9.00	9.90	9.90	7.90	7.90	9.40	9.40	8.47
CB-Loan marginal		7.80		10.60		13.40		13.40		10.10		15.00	11.72
Market paper													
D-Loan													

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity		7.80		10.60		13.40		13.40		10.10		15.00	11.72
1978													
Discount rate	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.92
CB-Loan average	8.70	8.70	10.50	10.50	8.90	8.90	8.30	8.30	8.90	8.90	7.90	7.90	8.87
CB-Loan marginal		12.00		13.00		13.00		9.70		10.90		10.00	11.43
Market paper								10.50			10.40	9.90	10.27
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity		12.00		13.00		13.00		10.50		10.90	10.40	10.00	11.40
1979													
Discount rate	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	9.00	9.00	7.33
CB-Loan average	7.60	7.60	7.40	7.40	7.80	7.80	8.10	8.10	9.20	9.20	10.50	10.50	8.43
CB-Loan marginal		9.20		9.00		10.10		9.30		10.50		11.50	9.93
Market paper	9.90	9.90	9.90	9.90	9.90		10.40			10.40	10.40		10.09
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	9.90	9.90	9.90	9.90	9.90	10.10	10.40			10.50		11.50	10.22
1980													
Discount rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
CB-Loan average	11.30	11.30	11.30	11.30	9.90	9.90	10.00	10.00	10.90	10.90	10.50	10.50	10.65
CB-Loan marginal		11.50		12.70		12.70		12.20		11.90		11.60	12.10
Market paper		12.50				11.50	11.50				11.50		11.75
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity		12.50		12.70		12.70		12.20		11.90		11.60	12.27
1981													
Discount rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
CB-Loan average	11.40	11.40	9.70	9.70	10.60	10.60	10.50	10.50	10.20	10.20	11.20	11.20	10.60
CB-Loan marginal		11.60		11.50		12.60		12.30		12.10		11.10	11.87
Market paper	11.50					13.00	13.00						12.50
D-Loan													
F-Loan													
Sight deposit													

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
F-deposit													
Marginal liquidity		11.60		11.50		13.00	13.00						12.28
1982													
Discount rate	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
CB-Loan average	10.70	10.70	11.80	11.80	9.00	9.00	9.60	9.60	9.40	9.40	9.20	9.20	9.95
CB-Loan marginal		12.60		12.50		12.60		11.10		11.00		11.00	11.80
Market paper	13.62		15.04			15.04			14.46				14.54
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	13.62		15.04			15.04			14.46				14.54
1983													
Discount rate	9.00	9.00	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.42
CB-Loan average	9.10	9.10	9.10	9.10	8.70	8.70	10.10	10.10	9.60	9.60	10.00	10.00	9.43
CB-Loan marginal		11.00		10.80		10.70		12.50		11.90		13.40	11.72
Market paper	13.75								13.50	13.50			13.58
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	13.75								13.50	13.50		13.40	13.54
1984													
Discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
CB-Loan average	10.04	10.04	9.78	9.78	10.35	10.35	10.62	10.62	10.27	10.27	10.19	10.19	10.21
CB-Loan marginal		12.20		12.90		13.10		13.00		12.80		12.60	12.77
Market paper	13.38						12.80			13.40			13.19
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	13.38			12.90		13.10		13.00		13.40			13.16
1985													
Discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
CB-Loan average	10.67	10.67	10.84	10.84	10.66	10.66	10.46	10.46	10.41	10.41	10.58	10.58	10.60
CB-Loan marginal		13.60		13.60		13.70		13.70		13.10		13.00	13.45
Market paper	13.35												13.35
D-Loan													
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity	13.35	13.60		13.60		13.70		13.70		13.10		13.00	13.44

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
1986													
Discount rate	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
CB-Loan average													
CB-Loan marginal		13.00		13.00		14.00		14.00		14.00		14.80	13.80
Market paper													
D-Loan			13.00	13.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.80	13.88
F-Loan													
Sight deposit													
F-deposit													
Marginal liquidity		13.00	13.00	13.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.80	13.80
1987													
Discount rate													
CB-Loan average													
CB-Loan marginal		13.80		13.80		13.80		13.80		13.80		13.80	13.80
Market paper													
D-Loan	14.50	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.86
F-Loan						14.20	14.50			13.80	14.70		14.30
Sight deposit													
F-deposit													
Marginal liquidity	14.50	13.80	13.80	13.80	13.80	14.20	14.50			13.80	14.70		14.10
1988													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	13.80	13.80	13.80	13.80	13.30	12.80	12.80	12.80	12.80	12.40	12.40	12.00	13.04
F-Loan	15.25	14.60	14.55	14.75	14.30	13.36			14.21	13.90			14.37
Sight deposit													
F-deposit													
Marginal liquidity	15.25	14.60	14.55	14.75	14.30	13.36			14.21	13.90			14.37
1989													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	11.50	11.00	11.00	11.00	10.50	10.00	10.00	10.00	10.00	10.00	11.00	11.00	10.58
F-Loan	12.20	11.34		11.48	11.28	11.16		11.43		11.02		12.11	11.50
Sight deposit													
F-deposit													
Marginal liquidity	12.20	11.34		11.48	11.28	11.16		11.43		11.02		12.11	11.50
1990													
Discount rate													

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	11.00	11.00	11.00	11.00	11.00	11.00	11.00	10.50	10.50	10.50	10.50	10.50	10.79
F-Loan	12.33	11.80	11.51	12.18	12.64	11.77	11.58	11.47	11.20	11.53	11.60		11.78
Sight deposit													
F-deposit													
Marginal liquidity	12.33	11.80	11.51	12.18	12.64	11.77	11.58	11.47	11.20	11.53	11.60		11.78
1991													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	10.50	10.50	10.20	9.75	9.50	9.50	9.50	9.50	10.00	10.00	10.00	10.00	9.91
F-Loan	11.30	11.02	10.85	10.85	10.27	10.23	10.43	10.46	10.31		10.00		10.57
Sight deposit	8.50	8.50	8.50	8.25	8.00	8.00	8.00	8.00	8.50	8.50	8.50	8.50	8.31
F-deposit													
Marginal liquidity	11.30	11.02	10.85	10.85	10.27	10.23	10.43	10.46	10.31	10.00	10.00	10.00	10.48
1992													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	11.00	11.00	17.00	11.00	10.83
F-Loan													
Sight deposit	10.00	10.00	10.00	9.00	9.00	9.00	9.00	9.00	11.00	10.00	9.00	9.00	9.50
F-deposit													
Marginal liquidity	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	11.00	11.00	17.00	11.00	10.83
1993													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	10.00	9.25	8.75	7.75	7.50	7.50	7.50	7.50	7.50	7.00	6.75	7.00	7.83
F-Loan								6.18	6.35	6.46	5.41	4.86	5.69
Sight deposit	9.00	8.25	7.75	6.75	6.75	6.00	6.00	5.50	5.50	5.00	4.75	5.00	6.35
F-deposit													
Marginal liquidity	10.00	9.25	8.75	7.75	7.50	6.75	6.18	6.35	6.46	5.41	4.86	4.86	7.01
1994													
Discount rate													
CB-Loan average													
CB-Loan marginal													

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Market paper													
D-Loan	7.00	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.77
F-Loan	5.18				5.02					5.17	6.05	5.29	5.34
Sight deposit	5.00	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.77
F-deposit		5.58	5.47	5.26		5.11	5.17	5.36	5.50				5.35
Marginal liquidity	5.18	5.58	5.47	5.26	5.02	5.11	5.17	5.36	5.50	5.17	6.05	5.29	5.35
1995													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75
F-Loan	4.98		5.08	6.12	5.59	5.55	5.08	5.13	5.22	5.07	5.28	7.33	5.49
Sight deposit	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
F-deposit		5.23											5.23
Marginal liquidity	4.98	5.23	5.08	6.12	5.59	5.55	5.08	5.13	5.22	5.07	5.28	7.33	5.47
1996													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	6.75	6.75	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.00	6.00	6.46
F-Loan	5.42		4.66	4.53	4.58	4.60	4.60	4.66	4.66		4.16		4.65
Sight deposit	4.75	4.75	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.00	4.00	4.46
F-deposit		5.18								4.66		4.19	4.68
Marginal liquidity	5.42	5.18	4.66	4.53	4.58	4.60	4.60	4.66	4.66	4.66	4.16	4.19	4.66
1997													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	5.25	5.25	5.25	5.25	5.25	5.25	5.50	5.50	5.50	5.50	5.50	5.50	5.38
F-Loan	3.35	3.35			3.52						3.63	3.77	3.52
Sight deposit	3.25	3.25	3.25	3.25	3.25	3.25	3.50	3.50	3.50	3.50	3.50	3.50	3.38
F-deposit			3.41	3.45		3.46	3.67	3.67	3.62	3.60			3.55
Marginal liquidity	3.35	3.35	3.41	3.45	3.52	3.46	3.67	3.67	3.62	3.60	3.63	3.77	3.54
1998													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	5.50	5.50	5.75	5.75	6.25	6.50	7.00	10.00	10.00	10.00	10.00	10.00	7.69

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
F-Loan	3.90										8.45	8.81	7.05
Sight deposit	3.50	3.50	3.75	3.75	4.25	4.50	5.00	8.00	8.00	8.00	8.00	8.00	5.69
F-deposit		3.75	3.82	3.82	3.85	4.62	5.15	8.65	8.26	8.21			5.57
Marginal liquidity	3.90	3.75	3.82	3.82	3.85	4.62	5.15	8.65	8.26	8.21	8.45	8.81	5.94
1999													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	9.50	9.50	9.00	8.50	8.50	8.00	8.00	8.00	7.50	7.50	7.50	7.50	8.25
F-Loan	7.99		7.55	7.15	7.15		6.65		5.55	5.57	5.54	5.60	6.53
Sight deposit	7.50	7.50	7.00	6.50	6.50	6.00	6.00	6.00	5.50	5.50	5.50	5.50	6.25
F-deposit		7.68				6.22		6.23					6.71
Marginal liquidity	7.99	7.68	7.55	7.15	7.15	6.22	6.65	6.23	5.55	5.57	5.54	5.60	6.57
2000													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	7.50	7.50	7.50	7.75	7.75	8.25	8.25	8.75	9.00	9.00	9.00	9.00	8.27
F-Loan	5.56	5.60		5.89	5.79						7.04	7.04	6.15
Sight deposit	5.50	5.50	5.50	5.75	5.75	6.25	6.25	6.75	7.00	7.00	7.00	7.00	6.27
F-deposit			5.61			6.38	6.38	6.86	7.11	7.12			6.58
Marginal liquidity	5.56	5.60	5.61	5.89	5.79	6.38	6.38	6.86	7.11	7.12	7.04	7.04	6.37
2001													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	8.50	8.96
F-Loan	7.05	7.06	7.06	7.02	7.03	7.07	7.06			7.08	7.05	6.59	7.01
Sight deposit	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.50	6.96
F-deposit								7.10	7.09				7.10
Marginal liquidity	7.05	7.06	7.06	7.02	7.03	7.07	7.06	7.10	7.09	7.08	7.05	6.59	7.02
2002													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	8.50	8.50	8.50	8.50	8.50	8.50	9.00	9.00	9.00	9.00	9.00	8.50	8.71
F-Loan					6.55								6.55
Sight deposit	6.50	6.50	6.50	6.50	6.50	6.50	7.00	7.00	7.00	7.00	7.00	6.50	6.71

TABLE I.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
F-deposit	6.60	6.65	6.62	6.59		6.59	7.10	7.11	7.10	7.09	7.09	6.59	6.83
Marginal liquidity	6.60	6.65	6.62	6.59	6.55	6.59	7.10	7.11	7.10	7.09	7.09	6.59	6.81
2003													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	8.00	8.00	7.50	7.50	7.00	6.00	6.00	5.00	4.50	4.50	4.50	4.25	6.06
F-Loan					5.07					2.62	2.54	2.33	3.14
Sight deposit	6.00	6.00	5.50	5.50	5.00	4.00	4.00	3.00	2.50	2.50	2.50	2.25	4.06
F-deposit	6.08	6.07	5.56										5.90
Marginal liquidity	6.08	6.07	5.56	5.50	5.07	4.00	4.00	3.00	2.50	2.62	2.54	2.33	4.11
2004													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	4.00	4.00	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.79
F-Loan	2.29		1.77	1.79	1.80	2.44	1.80	1.79	1.83	1.79	1.78		1.91
Sight deposit	2.00	2.00	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.79
F-deposit													
Marginal liquidity	2.29	2.00	1.77	1.79	1.80	2.44	1.80	1.79	1.83	1.79	1.78	1.75	1.90
2005													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	3.75	3.75	3.75	3.75	3.75	3.75	4.00	4.00	4.00	4.00	4.25	4.25	3.92
F-Loan			1.82	1.80	1.79	1.78	2.03			2.07	2.28	2.30	1.98
Sight deposit	1.75	1.75	1.75	1.75	1.75	1.75	2.00	2.00	2.00	2.00	2.25	2.25	1.92
F-deposit													
Marginal liquidity	1.75	1.75	1.82	1.80	1.79	1.78	2.03	2.00	2.00	2.07	2.28	2.30	1.95
2006													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	4.25	4.25	4.50	4.50	4.50	4.75	4.75	5.00	5.00	5.00	5.25	5.50	4.77
F-Loan	2.28			2.55	2.54	2.84	2.79	3.03	3.03	3.05	3.27	3.56	2.89
Sight deposit	2.25	2.25	2.50	2.50	2.50	2.75	2.75	3.00	3.00	3.00	3.25	3.50	2.77
F-deposit													
Marginal liquidity	2.28	2.25	2.50	2.55	2.54	2.84	2.79	3.03	3.03	3.05	3.27	3.56	2.81

TABLE 1.D.2
Norges Bank interest rates

Interest rates on liquidity instruments

End-of-month data January 1965–October 2007

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
2007													
Discount rate													
CB-Loan average													
CB-Loan marginal													
Market paper													
D-Loan	5.75	5.75	5.00	5.00	5.25	5.50	5.50	5.75	6.00	6.00			5.55
F-Loan	3.86	3.87	4.06	4.12	4.34	4.60	4.59	4.87	5.12	5.11			4.45
Sight deposit	3.75	3.75	4.00	4.00	4.25	4.50	4.50	4.75	5.00	5.00			4.35
F-deposit													
Marginal liquidity	3.86	3.87	4.06	4.12	4.34	4.60	4.59	4.87	5.12	5.11			4.45

TABLE 1.D.3
Norges Bank interest rates

Interest rates on liquidity instruments

Quarterly averages 1965:1 - 2007:3

	Discount rate	CB-Loan average	CB-Loan marginal	Market paper	D-Loan	F-Loan	Sight deposit	F-deposit	Marginal liquidity
1965Q1	3.50								
1965Q2	3.50	4.84							4.84
1965Q3	3.50	5.23							5.23
1965Q4	3.50	4.38							4.38
1966Q1	3.50								
1966Q2	3.50								
1966Q3	3.50								
1966Q4	3.50								
1967Q1	3.50	4.50							4.50
1967Q2	3.50	4.60							4.60
1967Q3	3.50								
1967Q4	3.50								
1968Q1	3.50	5.30							5.30
1968Q2	3.50	4.70							4.70
1968Q3	3.50	4.90							4.90
1968Q4	3.50	4.60							4.60
1969Q1	3.50	5.30							5.30
1969Q2	3.50	5.26							5.26
1969Q3	3.58	5.68							5.68
1969Q4	4.50	6.85							6.85
1970Q1	4.50	6.92							6.92
1970Q2	4.50	6.08							6.08
1970Q3	4.50	6.11							6.11
1970Q4	4.50	5.85							5.85
1971Q1	4.50	4.63							4.63
1971Q2	4.50	5.30							5.30
1971Q3	4.50	5.23							5.23
1971Q4	4.50	5.17							5.17
1972Q1	4.50	5.03							5.03
1972Q2	4.50	5.30							5.30
1972Q3	4.50	5.03							5.03
1972Q4	4.50	6.23							6.23
1973Q1	4.50	5.87							5.87
1973Q2	4.50	5.93							5.93
1973Q3	4.50	6.27							6.27
1973Q4	4.50	6.73							6.73
1974Q1	4.55	6.53							6.53
1974Q2	5.50	8.33							8.33
1974Q3	5.50	8.10							8.10
1974Q4	5.50	7.10							7.10
1975Q1	5.50	8.60							8.60
1975Q2	5.50	8.33							8.33
1975Q3	5.50	6.53							6.53

TABLE 1.D.3
Norges Bank interest rates

Interest rates on liquidity instruments

Quarterly averages 1965:1 - 2007:3

	Discount rate	CB-Loan average	CB-Loan marginal	Market paper	D-Loan	F-Loan	Sight deposit	F-deposit	Marginal liquidity
1975Q4	5.01	6.47							6.47
1976Q1	5.00	6.10							6.10
1976Q2	5.00	6.83	8.15						8.15
1976Q3	5.31	7.83	9.80						9.80
1976Q4	6.00	8.17	10.25						10.25
1977Q1	6.00	7.27	7.80						7.80
1977Q2	6.00	8.47	12.00						12.00
1977Q3	6.00	9.23	13.40						13.40
1977Q4	6.00	8.90	12.55						12.55
1978Q1	6.56	9.30	12.00						12.00
1978Q2	7.00	9.43	13.00						13.00
1978Q3	7.00	8.50	9.70	10.50					10.50
1978Q4	7.00	8.23	10.45	10.15					10.43
1979Q1	7.00	7.53	9.20	9.90					9.90
1979Q2	7.00	7.67	9.55	9.90					9.97
1979Q3	7.00	8.47	9.30	10.40					10.40
1979Q4	7.76	10.07	11.00	10.40					11.00
1980Q1	9.00	11.30	11.50	12.50					12.50
1980Q2	9.00	10.37	12.70	11.50					12.70
1980Q3	9.00	10.30	12.20	11.50					12.20
1980Q4	9.00	10.63	11.75	11.50					11.75
1981Q1	9.00	10.83	11.60	11.50					11.60
1981Q2	9.00	10.30	12.05	13.00					12.25
1981Q3	9.00	10.40	12.30	13.00					13.00
1981Q4	9.00	10.87	11.60						
1982Q1	9.00	11.07	12.60	14.33					14.33
1982Q2	9.00	9.93	12.55	15.04					15.04
1982Q3	9.00	9.53	11.10	14.46					14.46
1982Q4	9.00	9.27	11.00						
1983Q1	9.00	9.10	11.00	13.75					13.75
1983Q2	8.69	8.83	10.75						
1983Q3	8.00	9.93	12.50	13.50					13.50
1983Q4	8.00	9.87	12.65	13.50					13.45
1984Q1	8.00	9.95	12.20	13.38					13.38
1984Q2	8.00	10.16	13.00						13.00
1984Q3	8.00	10.50	13.00	12.80					13.00
1984Q4	8.00	10.21	12.70	13.40					13.40
1985Q1	8.00	10.72	13.60	13.35					13.48
1985Q2	8.00	10.72	13.65						13.65
1985Q3	8.00	10.44	13.70						13.70
1985Q4	8.00	10.52	13.05						13.05
1986Q1	8.00		13.00		13.00				13.00
1986Q2	8.00		13.50		15.49				15.49

TABLE 1.D.3
Norges Bank interest rates

Interest rates on liquidity instruments

Quarterly averages 1965:1 - 2007:3

	Discount rate	CB-Loan average	CB-Loan marginal	Market paper	D-Loan	F-Loan	Sight deposit	F-deposit	Marginal liquidity
1986Q3	8.00		14.00		14.00				14.00
1986Q4	8.00		14.40		14.46				14.46
1987Q1			13.80		14.19				14.19
1987Q2			13.80		13.80	14.24			13.95
1987Q3			13.80		13.80	14.33			14.33
1987Q4			13.80		13.80	14.33			14.33
1988Q1					13.80	14.82			14.82
1988Q2					13.40	14.74			14.74
1988Q3					12.80	14.64			14.64
1988Q4					12.37	14.67			14.67
1989Q1					11.29	13.26			13.26
1989Q2					10.65	11.92			11.92
1989Q3					10.00	11.45			11.45
1989Q4					10.50	11.38			11.38
1990Q1					11.00	11.75			11.75
1990Q2					11.00	12.02			12.02
1990Q3					10.80	11.88			11.88
1990Q4					10.50	11.65			11.65
1991Q1					10.46	11.44	8.50		11.44
1991Q2					9.75	11.13	8.22		11.13
1991Q3					9.56	10.67	8.06		10.67
1991Q4					10.00	10.54	8.50		10.00
1992Q1					10.00	10.64	9.91		10.00
1992Q2					10.00	10.66	9.00		10.00
1992Q3					10.26	10.81	9.53		10.26
1992Q4					12.73		9.67		12.73
1993Q1					9.58		8.48		9.58
1993Q2					7.83		6.86		7.66
1993Q3					7.50	6.25	5.67	6.19	6.25
1993Q4					7.03	5.48	5.03	5.37	5.48
1994Q1					6.86	5.39	4.86	5.45	5.45
1994Q2					6.75	5.18	4.75	5.29	5.29
1994Q3					6.75	5.68	4.75	5.37	5.68
1994Q4					6.75	5.59	4.75	5.76	5.76
1995Q1					6.75	4.95	4.75	5.26	5.26
1995Q2					6.75	5.56	4.75	5.90	5.90
1995Q3					6.75	5.16	4.75	5.19	5.19
1995Q4					6.75	5.56	4.75	5.12	5.56
1996Q1					6.69	5.27	4.69	5.15	5.27
1996Q2					6.50	4.60	4.50		4.60
1996Q3					6.50	4.65	4.50	4.70	4.70
1996Q4					6.19	4.33	4.19	4.43	4.43
1997Q1					5.31	3.39	3.31	3.59	3.59

TABLE 1.D.3
Norges Bank interest rates

Interest rates on liquidity instruments

Quarterly averages 1965:1 - 2007:3

	Discount rate	CB-Loan average	CB-Loan marginal	Market paper	D-Loan	F-Loan	Sight deposit	F-deposit	Marginal liquidity
1997Q2					5.25	3.52	3.25	3.43	3.52
1997Q3					5.46		3.46	3.66	3.66
1997Q4					5.50	3.65	3.50	3.65	3.65
1998Q1					5.53	3.78	3.53	3.70	3.78
1998Q2					5.97		3.97	4.02	4.02
1998Q3					8.34	5.49	6.34	5.35	5.49
1998Q4					10.00	8.51	8.00	8.21	8.51
1999Q1					9.50	8.11	7.50	7.76	8.11
1999Q2					8.55	7.21	6.55	6.72	7.21
1999Q3					7.95	6.35	5.95	6.21	6.35
1999Q4					7.50	5.56	5.50	5.66	5.66
2000Q1					7.50	5.59	5.50	5.61	5.61
2000Q2					7.81	5.86	5.81	6.38	6.38
2000Q3					8.56		6.56	6.69	6.69
2000Q4					9.00	7.05	7.00	7.12	7.12
2001Q1					9.00	7.05	7.00	7.12	7.12
2001Q2					9.00	7.03	7.00		7.03
2001Q3					9.00	7.04	7.00	7.10	7.10
2001Q4					8.90	6.93	6.90	7.11	7.11
2002Q1					8.50	6.59	6.50	6.61	6.61
2002Q2					8.50	6.56	6.50	6.60	6.60
2002Q3					8.98		6.98	7.09	7.09
2002Q4					8.90	7.10	6.90	7.00	7.10
2003Q1					7.97		5.97	6.07	6.07
2003Q2					7.12	5.07	5.12		5.07
2003Q3					5.39		3.39		3.39
2003Q4					4.47	2.54	2.47		2.54
2004Q1					4.02	2.04	2.02		2.04
2004Q2					3.75	1.80	1.75		1.80
2004Q3					3.75	1.83	1.75		1.83
2004Q4					3.75	1.80	1.75		1.80
2005Q1					3.75	1.82	1.75		1.82
2005Q2					3.75	1.80	1.75		1.80
2005Q3					4.00	2.03	2.00		2.03
2005Q4					4.16	2.22	2.16		2.22
2006Q1					4.29	2.29	2.29		2.29
2006Q2					4.58	2.63	2.58		2.63
2006Q3					4.87	2.93	2.87		2.93
2006Q4					5.21	3.27	3.21		3.27
2007Q1					5.56	3.82	3.73		3.82
2007Q2					5.10	4.17	4.10		4.17
2007Q3					5.64	4.70	4.64		4.70

CHAPTER 2

A reconstruction of the balance sheets of savings banks in Norway 1822–1875

Jan T. Klovland¹

Savings banks were quantitatively the most important group of financial intermediaries in Norway in the nineteenth century. Although commercial banks gradually increased their share of the business of banking, it was not until 1898 that commercial banks surpassed the savings banks with regard to the volume of loans to the public. This chapter is devoted to a reconstruction of the balance sheets of individual savings banks in the period 1822 to 1875. We also give revised estimates of aggregate deposits, own funds, total assets and loans for all years through 1918. The new data base allows us to compute a liquid asset ratio for savings banks, which - after adjustment for trend movements - turns out to be a sensitive barometer of financial conditions in Norway. It seems very often to be the case that when savings banks did well and expanded their activities the nation prospered as well. Once again, this highlights the savings banks' key role as the most important financial intermediaries of the nineteenth century.

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2.1 Introduction

Savings banks were quantitatively the most important group of financial intermediaries in Norway in the nineteenth century. Commercial banks gradually increased their share of the business of banking, surpassing the savings banks in 1898 in terms of loans to the public, but only in 1915 with respect to the volume of deposits held by the public. Some of the savings banks were relatively large by Norwegian standards; in 1870, for example, there were six savings banks among the ten largest banks in the country.² Thirty years later this number had shrunk to four, but the largest bank in Norway in the year 1900, as measured by deposit volume, was in fact a savings bank – Christiania Sparebank.

Although some town banks were relatively large, this was not typical of savings banks – the majority of savings banks were indeed quite small. At the end of the period covered in detail here, in 1875, our data base comprises 284 savings banks in operation.³ The great number of small banks were located in rural areas, and it was only some of the largest ones of these that operated with total assets above 100 000 speciedaler (NOK 400 000).⁴

The great majority of savings banks were *chartered banks*, i.e. they were given permission by the government to operate as savings banks according to the Savings Bank Act of 1824 by applying for approval of their statutes. These banks were allowed to charge five per cent interest on mortgage loans (instead of the general maximum of four per cent), enjoyed exemption from some stamp duties and were given some other minor privileges.⁵ However, a few banks operated as savings banks without being chartered. Some banks did so for a few years after being established, then applying for authorization as a chartered bank; other banks existed for a long period without formal approval from the authorities. One reason for a savings bank not to operate as a chartered bank was to avoid the restriction of four per cent on the maximum rate of interest paid to depositors. The issue came to the forefront in 1849 when Akers Sparebank temporarily opted to renounce its charter because the government refused to accept a change in its plan that enabled the bank to give more than four per cent interest to its depositors.⁶ In 1857 an amendment to the Savings Bank Act raised the maximum deposit rate to six per cent, but there were still some banks that operated without a formal approval of their statutes.

In the existing savings banks statistics the practice of including the few unchartered banks varies from bank to bank and over time. Here, we make no distinction between the two types of savings banks, trying to include all banks that were operating as savings banks. In a few cases it is a matter

²Christiania Sparebank and Bergen Sparebank ranked as number 3 and four, respectively, after the two largest commercial banks, Christiania Bank og Kreditkasse and Bergens Privatbank.

³Four savings banks established between 1845 and 1860 had gone out of business by 1875: Horrig, Næs Jernverk, Aurland and Skibvedt. It should also be noted that some of the earliest established banks had been closed for a number of years before being reestablished at a later date. This concerns Moss Sparebank, founded in 1826, but being out of business between 1830 and 1842, and Tønsberg Sparebank, which also began operations in 1826, but which was inactive between 1832 and 1846.

⁴To put the size of the banks in perspective it can be noted that a bank with total assets of 100 000 speciedaler in 1875 would only be 2.9 per cent of the size of Christiania Sparebank.

⁵Rønning (1972).

⁶See Schreiner (1943, pp. 52–68.).

of judgement whether a bank should be classified as a savings bank, since some of the banks in question were organized with some of the features of a commercial bank. The typical savings bank was established by collecting funds from private individuals to form the share capital of the bank (*grunnfond*). In rural areas we also see many cases of savings banks being formed by converting the funds of the local common grain store into a bank.⁷ These funds might be considered either as a permanent donation, as a loan to be repaid after some years with, or without, interest, or as an interest-bearing deposit with a minimum maturity of some years. A crucial distinction between a commercial bank and a savings bank, applied here, is that the share capital of the former was invested with a view to obtain dividends from the bank's activities, while in the case of a savings bank the altruistic motives of the founders were more important.

In practice, there are some cases that are not clear cut. One example is Rennesø Spareskillingsbank, which was established in 1854.⁸ In Brandal (1989) it is listed among commercial banks, but its status is somewhat undecided until it is definitely reestablished as a commercial bank in 1910 under the name of A/S Rennesøybanken. We know that it was entered into the Norwegian Registry of Firms (Handelsregisteret) as Rennesø Spareskillingsbank in February 1875.⁹ From that date (maybe also earlier) it appears to be organized as a general partnership (*ansvarlig selskap*) formed among a large number of local citizens. This example shows the fact that in some rural districts a distinction was sometimes made between the 'public' savings bank, which had close ties to the local authorities, and the 'private' bank, which was typically founded and run by a group of individuals as a general partnership. The equity of the latter type of banks was typically referred to as share capital, but surpluses were accumulated in the bank's own fund (*grunnfond*) rather than paid out to share holders, thus operating more in the tradition of a savings bank. We have considered Rennesø Spareskillingsbank as a savings bank here, in accordance with the existing savings banks statistics which listed the bank through 1881, but thereafter it disappears from the banking statistics.¹⁰

An additional problem is caused by the fact that several banks adopted the name of 'sparebank' (savings bank), but it turns out that the ownership structure indicates that they were more typical of the commercial bank category, and these banks have therefore been classified as commercial banks here.¹¹ However, the total of deposits and loans belonging to banks that may have been wrongly classified is trifling.

This chapter is devoted to a reconstruction of the balance sheets of individual savings banks in the period 1822 to 1875. We also give revised estimates of aggregate deposits, own funds, total

⁷Rønning (1972).

⁸See Rennesøy Local Council (1938, pp. 151–156) for a short history of the banks in this region.

⁹*Den Norske Rigstidende* 5 April 1875, p. 1. The same page contains a similar announcement concerning Hjelmeland Sparebank, which according to Brandal (1989) also was a commercial bank. After 1881 Rennesø Spareskillingsbank disappears altogether from the savings banks statistics until it reappears as Rennesøybanken in the commercial bank statistics in 1917.

¹⁰A similar case is Strandvig Privatbank, which was established in 1868 by a faction of the board members of Fuse Sparebank (Søndre Bergenhus Amt). This bank also seems to have been organized as a general partnership, closer to being a savings bank than a commercial bank despite its name. It was amalgamated with Fuse Sparebank in 1883, see Fusa Sparebank (1958, pp. 34–40).

¹¹See the appendix to chapter 3 in this volume for a list of such banks.

assets and loans for all years through 1918. These data are corrected for errors and omissions in the published savings bank statistics of this period.

2.2 Sources of balance sheet data for savings banks

Two facts make it an arduous task to collect a reasonably complete set of savings banks's balance sheets before 1860: the great number of banks – by 1860 at least 173 banks had been established – and the fact that the balance sheets have to be extracted one by one from a number of different and partly rather unwieldy sources. This section contains a review of the various sources and some reflections on their quality and reliability.

2.2.1 The sources

The first year covered by the annual savings bank statistics (henceforth referred to as *SBS*) is 1869, which thus marks a watershed regarding sources of balance sheet data. We first review the adequacy of the data in *SBS*, then dealing with the period 1822 to 1868.

Savings banks statistics

From 1870 to 1879 the statistics was published by the Ministry of Finance.¹² The quality of the statistics was markedly improved when Statistics Norway took over the responsibility of collecting the data and processing the returns beginning with the year 1880. There are several problems with the *SBS* prior to 1881 that need to be dealt with to obtain a satisfactory data base for these years: (1) missing or wrongly classified banks (2) missing data or previous year's figures inserted for individual banks (3) transcription and printing errors, and (4) only total figures for each bank's holdings of mortgage loans and securities were published.

There were various reasons why banks were left out of the annual returns. The practice of including unchartered banks varied from bank to bank; some were included in the 1870s, but these were weeded out in the early 1880s when their status had been clarified. The most important of the unchartered banks was Bergens Skillingbank, which was founded as a savings bank in 1857, but omitted from all banking statistics until it was reorganized as a commercial bank in 1919. Another important case is Stavanger Sparekasse, established in 1851, but not included in *SBS* until 1881, after obtaining approval of its statutes in 1878.

From 1906 *SBS* provides summary information on 21 'unauthorized' savings banks, some of which have been taken into account throughout the period here. In that year the aggregate deposits

¹²The issues prepared by the Ministry of Finance include *Tabeller vedkommende Norges Sparebanker i Aarene 1870, 1871 og 1872* (Christiania, 1876), later issues with similar titles covered the years 1873, 1874 and 1875 (Christiania, 1878), the years 1876, 1877 and 1878 (Christiania, 1880), and the year 1879 (Christiania, 1882). The first issue also contained data for 1869. It is unfortunate that Statistics Norway failed to include data for some years between 1869 and 1874 when it published its 1948 issue of Historical Statistics (*Statistiske Oversikter 1948*), which is the only survey which purported to reproduce annual figures for this period.

of these banks amounted to NOK 10.7 million. The largest banks have already been included in our sample prior to this,¹³ and one bank (Røkens Sparebank) was actually a commercial bank, so that the net addition to aggregate savings bank deposits not included previously is NOK 2.8 million. This fact creates a minor break in the time series in 1906; aggregate deposits rose by 0.67 per cent due to the new information, and similar breaks must be expected for the other components of the balance sheet.

In the years before 1881 the *SBS* data had to be supplemented by information on a number of other banks that were left out for various reasons. It was often the case that newly established banks failed to show up in the *SBS* in the first years of their existence. In some cases it appears that the Ministry of Finance had some difficulties with obtaining the annual accounts from individual banks, which led to the use of previous year's figures or the exclusion of the bank from the tables.¹⁴ Before Statistics Norway was given charge of the *SBS* in 1880 the published returns contain quite many transcription and printing errors. Obvious misprints have been corrected and figures have been revised in all suspected cases when the data could be checked against the original returns in the National Archives or other sources.

A final problem with *SBS* prior to 1880 is the fact that no separate estimates of mortgage loans (*pantelån*) were published. Such loans were lumped together with bonds and other securities. Figures for the mortgage loans of individual banks have been extracted from the original returns in the National Archives for the years 1860–1878 (see below for further information on this source); the 1879 returns are missing in the archive and only figures from newspapers or anniversary publications were available for this year.

The quinquennial reports of the county governors and other official sources

Beginning with 1845 the Quinquennial reports of County Governors (*Amtmennenes Femårsberetninger*) contain statistics relating to nearly all savings banks, excluding only a few unchartered or newly established banks.¹⁵ The information given is restricted to deposits, own funds and total balances. There is in general no information on loans or other assets.

Public archives

There are many references in the County Governors' reports to the fact that one of their regular duties was to provide the government with summary statements of the savings banks' annual accounts.¹⁶ In general these statements seem to have contained information on deposits, own funds and total

¹³This concerns Bergens Skillingsbank (deposits in 1906 amounted to NOK 5.6 million), Spareforeningen Bien (NOK 1.3 million) and Levanger Haandværkerforenings Sparekasse (NOK 0.6 million).

¹⁴Alten Sparebank, the only bank in Finnmarken Amt, mysteriously disappears from *SBS* in the years 1876 to 1879. The original returns (except 1879) sent in to the Ministry by the bank have been recovered in the National Archives.

¹⁵The full title of the reports are *Beretning om Kongeriget Norges økonomiske Tilstand i Aarene 1836–1840* etc. Some less systematic information can also be found in the 1836–1840 volume and earlier issues.

¹⁶For one example see the report for the years 1840–1845, p.59, concerning Christians Amt.

balances only.¹⁷ In 1861 all savings banks were required to report their accounts to the Ministry of Finance annually.¹⁸ From this year the original documents can be found in the National Archives, comprising the great majority of savings banks.¹⁹ This source has been exploited fully here to construct a fairly complete data base of the main balance sheet items for the years 1861–1868. The same source was used for some minor additions and revisions to the published figures for the years through 1875 and for extracting figures for mortgage loans of individual banks between 1869 and 1878.

In addition to the material in the National Archives it turned out that the State Archive of Stavanger contained valuable information on some of the region's savings banks that were not available elsewhere, in particular a complete record of the accounts of Stavanger Sparebank from its founding year in 1834.²⁰

Anniversary publications of savings banks

Especially for the early years, before access to the nearly complete sources after 1860, the numerous anniversary publications issued by savings banks form a very useful set of sources. Most banks have issued such publications in connection with the centenary of their foundation, sometimes also after having been in operation for fifty, seventy-five or more than one hundred years. Some publications contain a complete set of annual figures relating to the main balance sheet items, but many banks published these for selected years and for deposits, funds and total balances only. In many cases it turns out that the accounts of the early years of the bank's existence are no longer available. Although being rather incomplete, these volumes constitute valuable sources of individual banks' balances. A list of anniversary publications published before 1945 that were consulted here can be found in the appendix.

Contemporary newspapers

The annual accounts of the local savings banks were often – but not always – published in one of the local newspapers, sometimes also in newspapers with a nationwide circulation.²¹ For this reason newspapers is one of the major sources, especially in the period before 1860. An extensive search has been made in a number of contemporary newspapers, which are listed in the appendix.²²

¹⁷Until 1851 savings banks were the responsibility of the Ministry of Church (*Kirkedepartementet*), after this these matters were transferred to the Ministry of Finance. Regrettably, few traces of this source material have been found in the National Archives before 1860.

¹⁸Egge (1972, p. 132).

¹⁹The annual savings bank accounts for the period 1861 to 1878 are catalogued as *Finandepartementet Ekspedisjonskontor C*, shelf numbers 3A25233/3A25234, boxes 59 through 66. A few banks each year and practically the whole of the 1879 file are missing.

²⁰Stavanger Sparebank, which was one of the major regional banks of the country, failed in 1889, see Rygg (1954, pp. 176–183).

²¹These were chiefly the Christiania newspapers *Morgenbladet*, *Christianiaposten* (beginning 1848) and *Aftenbladet* (beginning 1855).

²²In most cases the statements of account or summary information thereof were published in the months from January to April, but there are also numerous examples of such information being published later, even in the final months of the year. In this period many local newspapers printed four pages of each issue twice or three times a week. The most comprehensive

Unfortunately, there are substantial gaps in the National Library's holdings of microfilmed local newspapers for this period.²³ Some regions lacked newspapers in the 1840s and 1850s, or they are no longer available. This applies in particular to some rural areas in the interior of southern Norway.²⁴

2.2.2 The quality and accuracy of the data

There was no standard setup for the original annual accounts published in newspapers or found in archive sources. The level of detail, completeness and transparency may vary greatly between banks, and even for a single bank over time. In some cases it is a matter of interpretation which items belong to deposits, own funds and temporary loans from individuals or other banks. There are also some minor problems of accuracy. These are mainly related to minor discrepancies between the first published statement and the final version due to auditing, rounding (we give rather detailed figures in the appendix, rounded to the nearest speciedaler) or subsequent discovery of summation errors. For this reason there might be minor differences between figures found in different sources.²⁵

The figures published in the anniversary publications must be subjected to a close scrutiny with respect to reliability. When checked against original accounts it appears that in quite a number of cases the published figures are based on incomplete data or a misunderstanding of the accounts.²⁶ In cases where there are conflicting information from various sources the data published in the Quinquennial Reports of the County Governors and original returns published in newspapers have as a rule been given precedence over the data in anniversary publications.

2.3 The balance sheet items

2.3.1 Deposits

The savings banks originally offered only one type of deposits, a kind of time deposits referred to as deposits at savings bank terms. Formally, such deposits were subject to a notice of withdrawal,

newspaper, *Morgenbladet*, appeared all days, including Sundays.

²³Most of the material was filmed in the 1950s, apparently destroying the paper copies at the same time. It is a sad fact that the quality of some of the film reels has deteriorated to the extent that the copies are no longer eligible. That applies for example to the Arendal newspaper *Vestlandske Tidende* for some years in the mid 1850s. This newspaper typically published the accounts of several town banks in the Agder region (Nedenæs Amt) that cannot be found elsewhere.

²⁴The regions with particularly thin surviving newspaper sources were (the counties, i.e. *Amt*, are given in parentheses): Sogn (Nordre Bergenhus Amt), Hardanger (Søndre Bergenhus Amt) as well as central parts of the interior of southeastern Norway (Christians Amt, Buskerud Amt).

²⁵There is but one rather curious example of annual accounts published in newspapers that had to be rejected due to suspected errors in the data. Gjerpen Sparebank (established 1849) published its annual accounts regularly early in the following year in the Skien newspaper *Correspondenten* in the 1850s through 1857. No accounts were published for the next two years until 15 December 1860, when rather incomplete statements appeared for 1858 and 1859. It turns out that the figures deviate considerably from those later published in the bank's history written by Hareide (1948). The strange figures may presumably be related to the bank cashier's embezzlement that were subsequently discovered. He claimed to have lost the money box while crossing the river on his way to the bank one morning, but the box was found fifty years later bricked up in his house (see Hareide (1948) or Gardåsen (1998) on this episode).

²⁶In some cases there is a confusion of deposit flows (funds deposited in the course of the year) and the stock of deposits at the end of the year.

most typically at three months. Practice varied somewhat between banks, and over time, as to how strict these rules were exercised. There might also be different rules in each bank regarding a number of other conditions associated with the calculation of interest on the deposits, the maximum size of deposits, and so on.²⁷ After mid-century it seems that there was a convergence towards simplifying the deposit terms, in general abandoning particular restrictions and waiving the rules regarding the notice of withdrawal.

After 1900 some large savings banks began to offer demand deposits, but these played only a minor role until well after World War I.

2.3.2 Equity

When a savings bank was established, capital could be raised in many ways: donations from private individuals, permanent or temporary loans or conversion of capital previously locked up in local community grain stores. In a few cases there is some ambiguity whether such funds should be classified as deposits, equity or some form of loan capital. This problem occurs mostly in the first years of the bank's existence. As far as possible such funds have been treated with a view to preserve consistency over time, keeping an eye on the way the funds were treated in the accounts in later years.

When the bank was well established, the equity grew by accumulating the operating surpluses less any donations for charitable purposes or to local community projects. Significant reductions in a savings bank's own funds from one year to the next could come about by writing off bad debts, paying off funds to the original founders, or, in a few cases, by splitting the bank into two or three separate entities.²⁸ There were – not unsurprisingly – quite a few cases of fraudulent behaviour on the part of the banks' cashiers which resulted in heavy losses and a diminished equity base.²⁹ Operating losses were not common in savings banks in this period except possibly in the founding years, because administrative expenses were low; for many years it was the rule that bank directors served without compensation, only the cashier was paid.

2.3.3 Loans

The dominant loan instrument throughout the period was *vekselsobligasjoner*, a kind of promissory notes endorsed by several guarantors. The debt formally fell due in three, four or six months' time

²⁷See Rønning (1972) for a discussion of such issues.

²⁸The main reason for splitting an existing bank seems to be that in many rural areas there was no undisputed community center; each part of the region wanted its own bank. This seems to have been the case when Eggedal and Krødsherred Sparebank were founded in 1851 by acquiring part of the funds of the previously established Sigdal Sparebank, see Mørch (1951). A similar case is the split of Hof Sparebank in 1861 into three banks, creating the basis for Aasnæs and Vaaler Sparebank as well, see Heier (1945).

²⁹The first case occurred already in 1827 in Christianian Sparebank, see Vogt (1922, pp. 28–31). Numerous other cases of fraudulent behaviour throughout the century are revealed in anniversary publications. One example of embezzlement on a large scale is the case of Ringsager Sparebank in 1858, in which case the loss amounted to all the equity and a quarter of the deposits. Amazingly, the bank survived due to a rescue operation from depositors and the local community, see Skappel (1928).

but in practice the bill was renewed after a ten percent downpayment of the principal. Ordinary trade bills were discounted by the largest town banks, but played a much less important role.

The volume of mortgage loans varied considerably between banks and also over time. In 1869 the two types of bills accounted for 89 percent of all loans and mortgage loans for 11 per cent.³⁰ We do not have complete annual figures for the distribution by loan type for previous years, but these figures may be reasonably representative for earlier periods as well, although the share of mortgage loans may have been somewhat higher before the late 1850s. It appears that the share of mortgage loans increased when the banks' liquidity was good, as in the boom years 1853 and 1854, and fell again during and after severe liquidity squeezes, as in 1857 and 1858. A dramatic example is provided by the actions taken by Christiania Sparebank in the autumn of 1857, when, after experiencing a severe drain of funds, the bank decided to call in all mortgage loans at the next due date, in most cases giving the debtors the option of converting the loans to *vekselsobligasjon* instead.³¹ In this bank the share of mortgage loans had always been substantial, often accounting for more than fifty percent of the loan portfolio. A renewable bill obviously provided more flexibility during a period of strained liquidity. From the 1850s investment in marketable securities in the form of government, Hypotekbank or municipal bonds provided an alternative outlet for surplus liquidity, and the savings banks gradually increased their holdings of such bonds.

The available information is generally less readily forthcoming for the asset side of the balance sheet than for the liabilities side before 1861. There are consequently more missing observations for loans than for the other items considered here. However, given the extremely simplified and stable structure of the savings banks' balance sheets in the period, the estimates of the loan figures are probably not far off the mark in the great majority of cases. Small savings banks in particular held only a small amount of liquid reserves – if any at all, see below – and loans regularly accounted for 95 to 100 per cent of their assets. Consequently, when figures for total assets are known, we know of course the upper limit of loans as well, and in the majority of cases the true figures are only a few per cent lower.

2.4 New estimates of the balance sheets of individual savings banks 1822–1875

Table 2.A.1 of the appendix contains annual data for the deposits of each savings bank for the period from 1822 to 1875. An extended table comprising similar data for own funds (equity), total assets and total loans, is not printed here, but it is available at the website.

The data for the individual banks are organized by the *amt*, which was the name of the twenty

³⁰These figures are derived from aggregating the amounts of mortgage loans of all individual banks. The annual savings banks statistics only give separate figures for mortgage loans beginning in 1880. In that year such loans accounted for 10 per cent of the total loan portfolio.

³¹Vogt (1922, p. 74 and p. 163). It was not until 1880 that Christiania Sparebank once again began granting new mortgage loans.

counties in which the country was divided for administrative purposes. The name of the banks are spelled in accordance with contemporary practice.

In order to provide a basis for an estimate of total deposits and loans, missing observations have basically been linearly interpolated between the known figures. These observations are printed in blue colour in the tables. In cases where data on total assets are known the missing loan figures have usually been estimated by multiplying total assets by the ratio of loans to total assets known from a previous or subsequent year. Usually the ratio of loans to total assets varied little from one year to the next, often being in the interval 95 to 100 per cent for a typical small savings bank. Sometimes the anniversary publications provide some clues as to the likely order of magnitude of these balance sheet items in a particular year, and this information has been taken into account as far as possible.

2.5 New estimates of aggregate key statistics for savings banks 1822–1918

Table 2.1 presents new aggregate estimates of the key balance sheet items and the number of savings banks in operation at the end of each year. These time series provide revised estimates of savings bank deposits previously published in Klovland (2004) and the number of savings banks and loans in Eitrheim et al. (2004). The final two columns show annual growth rates of total assets and an approximate measure of the percentage of total balances held as liquid assets, which is further explained below.

The estimates of the number of savings banks refer to banks that were open for business at the end of the year. Such data may deviate from the information that can be found in *SBS*, which gives the year in which the bank gained status as a chartered bank. There are a number of examples of banks that had been in operation for some time before they were given formal approval of their statutes by the government. Stavanger Sparekasse was established in 1850, but waited until 1878 to apply for a charter; the plan of Finnøy Sparebank was formally accepted in 1860 although the bank had been in business since 1852.³² Sørums Sparebank became a chartered savings bank in 1865 in connection with a partial reconstruction of Sørums Sparekasse (established in 1851), involving the community council as board members.³³ These are somewhat extreme examples; it was more common for a bank to obtain a charter about the same time as the bank was founded or within one or two years time.

The number of banks grew fairly steadily over the years considered here, except between the years 1829 and 1832, when two of the pioneer banks, in Moss and Tønsberg, closed down after failing to attract a sufficient number of depositors. The 1850s, the first half of the 1860s and the middle and final years of the 1870s are periods of particularly rapid expansion.

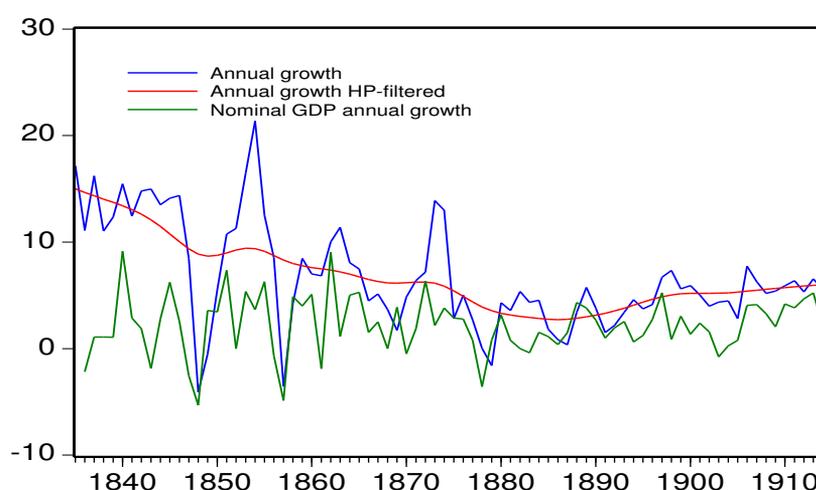
Table 2.1 contains annual data on four balance sheet items for the aggregate of all savings banks:

³²Stavanger Sparekasse (1900); Mjølssnes (1953).

³³Kongsvik (1965).

deposits, equity (own funds), total assets and loans. The growth rate of savings banks' total assets is visualized in Figure 2.1 for the period 1835 to 1914, thus excluding the founding years and the great inflation episode beginning with World War I. The annual rates of growth of total assets are shown together with a flexible trend growth curve and the annual growth rate of nominal gross domestic product.³⁴ It will be seen from the graph that the trend rate of expansion is falling from about 15 per cent in the mid 1830s to a secular low in the mid 1880s; from a level of slightly below 3 per cent it then starts to climb again, being fairly stable at 5 to 6 per cent from the mid 1890s until World War I.

FIGURE 2.1 Growth rates of savings banks' total assets and nominal GDP. 1835–1914. Per cent



The early years, from about 1830 to the mid 1840s, represent a period of uninterrupted high growth, but there are notably larger cyclical swings around the trend growth in the decades thereafter. The great commercial crises of 1848, 1857–1858 and the business cycle downturn at the end of the 1870s clearly affected savings banks, as aggregate assets fell in each of these episodes. We know from a great number of savings banks' anniversary publications that these episodes were years of severe drain on the banks' liquidity. In Christiania Sparebank deposits fell by 38 per cent in 1857; in Risør Sparebank the ratio between withdrawals and the inflow of deposits equaled 22 to 1 in 1858 and in the spring of that year the bank could no longer pay back deposits within due time.³⁵

The great boom years of the early fifties and seventies are also duly reflected in the aggregate figures; 1853–1854 and 1873–1874 are years of particularly rapid expansion.³⁶ These observations

³⁴The smoothed series of total assets are computed by applying a Hodrick-Prescott filter to the annual growth rates, with the smoothing parameter lambda set equal to 100. The underlying GDP data are from Grytten (2004).

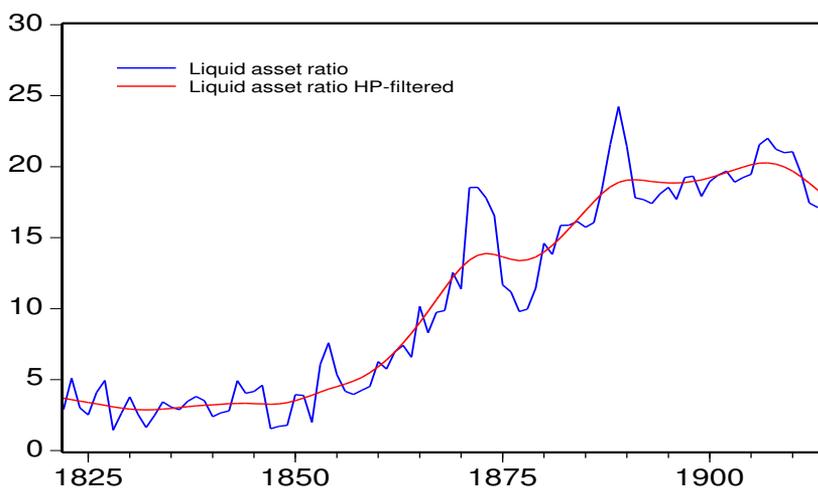
³⁵Vevstad (1935, p. 56).

³⁶So overwhelming was the surge of the inflow of deposits in 1853 and 1854 that many banks were reluctant to accept deposits beyond a certain amount from an individual depositor, invoking partly dormant paragraphs in their statutes which

highlight the fact that the savings banks could not escape the great international business cycle fluctuations and price level changes.³⁷

The composition of the balance sheet of a typical small savings bank in the early and middle part of the eighteenth century was extremely simple. On the liabilities side the items include own funds and deposits, on the assets side loans and cash.³⁸ In periods of ample liquidity, deposits in a larger bank might occur in the balance sheet, and in years of stringency, loans from the branches of Norges Bank, government loan commissions as well as from other savings or commercial banks frequently occurred. In the larger banks, and increasingly also in the medium-sized banks, a modest portfolio of marketable securities (Hypotekbank, government and municipal bonds) gradually became more widespread.

FIGURE 2.2 Savings banks' liquid asset ratio. 1822–1914



In general, the liquid assets of the savings banks were very small in the early years; from the 1860s to the 1880s, in particular, we see a trend movement towards a greater share of liquid assets. In Table 2.1 and Figure 2.2 the movements of the savings banks' liquid positions can be studied by reference to a statistic which (somewhat inaccurately) is labeled the liquid asset ratio (liquid assets as a ratio to total assets). Liquid assets is here defined as cash, deposits with other banks and securities. Because we do not have direct estimates of these items the liquid asset ratio has to be calculated as

specified an upper limit for each account. Examples of such practice are numerous, it was for example applied by Bergens Sparebank [(Fossen, 1998, p. 57)] and Akers Sparebank Schreiner (1943, p. 64).

³⁷This theme is further discussed in Rønning (1972).

³⁸It is not uncommon to see only one item, loans, on the asset side of the balance sheet in small savings banks – cash holdings were zero. In 1863, for example, it appears that at least seven banks were in this position (Hakedal, Urskoug, Elverum, Aamot, Lunde, Sirdal, Høiland). Many banks held only a few speciedaler in cash.

the difference between total assets and loans. Because of this the figures will also include various small items such as premises, furniture and money boxes. In 1882 such assets only accounted for 0.8 per cent of total assets;³⁹ from an inspection of a number of accounts for savings banks in previous years it seems likely that it was no greater in earlier years, and did not vary much from one year to the next.

Until October 1857 the maximum rate of interest that the chartered savings banks could offer their depositors was four per cent, then it was raised to six per cent. In 1887 all restrictions on interest rates were abolished. The extremely low liquid asset ratios of savings banks before the late 1850s are typical of a credit-constrained economy: there was a widespread excess demand for loans at the stipulated rates of interest which led many banks, in particular the small ones, to ration out new loans as soon as it was warranted by the bank's liquidity position. Such banks were highly vulnerable to periods of money market stringency, in particular during the years 1847–1849 and once again ten years later following the worldwide commercial crisis.

From the late 1850s we see a trend towards a higher liquid asset ratio; from the mid 1880s it usually fluctuated between 15 and 20 per cent.⁴⁰ The fluctuations around the trend value of the liquid asset ratio is clearly affected by business cycles and financial conditions. It rises markedly in 1853–1854, 1871–1874 and 1888–1890 – which are known to be periods of booming export revenues and easy money markets.

For the nineteenth century the liquid asset ratio of savings banks, when corrected for trend movements, is a sensitive barometer of financial conditions in Norway. Once again, this highlights these banks' key role as the most important financial intermediaries of this period. When savings banks did well and expanded their activities the nation prospered as well. This insight is not new – the newspaper *Correspondenten* in Skien wrote on 12 March 1853, that 'in general, the ebb and flow of the savings banks' stock of deposits is considered as a barometer of the region's general wealth'.⁴¹ Now we know more about *when* these ebbs and flows occurred, the challenge ahead is to increase our knowledge of what caused them and what their consequences were.

³⁹*SBS* for the years 1881 and 1882 p. VI.

⁴⁰The Savings Banks Act of 1887 had originally contained a paragraph that required the banks to hold at least ten percent of their assets in securities (bonds, shares in Norges Bank), but this met with fierce opposition and was abolished in 1903, see Egge (1972).

⁴¹'I Almindelighed ansees Sparebankkuddenes Stigen og Falden som et Barometer paa Svingningerne i den almene Velstand i Distriktet.'

TABLE 2.1
New estimates of key statistics for savings banks 1822–1918

End-of-year balance sheet figures are in 1000 kroner

Year	Number of banks	Deposits	Equity	Total assets	Loans	Growth rate total assets	Liquid asset ratio
1822	1	17	4	22	21		2.9
1823	4	123	19	141	134	188.3	5.1
1824	4	269	26	295	286	73.5	3.0
1825	6	455	39	494	482	51.7	2.5
1826	8	701	57	758	727	42.7	4.1
1827	8	801	54	855	812	12.0	4.9
1828	8	993	68	1061	1046	21.6	1.5
1829	8	1243	88	1331	1296	22.7	2.6
1830	7	1531	106	1637	1575	20.7	3.8
1831	7	1743	135	1879	1831	13.8	2.5
1832	6	2116	159	2275	2238	19.1	1.6
1833	7	2481	188	2668	2602	15.9	2.5
1834	8	2941	223	3165	3056	17.1	3.4
1835	13	3491	266	3757	3642	17.2	3.1
1836	13	3882	316	4198	4077	11.1	2.9
1837	15	4555	382	4937	4765	16.2	3.5
1838	16	5075	438	5514	5303	11.0	3.8
1839	19	5727	512	6239	6020	12.4	3.5
1840	22	6688	591	7282	7108	15.5	2.4
1841	27	7573	664	8245	8026	12.4	2.7
1842	36	8784	774	9561	9293	14.8	2.8
1843	48	10216	873	11107	10560	15.0	4.9
1844	53	11730	969	12714	12199	13.5	4.0
1845	57	13547	1080	14641	14031	14.1	4.2
1846	61	15650	1248	16903	16384	14.4	3.1
1847	69	17001	1357	18393	18110	8.4	1.5
1848	80	16043	1533	17656	17355	-4.1	1.7
1849	82	15881	1617	17563	17250	-0.5	1.8
1850	89	16763	1722	18558	17827	5.5	3.9
1851	98	18774	1844	20665	19870	10.8	3.8
1852	102	21122	1985	23132	22669	11.3	2.0
1853	108	25009	2216	27278	25608	16.5	6.1
1854	116	31265	2482	33773	31207	21.4	7.6
1855	120	35432	2782	38271	36223	12.5	5.4
1856	126	38362	3257	41683	39938	8.5	4.2
1857	140	36561	3569	40231	38626	-3.5	4.0
1858	149	38018	3790	41981	40199	4.3	4.2
1859	163	41381	4127	45687	43638	8.5	4.5
1860	174	44359	4497	49001	45934	7.0	6.3
1861	185	47323	4923	52466	49450	6.8	5.7
1862	195	52387	5395	57992	53968	10.0	6.9
1863	218	59157	5627	64984	60169	11.4	7.4
1864	227	64170	6072	70436	65802	8.1	6.6
1865	241	69058	6681	75904	68191	7.5	10.2
1866	251	72005	7230	79385	72794	4.5	8.3
1867	258	75584	7859	83570	75428	5.1	9.7

TABLE 2.1
New estimates of key statistics for savings banks 1822–1918

End-of-year balance sheet figures are in 1000 kroner

Year	Number of banks	Deposits	Equity	Total assets	Loans	Growth rate total assets	Liquid asset ratio
1868	263	77907	8579	86691	78140	3.7	9.9
1869	263	78975	9159	88202	77146	1.7	12.5
1870	265	82775	9715	92574	80846	4.8	12.7
1871	270	88237	10325	98687	80415	6.4	18.5
1872	270	95108	10858	106027	86376	7.2	18.5
1873	276	110355	11416	121824	100162	13.9	17.8
1874	281	126327	12351	138720	115764	13.0	16.5
1875	284	129236	13451	142694	126046	2.8	11.7
1876	292	135446	14531	150021	133241	5.0	11.2
1877	299	138542	15554	154138	139042	2.7	9.8
1878	305	137683	16501	154191	138831	0.0	10.0
1879	311	134845	16896	151750	134392	-1.6	11.4
1880	313	139815	17858	158441	135305	4.3	14.6
1881	318	144462	18720	164221	141544	3.6	13.8
1882	318	152684	19639	173273	145799	5.4	15.9
1883	326	159628	20472	180985	152246	4.4	15.9
1884	329	167285	21409	189394	158822	4.5	16.1
1885	330	169587	22269	192850	162515	1.8	15.7
1886	337	170659	22644	194487	163251	0.8	16.1
1887	341	170902	23316	195190	159285	0.4	18.4
1888	343	176818	24201	201970	158434	3.4	21.6
1889	347	188078	25135	213907	162103	5.7	24.2
1890	352	195788	25395	222213	174627	3.8	21.4
1891	355	198449	26140	225614	185454	1.5	17.8
1892	363	202996	26486	230570	189811	2.2	17.7
1893	366	209516	27857	238539	197027	3.4	17.4
1894	369	219653	29012	249771	204580	4.6	18.1
1895	375	227956	30539	259282	211214	3.7	18.5
1896	382	237479	31853	270236	222404	4.1	17.7
1897	396	254752	33297	288965	233399	6.7	19.2
1898	404	274989	35040	310933	250846	7.3	19.3
1899	413	291849	35880	328875	270009	5.6	17.9
1900	414	310535	37174	348894	282768	5.9	19.0
1901	423	326614	38734	366885	295684	5.0	19.4
1902	429	339381	40834	381796	306672	4.0	19.7
1903	436	354491	42545	398812	323384	4.4	18.9
1904	441	370979	44393	417118	336917	4.5	19.2
1905	448	380368	46797	428991	345537	2.8	19.5
1906	461	413168	48881	463522	363626	7.7	21.6
1907	478	440422	51428	493576	385028	6.3	22.0
1908	487	463111	53950	519885	409547	5.2	21.2
1909	491	488482	56731	548731	433609	5.4	21.0
1910	502	518169	60330	582122	459605	5.9	21.0
1911	511	551302	64319	620422	499239	6.4	19.5
1912	523	580153	67872	654311	540217	5.3	17.4
1913	534	620051	71593	698583	578955	6.5	17.1

TABLE 2.1
New estimates of key statistics for savings banks 1822–1918

End-of-year balance sheet figures are in 1000 kroner

Year	Number of banks	Deposits	Equity	Total assets	Loans	Growth rate total assets	Liquid asset ratio
1914	540	651396	76193	738044	610880	5.5	17.2
1915	542	738393	81303	832329	669631	12.0	19.5
1916	552	971842	90703	1086518	806966	26.7	25.7
1917	556	1267866	99452	1395331	980603	25.0	29.7
1918	564	1594746	109761	1741930	1268527	22.2	27.2

NOTE: The growth rates of total assets are computed as continuously compounded annual rates of growth. The liquid asset ratio is computed as total assets less loans as a percentage of total assets. The main liquid assets include cash, deposits in other banks, bonds and other securities. A small fraction of non-liquid items are comprised in the liquid asset ratio for data reasons, such as premises, furniture, money boxes etc, see text for further information.

Bibliography

- Brandal, T. (1989). Seglskip, brisling og tomat. In *Penger spart, penger tjent. Sparebanker og økonomisk utvikling på Sør-Vestlandet fra 1839 til 1989*, 219–264. SR-Bank, Stavanger.
- Egge, Å. (1972). Trekk av sparebankvesenet og sparebanklovgivningen i slutten av forrige århundre. In *Studier i sparing og sparebankvesen i Norge 1822-1972*, 101–153. Gyldendal, Oslo.
- Eitrheim, Ø., K. Gerdrup and J. T. Klovland (2004). Credit, banking and monetary developments in Norway 1819-2003. In Eitrheim, Ø., J. T. Klovland and J. F. Qvigstad (eds.), *Historical Monetary Statistics for Norway 1819-2003*, Norges Bank Occasional Paper no. 35, 377–407. Norges Bank, Oslo.
- Fossen, A. B. (1998). Byen og banken. In Lekve, J., A. B. Fossen and J. Gjerstad (eds.), *Vestland-sreise*, 1–144. Sparebank 1 Vest, Bergen.
- Fusa Sparebank (1958). *Hundreårsskrift for Fusa Prestegjelds Sparebank 1858-1958*.
- Gardåsen, T. K. (1998). *Sædelighet, Flid, Orden og Sparsommelighet. Utgitt av Gjerpens og Solums Sparebank i forbindelse med bankens 150-års jubileum 1998*. Skien.
- Grytten, O. H. (2004). A Consumer Price Index for Norway 1516-2002. In *Historical Monetary Statistics for Norway 1819-2003*, Norges Bank Occasional Paper no. 35, chap. 3, 47–98.
- Hareide, K. (1948). *Gjerpens Sparebank hundre år 1848-1948*. Skien.
- Heier, H. (1945). *Hof Sparebank Solør 1845-1945*.
- Husby, E. (1985). *En bank for bygd og by. Nordmøre Sparebank 150 år 1835-1985*.

- Klovland, J. T. (2004). Monetary aggregates in Norway 1819-2003. In Eitrheim, Ø., J. T. Klovland and J. F. Qvigstad (eds.), *Historical Monetary Statistics for Norway 1819-2003*, Norges Bank Occasional Paper no. 35, 181–240. Norges Bank, Oslo.
- Knutsen, S. and E. Lange (1992). Bank- og finanshistorie som etterkrigshistorisk forskningsfelt. LOS-senter notat 92/27.
- Kongsvik, R. (1965). *Sørum Sparebank 1865-1965*.
- Lekve, J., A. B. Fossen and J. Gjerstad (1998). *Vestlandsreise*. Bergen.
- Mjølshes, O. (1953). *Finnøy Sparebank gjennom 100 år 1852-1952*.
- Mørch, A. (1951). *Eggedal Sparebank 1851-1951*.
- Nordvik, H. W., G. Nerheim and T. Brandal (1989). *Penger spart, penger tjent. Sparebanker og økonomisk utvikling på Sør-Vestlandet fra 1839 til 1989*. Stavanger.
- Reiersen, E. (1998). *Penger, vekst og endring: Trondhjems Sparebank - Sparebanken Midt-Norge 1823-1998*. Trondheim.
- Rennesøy Local Council (1938). *Rennesøy prestegjeld: Rennesøy - Mosterøy - Kvitsøy*. Stavanger.
- Rønning, B. R. (1972). Norsk sparebankvesen inntil 1850. In *Studier i sparing og sparebankvesen i Norge 1822-1972*, 9–65. Gyldendal, Oslo.
- Rygg, N. (1954). *Norges Banks historie. Del II*. Oslo.
- Sandberg, P.-Ø. (1995). *Hedmark gjennom 150 år*.
- Schreiner, J. (1943). *Akers Sparebank gjennom hundre år 1844-1944*. Grøndahl og Søns Boktrykkeri, Oslo.
- Skappel, S. (1928). *Ringsaker Sparebank 1847-1927*. Oslo.
- Stavanger Sparekasse (1900). *Stavanger Sparekasse 29 Oktober 1850 - 19 Oktober 1900: Femti-aarsberetning ved Direktionens Formand*. Stavanger.
- Vevstad, J. (1935). *Risør Sparebank gjennom hundre år 1835-1935*. Risør.
- Vogt, N. (1922). *Christiania Sparebank gjennom hundrede aar*. Christiania.

2.6 Sources and notes

2.6.1 Newspaper sources

The following newspaper sources were examined, in most cases for all available years before 1861. The place of publication is given in parentheses in cases where it does not appear in the title.

- *Adressebladet* (Christiania)
- *Adressetidende for Brevig, Stathelle og Langesund*
- *Aftenbladet* (Christiania)
- *Bergensposten*
- *Bergens Stiftstidende*
- *Christianiaposten*
- *Christianssundsposten*
- *Correspondenten* (Skien)
- *Den Norske Rigstidende* (Christiania)
- *Drammens Tidende*
- *Hamars Budstikke*
- *Hedemarkens Amtstidende* (Hamar)
- *Holmestrandsposten*
- *Jarlsberg og Laurvigs Amtstidende*
- *Kongsberg Adresse*
- *Kragerø Adresse*
- *Landboe-Avisen* (Volda)
- *Lillehammer Tilskuer*
- *Lister og Mandals Amtstidende*
- *Morgenbladet* (Christiania)
- *Nordre Trondhjems Amtstidende* (Levanger)
- *Postbudet* (Volda)

- *Romsdals Amtstidende* (Christiansund)
- *Romsdals Budstikke* (Molde)
- *Tromsø Tidende/Stiftstidende*
- *Trondhjems Adresseavis*
- *Vestlandske Tidende* (Arendal)
- *Østerdølen* (Elverum)

2.6.2 List of anniversary publications before 1946

A reasonably complete bibliography of anniversary publications appearing after 1945 can be found in Knutsen and Lange (1992). In addition, some recent publications have included useful bibliographies of publications within their respective regions, see Gardåsen (1998), Lekve et al. (1998), Husby (1985), Nordvik et al. (1989), Reiersen (1998) and Sandberg (1995). See also the references in Rønning (1972).

The list below contains all anniversary publications published *before 1946* that were consulted in the present study. It covers many of the publications that have appeared, but it makes no claim of being complete. The name and the year of the publication is given, and, if stated, the name of the author. In many cases the publication is authored by the bank itself. The place of publication is nearly always the place where the main office of the bank is located.

- *Femtiarsberetning vedkommende Bergens Sparebank, stiftet 12te Februar 1823*, 1873.
- *Christiania Sparebank 1822–1897* (Evald Rygh), 1897.
- *Bamle Sparebank 1849–1899: Utarbeidet i Anledning af Bankens Femtiarsjubilæum den 11. December 1899*, 1899.
- *Stavanger Sparekasse 19 Oktober 1850–29 Oktober 1900*, 1900.
- *Tvedestrand's Sparebank 15 August 1852–15 August 1902*, 1902.
- *Vangs Sparebank Hamar. Femtiarsberetning 1853–1903*, 1903.
- *Voldens og Ørstens Sparebank 1854–1904*, 1904.
- *Trondhjems Arbeiderforenings Spareskillingsbank 1854–1904* (J. Five), 1904.
- *Haugesunds Sparebank: Femtiarsberetning 1855–1905*, 1905.
- *Ørskog Sparebank 3. Januar 1857 til 3. Januar 1907* (P. Th. Gjære), 1906.

- *Kvinnherred Sparebank 26 November 1857 26 November 1907: Femtiaarsberetning* (Axel Lea), 1907.
- *Bodø Sparebank: Femtiaarsberetning 1858–1907*, 1908.
- *Skoger Sparebank gjennom 50 Aar 1859–1909* (Th. Bjerknes), 1909.
- *Beretning om Søndre Hedemarkens Sparebanks stiftelse og virksomhed i 75 aar, 3. aug. 1835–3. aug 1910*, 1910.
- *Skiens Sparebank 1835–1910: Festskrift ved Bankens 75-Aars Jubilæum*, 1910.
- *Svelviks Sparebank 1861–1911* (Nikolai Roksvoll), 1911.
- *Tromsø Sparebank 1837–1912: Beretning om Bankens 75-aarige Virksomhed*, 1912.
- *Laurvigs Sparebank 1838–1913* (Kristen Simonsen), 1913.
- *Mandals Sparebank 1840–1915* (Kr. Fjeldsgaard), 1916
- *Strindens Sparebank i 75 Aar* (Henr. Mathiesen), 1917.
- *Røros Sparebank i fem og sytti Aar 1842 til 1917* (Henrik Grønn), 1917.
- *Porsgrunds Sparebank 1844–1919* (Stian Vemmestad), 1919.
- *Modum Sparebank 1841–1921*, 1921.
- *Torvestad & Skaares Sparebank Haugesund: Femtiaarsberetning 1871–1921* (Math. Gaard, Fridtjof Øvrebø), 1921.
- *Drammens Sparebank gjennom 100 Aar 1823–1923* (Anton B. Rustad), 1923.
- *Trondhjems Sparebank 1823–26 mai – 1923* (Aagaat Daae), 1923.
- *Christianssands Sparebank 1824–1924* (Vilhelm Krag), 1924.
- *Stranda Sparebank gjennom 75 aar: Eit kort oversyn* (Jørgen Gjerding), 1924.
- *Vinger Sparebank 1851–1926. Jubileumsskrift* (Arne Næss), 1926.
- *Ringsaker Sparebank 1847–1927* (S. Skappel), 1928.
- *Vaale Sparebank 1853–1928*, 1928.
- *Øvrebø og Hægeland Sparebank gjennom 70 aar: 1858–1928*, 1928.
- *Trondhjems Arbeiderforenings Sparingsskillingssbank i 75 år 1853–1928* (Olav Henmo), 1928.
- *Verdalens Sparebank 1854–1929* (Carl Braarud), 1929.

- *Vadsø Sparebank i 75 år 1854–1929: En oversikt* (Johan Beronka), 1930.
- *Sems Sparebank 1855–1930* (Helge L. Semb), 1930.
- *Nøtterø Sparebank i fem og sytti år* (Arne R. Evensen), 1932.
- *Hedrums Sparebank 75 år 1857–1932*, (Ivar Ketilsson), 1932.
- *Høyland Sparebanks 75-års beretning 1/7 1858 – 1/7 1933* (Teodor Stokka), 1933.
- *Beretning om Horg Sparebanks virksomhet i 50 år 1883–1933*, 1933.
- *Klæbu Sparebank i fem og sytti år 1858–1933* (G. Overvik), 1933.
- *Vikna Sparebank gjennom fem og sytti år 1858–1933* (Paul Woxeng, K. J. Ofstad, Ingvar Inderberg), 1933.
- *Hvaler Sparebank 1859–1933* (Andreas Madsen), 1934.
- *Skoger Sparebank gjennom 75 år 1859–1934* (Arne N. Anchersen), 1934.
- *Hobøl Sparebank 1859–1934*, 1934.
- *Fredrikshalds Sparebank gjennom 100 år* (Harald Bakke), 1935.
- *Spareforeningen Bien 8. juni 1885 – 8. juni 1935*, 1935.
- *Sandar Sparebank 1860–1935* (Aage Henrik Irgens), 1935.
- *Risør Sparebank gjennom hundre år 1835–1935* (Jens Vevstad), 1935.
- *Kristiansunds Sparebank 5. april 1835 – 5. 1935*, 1935.
- *Tromsø Sparebank gjennom hundre år 1836–1936* (L. Robsahm Dæhlin), 1936.
- *Overhalla Sparebank gjennom 80 år* (Olav Flotten), 1936.
- *Alta Sparebank i 75 år 1861–1935: En oversikt* (Erling Kjeldsberg), 1936.
- *Rygge Sparebank i 80 år, 1857–1937* (Per Schulstad), 1937.
- *Sokndal Landsogns Sparebank: 75-års beretning 11. oktober 1862–11. oktober 1937* (T. Hegdal, S. Mellgren), 1937.
- *Grong Sparebank gjennom 75 år* (Martin Bjerken), 1937.
- *Larvik Sparebank gjennom hundre år 1838–1938* (F. M. Hesselberg), 1938.
- *Kongsberg Sparebank 1839–1939* (H. Irgens), 1939.

- *Egersunds Sparebank gjennom hundre år 1839–1939* (Olaf Lorentzen), 1939.
- *Skedsmo Sparebank gjennom 75 år*, 1940.
- *Lillehammer Sparebank 1841–1941: En beretning ved Hundreårs jubileet den 26. oktober 1941*, 1941.
- *Eid Sokn Sparebank gjennom hundrad år, 1841 1. juni 1941* (Andr. Liset), 1941.
- *Sogndal Sparebank i 100 år 1841 – 10. juli – 1941* (Kjell Bondevik), 1941.
- *Stokke Sparebank. 75 års jublieum*, 1942.
- *Orkedals Sparebank 100-års jubileumsskrift* (P. Kr. G. Flønæs), 1942.
- *Namsos Sparebank 1842–1942*, 1942.
- *Stadsbygd Sparebank i femti år 1892–1942* (Jacob Sann), 1942.
- *Melhus Sparbank 1841–1941*, 1942.
- *Fredrikstad Sparebank 1843 – 1943. Bankens historie og dens menn gjennom hundre år* (Haakon Gjerløw), 1943.
- *Folloug Sparebank Iste april 1843 Follo Sparebank Iste april 1943*, 1943.
- *Hurdal Sparebank 1843–1943*, 1943.
- *Ekers Sparebank 100 år 1843–1943*, 1943.
- *Surnadal Sparebank gjennom hundre år* (Hans Hyldbakk), 1943.
- *Levanger og Skogns Sparebank 1843–1943: Utgitt i anledning bankens 100 års jubileum 1. mars 1943* (K. Landfald), 1943.
- *Onsøy Sparebank. Beretning ved hundreårs jubileet 25. september 1944*, (Haakon Gjerløw), 1944.
- *Rakkestad Sparebank 1844–1944* (A. Biering-Lien, Haakon Gjerløw), 1944.
- *Lier Sparebank 1844–1944: Et utsnitt av Lier herreds historie* (Tore Strand), 1944.
- *Porsgrunds Sparebank 1844–1944*, 1944.
- *Hortens Sparebank gjennom 100 år* (H. E. Bruusgaard, S. Oppegård), 1945.
- *Hof Sparebank Solør 1845–1945* (Hans Heier), 1945.

2.A Savings bank deposits

TABLE 2.A.1
Savings bank deposits 1822–1829

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1822	1823	1824	1825	1826	1827	1828	1829
Christiania <i>CHRISTIANIA AMT</i>	4367	19289	40710	61743	86370	82022	101104	123880
Moss <i>SMAALENENES AMT</i>					885	828	1067	1157
Drammen <i>BUSKERUDS AMT</i>		3921	10236	9245	11807	13055	14016	14066
Tønsberg <i>JARLSBERG & LAURVIGS AMT</i>					553	954	1515	1196
Arendal <i>NEDENÆS AMT</i>					4194	4595	5915	7495
Christianssand <i>LISTER & MANDALS AMT</i>				3681	9556	10246	8804	12298
Bergen <i>BERGEN AMT</i>		4476	8962	17613	28831	40093	47468	59622
Thronhjem <i>SØNDRE TRONDHJEMS AMT</i>		3010	7271	21460	33106	48455	68394	91100

TABLE 2.A.1
Savings bank deposits 1830–1837

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1830	1831	1832	1833	1834	1835	1836	1837
Christiania <i>CHRISTIANIA AMT</i>	150371	174789	215571	269400	337009	389757	420793	457720
	150371	174789	215571	269400	337009	389757	420793	457720
Fredrikshald <i>SMAALENENES AMT</i>						4709	8843	15071
						4709	8843	15071
Søndre Hedemarken <i>HEDEMARKENS AMT</i>						1200	2000	3000
						1200	2000	3000
Drammen Ringerige <i>BUSKERUDS AMT</i>	13457	12690	14846	17062	20487	25781	29996	40199
				261	390	1560	3897	6229
	13457	12690	14846	17323	20877	27341	33893	46428
Tønsberg <i>JARLSBERG & LAURVIGS AMT</i>	1000	922						
	1000	922						
Skien <i>BRATSBERGS AMT</i>						7672	17679	24694
						7672	17679	24694
Arendal Risør <i>NEDENÆS AMT</i>	8980	9593	10893	12667	18535	23297	28297	36978
						828	1907	3689
	8980	9593	10893	12667	18535	24125	30204	40667
Christianssand Flekkefjord <i>LISTER & MANDALS AMT</i>	15315	18126	21997	24929	29160	31860	33521	40110
								2148
	15315	18126	21997	24929	29160	31860	33521	42258
Stavanger <i>STAVANGER AMT</i>					5190	10523	14884	22558
					5190	10523	14884	22558
Bergen <i>BERGEN AMT</i>	72853	87369	101608	128176	159146	185354	184098	198939
	72853	87369	101608	128176	159146	185354	184098	198939
Christianssund <i>ROMSDALS AMT</i>						2495	5903	13281
						2495	5903	13281
Thronhjelm <i>SØNDRE TRONDHJEMS AMT</i>	120860	132380	164008	167643	165447	187816	218771	269361
	120860	132380	164008	167643	165447	187816	218771	269361
Tromsø <i>TROMSØ AMT</i>								4720
								4720

TABLE 2.A.1
Savings bank deposits 1838–1845

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1838	1839	1840	1841	1842	1843	1844	1845
Christiania	477881	514916	565779	607188	665159	779725	871225	948762
<i>CHRISTIANIA AMT</i>	477881	514916	565779	607188	665159	779725	871225	948762
Follo (Drøbak)						3139	4288	6210
Aker							9972	31099
Fenstad								3636
Hurdalen						10	10	20
<i>AKERSHUS AMT</i>						3149	14270	40965
Moss						4272	10112	17991
Fredrikshald	18051	18239	25031	24378	22713	32503	39611	49306
Fredriksstad						3995	7365	12689
Rakkestad							14	720
Onsø							604	3460
<i>SMAALENENES AMT</i>	18051	18239	25031	24378	22713	40770	57706	84166
Søndre Hedemarken	4000	5000	5604	6500	7500	8500	9319	11546
<i>HEDEMARKENS AMT</i>	4000	5000	5604	6500	7500	8500	9319	11546
Lillehammer					1825	3175	4338	6277
Land		1000	2000	3000	4000	5000	6709	10453
<i>CHRISTIANS AMT</i>		1000	2000	3000	5825	8175	11047	16730
Drammen	46217	47878	59543	74238	79484	82898	97850	124886
Ringerige	7972	8511	7350	8529	13313	14769	15846	23867
Kongsberg			4790	7003	13493	19181	25201	32974
Modum				3091	5415	7646	8824	10585
Eker					2267	4040	5038	6857
Lier							465	2106
Næs (Hallingdal)							200	237
Sigdal						800	1000	1200
<i>BUSKERUDS AMT</i>	54189	56389	71683	92861	113972	129334	154424	202712
Holmestrand	5000	9018	16233	20000	23631	31969	32838	38821
Laurvig		5840	9053	11163	10178	13940	18427	26788
Fredriksværn				1486	9286	13000	18000	23475
<i>JARLSBERG & LAURVIGS AMT</i>	5000	14858	25286	32649	43095	58909	69265	89084
Skien	29060	35203	37288	35866	40931	44939	53686	68440
Porsgrund							1200	6744
Kragerø								1000
<i>BRATSBERGS AMT</i>	29060	35203	37288	35866	40931	44939	54886	76184
Arendal	47341	52621	61176	69283	72767	76221	86118	104048
Risør	3854	5274	4754	4121	3613	3164	2697	3193

TABLE 2.A.1
Savings bank deposits 1838–1845

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1838	1839	1840	1841	1842	1843	1844	1845
Grimstad					2170	2753	2746	4079
Næs Jernverk								460
<i>NEDENÆS AMT</i>	51195	57895	65930	73404	78550	82138	91561	111780
Christianssand	43456	43142	45245	53081	57006	65769	72174	87404
Flekkefjord	8907	12106	11647	10404	11802	14793	19106	22126
Mandal			1326	2923	4008	6492	10397	14310
Farsund					2516	4769	6932	10114
<i>LISTER & MANDALS AMT</i>	52363	55248	58218	66408	75332	91823	108609	133954
Stavanger	27691	41589	59609	64207	67881	70114	77430	94400
Egersund			971	1564	1665	5466	10402	9318
<i>STAVANGER AMT</i>	27691	41589	60580	65771	69546	75580	87832	103718
Eid						239	630	1028
Vos						5000	10000	14441
<i>SØNDRE BERGENHUS AMT</i>						5239	10630	15469
Bergen	210845	240339	289048	343273	403774	467468	555805	634678
<i>BERGEN AMT</i>	210845	240339	289048	343273	403774	467468	555805	634678
Sogndal				500	1000	2000	3000	4142
Førde						500	1000	1700
<i>NORDRE BERGENHUS AMT</i>				500	1000	2500	4000	5842
Christianssund	19487	21129	27411	33432	38584	46082	54634	61324
Molde		3118	10493	13801	17013	19462	25101	31943
Aalesund				6849	12909	23305	39336	51090
Herø og Røvde						75	791	2519
Surendal						2043	7152	10188
<i>ROMSDALS AMT</i>	19487	24247	37904	54082	68506	90967	127014	157064
Thronhjelm	308365	352106	405083	456334	552631	597276	620438	658386
Melhus				1321	3860	6117	8038	6848
Røros					203	1553	2740	3360
Strinden					707	2294	3361	4825
Orkedal					2281	5171	6464	4615
Horrig				400	800	1200	1500	1887
<i>SØNDRE TRONDHJEMS AMT</i>	308365	352106	405083	458055	560482	613611	642541	679921
Namsos					1143	2100	3100	4116
Levanger						3520	6165	10948
<i>NORDRE TRONDHJEMS AMT</i>					1143	5620	9265	15064
Tromsø	10711	14706	22458	29323	38565	44029	50736	56037

TABLE 2.A.1
Savings bank deposits 1838–1845

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1838	1839	1840	1841	1842	1843	1844	1845
Ibestad						1642	2470	3114
TROMSØ AMT	10711	14706	22458	29323	38565	45671	53206	59151

TABLE 2.A.1
Savings bank deposits 1846–1853

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1846	1847	1848	1849	1850	1851	1852	1853
Christiania	1027919	993658	867901	839031	854174	925437	1009007	1175176
Christiania Sparesk.bank						488	3782	8840
<i>CHRISTIANIA AMT</i>	1027919	993658	867901	839031	854174	925925	1012789	1184016
Follo (Drøbak)	11177	12865	10871	9900	9380	10546	13733	18763
Aker	61831	88127	78867	88334	219550	367860	460939	554293
Fenstad	7637	12220	12304	13041	8054	7173	7770	8737
Urskoug		3191	3290	3458	3676	4100	5890	7690
Fet			3591	3076	2557	3244	3815	4816
Eidsvold			800	1300	1816	2207	4900	7700
Ullensaker				802	1948	3164	5031	8913
Nitedal					119	295	500	832
Gjerdrum					507	967	3200	5500
Høland					761	1159	2030	2910
Hurdalen	20	30	30	40	51	71	180	290
Enebak								2494
Sørum						104	600	1200
<i>AKERSHUS AMT</i>	80665	116433	109753	119951	248419	400890	508588	624138
Moss	24164	26313	23515	24476	25854	28924	34038	41979
Fredrikshald	60408	72380	62850	58050	63480	71588	83704	97022
Fredriksstad	18732	19901	20570	20803	23886	27370	29082	36051
Rakkestad	3001	7036	4541	3174	1979	2255	2233	2049
Onsø	5364	6162	6189	5538	5430	6123	7596	9912
Trøgstad		821	963	899	844	925	931	2573
Skjeberg			456	690	788	1252	1570	1890
Eidsberg			15	10	3	314	1000	1700
Sarpsborg						1289	1566	4068
Aremark							234	1653
<i>SMAALENENES AMT</i>	111669	132613	119099	113640	122264	140040	161954	198897
Søndre Hedemarken	14925	18705	15077	12136	11403	13352	17000	25000
Hof	100	300	400	500	661	785	980	1180
Elverum		3975	3589	5037	4845	6553	7190	11580
Næs (Hedmark)			2215	2278	2961	3494	3140	2800
Ringsaker			3136	6104	7084	10254	9253	11000
Aamot						3857	3400	3000
Kongsvinger							1736	3638
Vang								5359
<i>HEDEMARKENS AMT</i>	15025	22980	24417	26055	26954	38295	42699	63557
Lillehammer	11964	16013	13583	11494	11018	13748	15528	20146
Land	15169	19096	15300	12200	9739	11580	12872	15827
<i>CHRISTIANS AMT</i>	27133	35109	28883	23694	20757	25328	28400	35973
Drammen	157831	162536	139870	157015	166606	188506	226625	272284

TABLE 2.A.1
Savings bank deposits 1846–1853

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1846	1847	1848	1849	1850	1851	1852	1853
Ringerige	25304	28748	25137	20007	16731	16610	17743	22926
Kongsberg	41669	34614	32606	28400	25530	29642	35233	47009
Modum	13093	14725	8843	7195	6989	7157	8800	12617
Eker	6800	6600	6400	6320	6923	6702	7930	12202
Lier	3808	4269	5585	4217	4035	6360	7317	9185
Næs (Hallingdal)	200	200	200	200	154	1000	2000	3000
Sigdal	1400	1600	1800	2000	2148	2386	2700	3010
Krødsherred						596	1250	1950
Eggedal						110	190	270
Hønefos Laaneindretning							83	387
<i>BUSKERUDS AMT</i>	250105	253292	220441	225354	229116	259069	309871	384840
Tønsberg		7624	15949	21863	25369	37595	47759	71107
Holmestrand	50639	56344	51602	47183	46347	50457	53000	57000
Laurvig	34448	59482	60789	57022	59029	65070	77206	89018
Fredriksværn	26189	27255	27172	21810	25117	25000	25139	29000
Horten	4432	9086	9245	9373	11318	14017	20392	26963
Vaale								5000
<i>JARLSBERG & LAURVIGS AMT</i>	115708	159791	164757	157251	167180	192139	223496	278088
Skien	96546	97021	84099	83384	75741	73588	79062	92377
Porsgrund	13514	21342	14272	11596	13931	15661	16959	19719
Kragerø	10000	22219	19944	18700	17479	16896	23500	31000
Brevig			1590	1417	2138	2900	3311	4680
Gjerpen				2187	3693	5311	5939	6684
Bamble					4774	8964	10758	15266
Hvideseid					203	433	435	735
Bøe							39	1601
<i>BRATSBERGS AMT</i>	120060	140582	119905	117284	117959	123753	140003	172062
Arendal	122532	141985	141724	139441	144768	160982	180337	215321
Risør	7194	10561	10716	9777	8949	10331	12565	16657
Grimstad	7350	8787	9371	7538	8811	12703	16205	27100
Næs Jernverk	525	600	640	780	918	876		
Lillesand							1541	11626
Tvedestrand								9198
<i>NEDENÆS AMT</i>	137601	161933	162451	157536	163446	184892	210648	279902
Christianssand	100127	104133	106473	107083	116769	133374	151812	179435
Flekkefjord	23088	25082	27137	33038	33135	34184	42650	47862
Mandal	18642	22390	24499	28520	30323	39192	44876	55310
Farsund	15474	16487	12586	13045	13680	15827	19000	23121
Vennesland					250	300	350	400
<i>LISTER & MANDALS AMT</i>	157331	168092	170695	181686	194157	222877	258688	306128
Stavanger	122796	131691	132983	128972	124594	127409	134065	158565

TABLE 2.A.1
Savings bank deposits 1846–1853

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1846	1847	1848	1849	1850	1851	1852	1853
Egersund	9896	11488	13827	17377	16933	18235	17773	24937
Stavanger Sparekasse						417	530	995
Finnø							262	510
<i>STAVANGER AMT</i>	132692	143179	146810	146349	141527	146061	152630	185007
Eid	1434	1420	1400	1380	1358	1490	1620	1760
Vos	22001	32194	27500	22800	18151	20900	23700	26500
Kinservik	10993	20352	20550	19193	19406	24902	30522	38866
Strandebarm								4698
<i>SØNDRE BERGENHUS AMT</i>	34428	53966	49450	43373	38915	47292	55842	71824
Bergen	690708	723732	696330	717234	787692	837757	901721	990091
<i>BERGEN AMT</i>	690708	723732	696330	717234	787692	837757	901721	990091
Sogndal	5527	6127	5546	4798	3807	5103	6500	8000
Førde	2965	3853	3400	2979	2034	1752	1550	1350
Vig	3184	6945	7001	5624	5032	4750	5900	7130
Balestrand		2756	4510	4277	4746	5606	7430	9260
Aurland			228	271	294	274	490	720
Hafslo			475	605	843	1242	3700	6200
Nordfjord								4089
<i>NORDRE BERGENHUS AMT</i>	11676	19681	21160	18554	16756	18727	25570	36749
Christiansund	67614	71843	70831	65681	60132	63093	65518	80341
Molde	30902	30493	26900	24729	23193	24662	29737	39462
Aalesund	52252	58380	57279	60365	58106	66042	81235	102960
Herø og Røvde	4246	6413	7441	6221	5339	5459	6159	6688
Surendal	11968	10920	10039	8921	9168	7328	7530	7750
Stranden					234	315	930	1550
<i>ROMSDALS AMT</i>	166982	178049	172490	165917	156172	166899	191109	238751
Thronhjelm	717614	805258	774074	745174	729573	763385	825386	925464
Melhus	7804	8551	8445	7813	5835	4604	4615	4643
Røros	3578	4882	5459	5479	6924	11934	12737	16286
Strinden	4412	3985	3706	4028	3996	5006	15612	23436
Orkedal	4952	6106	6030	5748	4546	5352	5984	5440
Horrig	1617	878	839	760	688	410	420	440
Stadsbygden		784	2254	3844	4506	4797	6370	7950
Ørlandet og Bjugn				705	2106	2955	5000	8646
<i>SØNDRE TRONDHJEMS AMT</i>	739977	830444	800807	773551	758174	798443	876124	992305
Namsos	6343	7903	9480	10999	12614	15198	18000	22500
Levanger	15730	22366	20900	16856	13047	12951	17999	22918
Stordalen		2981	8129	8675	6655	8875	11864	16602
Frosten		712	1679	2199	1641	1779	3230	4690
Stod og Stenkjær							415	3211

TABLE 2.A.1
Savings bank deposits 1846–1853

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1846	1847	1848	1849	1850	1851	1852	1853
<i>NORDRE TRONDHJEMS AMT</i>	22073	33962	40188	38729	33957	38803	51508	69921
Tromsø	65598	76433	85231	90719	95317	106213	105710	111733
Ibestad	5039	6323	7518	9268	10531	11728	13621	17101
<i>TROMSØ AMT</i>	70637	82756	92749	99987	105848	117941	119331	128834
Hammerfest			2500	5000	7384	8484	9474	11153
<i>FINNMARKENS AMT</i>			2500	5000	7384	8484	9474	11153

TABLE 2.A.1
Savings bank deposits 1854–1861

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1854	1855	1856	1857	1858	1859	1860	1861
Christiania	1511048	1492313	1522470	1099195	1181360	1274905	1326914	1338532
Christiania Sparesk.bank	14194	18528	19579	16752	19752	23309	27196	30791
<i>CHRISTIANIA AMT</i>	1525242	1510841	1542049	1115947	1201112	1298214	1354110	1369323
Follo (Drøbak)	29997	41300	47235	45684	47985	52740	54082	55202
Aker	644681	748361	762589	741385	822438	873814	854898	874118
Fenstad	13209	15404	19038	15000	11080	11424	11284	12760
Urskoug	9480	10362	11900	13450	14990	16530	18084	18406
Fet	7002	8486	9335	8687	7423	8836	10064	11228
Eidsvold	10400	13144	14909	9308	8745	11499	11944	10529
Ullensaker	13140	18490	17043	12118	9573	12525	17056	22450
Nitedal	2787	3374	3270	3150	3050	2940	2835	3200
Gjerdrum	7800	10025	9960	9900	9830	9780	9714	11326
Høland	3781	6833	8400	9960	11500	13088	13068	14609
Hurdalen	390	494	1270	2040	2810	3580	4358	4534
Enebak	5571	11231	12073	10811	12994	15641	15538	17511
Kraakstad	3017	12563	24841	30350	25792	34204	40615	38737
Næs Hovedsogn		4401	8258	7427	8578	12183	13170	16330
Udenæs				2070	3252	3835	6124	6967
Asker						2600	3440	3243
Aas					1500	3298	6613	7346
Nannestad						1995	7278	8491
Sørum	1700	2250	2800	3350	3900	4445	5313	4962
Vestby							490	5684
Lørenskoven								421
Hakedalen								4254
<i>AKERSHUS AMT</i>	752955	906718	952921	924690	1005440	1094957	1105968	1152308
Moss	45719	45878	49696	53819	84124	68214	73827	80012
Fredrikshald	122501	146563	127266	148817	158653	161351	169352	164382
Fredriksstad	45246	57502	61339	60421	67202	76081	85281	85775
Rakkestad	2568	3028	3006	2879	3872	6689	7446	9610
Onsø	10913	14028	12520	9115	9152	10855	13872	15404
Trøgstad	5159	11124	17932	16188	17732	18727	21673	18946
Skjeberg	2210	2527	2580	2630	2681	3321	3650	5732
Eidsberg	2401	5237	6238	5811	7762	11093	10488	7404
Sarpsborg	9085	9845	9135	8000	7587	9406	12204	15113
Aremark	3214	3569	3537	2824	4214	4110	3604	3766
Rygge				1666	3116	3646	3633	5747
Hvaløerne					15	2497	4208	4897
Raade							592	1295
Haabøl							7597	12264
Skibtvedt					2637	3169	4339	8569
Spydeberg						4159	9766	19105
<i>SMAALENENES AMT</i>	249016	299301	293249	312170	368747	383318	431532	458021

TABLE 2.A.1
Savings bank deposits 1854–1861

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1854	1855	1856	1857	1858	1859	1860	1861
Søndre Hedemarken	30000	35826	42044	33495	35000	37000	39085	40000
Hof	1380	1588	1600	1600	1600	1617	2914	804
Elverum	17924	26115	31962	26469	24075	24038	28425	32744
Næs (Hedmark)	5500	8256	10525	9840	9160	8480	7805	8680
Ringsaker	12603	16574	14300	11496	14000	16600	19218	20908
Aamot	2500	2064	1850	1600	1400	1200	1021	1050
Kongsvinger	10551	18128	20566	20798	27091	39996	55183	71490
Vang	21119	27961	37852	34025	36851	45067	41856	39288
Løiten		1840	2000	2250	2500	2894	3131	2964
Tønset			5129	7174	11592	17058	20255	26881
Hamar			69	1000	2000	3000	3966	3105
<i>HEDEMARKENS AMT</i>	101577	138352	167897	149747	165269	196950	222859	247914
Lillehammer	39428	62946	67000	70693	81222	101948	108320	104057
Land	22275	26772	36454	39485	43788	53870	53590	52978
Toten og Vardal	10175	20856	41430	35098	37903	42844	49564	43935
Vaage	2140	5826	9939	10712	13116	15906	18500	18460
Faaberg				907	1115	2247	6015	6732
Gran					1901	6999	7824	7546
Birid				300	3300	6296	8426	10265
Søndre Fron							391	6301
Ringebu							739	2772
<i>CHRISTIANS AMT</i>	74018	116400	154823	157195	182345	230110	253369	253046
Drammen	343760	377117	389582	335246	364388	369927	369547	380121
Ringerige	30062	36567	40482	39917	35234	37468	35766	35204
Kongsberg	68977	72949	99224	93650	92551	113574	112676	107007
Modum	18806	22157	23752	21421	20528	23306	25354	21648
Eker	21429	25833	28194	32000	35500	39500	43165	48708
Lier	12227	14581	15862	16218	16830	19523	19806	19302
Næs (Hallingdal)	14000	24409	28200	32000	35000	39000	43497	29517
Sigdal	3320	3640	4300	4970	5630	6300	6969	7641
Krødsherred	2600	3261	3900	4500	5100	5800	6441	5024
Eggedal	350	427	630	830	1030	1230	1427	1447
Hønefos Laaneindretning	640	890	1140	1390	1642	2084	2403	2420
Hole								498
Svelvik								2601
<i>BUSKERUDS AMT</i>	516171	581831	635266	582142	613433	657712	667051	661138
Tønsberg	100732	143127	155832	145298	170911	220365	299969	322512
Holmestrand	61000	65810	64000	63000	62000	61000	59929	63239
Laurvig	112730	134975	144670	123238	132751	138686	144032	155069
Fredriksværn	33000	35984	35654	35928	40000	45000	51838	61295
Horten	35053	39469	44779	38330	42512	46839	55140	62030
Vaale	9000	14538	16300	18000	19800	21500	23337	30518
Botne	6139	5606	5800	6000	6167	7274	13062	13772
Sem		732	4477	4254	5597	7300	11254	13896

TABLE 2.A.1
Savings bank deposits 1854–1861

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1854	1855	1856	1857	1858	1859	1860	1861
Hedrum				2041	5293	8655	26789	50882
Nøterø				4467	10859	16564	20531	24277
Tjømmø				1972	6125	8514	11475	15510
Sandefjord					12242	15811	22633	25149
Skauget						3907	7961	11609
Brunlanes			1500	2500	3500	4573	5246	6636
Sande			100	2000	3000	4882	4021	5255
Sandherred							1099	12091
<i>JARLSBERG & LAURVIGS AMT</i>	357654	440241	473112	447028	520757	610870	758316	873740
Skien	138972	162441	180897	155618	147662	157651	157261	162354
Porsgrund	32427	39979	46880	41199	35301	46968	49901	54530
Kragerø	37300	44222	49507	48290	42756	44090	46845	47205
Brevig	6930	7644	8859	10540	13507	12214	13625	14113
Gjøerpen	10067	17390	23837	25395	32114	40866	43866	50222
Bamble	25887	32341	31346	30315	31320	32963	34676	37984
Hvideseid	2012	4670	9572	9280	7027	5839	4117	6179
Bøe	3961	9011	9100	7525	6905	15612	16095	16067
Attraa og Mæl						1392	2002	2588
<i>BRATSBERGS AMT</i>	257556	317698	359998	328162	316592	357595	368388	391242
Arendal	263484	279485	313527	273980	252479	274282	294265	355336
Risør	31237	47167	64291	59421	34979	27875	27384	32915
Grimstad	76372	92461	87285	76638	43570	48718	47880	72332
Lillesand	25222	33150	38444	41788	34571	37344	37712	47930
Tvedestrand	14640	21917	35290	33536	28293	40938	48326	52793
Birkenæs						757	2322	3231
Fjære							2018	6105
Øiestad								2988
Arendal Haandv. Laaneindr.							496	1143
<i>NEDENÆS AMT</i>	410955	474180	538837	485363	393892	429914	460403	574773
Christianssand	214490	253662	243179	222873	199488	223296	263428	285786
Flekkefjord	60922	65955	73989	79667	82844	88625	95591	96544
Mandal	73344	87636	96918	93875	82700	96809	103012	118126
Farsund	31223	38504	42053	40611	38741	43379	50372	56913
Vennesland	435	1523	1580	1630	1690	1750	1806	2515
Øvrebø og Hægland						1062	1900	2763
Sirdalen								1205
<i>LISTER & MANDALS AMT</i>	380414	447280	457719	438656	405463	454921	516109	563852
Stavanger	212067	231108	268580	275190	277467	294262	338433	376683
Egersund	31798	38812	36770	32365	30258	33425	34678	37307
Stavanger Sparekasse	2184	5013	7191	8106	7780	12948	24431	28752
Haugesund		1171	4430	8828	19911	27925	38808	48325
Egersunds Landsogn			1435	7791	10503	15652	18227	19561

TABLE 2.A.1
Savings bank deposits 1854–1861

End-of-year deposits in specie-daler. Uncertain or interpolated figures are in blue.

	1854	1855	1856	1857	1858	1859	1860	1861
Kopervik				2315	3900	5627	8327	8341
Høiland					1700	8645	10178	11571
Rennesø						2000	2499	2619
Finnø	962	1159	1553	1945	2519	2765	2955	3474
Birkrem								1121
<i>STAVANGER AMT</i>	247011	277263	319959	336540	354038	403249	478536	537754
Eid	1900	2032	2360	2700	3030	3370	3709	4061
Vos	29300	32076	36112	41338	45110	54969	58075	57879
Kinservik	48014	56837	63155	67131	77000	87000	96796	96263
Strandebarm	9378	15677	19500	23415	28500	34000	39523	39001
Kvindherred					7012	16000	25197	29331
Etne							1584	2936
Fuse					500	5000	11140	15029
Vikør						2000	2487	5282
<i>SØNDRE BERGENHUS AMT</i>	88592	106622	121127	134584	161152	202339	238511	249782
Bergen	1093370	1205676	1283529	1345922	1367903	1436294	1459943	1492563
Bergens Skillingsbank				6326	28584	39569	44744	46970
<i>BERGEN AMT</i>	1093370	1205676	1283529	1352248	1396487	1475863	1504687	1539533
Sogndal	9000	9996	10000	10000	10000	10000	10352	11074
Førde	1140	939	1590	2250	2900	3550	4206	6079
Vig	8310	9501	11513	12400	13300	14251	15091	15127
Balestrand	11000	12916	15260	17600	19900	22299	20485	18665
Aurland	930	1153	1240	1330	1420	1509	1483	1535
Hafslo	8640	11112	13300	15500	17700	19900	22114	21176
Nordfjord	8402	11866	14000	16000	18300	20571	23629	30376
<i>NORDRE BERGENHUS AMT</i>	47422	57483	66903	75080	83520	92080	97360	104032
Christianssund	102504	129352	152744	179955	177256	185719	222290	208097
Molde	51524	60608	90004	106316	96530	93777	99945	114846
Aalesund	121638	159991	216665	243545	242736	252231	269131	294600
Herø og Røvde	8357	10198	14502	16656	19205	21536	24886	32070
Surendal	7960	8171	8010	7860	7710	7560	7410	7917
Stranden	2160	2779	3800	4800	5800	6800	7814	9946
Volden	10257	16323	25851	33870	40904	45621	51315	55770
Molde Haandv. Sparekasse						301	430	560
Veø						1411	3493	7149
Ørskoug				2500	5000	7500	11650	16223
<i>ROMSDALS AMT</i>	304400	387422	511576	595502	595141	622456	698364	747178
Thronthjem	1064424	1148785	1185087	1123738	1100820	1139034	1170522	1179471
Melhus	4756	4984	4822	5521	5765	6461	8664	10223
Rørøros	22112	29520	31942	34953	40219	41191	42261	49322
Strinden	35030	54310	78024	93688	137984	149927	148201	149202

TABLE 2.A.1
Savings bank deposits 1854–1861

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1854	1855	1856	1857	1858	1859	1860	1861
Orkedal	6224	6627	6326	6576	7299	8482	10052	17500
Horrig	450	465	430	400	370	350	330	415
Stadsbygden	9520	11098	11850	12600	13350	14110	14867	17502
Ørlandet og Bjugn	14381	20515	26483	26870	27250	27640	28036	28993
Throndhjem Sparesk.bank	3090	7868	7182	8681	9530	11025	13364	14371
Opdal			1053	2498	2480	2459	3042	4394
Klæbo						1923	4971	6224
Selbo						1000	3303	5190
<i>SØNDRE TRONDHJEMS AMT</i>	1159987	1284172	1353199	1315525	1345067	1403602	1447613	1482807
Namsos	25750	29240	32000	35000	37500	40000	43826	53829
Levanger	28826	36425	38650	43090	37186	34537	40004	65891
Størdalen	25826	32011	38143	39148	38806	42707	44399	55667
Frosten	6150	7606	10830	14060	17290	20520	23752	24843
Stod og Stenkjær	10249	14509	21558	22195	22185	34302	47377	68561
Værdalen	4803	9618	13310	14571	16210	18858	23541	31528
Overhalden				1594	2614	3546	5589	8376
Nærø (Vikna)					765	1451	2226	3498
Beitstaden					366	2500	4612	7711
Lexsvigen								7761
<i>NORDRE TRONDHJEMS AMT</i>	101604	129409	154491	169658	172922	198421	235326	327665
Bodø					7583	13556	17638	26669
Vaagen						1000	3073	6308
Vefsen							4554	8310
Brønø							2214	4933
Alstahaug							738	3363
Stegen								3311
<i>NORLANDS AMT</i>					7583	14556	28217	52894
Tromsø	113463	131265	146976	154644	152493	150163	149196	153697
Ibestad	20446	25996	33863	38105	36325	40992	44987	48639
Maalselven								1664
<i>TROMSØ AMT</i>	133909	157261	180839	192749	188818	191155	194183	204000
Hammerfest	11332	13115	14337	15322	14252	15942	17943	25134
Vadsø	2954	6810	8676	11834	12488	10987	11013	13051
Alten								1517
<i>FINNMARKENS AMT</i>	14286	19925	23013	27156	26740	26929	28956	39702

TABLE 2.A.1
Savings bank deposits 1862–1869

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1862	1863	1864	1865	1866	1867	1868	1869
Christiania	1505026	1660567	1875952	2100982	2049277	2230465	2206537	2159323
Christiania Sparesk.bank	36958	46636	55100	65177	91846	126882	169777	215945
Christiania Haandv. Sparek.			33737	45978	62060	74084	116932	192541
<i>CHRISTIANIA AMT</i>	1541984	1707203	1964789	2212137	2203183	2431431	2493246	2567809
Follo (Drøbak)	59318	64035	66474	71332	82344	93020	85729	92016
Aker	925104	1003797	1118518	1094468	1069766	1096182	1082742	1000709
Fenstad	15974	16460	12294	12850	12935	15996	18110	20393
Urskoug	19309	19632	20007	21098	23611	23407	24259	23712
Fet	11504	13694	14170	14459	15962	18175	17860	18263
Eidsvold	8503	12599	13888	12833	13509	13175	16462	17472
Ullensaker	37550	34883	32357	36781	40490	40815	41460	40849
Nitedal	3600	4000	4350	4739	4500	4371	4746	5141
Gjerdrum	11619	15159	14677	17158	16221	16817	16453	16621
Høland	14034	14298	18423	18560	19360	21900	20871	16899
Hurdalen	7250	8974	9343	9316	7951	6650	5443	3865
Enebak	23767	32725	27205	26975	25798	24720	24156	21612
Kraakstad	37393	42377	38021	34157	38610	42062	42000	41342
Næs Hovedsogn	20229	22160	21028	20140	20466	23991	23942	35145
Udenæs	8295	8347	7757	8104	8260	8212	7342	6830
Asker	5500	8323	6182	5007	5926	6198	6963	8621
Aas	13985	15149	16451	18883	25118	27248	38704	37715
Nannestad	9342	12618	14014	17157	21596	23581	28347	27183
Sørum	5675	8708	7935	10539	9682	9232	9081	10908
Vestby	8729	11018	11320	14416	17021	18633	20300	20071
Lørenskoven	294	527	88	56	81	166	118	116
Hakedalen	7118	7011	5652	5158	4790	5941	5407	5007
Skedsmo					400	722	1022	1275
<i>AKERSHUS AMT</i>	1254092	1376494	1480154	1474186	1484397	1541214	1541517	1471765
Moss	85342	117743	117840	149239	160349	181658	197103	175761
Fredrikshald	186029	222435	254544	262082	272189	228351	242698	235501
Fredriksstad	90079	103341	115678	128328	138793	152909	151776	153947
Rakkestad	11575	14520	14849	16988	19333	23936	30652	28738
Onsø	16550	21248	22454	25254	25216	29124	30995	33002
Trøgstad	23643	26045	23713	26043	23313	25145	26778	22694
Skjeberg	6826	7411	7624	6804	7844	7883	10288	11007
Eidsberg	7544	15810	20194	22605	20422	24619	26752	27591
Sarpsborg	22338	28599	28524	35125	37866	41990	49300	55320
Aremark	5195	6874	7333	10985	11178	12238	12267	10826
Rygge	8220	11436	11444	12964	19909	23769	27427	31050
Hvaløerne	8430	9597	12326	12972	12869	12011	12826	14201
Raade	2573	3056	2709	2895	3192	2791	3089	2796
Haabøl	16741	19257	19584	18770	20253	19095	18976	19159
Skibtvedt	5701	7095	5413	6610	3874			
Spydeberg	38670	48259	56641	59892	53719	48739	43627	39737
Tune		3303	3578	3254	4464	5497	7617	9082

TABLE 2.A.1
Savings bank deposits 1862–1869

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1862	1863	1864	1865	1866	1867	1868	1869
<i>SMAALENENES AMT</i>	535456	666029	724448	800810	834783	839755	892171	870412
Søndre Hedemarken	40147	38775	44550	44552	46992	53428	63991	76019
Hof	969	1057	1686	1900	3568	6197	8860	11519
Elverum	36928	42332	44281	52657	57610	64134	78073	85374
Næs (Hedmark)	7582	8583	11823	12027	11580	13513	13549	12720
Ringsaker	18823	19474	21508	27967	33374	41353	38968	35598
Aamot	1190	1050	1121	1117	1107	1148	526	588
Kongsvinger	83256	97642	111733	96537	97237	89988	82335	73160
Vang	39021	45610	51294	54790	61876	78492	81447	89819
Løiten	3211	3709	4117	5540	6217	6346	6754	6983
Tønsset	33716	37172	36128	36116	41859	45908	51460	53935
Hamar	3955	4156	4577	5545	5971	6719	7589	10056
Aasnæs	1077	1291	1529	2923	13383	17619	29686	36120
Vaaler	6187	21053	24533	35364	36230	34540	34718	31419
Grue		10534	14039	17857	19877	25263	25435	27718
Trysil		3466	5077	6326	5735	5647	6000	6495
Tolgen				2905	5286	6708	7971	8980
<i>HEDEMARKENS AMT</i>	276062	335904	377996	404123	447902	497003	537362	566503
Lillehammer	113760	125354	133761	149174	154933	159688	156878	145234
Land	55619	59626	59276	60120	63315	69457	73444	75461
Toten og Vardal	44904	54662	57303	52724	52783	55615	61452	79659
Vaage	17540	15102	17448	19778	18545	23752	27526	35785
Faaberg	6629	8330	9920	8489	9280	10000	10583	10828
Gran	10439	15641	16825	18978	21535	30114	29030	26699
Birid	11714	12298	12431	13998	16506	19567	22235	23935
Søndre Fron	10591	13766	15928	15798	14957	19285	30249	35985
Ringebu	3977	5132	4428	4993	5766	8070	10662	13447
Søndre Aurdal	942	2364	3207	3894	6920	12636	12573	12986
Øier		8786	12549	16691	16962	15284	13372	14097
Nordre Fron		4967	7054	7946	10044	12886	23924	23038
Lesje		637	1562	1730	2944	3917	4295	5421
Jevnaker		5216	5177	6289	7183	9881	10655	9942
Vestre Slidre		934	1734	1603	1691	2490	4411	5761
Nordre Aurdal		355	2586	7879	9136	9553	11547	13233
Gausdal			3263	9216	15546	16318	22511	21506
Gjøvik					4319	10302	14930	19735
Østre Slidre							1216	1903
<i>CHRISTIANS AMT</i>	276115	333170	364452	399300	432365	488815	541493	574655
Drammen	444843	489232	536404	601448	649544	593121	529319	496620
Ringerige	38748	41735	42375	41759	41217	42561	39877	38860
Kongsberg	117161	134539	144520	155369	161685	174816	177579	172621
Modum	21006	22135	20444	20733	23207	26740	27192	24280
Eker	45692	43008	40696	41886	42136	45431	43515	41092
Lier	24890	29494	29800	30423	35986	35877	41960	42373

TABLE 2.A.1
Savings bank deposits 1862–1869

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1862	1863	1864	1865	1866	1867	1868	1869
Næs (Hallingdal)	33089	47192	55887	56447	60527	63153	70039	73654
Sigdal	7957	8618	9813	9617	9340	11663	14271	14001
Krødsherred	4408	4530	5355	6225	9400	9723	10573	13656
Eggedal	1586	1771	1591	1843	1964	2581	3268	3065
Hønefos Laaneindretning	2440	2457	2810	3160	3520	3870	4228	4000
Hole	2948	4600	6770	8872	9681	11146	13268	14913
Svelvik	5144	8581	9472	11436	16313	16822	16591	18652
Flesberg	35	726	2247	2401	2521	3788	5274	6114
Hurum	149	1219	1773	2302	3018	5262	5335	4978
Lunder				357	695	942	1832	2412
<i>BUSKERUDS AMT</i>	750096	839837	909957	994278	1070754	1047496	1004121	971291
Tønsberg	326967	406537	449131	489782	501032	586629	666256	708500
Holmestrand	61820	71329	85788	97923	104297	107571	114698	111713
Laurvig	157296	182608	205404	222604	238427	262310	293111	296471
Fredriksværn	59259	53627	57812	57465	57464	57783	60001	50769
Horten	65692	72489	78322	80299	80949	88007	101061	97489
Vaale	34783	43431	50443	61262	57593	51675	52446	50582
Botne	13867	10543	12079	11702	12632	12385	11533	9302
Sem	18240	18509	18006	17786	18228	18659	21809	22416
Hedrum	83065	101996	117024	121889	120539	108809	110364	121858
Nøtterø	23301	25398	32117	34917	32472	40234	45293	44346
Tjømo	19975	24450	27982	35802	32391	31898	33393	35341
Sandefjord	31795	50168	64253	75648	89997	91212	82039	94346
Skauget	12589	18818	23539	35174	63349	83291	86587	84828
Brunlanes	6873	7935	9244	8065	6132	5336	5502	10326
Sande	6285	7371	9326	10682	9537	10666	10395	9748
Sandeherred	21107	28911	42553	46848	51621	61001	70344	75486
Andebo		166	1101	3030	4003	3628	5651	5804
Stokke				12328	19165	21053	21929	22157
<i>JARLSBERG & LAURVIGS AMT</i>	942914	1124286	1284124	1423206	1499828	1642147	1792412	1851482
Skien	174140	208900	235081	249991	268669	265150	265148	281949
Porsgrund	57847	66576	80281	83977	87383	86225	89377	101135
Kragerø	54514	69500	85276	83555	90721	85799	93729	124195
Brevig	14625	22797	28177	28138	30327	30222	27338	24169
Gjerpen	49064	62589	71130	79431	96533	96680	110528	121566
Bamble	47379	55498	58138	57858	63008	62673	66072	71412
Hvideseid	6946	10500	10605	10420	9904	8434	8999	14231
Bøe	28547	42090	50605	49943	48606	49391	32149	33987
Attraa og Mæl	5685	11420	17429	20988	23046	25001	26248	25431
Lunde		4947	13783	14101	15501	15748	15812	19986
Solum			6836	9639	12977	16870	21194	19102
Drangedal				5695	10681	12732	14733	17317
Torrisdal				706	2770	2971	4553	6362
Silgjord				3980	10677	13568	15997	20200
Saude og Næs						946	5935	9216

TABLE 2.A.1
Savings bank deposits 1862–1869

End-of-year deposits in specie-daler. Uncertain or interpolated figures are in blue.

	1862	1863	1864	1865	1866	1867	1868	1869
Sandøkedal							4719	9858
<i>BRATSBERGS AMT</i>	438747	554817	657341	698422	770803	772410	802531	900116
Arendal	400132	496400	532699	562977	557010	510833	606989	560786
Risør	36850	45097	50053	60351	68434	70885	72263	67921
Grimstad	81571	93832	124463	124798	130395	120139	129392	120301
Lillesand	57731	70731	81857	85087	87948	98694	99784	97548
Tvedestrand	63264	82843	100610	118659	132389	126141	120068	130799
Birkenæs	4242	4856	4851	5721	5620	5705	5616	5129
Fjære	10900	12625	20227	22751	23463	21042	21544	21697
Øiestad	4667	7324	8487	14319	16123	14805	13204	12141
Høivaag		2232	4922	6168	6780	7670	9695	10257
Tromø		2960	11852	20238	31744	37439	50814	66388
Evje og Hordnæs				1639	4244	6100	6271	5550
Landvik					1410	1805	2405	2719
Valle					334	1730	2506	2755
Iveland							840	850
Arendal Haandv. Laaneindr.	2943	6286	8027	11939	17200	22500	27800	33202
Bygland								2558
<i>NEDENÆS AMT</i>	662300	825186	948048	1034647	1083094	1045488	1169191	1140601
Christianssand	332296	393639	431152	482010	509123	551072	552347	582719
Flekkefjord	117437	130713	133677	154077	167160	185106	190753	215176
Mandal	134937	175485	200662	209642	190402	193080	197013	197525
Farsund	70418	77230	89157	96901	105689	108117	109136	89075
Vennesland	2658	3423	2883	4306	4499	4714	4556	4142
Øvrebø og Hægland	2938	3918	3543	3866	5190	5986	6092	5772
Sirdalen	1213	2150	2219	2061	1684	1518	1586	1465
Søgne og Grebstad		4636	8184	13723	16553	19228	19088	17932
Bjelland			1598	5846	9087	10169	9045	5970
Lyngdal			954	3212	5315	6891	9085	9570
Hægebostad				464	1005	1550	1701	1751
Vanse				4768	9231	11495	13860	19101
Holme, Halsaa, Hartmark					4940	8569	10157	12261
Søndre Undal					767	2812	4635	8171
Øslebø og Løvdal						4278	7456	10603
Nordre Undal						605	2043	2356
<i>LISTER & MANDALS AMT</i>	661897	791194	874029	980876	1030645	1115190	1138553	1183589
Stavanger	385860	487672	565096	557696	495899	492979	437629	409209
Egersund	41310	46031	47431	53374	56818	58895	58229	56045
Stavanger Sparekasse	40417	52639	67090	82939	83115	92232	87819	78912
Haugesund	66381	84185	92264	102452	115478	139218	156447	176091
Egersunds Landsogn	22514	23853	24024	27282	29003	26122	26172	25731
Kopervik	10585	15425	15596	15772	15894	17553	21888	17940
Høiland	14807	18052	21444	27571	33440	34689	33145	29488
Rennesø	4340	5021	6020	7839	9468	9492	11244	13578

TABLE 2.A.1
Savings bank deposits 1862–1869

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1862	1863	1864	1865	1866	1867	1868	1869
Finnø	4146	5569	6041	6673	8846	11002	10881	9362
Birkrem	1584	1395	1351	1291	1313	1253	1399	1179
Sogndal Ladested		1007	2704	2637	2334	2541	3152	3281
Skudenæshavn			3740	5408	10102	12284	14287	12067
<i>STAVANGER AMT</i>	591944	740849	852801	890934	861710	898260	862292	832883
Eid	4520	5926	6060	5814	5863	6090	7074	7245
Vos	60209	63367	67262	71122	77922	87486	91222	96018
Kinservik	102280	115407	110449	121299	134081	141278	137935	132180
Strandebarm	40719	43431	43218	44514	46445	47956	46295	44369
Kvindherred	32973	35715	36061	37403	40300	43705	50606	49902
Etne	3878	6990	8526	8977	9981	12094	14988	14474
Fuse	17716	18924	18909	23095	24725	26014	25865	28864
Vikør	6188	6366	6197	6629	7921	8596	8739	8815
Stordøen		5795	10295	13476	13209	14809	18191	19536
Tysnæs		1765	4801	7017	8203	8832	10620	12854
Skaanevig		484	1200	3337	5678	8795	12921	12596
Fitje				1367	2888	4496	7572	10145
Bremnæs						4618	7693	7996
Lindaas					4411	6800	9353	11194
Haus						4246	7512	9200
<i>SØNDRE BERGENHUS AMT</i>	268483	304170	312978	344050	381627	425815	456586	465388
Bergen	1558563	1587160	1599575	1670880	1712493	1732952	1782467	1835381
Bergens Skillingsbank	52080	57475	69683	85161	91738	99055	107052	111362
<i>BERGEN AMT</i>	1610643	1644635	1669258	1756041	1804231	1832007	1889519	1946743
Sogndal	11000	11000	11000	11111	12000	13000	14000	15551
Førde	9024	10742	12758	19687	21035	23527	24108	23432
Vig	17234	19989	18820	19062	20451	21936	25473	24232
Balestrand	21331	23329	23524	22402	22026	21877	23919	24338
Aurland	2127	2010	1898	3818	6617	3789	1065	
Hafslo	23172	32918	33294	37440	39112	38222	40110	40367
Nordfjord	37563	42198	41264	48115	58514	67113	62341	57169
Lærdal	1820	9181	12570	15621	16505	20660	26319	30282
Lekanger				2476	5804	8132	10807	12043
Lyster				6039	12731	17455	19774	22814
<i>NORDRE BERGENHUS AMT</i>	123271	151367	155128	185771	214795	235711	247916	250228
Christianssund	248223	268570	263212	280169	304336	333205	350187	340124
Molde	148324	156309	152646	163368	168460	171925	156807	151018
Aalesund	351717	370453	367447	415716	435423	455223	410855	371595
Herø og Røvde	39787	41691	47597	58772	67339	89481	83243	79579
Surendal	10396	12033	12950	12417	16161	18996	20797	21618
Stranden	12452	15448	17179	19174	21033	21928	22686	24245
Volden	64353	68318	73818	89942	99706	116989	117095	118365

TABLE 2.A.1
Savings bank deposits 1862–1869

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1862	1863	1864	1865	1866	1867	1868	1869
Molde Haandv. Sparekasse	1139	1450	1760	2080	2390	2700	3020	3330
Veø	11054	15883	17767	19208	21757	25279	27772	30318
Ørskoug	22318	27918	27865	29701	31185	35669	37196	38549
Christianssund Sparek.bank	2115	3539	4223	5296	6504	7097	7591	9268
Vanelven og Søvde	10239	12785	13561	20680	24071	28736	28968	28715
Vestnæs		448	2630	3611	4839	6351	6741	6903
Bolsø		166	2544	5896	10031	10697	11191	13061
Skodje			3569	6830	10649	13898	13774	15056
Søkelven			2575	5388	7118	12355	14211	14608
Sunelven					596	1912	2299	2437
Stangvik					7379	11302	13634	13820
Christianssunds Haandv. L.						1477	1483	1584
Ulfsten og Hareid						8231	14232	17074
Harham							6274	21463
<i>ROMSDALS AMT</i>	922117	995011	1011343	1138248	1238977	1373451	1350056	1322730
Throndhjem	1178781	1204801	1181128	1189588	1186547	1177757	1173392	1174775
Melhus	11720	12979	14577	19603	28978	35896	34093	38368
Røros	52968	58201	57687	57009	56712	54425	52959	53688
Strinden	142943	143066	136589	129938	133549	129685	126923	128652
Orkedal	26450	29032	29236	33348	38241	46205	56044	64308
Horrig	444	429	340	254				
Stadsbygden	18988	23563	24151	25923	24040	26922	26321	25528
Ørlandet og Bjugn	32847	33785	33887	29051	27478	29744	32345	29740
Throndhjem Sparek.bank	15646	18230	21996	20129	20927	20258	18904	20540
Opdal	6851	7101	6385	4986	5995	5420	6643	7172
Klæbo	7570	9374	9817	9223	9795	10026	8793	8601
Selbo	5519	6233	6216	7313	6679	5200	4691	5064
Hevne					4377	6397	6726	6806
Bynæsset					2226	3735	5505	6800
<i>SØNDRE TRONDHJEMS AMT</i>	1500727	1546794	1522009	1526365	1545544	1551670	1553339	1570042
Namsos	61737	70814	76664	81028	87471	90391	89834	106114
Levanger	68098	74047	72084	73737	74312	83911	89156	92805
Størdalen	61032	69949	66961	55611	48547	51461	57987	55984
Frosten	28400	28890	29351	31312	33416	35455	36819	37867
Stod og Stenkjær	82849	85993	96794	87019	90059	105365	118967	133133
Værdalen	37012	40091	42418	41650	42531	44124	47264	49794
Overhalden	11084	13409	15385	16824	17910	18552	18549	18807
Nærø (Vikna)	4711	5672	6326	6582	6967	7336	9449	10904
Beitstaden	12431	14214	15110	15453	15784	15479	14209	13073
Lexsvigen	11932	15259	18452	16613	16735	17375	18079	18162
Aasen	1080	4038	5208	5450	6881	8072	10713	11216
Ytterøen		4189	6204	9086	11506	12130	11672	12006
Kolvareid		1453	2879	4142	5006	7479	8382	7844
Inderøen			5548	12512	15896	20925	26064	30389
Grong	1415	3381	4955	5756	6096	7284	8310	9438

TABLE 2.A.1
Savings bank deposits 1862–1869

End-of-year deposits in specie. Uncertain or interpolated figures are in blue.

	1862	1863	1864	1865	1866	1867	1868	1869
<i>NORDRE TRONDHJEMS AMT</i>	381781	431399	464339	462775	479117	525339	565454	607536
Bodø	39190	47919	53971	53545	63650	65081	58042	56954
Vaagen	13149	17523	19756	22133	33809	40315	50021	47912
Vefsen	8577	9482	9184	11114	10557	9749	9263	9153
Brønø	5621	7387	9158	11171	12051	13969	10859	10256
Alstahaug	6016	9143	11153	13008	12618	12786	12711	11417
Stegen	4944	9298	10946	11842	12365	13297	13476	14022
Saltdalen						2302	4144	4307
Hadsel						1247	5379	8775
Tjøø							4477	4133
<i>NORLANDS AMT</i>	77497	100752	114168	122813	145050	158746	168372	166929
Tromsø	175162	191060	208345	243398	269870	260162	249196	248856
Ibestad	59136	69125	75964	87420	94234	98071	94539	99633
Maalselven	1943	2491	2262	3129	4771	5064	4939	5029
Throndenæs		5647	13488	22677	38095	44041	46801	53770
Skjervø			1641	5179	7457	7020	8142	
<i>TROMSØ AMT</i>	236241	268323	300059	358265	412149	414795	402495	415430
Hammerfest	28145	30705	30643	32725	34794	33247	33072	33367
Vadsø	13343	14767	16748	16253	15430	14077	19315	16069
Alten	2938	6393	7752	8172	9986	11980	15721	18067
<i>FINNMARKENS AMT</i>	44426	51865	55143	57150	60210	59304	68108	67503

TABLE 2.A.1
Savings bank deposits 1870–1875

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1870	1871	1872	1873	1874	1875
Christiania	2268860	2325546	2244293	2523325	2922189	3152001
Christiania Sparesk.bank	223200	264484	266882	322206	433328	480863
Christiania Haandv. Sparek.	190995	191478	188316	204990	224206	218295
<i>CHRISTIANIA AMT</i>	2683055	2781508	2699491	3050521	3579723	3851159
Follo (Drøbak)	82803	83283	75880	86460	124020	126952
Aker	979224	972561	945005	1108660	1308154	1318343
Fenstad	23097	24046	33866	45763	49335	43582
Urskoug	23536	24265	28192	27622	29276	23661
Fet	20103	21085	26140	27623	37271	39920
Eidsvold	18849	19517	26499	39547	50948	48632
Ullensaker	37025	34721	37054	47079	55056	55105
Nitedal	5094	6067	6716	8975	10975	9929
Gjerdrum	13592	12345	13346	17862	20835	20068
Høland	19469	18395	23350	31299	42746	44099
Hurdalen	4068	4760	6732	13138	14825	12760
Enebak	18852	21302	21291	21363	23162	23396
Kraakstad	37390	39325	34616	38588	40064	44006
Næs Hovedsogn	33051	33969	50445	54675	58975	57763
Udenæs	6033	7924	7405	10839	13143	11825
Asker	9100	14042	16625	23054	28070	26474
Aas	43234	43273	39698	45701	47675	58043
Nannestad	23133	24203	30938	28859	31958	26418
Sørum	12697	13158	14345	17053	18040	18395
Vestby	22251	23731	30198	40095	44356	49440
Lørenskoven	132	223	538	724	781	1042
Hakedalen	4867	4266	4137	4852	6042	6277
Skedsmo	2000	2730	4315	6530	9000	11415
<i>AKERSHUS AMT</i>	1439600	1449191	1477331	1746361	2064707	2077545
Moss	190387	169179	180811	210499	270357	281564
Fredrikshald	254264	263714	260946	268909	339399	321336
Fredriksstad	194911	215359	226441	267588	290814	312944
Rakkestad	29112	32110	32357	32184	35892	38269
Onsø	38019	38726	47173	51901	54529	55161
Trøgstad	21734	23535	24986	28564	32361	26884
Skjeberg	13109	16496	22672	29704	37228	40093
Eidsberg	29584	34890	34736	35951	38240	40363
Sarpsborg	50154	48948	53839	55335	61316	66967
Aremark	9106	9315	7964	6797	6794	6374
Rygge	33833	42475	47207	54154	54729	56415
Hvaløerne	15240	16539	18545	20751	22192	21818
Raade	3208	4362	4964	6642	9645	9925
Haabøl	18568	17403	16889	16558	16231	17828
Spydeberg	39661	37499	36493	36909	41891	42779
Tune	12605	14686	25595	34609	44994	50983
Fredrikstad Sparesk.bank						24191

TABLE 2.A.1
Savings bank deposits 1870–1875

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1870	1871	1872	1873	1874	1875
<i>SMAALENENES AMT</i>	953495	985236	1041618	1157055	1356612	1413894
Søndre Hedemarken	68782	82839	80576	97314	112042	111614
Hof	12631	15308	17727	17194	24032	23285
Elverum	101262	144419	163068	218217	268993	216347
Næs (Hedmark)	13952	13952	13952	17348	18658	18094
Ringsaker	40066	40206	44754	49997	71584	75109
Aamot	555	582	555	603	605	651
Kongsvinger	67090	66337	79912	111906	123088	122611
Vang	92744	102069	116293	147897	184171	195763
Løiten	7645	9980	9890	19650	19798	20110
Tønset	57327	62220	71200	74361	88984	82480
Hamar	11507	13102	14874	21615	20414	19415
Aasnæs	48645	61272	80430	126916	131313	117748
Vaaler	29580	31722	36145	51299	60615	60017
Grue	29411	30843	28926	38794	47551	39802
Trysil	7252	9121	9943	11848	15498	14669
Tolgen	9830	13044	16845	22665	29253	35200
Stange				25167	39574	43179
<i>HEDEMARKENS AMT</i>	598279	697016	785090	1052791	1256173	1196094
Lillehammer	157354	175290	192765	224803	255796	258244
Land	79382	89789	99470	112887	124181	113710
Toten og Vardal	81316	93253	109735	140686	165553	162829
Vaage	41249	48491	53410	59790	67367	70782
Faaberg	13651	21376	25865	31997	42380	48127
Gran	26572	29085	34281	53092	65997	65153
Birid	21926	21486	38697	46904	49614	43196
Søndre Fron	38366	41983	40824	55144	60561	63817
Ringebu	11888	16240	18591	26961	41115	45808
Søndre Aurdal	14012	14620	19706	26583	36456	37638
Øier	13090	15045	14709	17078	18268	19687
Nordre Fron	25059	28499	32614	38284	45889	43610
Lesje	6170	7197	13775	22848	33703	38807
Jevnaker	9874	12063	12187	14341	14812	16458
Vestre Slidre	6699	7555	8769	8412	8685	10441
Nordre Aurdal	14025	17593	22610	25443	29226	34438
Gausdal	21597	25124	29891	45449	55645	54864
Gjøvik	22028	25737	32419	49569	67466	60841
Østre Slidre	2106	3073	5986	8001	14431	14761
Lom og Skiager					2262	5970
<i>CHRISTIAN'S AMT</i>	606364	693499	806304	1008272	1199407	1209181
Drammen	516803	533793	516478	575364	735573	746825
Ringerige	35553	32671	28802	29679	32698	33412
Kongsberg	168632	179084	186164	205264	215222	193032
Modum	26155	32651	38374	41370	43982	44395

TABLE 2.A.1
Savings bank deposits 1870–1875

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1870	1871	1872	1873	1874	1875
Eker	42802	47480	53646	58804	64837	65004
Lier	45181	50725	55594	57949	59218	70824
Næs (Hallingdal)	69415	65129	73935	83445	108362	111629
Sigdal	15235	17712	20021	22225	23510	23910
Krødsherred	14469	15001	18898	19284	21031	20468
Eggedal	3147	3417	4480	4830	4870	4710
Hønefos Laaneindretning	3770	3540	3320	3090	2860	2635
Hole	15704	15715	18923	25062	32534	32101
Svelvik	17840	19376	18592	22843	26626	25511
Flesberg	5248	4091	3528	3714	3512	6280
Hurum	7119	7087	8095	8129	8242	9580
Lunder	2705	2915	3693	5440	5594	6610
Aal	2605	12072	23846	39368	53846	62097
Gol				32470	44817	51918
<i>BUSKERUDS AMT</i>	992383	1042459	1076389	1238330	1487334	1510941
Tønsberg	641457	647757	670696	676907	728198	734278
Holmestrand	120399	116669	121438	146845	163717	156603
Laurvig	306606	311166	350336	356535	403400	407743
Fredriksværn	49847	50324	51872	56263	57221	54148
Horten	101372	108852	98101	107286	118494	129271
Vaale	53659	56589	57666	59184	70295	71336
Botne	8868	10195	12663	15741	19178	21527
Sem	25207	28809	34475	41058	67135	75059
Hedrum	143697	137928	142563	166650	203960	212658
Nøterø	44397	45867	43290	52140	49904	47851
Tjømø	37529	40075	39121	42962	51686	46369
Sandefjord	113169	126450	123369	169657	177035	156314
Skauger	121611	158456	203424	285864	427948	451954
Brunlanes	12523	10905	14707	16080	14778	13031
Sande	10500	11300	12200	13038	14002	15294
Sandeherred	85387	113804	111110	150299	156990	156233
Andebo	8843	10610	13767	17767	26901	29644
Stokke	29636	38390	36712	42420	48180	47461
Ramnes		2534	6238	8157	10901	11600
<i>JARLSBERG & LAURVIGS AMT</i>	1914707	2026680	2143748	2424853	2809923	2838374
Skien	304818	306804	338065	417216	477239	495862
Porsgrund	105296	107615	115382	128425	140456	146540
Kragerø	123128	119593	118839	144913	163371	172348
Brevig	26092	29181	30582	38237	49030	50289
Gjerpen	137241	138610	160488	201113	238239	239151
Bamble	79271	94176	118661	144070	154625	164938
Hvideseid	15945	17979	28935	44252	55302	54467
Bøe	38673	45254	52705	68788	85830	87515
Attraa og Mæl	25497	26049	33543	40732	56073	59526
Lunde	22895	26242	33226	45666	45923	40738

TABLE 2.A.1
Savings bank deposits 1870–1875

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1870	1871	1872	1873	1874	1875
Solum	20311	39938	60695	101052	147380	150289
Drangedal	18181	21960	34443	53940	62834	57756
Torrisdal	5777	5699	6249	11732	12884	10538
Silgjord	24864	30149	33348	39182	45097	54153
Saude og Næs	12858	20976	22244	29652	38028	39832
Sandøkedal	13418	22640	37436	61703	71581	64634
Eidanger		3161	9959	15746	21190	22655
Langesund						7372
<i>BRATSBERGS AMT</i>	974265	1056026	1234800	1586419	1865082	1918603
Arendal	579913	630722	649207	694920	912786	891551
Risør	79410	84855	111001	146252	152372	135496
Grimstad	152850	189848	214581	243894	290420	261749
Lillesand	124115	131497	139100	179265	176967	178646
Tvedestrand	156820	184390	204857	230349	280023	268273
Birkenæs	6267	11171	18338	24514	31819	36067
Fjære	27824	38601	47120	65303	67090	64195
Øiestad	11001	13000	13471	12416	13332	11928
Høivaag	12564	12767	14736	15154	14574	16735
Tromø	82171	105599	109565	130563	138122	120699
Evje og Hordnæs	4860	4976	7025	9885	12105	17121
Landvik	3516	5355	7217	10075	13503	13679
Valle	2750	2753	3624	7974	12066	14914
Iveland	1135	1354	2987	3931	5423	6900
Arendal Haandv. Laaneindr.	60075	118498	218026	386624	381365	297673
Bygland	2040	1950	1552	1813	2473	2644
Sønedeled		2916	5128	8285	11292	11876
Dybvaag				16472	25762	33217
<i>NEDENÆS AMT</i>	1307311	1540252	1767535	2187689	2541494	2383363
Christianssand	613090	650085	695425	777771	869618	870100
Flekkefjord	176616	194727	196171	222391	244632	256346
Mandal	217073	211905	215773	223322	248873	261595
Farsund	82018	84440	84421	95796	105960	106190
Vennesland	3786	2707	2741	3452	5224	5213
Øvrebø og Hægland	5820	5389	9276	12797	18320	20676
Sirdalen	1224	1308	1944	1697	1765	1786
Søgne og Grebstad	19534	21007	25794	28773	33605	36483
Bjelland	7725	7244	11837	18938	21546	21636
Lyngdal	10356	12639	15998	17895	20197	22123
Hægebostad	2500	3330	4558	8400	8214	9142
Vanse	24347	27680	29342	35112	43622	45426
Holme, Halsaa, Hartmark	15629	26742	38612	54230	72063	77354
Søndre Undal	9997	10694	15585	19930	26518	30791
Øslebø og Løvdal	11779	13443	13995	30022	41086	48123
Nordre Undal	3169	4526	7764	11334	14782	21429
Liknæs	493	2805	5930	9718	12348	13401

TABLE 2.A.1
Savings bank deposits 1870–1875

End-of-year deposits in speciealer. Uncertain or interpolated figures are in blue.

	1870	1871	1872	1873	1874	1875
Tveit					2781	10650
<i>LISTER & MANDALS AMT</i>	1205156	1280671	1375166	1571578	1791154	1858464
Stavanger	440116	489379	522731	581875	615036	624964
Egersund	64014	68823	76825	88624	95748	108968
Stavanger Sparekasse	93703	105379	117779	127233	142728	133207
Haugesund	194223	219839	248758	310083	315343	302140
Egersunds Landsogn	28919	31027	31932	36609	38615	39376
Kopervik	17723	21070	24400	27773	31000	31425
Høiland	26388	28601	38769	43575	47762	50146
Rennesø	13600	13698	15000	16615	17314	16498
Finnø	9990	11110	14019	16328	16347	17173
Birkrem	1021	1008	1500	1932	1850	2116
Sogndal Ladested	4123	3752	5415	5107	8953	8752
Skudenæshavn	12546	15734	20086	25888	32024	32125
Skjold				6466	8754	6900
Torvestad		7482	19590	30519	44138	48175
Sand					17429	19932
<i>STAVANGER AMT</i>	906366	1016902	1136804	1318627	1433041	1441897
Eid	7086	6919	7654	9054	9603	10107
Vos	100331	107215	121258	141530	166473	181033
Kinservik	136824	148767	170371	201336	217355	220183
Strandebarm	43630	43285	47289	52300	53842	53550
Kvindherred	49606	49016	53808	57570	61288	61027
Etne	12882	14863	20195	22268	26778	27847
Fuse	32312	35454	39709	44077	47251	51675
Vikør	8104	8869	10882	13368	14341	15869
Stordøen	21340	23014	27274	34971	36423	33652
Tysnæs	13907	13295	14255	16201	18252	18550
Skaanevig	13132	14586	20620	27476	30519	25455
Fitje	10677	10309	10092	9970	8902	8372
Bremnæs	7637	7344	6425	7203	7166	7039
Lindaas	11112	11868	14583	18849	24312	27250
Haus	13170	17215	23918	29652	35250	39845
Os					4640	7305
Fjære						2236
<i>SØNDRE BERGENHUS AMT</i>	481750	512019	588333	685825	762395	790995
Bergen	1905642	1894176	1932238	2041215	2127562	2179886
Bergens Skillingsbank	123423	133917	151199	163925	171407	177292
<i>BERGEN AMT</i>	2029065	2028093	2083437	2205140	2298969	2357178
Sogndal	16763	17326	22565	23748	27034	26315
Førde	27073	30399	40073	51524	66010	71511
Vig	24583	27946	35058	42438	45334	49046

TABLE 2.A.1
Savings bank deposits 1870–1875

End-of-year deposits in speciedaler. Uncertain or interpolated figures are in blue.

	1870	1871	1872	1873	1874	1875
Balestrand	23047	26526	30393	34836	44006	41504
Hafslo	42453	45382	43495	44248	50361	54388
Nordfjord	59922	63833	82308	104104	129220	133679
Lærdal	34338	36863	44307	50607	73134	73620
Lekanger	12788	15533	19016	24479	26658	27477
Lyster	22662	31601	30617	36350	35053	35678
Ytre Holmedal				1296	4569	6840
<i>NORDRE BERGENHUS AMT</i>	263629	295409	347832	413630	501379	520058
Christianssund	352094	371437	434878	502354	565018	573347
Molde	151411	158453	190338	210305	235316	248128
Aalesund	377972	381802	395083	451171	494996	509460
Herø og Røvde	68038	55961	56940	60823	65988	66563
Surendal	25361	26362	28965	22590	26465	30096
Stranden	25177	26147	29199	31163	36146	39516
Volden	122405	120453	137832	161517	177770	190103
Molde Haandv. Sparekasse	3650	3960	4270	4585	5174	6857
Veø	32307	36325	43968	59615	71435	78000
Ørskoug	41416	41314	41314	49301	50000	62175
Christianssund Sparesk.bank	10810	12471	17443	22202	27018	25458
Vanelven og Søvde	27734	23222	26504	29977	33307	34450
Vestnæs	7019	5935	8328	11508	13668	16892
Bolsø	13572	15545	18061	21278	21417	22053
Skodje	18805	19344	25891	30840	34454	38922
Søkelven	13348	13691	15407	16570	18966	20103
Sunelven	2587	2633	3779	4355	5650	6394
Stangvik	13258	16245	20038	26463	30660	34355
Christianssunds Haandv. L.	1671	2036	2100	2356	2581	2766
Ulfsten og Hareid	20701	20761	26802	35171	36522	40550
Harham	36986	43442	54681	69775	81360	87395
Nordalen		2786	5785	10333	15546	18443
Rindal				16889	24229	27910
<i>ROMSDALS AMT</i>	1366322	1400325	1587606	1851141	2073686	2179936
Thronhjem	1171120	1236931	1375309	1519744	1624620	1598094
Melhus	40610	47268	54737	70453	71390	76721
Røros	56698	64315	67336	72746	82272	93912
Strinden	130760	132260	132900	142420	150968	161686
Orkedal	71416	82149	93663	105352	119366	136936
Stadsbygden	25843	25382	28165	33416	34044	36211
Ørlandet og Bjugn	27138	26299	28136	31453	38719	41195
Thronhjem Sparesk.bank	23007	25555	30438	36063	46923	55317
Opdal	6526	7553	9460	14764	21107	24875
Klæbo	8846	9090	10358	11121	12357	12201
Selbo	5241	5633	7573	8534	10477	11396
Hevne	6240	6346	8017	12537	19548	25816
Bynasset	7134	7954	8906	11308	11902	13085

TABLE 2.A.1
Savings bank deposits 1870–1875

End-of-year deposits in specie-daler. Uncertain or interpolated figures are in blue.

	1870	1871	1872	1873	1874	1875
<i>SØNDRE TRONDHJEMS AMT</i>	1580579	1676735	1854998	2069911	2243693	2287445
Namsos	113991	116473	127079	144431	173260	201310
Levanger	96129	112581	123028	141819	163417	174216
Størdalen	55796	55033	66189	83312	95376	100666
Frosten	38056	39938	41089	47637	56908	60472
Stod og Stenkjær	144081	163513	184425	215118	246592	244320
Værdalen	50310	52748	58151	66409	76818	78949
Overhalden	20748	25050	29376	36082	44643	45263
Nærø (Vikna)	13295	17152	19626	19255	21747	26922
Beitstaden	14464	15253	17093	18962	22480	26141
Lexsvigen	17847	18548	20894	23879	26626	27536
Aasen	10464	10057	11423	15554	19459	21978
Ytterøen	11986	12342	14758	16358	20260	20878
Kolvereid	9615	11106	13338	15576	19189	22213
Inderøen	38469	40695	53243	57299	61446	63970
Grong	11261	13395	14954	19051	25345	27352
Sparbo og Egge					10626	14445
<i>NORDRE TRONDHJEMS AMT</i>	646512	703884	794666	920742	1084192	1156631
Bodø	67203	82986	104330	117329	140163	159564
Vaagen	53417	58437	67722	73254	77429	81170
Vefsen	9370	11542	13850	17228	20529	26905
Brønø	11337	11422	15726	18926	21613	21634
Alstahaug	12346	15726	19414	22480	26225	27478
Stegen	14770	16523	21083	22952	25722	28257
Saltdalen	4977	7000	7958	9985	13698	14913
Hadsel	15400	17287	18389	20204	21038	28101
Tjøttø	4928	5536	6344	7229	7680	8539
<i>NORLANDS AMT</i>	193748	226459	274816	309587	354097	396561
Tromsø	296789	353415	384091	424877	475946	482272
Ibestad	106219	115260	120269	131918	138496	149382
Maalselven	4536	5389	6712	9439	13478	16052
Thronenæs	60644	69861	76979	88576	99230	109378
Skjervø	9805	10264	10823	12228	13990	14555
<i>TROMSØ AMT</i>	477993	554189	598874	667038	741140	771639
Hammerfest	38419	52355	60571	74804	80705	83541
Vadsø	16485	20861	18855	21936	25157	27502
Alten	18310	19427	22712	26545	31669	38066
<i>FINNMARKENS AMT</i>	73214	92643	102138	123285	137531	149109

CHAPTER 3

A reconstruction of the balance sheets of commercial banks in Norway 1848–1900

Jan T. Klovland¹

The broad picture of the development of commercial banks in Norway towards 1900 is fairly well established, but we still lack fully satisfactory data on the annual movements the most important assets and liabilities of individual banks. Previous research has gone some way towards filling these gaps, but there still seem to be unexploited sources that can be used to make the data series more complete. The purpose of the present study is to make another effort in order to present more exact annual balance sheet data for the commercial banks before 1900. The items included are deposits, equity and loans. The major new sources include material deposited with the Regional State Archives in Trondheim and Stavanger and the University of Bergen; in addition, statements of annual accounts in local newspapers, trade journals and data series published in individual bank anniversary publications have been recovered.

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3.1 Introduction

The first commercial bank in Norway, Christiania Kreditkasse, was established in 1848. In the first years of its life the bank operated on a very moderate scale; after seven years, in 1855, its deposits were still only 25 percent of that of the largest savings bank in Norway, Christiania Sparebank.²

In the second half of the 1850s the development of commercial banking entered a new phase. The paid-up capital of Christiania Kreditkasse was increased significantly, and the amount of loans outstanding was increased by a factor of three between 1855 and 1860. Three other banks that were to play a dominant role throughout the century were established during the following years: Bergens Privatbank in 1856, Den norske Creditbank in 1857 and Privatbanken i Trondhjem in 1859.³ Although still being smaller than savings banks with respect to aggregate volumes of deposits and loans, commercial banking was firmly established by the early 1860s and came to play an increasing role as financial intermediaries in Norway until shortly after World War I.

The broad picture of the development of commercial banks in Norway towards 1900 is fairly well established, but we still lack fully satisfactory data on the annual movements of the most important assets and liabilities. Until recently there were large gaps in the information on the annual balances of individual banks. However, a useful study published by Matre (1992) has gone a considerable way towards filling these gaps, although there still seem to be unexploited sources that can be used to make the data series more complete. The purpose of the present study is to make another effort in order to present more exact annual balance sheet data for the commercial banks before 1900. The items included are deposits, equity and loans.

The reconstruction of balance sheet items of individual banks is a difficult task for various reasons. In 1877 Statistics Norway began publishing annual data on selected items of the main commercial banks, but a number of small banks were not included in the period 1877 to 1900.⁴ The data on deposits and equity of the banks which are included in the statistics are reliable, but the loan series cover only bills, which did not account for more than roughly two thirds of total loans. In earlier years data on commercial banks were presumably not systematically collected by the authorities, at least they cannot be found in available sources.⁵

In the early years many commercial banks published their annual balances in newspapers. From the 1870s a more restrictive practice with respect to public announcements seemed to develop, however. In some cases the local newspaper noted that the annual shareholders' meeting had taken place, perhaps also giving some information on profits and dividends and sundry other items, but

²The bank was renamed to *Christiania Bank og Kreditkasse* in 1862. The first hundred years of the history of the bank are covered in Engebretsen (1948).

³Den norske Creditbank began its operations on 1 October 1857, but the first annual accounts were not published until 1858, see Hertzberg and Rygg (1907).

⁴The data can be found in *Statistical Yearbook of Norway and Meddelelser fra Det Statistisk Centralbureau*. The number of banks included were increased in 1889.

⁵In *NOS Statistiske Oversikter 1948* aggregate figures on paid-up capital, reserve and contingency funds as well as loans (portfolio of bills) can be found. These are reasonably complete, but some minor banks are apparently not included in the aggregates. Note that there are no data on deposits and that the loan series comprises bills only.

falling short of publishing the whole balance sheet.⁶

Although such a reconstruction project thus meets with numerous difficulties, we have succeeded in collecting significant new information on the balance sheets of commercial banks that previously have been left in the dark. The major new sources include material deposited with the Regional State Archives in Trondheim and Stavanger and the University of Bergen; in addition, statements of annual accounts in local newspapers, trade journals and data series buried in individual bank anniversary publications have been recovered.

The banks included here are those which were organized as a limited company with a share capital and (in principle) paying dividends to its shareholders. These include a few examples of banks which formally adopted the name of 'sparebank' (savings bank). In some cases these were erroneously classified as savings banks in the official statistics (see appendix for further details). In practice their business was probably very similar to that of a local savings bank, but their ownership structure was clearly that of a commercial bank as defined here.⁷

The distinction between a commercial bank and other financial intermediaries is therefore not always wholly clear-cut. In principle we only include those banks which performed regular banking business including discounting bills. Before 1856 some of the lending activity of Christiania Kreditkasse was in the form of advances against commodity stocks and securities as collateral, but it also discounted regular trade bills, which became the dominant type of loan business.

Drammens Kreditkasse was founded in 1849 on much the same basis as the bank in Christiania. According to Eier (1954, p. 46) Drammens Kreditkasse began discounting bills in 1852, but in contrast to Christiania Kreditkasse, the discount business seems to have played a minor role before the 1860s. In 1867 the bank was reconstructed along the principles of an ordinary commercial bank and established as Drammens Privatbank. Although Drammens Kreditkasse is claimed to be the 'second oldest' commercial bank in Norway,⁸ little is known about the scale of its activities in the early years, except that it was fairly small.⁹ Balance sheet data for Drammens Kreditkasse are included here for the years 1863–1866 only, because no information is available for earlier years. However, this bank is included in the number of banks in operation as from its founding year, 1849.

In addition to the banks listed here there were probably several small-scale commercial banks on which we have no or only fragmentary evidence. The criterion used here is that data for at least one year of the bank's history must be known. Some of the neglected banks may be classified as 'ephemeral' banks, but in other cases they may have been in operation for a considerable time period on a very small scale, serving the local community. Brandal (1989) lists no less than four commercial

⁶For one particular example see *Vestlandske Tidende*, the local newspaper in Arendal, for 26 March 1876 concerning the first annual balance of accounts of Arendal Privatbank. Only profits and dividends were reported.

⁷There is also an example of a savings bank adopting the name of *Privatbank* (private bank). Strandvik Privatbank was founded in 1868 and was amalgamated with Fusa Sparebank in 1883. It seems that this bank corresponds most closely to a savings bank, see Fusa Sparebank (1958). See also *Amtmannsberetninger 1866–1870*, section M, Søndre Bergenhus Amt, p. 15.

⁸Eier (1954, p. 44).

⁹See Hoffstad (1928, pp. 322–326), Drammens Privatbank (1917) and Eier (1954, pp. 37–50) on the kind of business that characterized Drammens Kreditkasse.

banks in existence in the 1850s in the small region of Ryfylke.¹⁰ Although their exclusion hardly affects the aggregate figures on deposits, equity and loans, this piece of information makes it clear that the number of commercial banks reported here definitely falls short of the actual number of banks in operation.

3.2 Sources of balance sheet data for commercial banks before 1900

3.2.1 Data on individual commercial banks' accounts published by Statistics Norway

There is no complete statistics of commercial banks until 1900 when Statistics Norway began publishing detailed information on the balance sheet items of nearly all commercial banks.¹¹ However, beginning in 1877 Statistics Norway published annual information on deposits, equity and certain types of loans for the major banks.¹² These data cover only selected items of the balance sheets. Data on deposits and equity for the banks which are included in the statistics seem to be complete and consistently reported, but the information on loans include the portfolio of bills only.¹³ For some banks other types of advances were of even greater importance, in particular current drawing accounts and other unsecured loans on which there is no information, except in 1877 and 1878. Mortgage loans were not included either, but the amount outstanding was rather small in the case of commercial banks.

The sample of banks included was extended to cover some small banks in 1889, which increased the number of banks from 19 in 1888 to 31 in 1889. The increase in the number of banks figuring in the returns of 1889 is deceptive, as none of the newly included banks were in fact established in 1889. This is but one of several pitfalls users of commercial bank statistics is faced with.

3.2.2 Previous attempts at reconstructing the balance sheet items of commercial banks

Matre (1992) presented a very useful attempt at collecting figures on deposits and various types of loans for all commercial banks in the period before 1900. This effort represents a significant improvement over the existing data provided by Statistics Norway. Much new information was obtained from annual statements of accounts of individual banks and anniversary publications. Still, a considerable

¹⁰These were Hjelmeland Spareskillingsbank, Rennesøy Spareskillingsbank, Sand Sparekasse and Stjernarøy Sparebank, which according to Brandal (1989) were organized as commercial banks rather than savings banks despite their names. See the notes on these banks in the appendix.

¹¹*NOS Private Aktiebanker.*

¹²The commercial bank returns can be found in annual issues of *Statistical Yearbook of Norway* and in *Statistiske Meddelelser*. Data for 1884 can only be found in the latter source.

¹³Foreign bills seem to have been included in the bill portfolio in some cases, but mostly this item was not added to the figures.

number of gaps remained, even for some of the large and medium-sized banks in the 1860s and 1870s, in which cases linearly interpolated estimates were substituted for actual balance sheet figures. However, the estimates of aggregate figures on deposits and loans of the commercial banks are probably much closer to the true ones than the previous data collected by Statistics Norway.

3.2.3 The new sources of data

The present study draws heavily on the individual balance sheet data presented in Matre (1992). A further improvement of the data base has enabled us to fill some of the gaps concerning the larger banks in the early years. The most important additions are as follows. The State Archive of Trondheim contained a complete run of the annual accounts of Privatbanken i Trondhjem (established in 1859) and Nordenfjeldske Kreditbank (1868), on which data previously had been very incomplete.¹⁴ The State Archive of Stavanger contained a complete collection of annual statements of the ill-fated Stavanger Kreditbank (1865–1887) and of Stavanger Privatbank (established 1879).¹⁵ It also turned out that a set of annual statement of accounts for Bergens Privatbank is held by the University of Bergen. This represents a significant contribution because the available evidence on this important bank, the second largest in 1870, had been rather patchy before the early 1880s. Another relatively large bank, Bergens Kreditbank, was established in 1876 by transferring the assets and liabilities of the Bergen office of Christiania Bank og Kreditkasse to a new bank; its annual statement of accounts were found in the newspaper Bergens Tidende in the first years of its existence before 1882.

Numerous minor corrections and additions to the existing data base in Matre (1992) were made by drawing on information in local newspapers, anniversary publications and the commercial bank statistics.¹⁶ As explained above, many commercial banks adhered to a restrictive practice with respect to publishing their annual statements of account after the 1860s. An extensive search in various local newspapers in the 1860s and 1870s resulted in some pieces of new balance sheet information, but in general the full annual accounts of the commercial banks were not to be found. There are consequently some remaining figures that need to be interpolated in the cases of a number of medium-sized banks established in the 1870s, the most important of which are Tønsberg Privatbank, established 1870,¹⁷ and Arendals Privatbank,¹⁸ Kristiansund Kreditbank, and Drammens og Oplands Kreditbank, which all opened for business in 1875.

¹⁴We are indebted to Kari Helgesen for making this material available to us.

¹⁵Stavanger Kreditbank was the second of the important banks to fail in the deflationary environment of the 1880s, in February 1889; Arendals Privatbank failed in October 1886.

¹⁶The annual returns collected by Statistics Norway were published in some more detail in *Statistiske Meddelelser* than in the *Statistical Yearbook*, primarily by including the previous year's figures of some items. This was valuable in cases where banks were entered into the statistics after some years of business. Also, data for 1884 are missing for many banks in the tables in Matre (1992). This may be due to the fact that 1884 figures were not published in *Statistical Yearbook*, but only in *Statistiske Meddelelser*.

¹⁷Data on total assets, deposits and equity of Tønsberg Privatbank were printed in the bank's fifty years anniversary report, see Tønsberg Privatbank (1920). Loan figures for the year 1872 were found in the newspaper *Tunsberggeren* of 4 April 1873. For the remaining years from 1870 to 1876 loans were interpolated using data on total assets in the source noted above.

¹⁸The annual accounts of Arendals Privatbank in 1884 and 1885, the last two years before it failed, can be found in Blichfeldt (1887).

3.3 The balance sheet items

We include data on three balance sheet items: deposits, equity and loans, which are defined in more detail below. These items are the only ones on which information is given in Commercial bank statistics published by Statistics Norway before 1900. For some of the major banks, for which a complete run of annual accounts have been preserved, it would have been possible to reconstruct other items such as balances due to and from other domestic and foreign banks as well as their portfolios of securities. In the majority of cases, however, such information is missing. It may also be noted that the way the accounts were set up varied quite much across the banks, which presents problems regarding a more detailed tabulation of balance sheet items. In the early years some banks presented a mixture of flows and stock information in their ‘general balances’, which presents further complications.¹⁹

3.3.1 Deposits

This item includes demand deposits (*kassefolie*), time (or term) deposits with a fixed maturity (*bestemt tid*) and savings deposits (*sparebankvilkår; oppsigelse*). The savings deposits were formally subject to a notice of withdrawal at one, three or six months time, but a liberal practice with respect to waiving these rules seems to have developed over time.²⁰

In the early years, say before the 1870s, term deposits with a fixed maturity were of some importance. From this time on, however, savings deposits at 3 and 6 months’ notice came to dominate as the main deposit instrument.²¹ The share of demand deposits was quite small and decreasing over the period to 1900. In a sample of ten leading commercial banks, for which data are available, demand deposits equalled 14.4 per cent of total commercial bank deposits in 1860, falling to 8.9 per cent in 1870, increasing slightly to 9.5 in 1880, but then falling further to 5.5 per cent in 1890 and 6.0 per cent in 1900.²² Total demand deposits were also small relative to the currency circulation, amounting to 11.8 per cent in 1900. Consequently, for this period a M1 definition of money, including only currency held by the public and demand deposits, is dominated by currency. The relevant monetary aggregate in this period is clearly a broader M2 definition, including all deposits. Savings deposits

¹⁹For example, in the balances of Bergens Privatbank the annual turnover of demand deposits and discounted bills were added to the stocks of other items. This practice was discontinued after 1879. In general, due to heterogenous accounting standards and incomplete information time series of the commercial banks’ total assets are not particularly informative before 1900. For an attempt at presenting some data on this, see Matre (1992).

²⁰See for example the comments in the weekly financial paper *Farmand* of 2 May 1891. The rule was more strictly adhered to in special circumstances, as for example during the outbreak of World War I, see Rygg (1954, p. 359).

²¹The distribution of deposits in Den norske Creditbank can be found in Hertzberg and Rygg (1907, p. 158). These data show that fixed term deposits were larger than savings deposits in 1858, but that the latter category became dominant in the 1860s. A similar tendency can be observed in the balances of Bergens Privatbank; initially fixed term deposits were largest, but savings deposits gradually increased their share, particularly from the mid 1870s. See also Hoffstad (1928, pp. 115–118).

²²The banks included in the sample are Christiania Bank og Kreditkasse, Bergens Privatbank, Den norske Creditbank, Privatbanken i Trondhjem, Stavanger Kreditbank, Drammens Privatbank, Nordenfjeldske Kreditbank, Bergens Kreditbank, Stavanger Privatbank and Skiensfjordens Kreditbank. For all commercial banks the share of demand deposits in 1900 was 6.1 per cent.

was practically the only deposit category in savings banks until after the turn of the century, when demand deposits were introduced in some of the large savings banks.

Only deposits from non-banks should be included in these figures, but according to the foreword of the commercial banks statistics in 1907 it might also be the case that interbank deposits were included to some extent.²³ In 1907 it was estimated that for commercial and savings banks in total the maximum amount that could have been included as interbank deposits equalled 3.7 per cent of total deposits. On the other hand, there is some evidence that a fraction of the amounts entered as ‘sundry creditors’ (*diverse kreditorer*) really should have been classified as deposits.²⁴ Due to lack of any specific information, no correction has been made for these items, which may have been of approximately the same order of magnitude and thus counterbalanced each other.

The deposit figures includes deposits held by the Treasury and state banks. This item is mostly rather small, in the order of 2 to 3 per cent, but during certain periods, as in the years 1872 to 1877 and from 1897 to 1900, it could amount to more than five per cent of total commercial bank deposits.²⁵

3.3.2 Equity

Equity, as defined here, comprises the amount of paid-up share capital and all funds except pension funds. Except for some of the minor banks, data on this item are fairly complete.

3.3.3 Loans

Loans include in principle all kinds of loans and advances to the non-bank public: domestic and foreign bills, mortgage loans and various types of advances. In the first part of the period bills, either ordinary trade bills (*veksel*), or a particular kind of renewable bills (*vekselobligasjon*), were the dominant type of loans. Domestic bills accounted for the bulk of the bill portfolio (96.5 per cent in 1900), but many banks also discounted some foreign bills.

As mentioned above, only bills were reported in the annual commercial bank returns prior to 1900. Data on this loan type are therefore much more complete and accurate than the remainder of loans offered by the commercial banks. Various types of advances, with no or unspecified collateral, also played an important role. In later years these were mostly associated with current drawing accounts (*kassekreditt*), or were simply entered under the item of ‘sundry debtors’ (*diverse debitorer*). In 1900, the first year for which complete data exist, these loans constituted 36.4 per cent of total loans.²⁶

The amount of mortgage loans was not particularly important in commercial banks, accounting for 11.6 per cent of total loans in 1900. The bulk of mortgage loans (84 per cent in 1900) originated

²³*Private Aktiebanker 1907*, Statistics Norway, p. 5.

²⁴When the commercial bank statistics was revised in 1925 it was discovered that about 20 per cent of demand deposits previously had been classified as sundry creditors.

²⁵Quarterly estimates of domestic bank deposits due to the Treasury and state banks can be found in Klovland (1984).

²⁶Matre (1992) contains separate estimates of the various loan types for individual banks, but in many cases loan figures for other categories than bills had to be based on interpolations.

from two banks which specialized in offering such loans to the public, Kristiania Hypothek- og Realkreditbank and Trondhjems Realkreditbank. These banks also offered other types of loans, but the greater part of their portfolios consisted of mortgage loans, part of which were financed by the banks' own deposit funds and, after the restriction on the emission of bonds had been lifted in 1898, by selling bonds on the domestic market. However, a substantial part of the mortgage loans on their balances were due to the fact that the two banks acted as pure intermediaries of privately placed mortgage loans.²⁷

For some medium-sized and small banks the estimates of other loans than bills represent problems – in some cases the amount of such loans are known only for selected years, or, in the worst case, only for the year 1900. In such cases the amounts were estimated using information on the share of such loans in benchmark years and rough estimates of the size of the bank. Although this procedure had to be applied to a number of small banks, this source of uncertainty does not materially affect aggregate bank loan figures. In 1870 about 2.5 per cent of total loans are based on estimates rather than actual balance sheet information, increasing to 3.5 per cent in 1885 .

3.4 New estimates of the balance sheets of individual commercial banks 1848–1918

3.4.1 Balance sheet items

Table 3.A.1 of the appendix contains data on deposits, equity and loans for individual commercial banks derived from the principles explained above. In cases where significant amounts of any item had to be estimated or interpolated in want of exact balance sheet information the figures are given in blue colour.

Table 3.1 contains the revised estimates for all commercial banks. Revised figures for the years 1901 to 1918 are also included. The figures after 1899 are based on the annual bank statistics published by Statistics Norway,²⁸ but a number of corrections and additions have been made to these data. For the period from 1900 to 1918 there are 25 cases where existing banks were not included in the published statistics, most of which concern newly established banks that were not included in the first year(s) of business. Information on these banks could often be extended one year back in time by using available data on the opening balances from the published statistics.²⁹ There are also some cases where existing banks, which were left out of the published statistics for a longer period, have been included here; the most important ones are Trondhjem Handels- og Industribank (1900–1902), Levanger Haandverkerforenings Sparekasse (1900–1908), Røkens Sparebank (1900–1906),

²⁷As a consequence, it will be seen from an inspection of the annual accounts of Kristiania Hypothek- og Realkreditbank and Trondhjems Realkreditbank that there was a large mismatch between the amounts of loans and the much smaller amounts due to depositors. See Keilhau (1936) and Hoffstad (1928) for an account of the two banks and their activities.

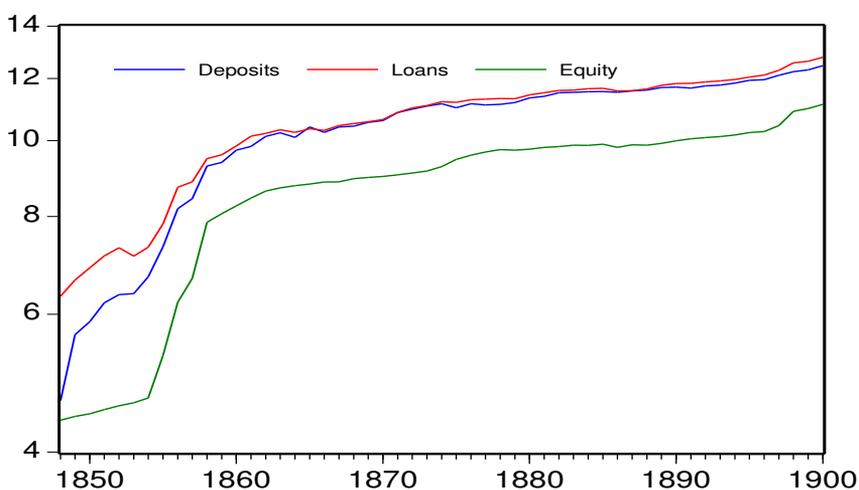
²⁸Annual issues of *Private Aktiebanker* beginning in 1900.

²⁹These banks were all very small except one, the old private banking business of Andresens Bank, which was formally established as a commercial bank in 1913.

and Lillestrøm Sparebank (1900–1908). The reason why the last three banks were not included earlier is that they were initially believed to be savings banks, but later it was ‘discovered’ that they were ordinary commercial banks.³⁰

Figure 3.1 shows the new estimates of the commercial banks’ balance sheet items for the period 1848 - 1900, using a logarithmic scale. After a period of very high growth in the initial founding years in the 1850s the trend growth rate of deposits settled down to about 9 per cent in the 1860s and slightly above 7 per cent per year in the 1870s. The rates of expansion of deposits and loans were further reduced after 1882, but from 1897 some years of rapid growth followed. These years are also marked by an unusual strong growth in commercial bank equity.

FIGURE 3.1 Deposits, equity and loans of commercial banks. 1848–1900. Logarithmic scale



A more detailed view of the cyclical behaviour of deposits and loans can be inferred from Figure 3.2, which shows annual growth rates from 1860 onwards. The middle of the 1860s were characterized by volatile movements, with significant contractions in commercial bank assets and liabilities in 1864 and 1866.³¹ After this there are three periods of rapid expansion in commercial banking: 1867–1874, 1879–1882, and 1897–1900, which roughly coincide with periods of expansion in economic activity in Norway.³² The commercial bank failures in 1885 to 1887 occurred within a period of very slow growth from 1883 to 1888; the worst year was 1886 when aggregate deposits fell 2.5 per cent and loans fell by 10.1 per cent.

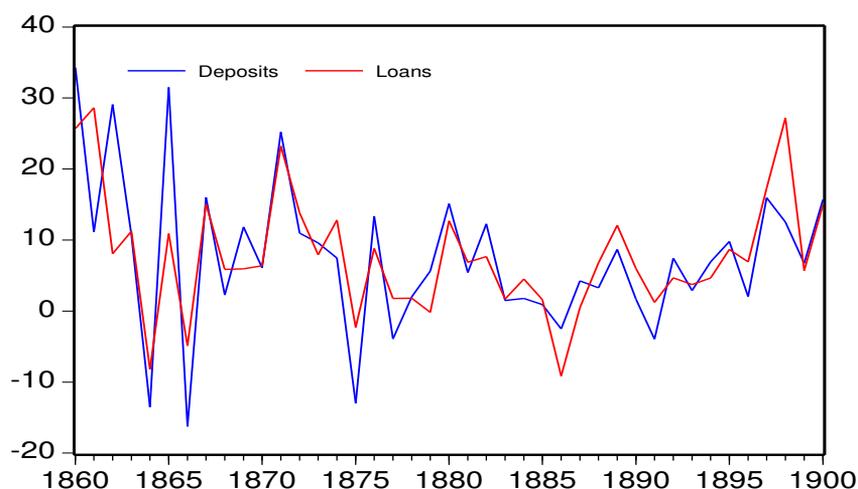
³⁰See the forewords to the Commercial Bank Statistics (*Private aktiebanker*) of 1907 and 1909.

³¹The crisis of the mid 1860s was most severely felt by Den norske Creditbank, which experienced heavy losses on loans used for property investments, see Hertzberg and Rygg (1907, pp. 89–111). It can be seen from Table ?? of the appendix that the loan portfolio of Den norske Creditbank fell by 42 per cent from 1863 to 1866.

³²See Klovland (1989) for a tentative business cycle chronology for Norway covering this period.

The new aggregate time series of deposits and loans generally follow the same pattern over time as the commercial bank estimates of deposits and loans derived by Matre (1992), but there are some interesting new features. For both deposits and loans the data series show approximately the same level in 1868 and 1882. However, in the new series more of the expansion in commercial bank activity in this period is shifted forward to the years from 1870 to 1873, which were a period of strong economic activity.³³ Our data also show a much sharper decline in the years 1875 and 1877. The spectacular growth in commercial bank activity in Christiania in the latter part of the 1890s

FIGURE 3.2 Annual growth rates of deposits and loans of commercial banks. 1860–1900. Per cent



and the subsequent failure of many of the newly established banks in the years after 1898 is a well known episode that has attracted much attention, particularly because it has been seen as one of the key factors creating the house price boom and bust at that time.³⁴ The available information on the full extent of the growth in loans from some of the fast-growing ‘ephemeral’ banks has been somewhat incomplete, but more balance sheet information has now been recovered.³⁵ The present study has resulted in a somewhat higher growth rate of bank loans in the years from 1895 to 1897 and a significant upward revision for 1898, with a corresponding slower growth in the following two years.³⁶

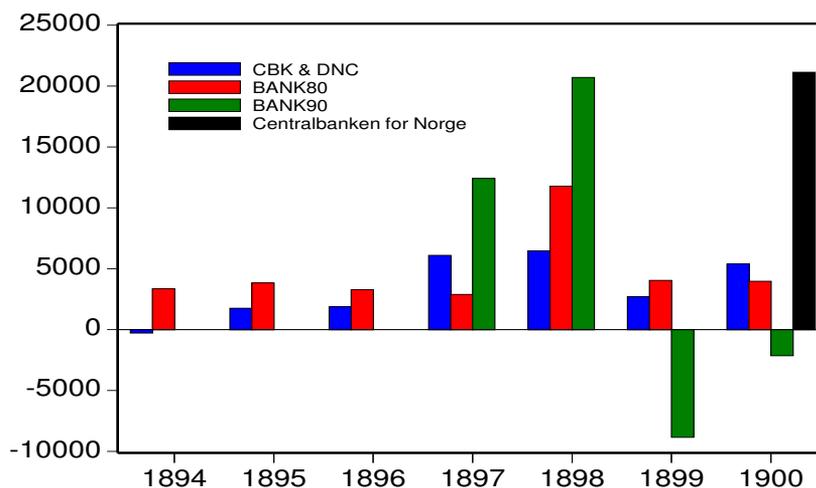
³³The new data imply that commercial bank deposits expanded 51.9 per cent (continuously compounded rates) over the four years from 1870 to 1873; the estimates in Matre (1992) imply a growth of 40.8 per cent.

³⁴For a general background see, *inter alia*, Hoffstad (1928, pp. 154–192) and Rygg (1950, pp. 238–268). The links between commercial bank growth and house prices have been discussed by Gerdrup (2003, 2004).

³⁵Most importantly, the balance sheets of Den norske Industri- og Vexelbank and Den norske Discotobank were located in the Christiania newspapers *Norske Intelligenszedler* and *Morgenbladet*. From the published accounts it is in some cases not possible to separate balances due from other banks from loans to the non-bank public; hence, some of the figures for loans may be somewhat too high.

³⁶According to our new estimates aggregate bank loans expanded at an annual rate of 27.2 per cent in 1898; the correspond-

FIGURE 3.3 Annual growth of loans in Christiania banks. 1894–1900. 1000 kroner.



The unusual development of commercial banking activity in Christiania in the 1890s is illustrated in Figure 3.3, which shows the annual growth of loans originating from four groups of banks in the years 1894 to 1900: (1) the two large commercial banks Christiania Bank og Kreditkasse and Den norske Creditbank, which were established in the 1850s; (2) BANK80 – four banks established in the 1880s, the most important of which was Kristiania Hypotek- og Realkreditbank, which was heavily engaged in the intermediation of mortgage loans³⁷; (3) BANK90 – seven banks established in the years 1897 to 1899³⁸; (4) Centralbanken for Norge, established in 1900. From the graph it will be seen how the newly established banks came to dominate the lending activity in the years 1897 and 1898; in the latter year, Kristiania Hypotek- og Realkreditbank also expanded considerably due to the fact that from 1898 it was able to raise a considerable amount of funds by issuing bearer bonds. By contrast, the loan expansion from the well established, large banks was modest throughout the latter half of the 1890s. In 1899 the banking business of the new banks began to collapse. With the establishment of Centralbanken for Norge in 1900, commercial bank activity in Christiania entered into a new phase, once again dominated by the growth of large banks.

ing figure computed on the basis of data in Matre (1992) is 21.5 per cent. The timing of the expansion period may be crucial with reference to the house price boom, which peaked in 1899 according to Eitrheim and Erlandsen (2004).

³⁷The three other banks were Christiania Handelsbank, Kristiania Folkebank and Kristiania Arbeiderbank.

³⁸Den norske Industri- og Vexelbank, Den norske Discontobank, Christiania Privatbank, Norsk Vexel- og Landmandsbank, Kristiania Delkrederebank, Totalisternes Aktiebanc and Den nordiske Aktiebanc. All these banks failed in the period 1898 to 1904, except the tiny Totalisternes Aktiebanc, which was renamed to Christiania Ørebank in 1902.

3.4.2 The number of banks

The new data collected in Table 3.1 also imply a slight revision to the number of commercial banks in operation in comparison with the figures in Matre (1992). Our sample includes various minor banks that were not reported in that source.³⁹ Beginning in 1884 we also report figures for Levanger Haandværkerforenings Sparekasse, which had changed its status from being a savings bank to a commercial bank.⁴⁰ Lillestrøm Sparebank, which was established in 1887, had a rather unclear status; although it may initially have been intended as a savings bank (it was founded through a public subscription of share capital), it was never authorized as such and gradually developed into a normal commercial bank.⁴¹

The number of banks is sometimes used as an indicator of the development of banking and of the degree of financial sophistication in general.⁴² There are various reasons why this measure is a rather poor indicator in the case of nineteenth century Norway. The size of some banks that were formally organized as commercial banks was extremely small. These banks operated within a restricted local community – and we know that there may have been a significant number of other small, ephemeral banks, for which no data have survived.⁴³ The business conducted by small locally oriented commercial banks in rural areas was much closer to that of a typical savings bank than to a commercial bank located in a town. Furthermore, several of the large commercial banks established branch offices in other towns, which were in some cases continued as independent banks at a later stage.⁴⁴ Some of these branch banks were relatively important and operated with considerable independence of the mother bank. This presents a further dilution of the concept of the ‘number of banks’. The amount of capital invested in commercial banking, represented by our new series of equity, is probably better suited as an indicator of the development of commercial banking. Table 3.1 gives the aggregate figures of commercial bank equity from 1848 to 1918.

³⁹Before 1883 these are Røkens Sparebank, Trondhjems Handelsbank (founded in 1865 as Detaljstforeningens Sparebank, which changed its name to Trondhjems Handelsbank in 1885) and Kvam Privatbank. Further details on these three banks can be found in Slåtto (1957), Helgesen (2000, p. 80) and Kolltveit (1962). Note also that Drammens Kreditkasse (see section 3.1 above) is contained in the estimates of the number of banks in operation right from its founding in 1849 although we have no balance sheet data relating to this bank until 1863.

⁴⁰See Privatbanken i Levanger (1920).

⁴¹See Tveter (1937). It was taken up in the commercial bank statistics in 1906, but our data begin with 1887, the first year in which the bank was in operation. In 1924 it was reestablished as a savings bank.

⁴²For Norway see for example Eitrheim et al. (2004), where the number of commercial and savings banks were tabulated annually for the whole period from 1822 up to 2003. The revised data series presented here and in the previous chapter on savings bank deviate slightly from the figures presented there due to corrections and some new information.

⁴³See the reference to the largely unknown small commercial banks in Brandal (1989) discussed above in section 3.1.

⁴⁴Bergens Kreditbank was established in 1876 as a continuation of the branch office of Christiania Bank og Kreditkasse, which had been founded in 1859, see Engebretsen (1948, pp. 94–96).

TABLE 3.1
New estimates of the number of commercial banks, equity, deposits and loans
1848–1918

End-of-year figures in 1000 kroner

Year	Number of banks	Equity	Deposits	Growth rate deposits	Loans	Growth rate loans
1848	1	81	105		560	
1849	2	85	284	99.5	761	30.7
1850	2	88	354	22.0	971	24.4
1851	2	93	495	33.5	1240	24.5
1852	2	98	576	15.2	1473	17.2
1853	2	102	587	1.9	1234	-17.7
1854	2	109	812	32.4	1497	19.3
1855	2	203	1506	61.8	2507	51.6
1856	3	500	3590	86.9	6112	89.1
1857	4	786	4577	24.3	7019	13.8
1858	5	2594	10722	85.1	13136	62.7
1859	6	3184	11806	9.6	14570	10.4
1860	6	3844	16637	34.3	18838	25.7
1861	6	4641	18597	11.1	25085	28.6
1862	7	5527	24877	29.1	27191	8.1
1863	7	6025	27685	10.7	30423	11.2
1864	7	6376	24187	-13.5	28031	-8.2
1865	9	6632	33143	31.5	31269	10.9
1866	9	6994	28172	-16.3	29780	-4.9
1867	9	7010	33066	16.0	34618	15.1
1868	11	7630	33823	2.3	36711	5.9
1869	12	7865	38073	11.8	38957	5.9
1870	14	8101	40464	6.1	41527	6.4
1871	14	8451	52064	25.2	52391	23.2
1872	14	8864	58100	11.0	60152	13.8
1873	14	9343	63946	9.6	65124	7.9
1874	15	10544	68907	7.5	74034	12.8
1875	18	12867	60505	-13.0	72352	-2.3
1876	19	14459	69147	13.4	79016	8.8
1877	23	15777	66489	-3.9	80442	1.8
1878	23	16930	67838	2.0	81911	1.8
1879	24	16673	71765	5.6	81755	-0.2
1880	24	17083	83484	15.1	92827	12.7
1881	25	18095	88141	5.4	99426	6.9
1882	30	18464	99650	12.3	107345	7.7
1883	32	19220	101156	1.5	109172	1.7
1884	33	19173	102976	1.8	114198	4.5
1885	35	19780	103916	0.9	116061	1.6
1886	35	18076	101351	-2.5	105907	-9.2
1887	42	19491	105741	4.2	106406	0.5
1888	44	19241	109249	3.3	113859	6.8
1889	45	20221	119159	8.7	128478	12.1
1890	47	21817	121144	1.7	136401	6.0
1891	49	23153	116476	-3.9	138072	1.2
1892	50	23990	125491	7.5	144682	4.7

TABLE 3.1
New estimates of the number of commercial banks, equity, deposits and loans
1848–1918

End-of-year figures in 1000 kroner

Year	Number of banks	Equity	Deposits	Growth rate deposits	Loans	Growth rate loans
1893	51	24806	129194	2.9	150173	3.7
1894	51	25997	138443	6.9	157342	4.7
1895	51	27988	152678	9.8	171597	8.7
1896	55	28822	155822	2.0	183901	6.9
1897	65	34609	182771	16.0	218659	17.3
1898	72	53832	207200	12.5	286973	27.2
1899	83	58959	221610	6.7	303802	5.7
1900	84	67823	259295	15.7	352911	15.0
1901	84	62763	286272	9.9	368208	4.2
1902	83	59287	283371	-1.0	365959	-0.6
1903	89	59175	292357	3.1	373898	2.1
1904	90	56432	299013	2.3	371608	-0.6
1905	90	57440	302712	1.2	379361	2.1
1906	92	58714	340983	11.9	405828	6.7
1907	96	67091	373732	9.2	443641	8.9
1908	99	70673	392278	4.8	477268	7.3
1909	101	72308	428405	8.8	503085	5.3
1910	104	83757	449504	4.8	524502	4.2
1911	108	88368	481117	6.8	580029	10.1
1912	112	106539	536290	10.9	658807	12.7
1913	117	122866	592212	9.9	727337	9.9
1914	120	137430	630831	6.3	753029	3.5
1915	124	151312	855749	30.5	985430	26.9
1916	140	314359	1442278	52.2	1756433	57.8
1917	165	536111	2203790	42.4	2648055	41.1
1918	193	839617	2720750	21.1	3346218	23.4

Bibliography

- Akre, P. (1938). *Trysil Privatbank: 50 års jubileum 1887-1937*. Elverum.
- Arbeidernes Landsbank (1938). *Arbeidernes Landsbank A.S.*. Oslo.
- Bjørnseth, O. and A. Bergløff (1948). *Arbeidernes Landsbank A/S 1898-1948*. Oslo.
- Blichfeldt, F. (1887). *Revisionsindberetninger i Arendals Privatbanks og Axel Herlofsons Concursoer*. Christiania (Oslo).
- Brandal, T. (1989). Seglskip, brisling og tomat. In *Penger spart, penger tjent. Sparebanker og økonomisk utvikling på Sør-Vestlandet fra 1839 til 1989*, 219–264. SR-Bank, Stavanger.
- Christiania Bank og Kreditkasse (1898). *Christiania Bank og Kreditkasse 1848-1898*. Oslo.
- Drammens Privatbank (1917). *Drammens Privatbank: 1867 - 1. april - 1917*. Drammen.
- Eier, S. L. (1954). *Privatbanken i Drammen*. Drammen.
- Eitrheim, Ø. and S. Erlandsen (2004). House price indices for Norway 1819-2003. In Eitrheim, Ø., J. T. Klovland and J. F. Qvigstad (eds.), *Historical Monetary Statistics for Norway 1819-2003*, Norges Bank Occasional Paper no. 35, 349–375. Norges Bank, Oslo.
- Eitrheim, Ø., K. Gerdrup and J. T. Klovland (2004). Credit, banking and monetary developments in Norway 1819-2003. In Eitrheim, Ø., J. T. Klovland and J. F. Qvigstad (eds.), *Historical Monetary Statistics for Norway 1819-2003*, Norges Bank Occasional Paper no. 35, 377–407. Norges Bank, Oslo.
- Engebretsen, E. (1948). *Christiania Bank og Kreditkasse 1848-1948*. Aschehoug, Oslo.
- Fusa Sparebank (1958). *Hundreårsskrift for Fusa Prestegjelds Sparebank 1858-1958*.

- Gerdrup, K. R. (2003). Three episodes of financial fragility in Norway since the 1890s. BIS working paper 142.
- Gerdrup, K. R. (2004). Three booms and busts involving banking crisis in Norway since the 1890s. In Moe, T. G., J. A. Solheim and B. Vale (eds.), *The Norwegian Banking Crisis*, Norges Bank Occasional Papers no. 33, 145–177. Oslo.
- Gierløff, C. (1943). *En norsk banksaga: Den Nordenfjeldske Kreditbanks jubileumsskrift*. Trondheim.
- Helgesen, K. (2000). *Fokus Banks historie: Banker i Fokus 1859-1987*. Trondheim.
- Hertzberg, E. and N. Rygg (1907). *Den norske Creditbank 1857-1907*. Christiania.
- Hoffstad, E. (1928). *Den norske privatbankvæsens historie*. Forretningsliv, Oslo.
- Keilhau, W. (1936). *Kristiania Hypothek- og Realkredit-bank 1886-1936*. Oslo.
- Klovland, J. T. (1984). Quantitative Studies in the Monetary History of Norway: Monetary Statistics, 1819-1983. Unpublished manuscript, Norwegian School of Economics and Business Administration.
- Klovland, J. T. (1989). A Chronology of Cycles in Real Economic Activity for Norway, 1867–1914. *Scandinavian Economic History Review*, 37, 18–38.
- Koefoed, H. (1938). *Kristiania Folkebank: En oversikt i anledning av 50 års jubileet*. Oslo.
- Koefoed, H. (1942). *Horten og Omegns Privatbank*. Horten.
- Kolltveit, O. (1962). *Kvam Privatbank 1862-1962*. Øystese.
- Kolltveit, O. (1970). *Ullensvang Privatbank gjennom 100 år 1870-1970*.
- Lillevold, E. (1951). *Oplandske Kreditbank gjennom 75 år*. Hamar.
- Matre, H. I. (1992). Norske forretningsbanker 1848-1990: En tilbakeføring av forretningsbankstatistikken. Rapport nr 41, Det nye pengesamfunnet.
- Østvedt, E. (1951). *Skiensfjordens Kreditbank gjennom 25 år med et omriss av den gamle banks historie*. Skien.
- Petersen, E. (1957). *Den norske Creditbank 1857 - 1957*. Oslo.
- Prang, R. (1987). *Fredriskshalds Kreditbank 1897-1987*. Halden.
- Privatbanken i Levanger (1920). *Privatbanken i Levanger AS i firti aar 1880-1919*. Levanger.
- Røgeberg, J. (1849). *Hamar Privatbank Aksjeselskap 1898-1948*. Hamar.

Rygg, N. (1950). *Norges Bank i mellomkrigstiden*. Gyldendal, Oslo.

Rygg, N. (1954). *Norges Banks historie. Del II*. Oslo.

Schmidt, O. (1948). *Trondjems Haandverk- og Industribank 1848-1948*. Trondheim.

Slåtto, E. (1957). *Røkens Bank AS 100 år*. Røyken.

Tønsberg Privatbank (1920). *Tønsbergs Privatbank MDCCCLXX - MCMXX*. Tønsberg.

Tveit, N. (1938). *Os Privatbank 1888-1938*. Bergen.

Tveter, R. (1937). *Lillestrøm Sparebank gjennom 50 år*. Lillestrøm.

Sources and notes to data on individual banks

Sources

Commercial bank statistics published by Statistics Norway (Statistisk Sentralbyrå): **1877–1883** *Statistical Yearbook of Norway*, annual issues 1880–1885; **1884–1899** *Meddelelser fra det Statistiske Centralbureau*, volumes covering 1885–1900; **1900** *Private Aktiebanker i Aaret 1900*.

Quinquennial reports of County Governors (Amtmennes Femårsberetninger): *Beretning om Kongeriget Norges økonomiske Tilstand i Aarene 1856–1860 med tilhørende Tabeller*. Similar issues for 1861–1865, 1866–1870, 1871–1875.

Archives: Regional State Archives of Trondheim and Stavanger; annual accounts of individual banks at the University Library of Bergen and National Library in Oslo (see Matre (1992) for a full list of annual reports held by the latter institution).

Newspapers: *Morgenbladet*, *Aftenbladet*, *Christianiaposten*, *Trondhjems Adresseavis*, *Tunsberg-eren*, *Vestlandske Tidende*, *Bergens Tidende*, *Bergensposten*, *Norske Intelligenszedler*, *Den Norske Rigstidende*; *Farmand*.

Books: see list of references.

List of commercial banks which changed their names or status

- Christiania Bank og Kreditkasse. The name was changed from Christiania Kreditkasse in 1862.
- Drammens Kreditkasse. Reestablished as Drammens Privatbank in 1867.
- Trondhjems Handelsbank. Established as a commercial bank under the name of Detaljistforeningens Sparebank in 1865, reconstructed under the new name in 1885, merged with Den Borgerlige Forenings Sparebank, Trondhjem in 1909. The latter bank was established as a commercial bank in 1868.
- Trondhjems Realkreditbank. Established in 1874 as Trondhjems Hypotekforsikringsselskap, changed its name in 1892.
- Kvam Privatbank. Established under the name of Østensø Laaneindretning in 1862, reconstructed under the new name in 1882.
- Den norske Discontobank. Established in 1897 as Kommanditaktieselskabet Arntzen, Schmidt & Co., which began their operations in January 1898. Renamed to Den norske Discontobank early in 1899, but went into liquidation later in the same year.
- Trondhjems Haandværkerforenings Sparekasse. Established as a savings bank in 1848, converted to a commercial bank in 1877. Renamed as Trondhjems Haandverk- og Industribank in 1907.

- Levanger Haandværkerforenings Sparekasse. Established as a savings bank in 1880, changed its status to a commercial bank in 1884, renamed as Privatbanken i Levanger in 1912.
- Totalisternes Aktiebank. Established 1898, changed its name to Christiania Ørebank in 1902.

3.4.3 List of commercial bank which failed or went out of business

- Arendals Privatbank failed in September 1886.
- Stavanger Kreditbank failed in February 1889. No accounts were published for 1888.
- Aardals Privatbank (Ryfylke) went out of business in 1897.
- Sarpsborg og Omegns Privatbank ceased operations in 1898.
- Den norske Discontobank was forced into liquidation from 1899. Balance sheet data for 1899 are not included here.
- Den nordiske Aktiebank was established in 1899 but was liquidated with a guarantee from four other banks in the summer of the same year. Incomplete balance sheet data for 1899 have been included here.

List of commercial bank in operation before 1900 on which there is no balance sheet information

The list contains information on the period in which the banks were in operation and a reference to sources giving such information. The annual commercial bank statistics published by Statistics Norway, *Private Aktiebanker*, is referred to as *CBS* (year). The banks referred to below are not included in the number of banks in operation as estimated here because the information is less specific as to these banks.

- Hjelmeland Spareskillingsbank (1852–ca. 1927). Brandal (1989).
- Rennsø Spareskillingsbank (1854–ca. 1927). Brandal (1989). This bank may initially have operated as a savings bank and is included among the savings banks through 1881 (see Chapter 2 of this volume). It was entered into the Norwegian Registry of Firms (Handelsregisteret) as Rennesø Spareskillingsbank in February 1875 (published in *Den Norske Rigstidende* 5 April 1875). The bank then seemed to be organized as a general partnership. It was reported in *CBS* (1909, p. 2*) that Rennesøbanken was registered as a company with limited liability in 1910, but no balance sheet data were reported in *CBS* until 1918, when Rennesøbanken, established 1854, appears in the tables.
- Sand Sparekasse (1855–1880s). Brandal (1989).

- Stjernerøy Sparebank (1859–). Brandal (1989)
- Jelsa Sparebank (1865–1896). Renamed to Jelsa Privatbank in 1897, which is included here. Brandal (1989).
- Vats Privatbank (1867–). This bank is included in *CBS* (1909) for the first time, where it is noted that this bank was founded in 1867 and was previously called Vats Sparebank. It is most likely that it was a commercial bank right from its foundation as it was never referred to in the savings bank statistics.
- Aardal Spareskillingsbank (1878–1902). Brandal (1989).

3.A Commercial banks

TABLE 3.A.1
Commercial banks 1848–1856

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1848	1849	1850	1851	1852	1853	1854	1855	1856
<i>Christiania Bank og Kreditkasse</i>									
Deposits	105	284	354	495	576	587	812	1506	2538
Equity	81	85	88	93	98	102	109	203	393
Loans	560	761	971	1240	1473	1234	1497	2507	4928
<i>Bergens Privatbank</i>									
Deposits									1052
Equity									107
Loans									1184
<i>ALL BANKS</i>									
Deposits	105	284	354	495	576	587	812	1506	3590
Equity	81	85	88	93	98	102	109	203	500
Loans	560	761	971	1240	1473	1234	1497	2507	6112
Number of banks	1	2	2	2	2	2	2	2	3

TABLE 3.A.1
Commercial banks 1857–1865

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1857	1858	1859	1860	1861	1862	1863	1864	1865
<i>Christiania Bank og Kreditkasse</i>									
Deposits	3160	4523	5209	6369	6793	8652	10264	9167	13100
Equity	655	738	831	1056	1312	1585	1883	2181	2280
Loans	5585	6123	6826	7640	9092	10066	11394	10976	13659
<i>Bergens Privatbank</i>									
Deposits	1417	2418	2653	3953	4369	4926	4828	4581	5719
Equity	131	239	241	245	280	346	360	372	710
Loans	1434	2113	2410	3332	3695	3717	3772	4042	3955
<i>Den norske Creditbank</i>									
Deposits		3773	3587	5552	6438	10156	10919	8759	10684
Equity		1612	2028	2456	2920	3400	3531	3559	3201
Loans		4887	4955	7158	11558	12184	13435	11072	9760
<i>Privatbanken, Trondhjem</i>									
Deposits			342	739	961	1114	1248	1134	1513
Equity			79	81	124	190	200	213	220
Loans			359	677	705	1189	1347	1344	1750
<i>Stavanger Kreditbank</i>									
Deposits									1310
Equity									153
Loans									1275
<i>Trondhjems Handelsbank</i>									
Deposits									6
Equity									9
Loans									11
<i>Røkens Sparebank</i>									
Deposits		7	15	24	35	29	31	44	55
Equity		5	5	5	6	6	7	7	8
Loans		13	20	30	35	35	38	51	62
<i>Kvam Privatbank</i>									
Deposits							14	22	36
Equity							3	4	5
Loans							17	26	38
<i>Drammens Kreditkasse</i>									
Deposits							381	480	720
Equity							40	40	46
Loans							420	520	760
<i>ALL BANKS</i>									
Deposits	4577	10722	11806	16637	18597	24877	27685	24187	33143
Equity	786	2594	3184	3844	4641	5527	6025	6376	6632
Loans	7019	13136	14570	18838	25085	27191	30423	28031	31269
Number of banks	4	5	6	6	6	7	7	7	9

TABLE 3.A.1
Commercial banks 1866–1874

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1866	1867	1868	1869	1870	1871	1872	1873	1874
<i>Christiania Bank og Kreditkasse</i>									
Deposits	11516	14062	14288	15909	15119	18519	19800	21364	23726
Equity	2348	2482	2598	2571	2591	2621	2754	2873	3080
Loans	13022	15272	15575	16890	16717	19669	20818	22642	24026
<i>Bergens Privatbank</i>									
Deposits	5533	6755	6675	8175	9247	10632	10894	12021	11820
Equity	760	815	872	946	1011	1045	1090	1168	1326
Loans	4981	6420	6021	6390	7350	8128	9282	9331	10748
<i>Den norske Creditbank</i>									
Deposits	7874	7646	7653	7083	7074	11611	14013	13631	16500
Equity	3287	2821	2833	2907	2920	2972	3075	3222	3663
Loans	7713	7282	8510	7282	7186	11908	14402	15225	18762
<i>Privatbanken, Trondhjem</i>									
Deposits	1414	1863	1339	1513	1539	2226	2603	3314	3239
Equity	226	240	245	251	287	323	366	370	422
Loans	1675	1955	1541	1672	2176	3047	3368	3634	3839
<i>Stavanger Kreditbank</i>									
Deposits	483	905	1218	1431	2330	3134	3131	3809	2893
Equity	258	364	466	530	536	540	545	551	559
Loans	1009	1825	1712	2109	2631	2807	3615	3785	4343
<i>Trondhjems Handelsbank</i>									
Deposits	40	118	232	300	300	300	400	400	400
Equity	17	20	30	30	34	38	42	46	50
Loans	57	135	260	300	300	300	400	400	400
<i>Drammens Privatbank</i>									
Deposits		1600	1824	2611	3191	2954	3399	4103	4401
Equity		253	278	314	354	382	422	490	564
Loans		1600	2038	2636	2995	2875	3457	4424	5131
<i>Nordenfjeldske Kreditbank</i>									
Deposits			381	836	1233	1919	2751	3562	3839
Equity			274	280	289	394	413	440	551
Loans			829	1451	1764	2978	3846	4186	4830
<i>Tønsberg Privatbank</i>									
Deposits					191	478	737	1186	1411
Equity					40	80	102	106	114
Loans					160	380	581	940	1200
<i>Trondhjems Realkreditbank</i>									
Deposits									28
Equity									136
Loans									140
<i>Røkens Sparebank</i>									
Deposits	68	63	56	57	58	74	99	114	143
Equity	8	9	9	9	10	11	12	13	13
Loans	75	69	64	66	67	83	109	126	156

TABLE 3.A.1
Commercial banks 1866–1874

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1866	1867	1868	1869	1870	1871	1872	1873	1874
<i>Kvam Privatbank</i>									
Deposits	44	54	57	57	57	57	58	69	81
Equity	5	6	6	7	7	7	5	6	6
Loans	48	59	61	62	61	60	62	68	78
<i>Den Borgerlige Forenings Sparebank</i>									
Deposits			100	100	100	100	100	200	200
Equity			20	20	20	20	20	40	40
Loans			100	100	100	100	100	200	200
<i>Aanesire Pengeforening</i>									
Deposits					25	25	25	25	25
Equity					3	3	3	3	3
Loans					20	20	20	20	20
<i>Ullensvang Privatbank</i>									
Deposits						35	90	146	202
Equity						15	15	16	17
Loans						36	92	143	162
<i>Drammens Kreditkasse</i>									
Deposits	1200								
Equity	85								
Loans	1200								
<i>ALL BANKS</i>									
Deposits	28172	33066	33823	38073	40464	52064	58100	63946	68907
Equity	6994	7010	7630	7865	8101	8451	8864	9343	10544
Loans	29780	34618	36711	38957	41527	52391	60152	65124	74034
Number of banks	9	9	11	12	14	14	14	14	15

TABLE 3.A.1
Commercial banks 1875–1883

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1875	1876	1877	1878	1879	1880	1881	1882	1883
<i>Christiania Bank og Kreditkasse</i>									
Deposits	18667	15790	12368	12822	12938	13707	14143	16062	16166
Equity	3633	3466	3395	3442	2735	2765	2790	2815	2845
Loans	23452	19202	16364	17518	15982	16379	15999	18075	18990
<i>Bergens Privatbank</i>									
Deposits	11259	12616	12642	13443	14007	15058	16026	16922	18087
Equity	1420	1493	1601	1687	1757	1820	1903	1962	2020
Loans	10933	11122	11974	12208	12334	13133	14015	14017	14124
<i>Den norske Creditbank</i>									
Deposits	15097	15602	14468	13962	14946	17613	18590	21929	21685
Equity	3800	3889	4088	4237	4300	4396	4442	4432	4534
Loans	16842	17065	16980	16673	16533	20045	21825	23550	24262
<i>Privatbanken, Trondhjem</i>									
Deposits	2590	2425	2493	2858	2883	3432	3341	4373	4927
Equity	467	517	540	664	684	695	700	720	728
Loans	3203	3396	3141	3670	3904	4394	4241	4445	5434
<i>Stavanger Kreditbank</i>									
Deposits	2187	2166	2013	1873	2144	3995	4003	5198	4617
Equity	568	584	600	610	622	627	635	635	600
Loans	3602	3742	3780	3202	3623	4414	5012	5653	4840
<i>Trondhjems Handelsbank</i>									
Deposits	500	500	500	600	600	600	700	700	700
Equity	54	58	62	66	70	74	77	81	84
Loans	500	500	500	600	600	600	700	700	700
<i>Drammens Privatbank</i>									
Deposits	3639	4552	3749	3363	3490	4202	4413	4684	4595
Equity	610	626	688	804	769	755	773	725	650
Loans	4256	4859	4691	4129	3901	4519	5262	5472	4993
<i>Nordenfjeldske Kreditbank</i>									
Deposits	3098	3955	4006	4524	4963	5604	5792	5254	5401
Equity	713	713	848	1161	1035	1002	1071	563	950
Loans	4284	5184	5392	5993	6227	6669	6594	5766	6402
<i>Tønsberg Privatbank</i>									
Deposits	1229	1280	1330	1468	1428	1483	1537	1611	1796
Equity	122	138	146	160	158	174	187	205	221
Loans	1200	1240	1337	1261	1222	1256	1480	1613	1686
<i>Trondhjems Realkreditbank</i>									
Deposits	96	82	113	144	174	163	168	178	178
Equity	140	140	141	142	143	144	152	160	168
Loans	216	509	623	737	850	981	1305	1651	1995
<i>Arendals Privatbank</i>									
Deposits	625	1050	1005	1053	1043	1595	1771	2044	2431
Equity	510	510	525	556	624	648	691	733	781
Loans	1100	1550	1588	1676	1667	2241	2460	2774	3213

TABLE 3.A.1
Commercial banks 1875–1883

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1875	1876	1877	1878	1879	1880	1881	1882	1883
<i>Kristiansund Kreditbank</i>									
Deposits	350	462	505	539	770	778	865	1078	1231
Equity	250	291	356	370	398	408	421	446	466
Loans	600	751	1191	1151	848	1020	1227	1264	1538
<i>Drammens og Oplands Kreditbank</i>									
Deposits	500	600	811	705	680	906	1022	1075	1080
Equity	500	510	525	554	553	562	567	567	557
Loans	1500	1680	1455	1351	1058	1243	1342	1304	1306
<i>Bergens Kreditbank</i>									
Deposits		7372	7687	7651	8282	9527	10126	12307	11421
Equity		1441	1616	1691	1729	1775	1828	1762	1684
Loans		7504	7747	7932	8684	10518	11131	12522	11429
<i>Oplandske Kreditbank</i>									
Deposits			1381	1297	1357	1960	1941	2063	2068
Equity			333	429	478	487	502	522	541
Loans			1927	2011	1762	2184	2244	2409	2346
<i>Trondhjems Haandv. Sparekasse</i>									
Deposits			526	510	510	510	510	625	644
Equity			103	99	95	91	87	83	79
Loans			613	613	613	613	613	721	746
<i>Aalesunds Kreditbank</i>									
Deposits			152	207	350	423	470	391	520
Equity			122	150	157	162	182	184	192
Loans			364	324	409	421	490	436	479
<i>Stavanger Privatbank</i>									
Deposits					404	1132	1308	1322	1471
Equity					256	391	473	536	546
Loans					693	1337	1735	1659	1220
<i>Christiania Handelsbank</i>									
Deposits							570	427	386
Equity							500	597	800
Loans							850	1344	1030
<i>Skienfjordens Kreditbank</i>									
Deposits								385	602
Equity								601	608
Loans								900	1229
<i>Røkens Sparebank</i>									
Deposits	144	139	132	121	109	112	144	176	164
Equity	14	15	16	15	16	17	18	19	20
Loans	152	152	147	136	124	127	158	193	186
<i>Kvam Privatbank</i>									
Deposits	84	88	86	85	84	92	103	111	107
Equity	7	7	8	9	9	6	9	7	8
Loans	85	91	92	92	92	104	112	112	118

TABLE 3.A.1
Commercial banks 1875–1883

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1875	1876	1877	1878	1879	1880	1881	1882	1883
<i>Den Borgerlige Forenings Sparebank</i>									
Deposits	200	200	200	300	300	300	300	300	400
Equity	40	40	40	60	60	60	60	60	80
Loans	200	200	200	300	300	300	300	300	400
<i>Aanesire Pengeforening</i>									
Deposits	25	25	25	25	25	25	25	25	25
Equity	3	3	3	3	3	3	3	3	3
Loans	20	20	20	20	20	20	20	20	20
<i>Ullensvang Privatbank</i>									
Deposits	215	244	272	263	253	243	249	254	260
Equity	17	17	18	19	20	20	21	22	23
Loans	208	249	292	289	286	284	285	287	290
<i>Herands Ørebank</i>									
Deposits			25	25	25	25	25	25	25
Equity			3	3	3	3	3	3	3
Loans			25	25	25	25	25	25	25
<i>Aardals Privatbank (Ryfylke)</i>									
Deposits								50	50
Equity								4	4
Loans								50	50
<i>Nedre Ekers Aktiebank</i>									
Deposits								10	10
Equity								3	3
Loans								12	12
<i>Skudenes Privatbank</i>									
Deposits								50	50
Equity								10	10
Loans								50	50
<i>Vikør Privatbank</i>									
Deposits								20	20
Equity								5	5
Loans								20	20
<i>Kristiania Arbeiderbank</i>									
Deposits									40
Equity									10
Loans									40
<i>ALL BANKS</i>									
Deposits	60505	69147	66489	67838	71765	83484	88141	99650	101156
Equity	12867	14459	15777	16930	16673	17083	18095	18464	19220
Loans	72352	79016	80442	81911	81755	92827	99426	107345	109172
Number of banks	18	19	23	23	24	24	25	30	32

TABLE 3.A.1
Commercial banks 1884–1892

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1884	1885	1886	1887	1888	1889	1890	1891	1892
<i>Christiania Bank og Kreditkasse</i>									
Deposits	18092	17452	16261	15586	15631	16530	16701	15429	16178
Equity	2880	2796	2499	2343	2421	2720	2851	3040	3289
Loans	18904	17574	15256	15047	15409	15988	18111	16573	16360
<i>Bergens Privatbank</i>									
Deposits	19066	19616	17535	18467	19019	19683	19450	18015	18805
Equity	2080	2144	1896	1899	1900	1950	2000	2007	2023
Loans	15099	17204	16467	15018	16191	16427	15815	16577	16338
<i>Den norske Creditbank</i>									
Deposits	20553	22678	26154	23556	22689	22228	21925	21965	22917
Equity	4576	4655	4415	4420	4425	4586	4674	4750	4839
Loans	25039	26100	24481	21348	22430	23822	24422	24312	25411
<i>Privatbanken, Trondhjem</i>									
Deposits	5113	4698	4439	5028	5249	5388	5383	4914	5289
Equity	600	600	600	600	600	600	640	695	766
Loans	5949	5015	4864	5259	5527	6230	6760	6656	6603
<i>Stavanger Kreditbank</i>									
Deposits	3204	2373	1561	1514					
Equity	550	500	545	624					
Loans	4089	3083	2062	1851					
<i>Trondhjems Handelsbank</i>									
Deposits	800	875	803	706	762	880	827	878	858
Equity	88	92	96	100	105	112	121	154	189
Loans	800	852	770	699	680	983	986	1007	1015
<i>Drammens Privatbank</i>									
Deposits	4667	4677	4484	4839	4766	5338	5437	4782	5061
Equity	662	703	702	714	750	793	843	885	927
Loans	5052	5203	5020	4972	5410	5966	6290	5584	5769
<i>Nordenfjeldske Kreditbank</i>									
Deposits	5639	4721	4694	4101	4028	4084	3908	3487	3662
Equity	1043	1137	1119	1082	1087	1097	1152	1190	1226
Loans	6914	6383	5600	4690	4596	4983	4767	4173	4748
<i>Tønsberg Privatbank</i>									
Deposits	1951	1904	1814	1698	1961	1902	1839	1959	2280
Equity	281	279	250	256	267	282	295	306	321
Loans	1867	2163	1862	1658	1458	1860	1885	2052	2162
<i>Trondhjems Realkreditbank</i>									
Deposits	190	188	186	202	193	209	268	246	297
Equity	176	185	190	195	200	208	213	221	227
Loans	2549	2971	3561	3522	3948	4359	4803	4778	4607
<i>Arendals Privatbank</i>									
Deposits	2591	2428							
Equity	828	887							
Loans	3308	2978							

TABLE 3.A.1
Commercial banks 1884–1892

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1884	1885	1886	1887	1888	1889	1890	1891	1892
<i>Kristiansund Kreditbank</i>									
Deposits	1344	1297	892	680	844	1188	1197	1336	1326
Equity	367	367	186	245	278	125	152	186	208
Loans	1805	1693	1369	1276	1316	1473	1648	1941	2009
<i>Drammens og Oplands Kreditbank</i>									
Deposits	936	693	883	1205	1657	2211	2657	2559	3211
Equity	460	452	459	468	484	512	546	587	575
Loans	1239	1194	1258	1294	1816	2675	3318	3282	4040
<i>Bergens Kreditbank</i>									
Deposits	10989	10708	10576	11855	12994	15228	13983	13338	14134
Equity	1721	1765	1837	1888	1913	1981	2025	2049	1956
Loans	11037	10300	10181	10231	11244	13479	12980	13243	12513
<i>Oplandske Kreditbank</i>									
Deposits	2368	2054	2170	2094	1974	2047	1960	2271	2236
Equity	558	585	576	584	582	588	582	621	655
Loans	2653	2582	2513	2510	2321	2513	2350	2731	2930
<i>Trondhjems Haandv. Sparekasse</i>									
Deposits	747	735	744	712	750	802	911	1021	1043
Equity	76	78	80	82	84	86	88	91	97
Loans	777	811	809	750	784	863	983	1100	1120
<i>Aalesunds Kreditbank</i>									
Deposits	527	586	801	730	1041	1181	1369	1460	1641
Equity	209	207	180	196	207	227	256	284	309
Loans	636	706	644	615	698	1092	1170	1595	1387
<i>Stavanger Privatbank</i>									
Deposits	1532	2106	2966	2938	2892	4120	4645	4581	5228
Equity	553	576	604	614	615	592	614	645	674
Loans	1631	2323	2720	2161	2162	2804	3255	4177	4503
<i>Christiania Handelsbank</i>									
Deposits	337	1158	1021	1710	2142	2658	3372	3102	3496
Equity	653	662	668	674	678	693	957	1216	1233
Loans	1764	2265	2241	2811	2964	3966	4501	4590	5319
<i>Skienfjordens Kreditbank</i>									
Deposits	1106	1187	1597	2038	2042	2769	3351	2495	2728
Equity	631	660	696	718	752	792	1124	1189	1260
Loans	1803	2321	2156	2707	3183	4011	4662	3736	3932
<i>Larvik Privatbank</i>									
Deposits		407	376	639	799	1051	1131	1149	1217
Equity		250	271	261	254	268	282	298	311
Loans		908	606	773	946	1509	1411	1238	1421
<i>Kristiania Hypotek- og Realkreditbank</i>									
Deposits				971	1277	1474	1533	2027	2649
Equity				806	816	830	846	873	906
Loans				3466	5315	6674	8341	9448	10820

TABLE 3.A.1
Commercial banks 1884–1892

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1884	1885	1886	1887	1888	1889	1890	1891	1892
<i>Agdesidens Bank</i>									
Deposits				2603	3767	4721	4684	4079	3794
Equity				265	330	392	440	453	506
Loans				1506	2456	2719	2598	2877	3246
<i>Aalesunds Landmandsbank</i>									
Deposits				127	549	416	471	421	493
Equity				201	206	415	432	406	407
Loans				370	802	1171	1034	911	897
<i>Kristiania Folkebank</i>									
Deposits						418	469	588	797
Equity						77	114	123	145
Loans						276	235	351	526
<i>Søndenfjeldske Privatbank</i>									
Deposits							806	1024	1945
Equity							257	271	297
Loans							1245	1500	2080
<i>Fredrikstad Privatbank</i>									
Deposits								234	784
Equity								262	273
Loans								431	1374
<i>Røkens Sparebank</i>									
Deposits	179	168	157	154	175	198	197	196	195
Equity	22	23	24	24	25	26	26	26	27
Loans	196	187	178	178	189	212	214	216	218
<i>Kvam Privatbank</i>									
Deposits	107	107	105	100	110	118	139	148	145
Equity	9	10	11	12	13	14	15	16	19
Loans	117	116	113	112	115	126	151	158	162
<i>Den Borgerlige Forenings Sparebank</i>									
Deposits	400	400	400	400	531	557	568	621	652
Equity	80	80	80	80	81	76	76	76	76
Loans	400	400	400	400	400	483	492	535	564
<i>Aanesire Pengeforening</i>									
Deposits	25	25	25	25	25	50	50	50	50
Equity	3	3	3	3	3	3	5	5	5
Loans	20	20	20	20	20	40	40	40	40
<i>Ullensvang Privatbank</i>									
Deposits	266	272	279	286	306	319	341	338	345
Equity	24	25	26	27	28	29	30	30	31
Loans	292	294	308	323	338	353	352	379	390
<i>Herands Ørebank</i>									
Deposits	25	25	25	25	25	25	25	25	50
Equity	3	3	3	3	3	3	3	3	5
Loans	25	25	25	25	25	25	25	25	50

TABLE 3.A.1
Commercial banks 1884–1892

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1884	1885	1886	1887	1888	1889	1890	1891	1892
<i>Aandals Privatbank (Ryfylke)</i>									
Deposits	50	50	50	50	53	55	50	50	50
Equity	4	4	4	4	4	4	4	4	4
Loans	50	50	50	50	56	55	50	50	50
<i>Nedre Ekers Aktiebank</i>									
Deposits	10	10	10	10	10	10	20	20	20
Equity	3	3	3	3	3	3	4	4	4
Loans	12	12	12	12	12	12	23	23	23
<i>Skudenes Privatbank</i>									
Deposits	50	70	70	70	96	119	133	113	125
Equity	10	12	12	12	14	15	15	16	17
Loans	50	70	70	70	96	110	87	129	142
<i>Vikør Privatbank</i>									
Deposits	20	20	25	25	25	25	30	30	30
Equity	5	5	5	5	5	5	5	5	5
Loans	20	20	25	25	25	25	30	30	30
<i>Kristiania Arbeiderbank</i>									
Deposits	40	60	60	60	83	98	123	135	163
Equity	10	12	12	12	14	14	15	18	18
Loans	40	60	60	60	90	91	124	143	169
<i>Stenkjær Privatbank</i>									
Deposits	20	20	30	30	38	45	39	49	45
Equity	8	8	10	10	13	14	14	15	16
Loans	25	25	35	35	46	52	50	54	58
<i>Levanger Haandv. Sparekasse</i>									
Deposits	32	48	59	70	79	113	124	148	148
Equity	3	5	5	6	9	9	10	10	10
Loans	37	54	69	85	94	127	130	153	153
<i>Sarpsborg og Omegns Privatbank</i>									
Deposits		100	100	150	197	237	238	231	257
Equity		10	12	14	16	16	16	18	19
Loans		100	100	150	207	253	245	245	273
<i>Lillestrøm Sparebank</i>									
Deposits				5	11	15	21	20	26
Equity				2	3	3	4	4	5
Loans				6	13	18	24	25	30
<i>Trysil Privatbank</i>									
Deposits				11	17	25	23	36	50
Equity				3	4	4	4	5	5
Loans				13	20	28	25	39	54
<i>Indherreds Kreditbank, Stenkjær</i>									
Deposits				150	166	265	306	354	393
Equity				10	12	13	15	19	23
Loans				150	166	228	288	364	399

TABLE 3.A.1
Commercial banks 1884–1892

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1884	1885	1886	1887	1888	1889	1890	1891	1892
<i>Namdals Privatbank</i>									
Deposits				121	193	260	285	319	330
Equity				25	27	28	30	33	36
Loans				155	202	283	304	348	377
<i>Strømsbo Aktiebank</i>									
Deposits				1	1	1	1	1	1
Equity				1	1	1	1	1	1
Loans				1	1	1	1	1	1
<i>Os Privatbank</i>									
Deposits					22	24	37	50	64
Equity					4	4	4	4	4
Loans					27	28	41	54	68
<i>Time Privatbank</i>									
Deposits					60	70	74	80	83
Equity					7	7	8	8	8
Loans					64	77	87	90	97
<i>Avaldsnes Laaneindretning</i>									
Deposits						4	4	4	7
Equity						5	5	5	5
Loans						5	5	5	9
<i>Klingen Privatbank</i>									
Deposits							38	38	42
Equity							6	6	6
Loans							41	41	45
<i>Horten og Omegns Privatbank</i>									
Deposits								60	134
Equity								20	21
Loans								61	134
<i>Kirkebo Aktieprivatbank</i>									
Deposits									18
Equity									2
Loans									18
<i>ALL BANKS</i>									
Deposits	102976	103916	101351	105741	109249	119159	121144	116476	125491
Equity	19173	19780	18076	19491	19241	20221	21817	23153	23990
Loans	114198	116061	105907	106406	113859	128478	136401	138072	144682
Number of banks	33	35	35	42	44	45	47	49	50

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Christiania Bank og Kreditkasse</i>								
Deposits	17505	19137	21527	20521	22841	24732	26017	29218
Equity	3352	3476	3583	3583	3713	3813	3813	3913
Loans	17273	17694	18072	18347	21401	22719	24686	27068
<i>Bergens Privatbank</i>								
Deposits	19464	19666	22586	21593	22932	24311	26159	28909
Equity	2034	2097	2167	2281	2401	2517	2638	2789
Loans	17545	19943	20058	20382	21966	25473	27247	31699
<i>Den norske Creditbank</i>								
Deposits	23232	22994	24764	25120	28587	30984	28118	30873
Equity	4978	5049	5122	5153	5212	5340	5372	11135
Loans	24849	24165	25547	27161	30212	35367	36120	39122
<i>Privatbanken, Trondhjem</i>								
Deposits	4702	4821	5522	5862	6035	5914	6057	5871
Equity	775	790	750	710	725	690	725	783
Loans	5872	5372	5409	5644	6026	6046	5833	6291
<i>Trondhjems Handelsbank</i>								
Deposits	959	1075	1654	1634	2278	1859	1926	2003
Equity	205	219	240	260	285	525	560	602
Loans	1143	1248	1414	1650	2272	2214	2391	2688
<i>Drammens Privatbank</i>								
Deposits	5335	5258	6192	6360	7546	6842	8525	9680
Equity	967	992	1022	1078	1133	2393	2423	2579
Loans	5907	5807	7248	7437	8091	9818	11552	13303
<i>Nordenfjeldske Kreditbank</i>								
Deposits	3564	4199	4419	4862	5058	5146	6419	6787
Equity	1116	1138	1103	1060	1091	1149	1225	1295
Loans	4370	5160	5176	5577	5627	6137	6854	7879
<i>Tønsberg Privatbank</i>								
Deposits	2178	2243	2311	2289	2643	3045	3098	3514
Equity	328	335	342	345	349	368	610	634
Loans	2287		2272	2399	2514	3264	3198	3636
<i>Trondhjems Realkreditbank</i>								
Deposits	385	414	424	453	661	621	780	1020
Equity	192	199	199	202	188	167	150	150
Loans	4675	4866	4926	4919	5209	5764	5923	5776
<i>Kristiansund Kreditbank</i>								
Deposits	1281	1090	1774	1739	1586	1649	1842	1861
Equity	233	267	284	316	309	316	318	364
Loans	1985	1974	2405	2406	2243	2211	2255	2309
<i>Drammens og Oplands Kreditbank</i>								
Deposits	3444	4682	5186	5425	6734	6649	7425	9229
Equity	600	636	783	826	874	2012	1916	2045
Loans	4168	5509	6284	6533	8011	9656	10957	13270

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Bergens Kreditbank</i>								
Deposits	13822	15249	15591	15768	16782	18936	21111	22101
Equity	1970	2050	2139	2195	2301	2392	2510	2641
Loans	12968	12801	14764	15983	16265	18949	20563	22822
<i>Oplandske Kreditbank</i>								
Deposits	2133	2275	2429	2416	2982	3371	3578	3847
Equity	673	697	700	699	718	744	731	799
Loans	2678	2808	2974	3315	3558	4233	4784	4880
<i>Trondhjems Haandv. Sparekasse</i>								
Deposits	1065	1088	1045	1141	1212	1283	1354	1640
Equity	103	110	131	152	173	194	215	246
Loans	1141	1162	1108	1200	1324	1440	1557	1793
<i>Aalesunds Kreditbank</i>								
Deposits	1643	1798	1857	1987	2170	2398	2396	2638
Equity	337	365	385	405	419	428	603	617
Loans	1864	1501	1251	1915	2120	2362	2438	2454
<i>Stavanger Privatbank</i>								
Deposits	5140	5391	5202	5129	5435	5067	6593	7358
Equity	719	752	782	819	848	1620	1646	1685
Loans	4412	4843	4311	5045	5831	6267	7411	8932
<i>Christiania Handelsbank</i>								
Deposits	3924	4785	5435	7103	7988	9193	9920	12401
Equity	1260	1292	2202	2229	2287	4837	4632	4663
Loans	5550	6938	8573	10006	11716	16206	13530	13965
<i>Skjensfjordens Kreditbank</i>								
Deposits	3338	3657	4299	4366	5477	6209	6448	6885
Equity	1454	1786	1980	2040	2100	3556	4301	4430
Loans	4198	4741	6056	6284	8369	12221	14046	13193
<i>Larvik Privatbank</i>								
Deposits	1555	1935	2303	2474	2673	2887	3017	3496
Equity	324	349	379	358	367	396	765	843
Loans	1746	2166	2459	2651	3092	3787	4244	3562
<i>Kristiania Hypotek- og Realkreditbank</i>								
Deposits	3075	3469	3630	3773	4744	5304	5466	5962
Equity	955	998	1057	1115	1187	2820	2900	2958
Loans	12194	13984	16021	17515	17926	24694	31120	34659
<i>Agdesidens Bank</i>								
Deposits	3268	3308	3382	3161	3472	3757	3959	4350
Equity	564	623	685	712	729	760	798	830
Loans	3640	2968	2777	2277	2502	3640	3547	3690
<i>Aalesunds Landmandsbank</i>								
Deposits	500	522	620	779	921	1258	1485	1807
Equity	407	410	414	418	423	434	443	451
Loans	808	944	1047	1334	1556	1688	1812	2282

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Kristiania Folkebank</i>								
Deposits	910	1115	1401	1692	2315	2554	3021	3106
Equity	148	171	200	220	490	490	490	490
Loans	571	739	912	1247	2019	2392	2635	2703
<i>Søndenfjeldske Privatbank</i>								
Deposits	1770	2034	2229	2160	2422	3039	3401	4217
Equity	332	372	420	458	491	850	850	917
Loans	2365	3208	2905	3175	3638	4766	5065	6905
<i>Fredrikstad Privatbank</i>								
Deposits	939	1535	1765	2194	2394	2913	2636	2942
Equity	287	309	331	362	830	844	1246	1331
Loans	1664	2075	2479	3292	4002	5414	5455	5217
<i>Nordlands Privatbank</i>								
Deposits	301	493	717	540	726	1277	1712	1967
Equity	105	108	133	167	182	250	849	967
Loans	460	606	759	836	1115	1651	2445	2917
<i>Den norske Industri- og Vexelbank</i>								
Deposits					7083	8793	9771	11308
Equity					3054	6780	6258	6378
Loans					11882	20729	20958	17725
<i>Christiania Privatbank</i>								
Deposits					367	720	912	1051
Equity					200	200	230	232
Loans					458	850	882	1223
<i>Fredrikshalds Kreditbank</i>								
Deposits					156	513	1150	1576
Equity					200	204	266	291
Loans					410	1507	1724	2289
<i>Moss Privatbank</i>								
Deposits					272	318	388	435
Equity					160	167	518	534
Loans					546	1036	1477	1349
<i>Gjøvik og Oplands Kreditbank</i>								
Deposits						1134	1319	1844
Equity						203	223	238
Loans						1380	1451	1805
<i>Norsk Vexel- og Landmandsbank</i>								
Deposits						985	653	1236
Equity						571	1065	1418
Loans						1565	1680	2874
<i>Den norske Discontobank</i>								
Deposits						4752		
Equity						3076		
Loans						9488		

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Skiens og Oplands Privatbank</i>								
Deposits						691	945	958
Equity						512	687	718
Loans						1720	1946	1609
<i>Stavanger Handels- og Industribank</i>								
Deposits						869	1792	2068
Equity						781	857	885
Loans						2053	2649	2797
<i>Fredrikstad Handelsbank</i>								
Deposits							469	1065
Equity							380	419
Loans							432	1716
<i>Hønefoss og Oplands Privatbank</i>								
Deposits							306	826
Equity							303	330
Loans							555	1171
<i>Tønsberg Handelsbank</i>								
Deposits							511	822
Equity							260	250
Loans							744	1032
<i>Centralbanken for Norge</i>								
Deposits								11536
Equity								2681
Loans								21132
<i>Røkens Sparebank</i>								
Deposits	206	217	228	239	250	260	270	280
Equity	27	27	28	28	29	30	31	32
Loans	226	234	242	250	258	273	288	304
<i>Kvam Privatbank</i>								
Deposits	150	165	175	185	194	208	218	229
Equity	19	21	21	23	25	27	28	27
Loans	162	167	179	194	194	208	214	226
<i>Den Borgerlige Forenings Sparebank</i>								
Deposits	656	662	675	658	708	756	811	861
Equity	76	76	76	76	76	76	84	89
Loans	583	528	528	526	565	660	745	869
<i>Aanesire Pengeforening</i>								
Deposits	50	50	50	50	50	50	79	103
Equity	5	5	5	5	5	5	5	5
Loans	40	40	40	40	40	40	40	60
<i>Ullensvang Privatbank</i>								
Deposits	358	404	421	449	456	496	513	559
Equity	31	32	33	34	40	41	41	42
Loans	394	414	432	442	446	459	435	467

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Herands Ørebank</i>								
Deposits	50	50	50	50	50	50	106	115
Equity	5	5	5	5	8	8	10	13
Loans	50	50	50	50	50	50	10	104
<i>Aardals Privatbank (Ryfylke)</i>								
Deposits	50	50	50	50				
Equity	4	4	4	4				
Loans	50	50	50	50				
<i>Nedre Ekers Aktiebank</i>								
Deposits	20	20	20	20	30	30	36	34
Equity	4	4	4	4	5	5	5	6
Loans	23	23	23	23	34	34	41	38
<i>Skudenes Privatbank</i>								
Deposits	149	173	166	151	167	171	174	212
Equity	18	20	18	22	23	25	27	27
Loans	164	193	187	171	186	193	197	147
<i>Vikør Privatbank</i>								
Deposits	30	35	35	35	35	40	40	40
Equity	5	5	5	5	5	5	5	5
Loans	30	35	35	35	35	40	40	40
<i>Kristiania Arbeiderbank</i>								
Deposits	205	215	221	280	264	402	441	430
Equity	20	22	26	29	41	56	59	53
Loans	205	214	203	228	221	358	411	344
<i>Stenkjær Privatbank</i>								
Deposits	49	53	63	82	102	120	125	168
Equity	18	19	19	21	21	21	27	28
Loans	60	71	79	101	120	142	152	178
<i>Levanger Haandv. Sparekasse</i>								
Deposits	163	193	230	262	323	358	430	476
Equity	10	11	12	14	15	18	20	21
Loans	164	190	225	256	312	361	430	471
<i>Sarpsborg og Omegns Privatbank</i>								
Deposits	258	290	289	290	358			
Equity	21	23	22	28	31			
Loans	269	305	306	306	369			
<i>Lillestrøm Sparebank</i>								
Deposits	31	39	44	47	50	72	72	80
Equity	6	6	7	8	9	9	11	13
Loans	35	40	49	52	58	76	83	93
<i>Trysil Privatbank</i>								
Deposits	63	75	84	89	111	143	156	166
Equity	5	5	6	6	7	8	9	10
Loans	67	78	91	92	116	151	166	177

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Indherreds Kreditbank, Stenkjær</i>								
Deposits	466	557	558	628	660	788	837	951
Equity	26	27	35	39	43	48	49	52
Loans	406	468	516	553	627	666	708	939
<i>Namdals Privatbank</i>								
Deposits	380	457	460	538	685	657	679	701
Equity	39	44	73	77	80	84	92	99
Loans	420	481	517	601	742	748	754	760
<i>Strømsbo Aktiebank</i>								
Deposits	1	1	1	1	1	1	4	2
Equity	1	1	1	1	1	1	1	2
Loans	1	1	1	1	1	1	3	3
<i>Os Privatbank</i>								
Deposits	78	95	113	129	152	160	175	197
Equity	5	5	6	7	9	10	11	12
Loans	82	99	117	133	158	164	179	202
<i>Time Privatbank</i>								
Deposits	98	104	112	119	125	136	149	172
Equity	9	10	10	10	11	12	13	14
Loans	108	116	123	133	144	150	163	187
<i>Avaldsnes Laaneindretning</i>								
Deposits	7	11	11	15	15	18	18	22
Equity	5	5	6	6	6	6	6	7
Loans	9	13	13	18	18	22	22	29
<i>Klingen Privatbank</i>								
Deposits	42	46	46	51	51	55	60	60
Equity	6	7	7	7	7	8	9	9
Loans	45	50	50	54	54	59	66	67
<i>Horten og Omegns Privatbank</i>								
Deposits	178	220	275	352	430	632	673	777
Equity	21	22	25	27	41	46	70	95
Loans	225	230	300	405	487	744	804	815
<i>Kirkebo Aktieprivatbank</i>								
Deposits	23	28	34	39	45	50	51	66
Equity	2	2	2	3	3	3	4	5
Loans	23	28	34	39	45	48	52	64
<i>Haldens Privatbank</i>								
Deposits				179	323	433	440	420
Equity				120	246	252	279	296
Loans				312	664	790	737	880
<i>Holmestrand og Oplands Aktiebank</i>								
Deposits				209	269	336	372	454
Equity				31	67	95	180	105
Loans				174	379	567	652	525

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Klep Privatbank</i>								
Deposits				64	80	96	99	135
Equity				10	10	11	12	13
Loans				80	100	120	139	162
<i>Klep Almenbank</i>								
Deposits				15	23	33	42	46
Equity				12	13	13	13	14
Loans				51	56	60	71	76
<i>Kristiania Delkrederebank</i>								
Deposits					75	225	172	137
Equity					240	258	479	459
Loans					77	438	498	331
<i>Skiens Ørebank</i>								
Deposits					46	60	73	93
Equity					25	27	29	31
Loans					59	77	95	124
<i>Jelse Privatbank</i>								
Deposits					95	113	126	148
Equity					15	16	17	18
Loans					69	82	96	120
<i>Høilandets Privatbank, Grong</i>								
Deposits					8	10	11	13
Equity					5	5	5	5
Loans					12	14	16	18
<i>Ørstens Aktiebank</i>								
Deposits					50	57	63	88
Equity					10	10	11	12
Loans					60	67	75	99
<i>Drammens Folkebank</i>								
Deposits						44	121	181
Equity						90	91	132
Loans						88	238	300
<i>Tvedestrands Privatbank</i>								
Deposits						138	116	151
Equity						71	71	73
Loans						248	211	181
<i>Totalisternes Aktiebank</i>								
Deposits						14	8	8
Equity						23	23	22
Loans						46	30	30
<i>Vikedals Privatbank</i>								
Deposits						17	24	34
Equity						8	9	9
Loans						22	31	43

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>Grøsvik Aktiebank</i>								
Deposits							8	20
Equity							6	6
Loans							13	26
<i>Sarpsborg Aktiekreditbank</i>								
Deposits							430	587
Equity							197	227
Loans							582	951
<i>Smaalenenes Aktiebank</i>								
Deposits							102	130
Equity							53	64
Loans							169	198
<i>Hamar Privatbank</i>								
Deposits							66	146
Equity							421	426
Loans							502	596
<i>Voss Vexel- og Landmandsbank</i>								
Deposits							99	180
Equity							50	50
Loans							115	226
<i>Romsdalske Vexel- og Landmandsbank</i>								
Deposits							264	395
Equity							62	67
Loans							288	530
<i>Oftens Bank</i>								
Deposits							239	258
Equity							254	260
Loans							119	220
<i>Tromsø Privatbank</i>								
Deposits							341	540
Equity							305	318
Loans							705	923
<i>Den nordiske Aktiebank</i>								
Deposits							1600	
Equity							2000	
Loans							250	
<i>Porsgrunds Ørebank</i>								
Deposits								18
Equity								19
Loans								34

TABLE 3.A.1
Commercial banks 1893–1900

End-of-year figures in 1000 kroner. Estimated figures in blue.

	1893	1894	1895	1896	1897	1898	1899	1900
<i>ALL BANKS</i>								
Deposits	129194	138443	152678	155822	182771	207200	221610	259295
Equity	24806	25997	27988	28822	34609	53832	58959	67823
Loans	150173	157342	171597	183901	218659	286973	303802	352911
Number of banks	51	51	51	55	65	72	83	84

Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices

Ola H. Grytten¹

Professor Dr. Ingvar B. Wedervang was genuinely interested in economic history as a tool of understanding the present economic situation and forecast the future. In consequence, an archive on historical prices and wages was set up along with the Institute of Economics at the University of Oslo in 1932. With generous funding, Wedervang and his assistants searched through private and public records in their efforts of establishing the best possible coverage of historical data of wages and prices for Norway. The archive, now located at the Norwegian School of Economics and Business Administration in Bergen, now stands as one of the world's largest manual archives of wages and prices. A number of historical price and wage series were calculated on the basis of the archive through several projects since the 1970s. Still, the Wedervang Archive has been under-utilized, until recently when it was revived during the Norges Bank project on Historical Monetary Statistics.

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4.1 One of the world's richest archives on historical wages and prices

The data which are presented in this project on Historical Monetary Statistics for Norway rely on data from several sources and archives. However, one archive has served as a predominant source in order to extract and calculate the time series for gross domestic product, the consumer price index and wages. This is Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices, or Professor Dr. Ingvar B. Wedervang's lønns- og prishistoriske arkiv, as it is called in Norwegian. The archive is located at the Norwegian School of Economics and Business Administration in Bergen, Norway.

The Wedervang Archive holds a seven digit number of direct observations of prices, starting in 1641 and ending in 1940, and equally many observations of wages, starting in 1751 ending in 1939. These price and wage data reflect some two digit million observations. Thus, the archive, which is still manually recorded, is one of the richest of its kind internationally. It has its own history connected to Wedervang himself and to the staff working with its' files.

4.2 Professor Dr. Ingvar B. Wedervang (1891–1961)

Wedervang was born in Oslo on 21 June 1891. In 1913 he completed his degree in political economics, followed by a two-year position as secretary at Statistics Norway. He was employed as a statistician for Treschow-Fritzøe in the town of Larvik (eastern Norway) 1916–1918, and was head of department at the national Rationing Directorate 1918–1920. This job was followed by employment as counselor for to the National Price Regulation Office 1920–1923. In 1922 he took a leave to visit Munich with his family and work on his doctoral thesis *On the ratio of genders at birth*.² Along with working on his doctorate degree he was working for Statistics Norway again in 1923 and 1924.³

He submitted his thesis in 1924, which was successfully defended the year after, when he was also appointed reader in statistics at the University of Oslo. In 1927, at the age of 36, he was appointed professor of political economics and statistics, and became editor of the *Review of Political Economics*.⁴ He retained his professorship until 1936.⁵ Wedervang published a number of important works as author or co-author, such as *The National Income of Norway* (1926), *On the Use of Income and particularly on Saving* (1927) and *The World Economy in the Post-War Period* (1932).⁶ The latter publication was a joint work with two other senior academic economists at the time, Wilhelm Keilhau and Ragnar Frisch.

In 1930 Wedervang traveled to the US, and visited he universities of Columbia, Yale, Harvard

²Wedervang 1924.

³Coward 1962, 283.

⁴Bergh and Hanisch 1984, 147–153, Coward 1961, 184–197.

⁵Coward 1962, 283–284.

⁶Wedervang 1926, Wedervang 1927, Keilhau, Wedervang and Frisch 1932.

and Chicago. He also wrote a proposal for the restructuring of the Norwegian economics study program. On his return to Norway, together with Professor Ragnar Frisch, he started to reorganize and modernize the program in economics at the University of Oslo in order to make it compatible with the academic standards he saw in America, in line with his previous proposal.⁷

Frisch and Wedervang were also granted a substantial amount of money from the Rockefeller Foundation in order to establish an Institute of Economics at the University of Oslo. This funding was supplemented by a grant from the Norwegian Fund for War Risks Insurance (Norsk vareforsikringsfond) and later from several other sources.⁸ The institute was founded on January 1 1932 with Wedervang and Frisch in a joint leadership.

Under the leadership of Wedervang the institute examined Norwegian retail trade, and during the first half of the 1930s it was a source of several publications on terms of trade and costs of different sub-industries within the trade sector. Perhaps more important, the institute compiled data on prices and wages in order to be able to examine the patterns and explanations of short- and long-term business cycles in Norway in the nineteenth and twentieth century.⁹ In 1936 this research project and its' data compilation task was incorporated into a more general program aiming at analyzing the Norwegian economic structure. This project was led by a steering committee, where three of the most prominent Norwegian professors in economics took part, notably Wilhelm Keilhau, Ragnar Frisch and Ingvar Wedervang. Four different departments were set up to work on this huge task. One department was set up under the leadership of Wedervang, working on the price and wage historical data, one under Keilhau and one under Arne Skau, whereas Frisch had the responsibility of coordinating the process, working on technical aspects like econometrics and the formation of national accounting.¹⁰ The outbreak of World War II, however, prevented the completion of the Norwegian economic structure project. Nevertheless, the data on wages and prices collected by Wedervang and his staff remained intact.

4.3 Wedervang and the Norwegian School of Economics and Business Administration

In 1937 Wedervang moved to Bergen to take up a position as rector and professor of economics at the newly founded Norwegian School of Economics and Business Administration (NHH). Originally this move was seen as temporary. He was granted a three-years leave from his work in Oslo in order to help with the establishment of a high academic standard at NHH. However, on April 9 1940 Norway was attacked by Germany and surrendered after two months of battle. Wedervangs leave from the chair in Oslo was extended as he wanted to continue his work on establishing an academically sound

⁷Wedervang 1930.

⁸Wedervang Archive, file W201.

⁹Gjølborg 1974a, 3–6.

¹⁰Coward 1962, 284–285.

institution within trade, commerce and economics at NHH.¹¹ The bulk of the material in the price and wage archive was sent to Bergen in 1941.¹² Wedervang refused to cooperate with the German occupants and a police order was issued forbidding him to stay in Bergen. Thus, he returned to his post in Oslo, but was shortly after arrested during the German raid against the University in the autumn 1943. He was later kept at the Berg prison camp.¹³

After his release he spent his time during the remaining war-years maintaining contact with academics and preparing possible solutions to the economic problems connected to the coming liberation. At the end of the war he was heavily engaged in the plans for the post-war reconstruction in Norway. He took part in numerous important working committees and in 1946 he became the chairman of the national currency committee. He was also a prominent member of a group of specialists who worked out a settlement between the government and national ship-owners when the state-controlled wartime ship-owner company *NORTRASHIP* was dismantled after the war. Wedervang was also a prominent member of the commission investigating the wartime work of the Norwegian Central Bank.¹⁴

He returned to Bergen to fill a new professor chair in economics set up for him at the Norwegian School of Economics and Business Administration. He was again appointed rector, a position he held until he retired in January 1957 due to health conditions.¹⁵

4.4 Wedervang and public duties

Wedervang had a direct and outspoken personality, and a remarkably practical approach to economics. As professor and rector he was involved in many representative duties. In 1931 he was appointed chairman of the committee set up to examine the Norwegian foreign trade and shipping industry. From 1932 he was leader of the Norwegian trade emergency council. In 1932–1933 he was commercial expert at the trade treaty negotiations with the United Kingdom, and in 1934–1935 chairman of the committee concerning the fishing industry. During the same period he was also member of the committee assessing the organization of the Ministry of Trade, i.e. Department of finance and trade. Wedervang was also chairman of the Neighbouring Countries Board 1935–1939, and held a permanent office at the Ministry of Trade. He was appointed representative at the meetings of the International Institute of Statistics in Prague in 1938, in Washington in 1947 and in Berne in 1949. He was member of the board of the Nansen Fund and member of both the board and council of the Norwegian Fund for War Risks Insurance. He was representative in Norwegian research councils, and a prominent member of the Norwegian Academy of Science since 1927, and later also the American Statistical Association and the International Institute of Statistics.¹⁶

He was awarded a series of honors and distinctions. Among others he was an officer of the French

¹¹Jensen and Strømme Svendsen 1986, 123–124.

¹²Wedervang Archive, file W001.

¹³Jensen and Strømme Svendsen 1986, 124.

¹⁴Coward 1962, 284–286.

¹⁵Bergh and Hanisch 1984, 147–153.

¹⁶Coward 1962, 285–286.

Legion of Honor.¹⁷ The most prestigious, however, was probably commander of the Royal Order of St. Olav, granted in 1947.

4.5 The birth of the Wedervang Archive

After having received funding from the Rockefeller Foundation and the Norwegian Fund for War Risks Insurance, the Institute of Economics was set up at the University of Oslo and started its work in January 1932.¹⁸ As a practical oriented economist Wedervang was genuinely interested in economic history as a tool of understanding the present economic situation and forecasting the future. His idea was that significant lessons could be drawn from the past in order to understand the problems of the interwar depressions. He believed that some of the answers could be found by studying historical time series of important economic indicators. As a consequence, the work on the compilation of historical prices and wages started along with the set up of the Institute of Economics.¹⁹

The work was very time consuming, but as the project had generous funding, as many as 46 full-time or part-time assistants were hired to compile the data during the heydays of the project in the 1930s.²⁰ Hence, the project was of a considerable size. His assistants searched through many kinds of archives and sources in their efforts aiming at establishing the best possible coverage of historical series for wages and prices for Norway from 1800 onwards. The data were taken from both public and private archives and records. The national archive, regional archives, Statistics Norway, central and local government files, public institutions, companies and offices served as sources. The bulk of the data concerning the private sector stems from business archives and records, farm or industrial plant accounts, bourses, employers' and employees' associations and newspapers.²¹ The data became so huge in numbers that an archive had to be set up almost from the start of the project, more precisely during the spring of 1932. The initial project is fairly well documented in the archive itself. This was done by assembling important correspondence and administrative logs into files, which were stored in the archive.²²

Between 1932 and 1936 the compilation of data went on at an impressive pace. The amount of collected data became so numerous that the staff was about to lose overview. In consequence, a new time consuming task of systemizing the data started. Some series were aggregated, whereas other were unified into shared tables. The process of documentation was given high priority. From 1936 the archive became part of one of the largest Norwegian research projects in economics ever, *The Economic Structural Survey of Norway*.²³ The project was initiated and led by some of the leading Norwegian economists, like Ragnar Frisch, Wilhelm Keilhau, Ingvar Wedervang and later

¹⁷Jensen and Strømme Svendsen 1986, 125.

¹⁸Bjerkholt 2000, 3–7.

¹⁹Coward 1961, 184–197.

²⁰Wedervang Archive, file W326.

²¹Wedervang Archive, files W002, W228, W260, W344 and W364.

²²Wedervang Archive, files W001, W002, W003, W201, W202, W228, W260, W326, W344, W364 and W381.

²³Bjerkholt 2000, 3–7.

Arne Skau.²⁴ Among these, Frisch and Wedervang had the strongest interests in the data from the archive. Wedervang was also given the responsibility to continue as leader of the data collection and systemizing work.

4.6 The archive in hibernation

In connection with Wedervang's work on his projects he published, together with Dag Coward, a handful of studies on the structure of different Norwegian trades and industries during the 1930s. These included studies on the costs and terms of trade of retail industries, including discussions on hardware, grocery, drapery, book and tobacco trades.²⁵ In these studies important information was drawn from the wage and price historical archive, and in fact some of the hand-written manuscripts from the projects are still kept in the archive.²⁶

However, Wedervang was never able to use the data to the large degree he planned for. There are two main reasons for this. In the first place, the work on the archive was given lower priority as he took up his chair in Bergen in 1937. Secondly, the funding of the project was stopped under the German occupation of Norway April/June 1940 – May 1945. Then, in 1941, the bulk of the archive was packed down from the University of Oslo and sent to Bergen. The plan was to resume the work, with limited resources. However, since Wedervang was disliked by the German occupiers, and forced back to Oslo in 1942, only to be imprisoned and later dismissed from his duties, the archive remained untouched for several decades.

On his return to Bergen after the war, Wedervang still had plans for the archive. However, as he became occupied with a successful expansion of the Norwegian School of Economics and Business Administration, he never had the time to resume the work with the archive again.

4.7 The archive reborn

On Wedervang's retirement in 1957 he still stressed the possible usefulness of the archive. However, he died on December 4 1961. At that time the archive had stayed untouched for twenty years, and remained so until the end of August 1973, when Ole Gjølberg of the Norwegian School of Economics and Business Administration reopened it after 32 years of storage. When the files were unwrapped, Gjølberg found a seemingly unsystematic archive. Thus, he started reorganizing and restructuring its content. During this work he soon traced the framework of an originally systematic and organized archive. Hence, his work was carried out impressively fast. In November 1973 Gjølberg finished his survey of the archive's content, which finally was published the year after.²⁷

²⁴Frisch, Keilhau and Wedervang 1936.

²⁵Wedervang and Coward 1933a, Wedervang and Coward 1933b, Wedervang and Coward 1934a, Wedervang and Coward 1934b, Wedervang and Coward 1934c, Wedervang and Coward 1935a, Wedervang and Coward 1935b.

²⁶Wedervang Archive, file W057.

²⁷Gjølberg 1974a, 3–4.

The 403 different files at the time were basically organized in two major blocks; one for wages and one for prices. Wages were in principle organized according to their related industry or sub-industry, when prices in principle were organized according to the processing chain, i.e. import prices, product prices, gross prices, institution prices, market prices, retail prices and export prices.²⁸ The survey of Gjølberg also reveals that considerable parts of the data were aggregated, in some cases up to a national level.

Gjølberg did not report any definite number of direct observations of total prices and wages recorded in the archive. However, he concludes with 1.5 million observations for sailors. Later research has confirmed that this number is correct.²⁹ However, some of these observations are double-counted. Thus, the actual number of different single observations is lower.³⁰ This is still a quite impressive number, and can probably not be matched by any other known manual historical archive. For other industries, e.g. road construction, the number of observations must have been far higher than assumed by most scholars engaged with the archive.

The unwrapping of the archive was followed up by research on the development of prices, wages and the standard of living. This was the second wave of research linked to the archive after decades of hibernation since the original work conducted by Wedervang and his staff in the 1930s. The new work was basically done by postgraduate students of economic history from the Norwegian School of Economics and Business Administration, and was published in their theses. Instead of putting data into the archive it was now used as data source, in accordance with the original idea.

Already in 1974 Ole Gjølberg published a thesis on real wages and the standard of living for farm labor covering the years 1830–1880.³¹ The main source of the publication was farm accounts kept in the archive. The following year Lasse Reinholdt utilized the rich data to examine sailor's wages in one of the important Norwegian ports at the time, i.e. Tønsberg, 1847–1914.³² Further, Agnar Tjeldnes and Per Kr. Bekkelund examined wages for road construction workers in parts of Northern Norway 1870–1910.³³ Ole Gjølberg published extensively by using data from the archive in a number of smaller research papers, before he submitted his doctoral thesis on the Norwegian merchant fleet and its relation to the economy 1866–1913.³⁴ Again, the archive served as one of the major sources. On the basis of his work on maritime wages Gjølberg also shed new light on a major issue in Norwegian maritime history, the slow substitution from sail to steam in the late 1800s and early 1900s in an article published by the *Scandinavian Economic History Review* in 1980.³⁵ The same year Fritz Hodne and Jan Ramstad calculated the productivity development of Norwegian agriculture 1865–1910 assisted by data from the archive.³⁶

²⁸Gjølberg 1974a, 2.

²⁹See Chapter 5 on nominal wages 1726–1940 in the present publication.

³⁰Wedervang Archive, file W201.

³¹Gjølberg 1974b

³²Reinholdt 1975.

³³Tjeldnes 1977, Bekkelund 1977.

³⁴Gjølberg 1975, 1976, 1977a, 1977b, 1978a, 1978b, 1979a, 1979b.

³⁵Gjølberg 1980, 135–146.

³⁶Hodne and Ramstad 1980.

4.8 The research project of the 1980s

A new research project was launched, with a threefold purpose. In the first place, one wanted to stimulate research on the basis of the data records. Secondly, secure the files from destruction, and thirdly, make the archive more userfriendly by computerizing it. The duration of the new project was planned to six years; 1 January 1981 – 31 December 1986. Seven institutions funded the project. The social science council and the humanist council of the Norwegian Research Council granted NOK 597000, The Norwegian School of Economics and Business Administration granted NOK 541000, Norges Bank (the Central Bank of Norway) NOK 46700, and finally Hedmark, Hordaland and Telemark road construction offices NOK 60300. All in all, the funding amounted to NOK 1.245 million.³⁷

The project had a steering committee of four experts within different fields: Atle Alvheim (information technology), Ole Gjølberg (economic history and the Wedervang Archive in particular), Sofie Rogstad (private archives) and Kari Skrede (social science research). It had a staff of five, all employees at the Norwegian School of Economics and Business Administration. Jan Ramstad (leader), Geir Løkken, Kjell Bjørn Minde, Brita Nordstrønen and Judy Heggvik. The project was set up in cooperation with an international network represented by Professor Lewis R. Fischer, University of Maryland, USA, later Memorial University of Newfoundland, Canada, Professor John J. McCusker, University of Maryland, USA and Helge W. Nordvik of the University of Bergen, Norway.

The same year as the project started, four publications drawing on the files from the archive came out: Fritz Hodne published his textbook *The Economic History of Norway 1815–1970* (Norges økonomiske historie 1815–1970).³⁸ Hodne and Gjølberg mapped market integration during periods of Norwegian industrialization.³⁹ Helge W. Nordvik published on the wage conditions for Norwegian sailors in the Canadian merchant fleet 1863–1914, whereas Jan Ramstad presented a draft on female wages in the textile industry.⁴⁰

The project succeeded in safeguarding the files and in promoting research both on a national and international level. Considerable effort was put into organizing and documenting the files. Also, a number of catalogs were published explaining the content of the archive systematically. A great deal of this work was carried out by two of the research assistants employed in the project, Kjell Bjørn Minde and Geir Løkken. As for the computerization of the data, the work was far more difficult and time demanding than assumed. Thus, only surveys of the contents of the files were computerized.

New publications drawing on the exhaustive data sets of the archive were published as part of the latter project. Whereas the early works predominantly investigated nominal wages, Jan Ramstad presented a new consumer price index for Kristiania (Oslo) in order to map real wages for female employees in the textile industry 1850–1910.⁴¹ This was published for a wider audience in 1986,

³⁷NFI 1987.

³⁸Hodne 1981.

³⁹Hodne and Gjølberg 1981.

⁴⁰Nordvik 1981, 79–86, Ramstad 1981.

⁴¹Ramstad 1982, Ramstad 1983.

when Ramstad and Minde gave an overview of trends in Norwegian real wages 1730–1910.⁴² Minde continued the work on real wage trends within the limits of the project.⁴³ Ramstad also published four works on wages for road construction workers on the basis of files in the archive.⁴⁴

Øivind Gladsø, Trond Olav Seim and Geir-Helge Sjøtrø, utilized records from the archive in a thesis on Norway's dual economy.⁴⁵ Torill Lønningdal examined wages for female domestic servants on farms in Eastern Norway 1850–1910.⁴⁶

When Helge W. Nordvik took up a position as associate professor at the Norwegian School of Economics in 1986, he became the leader of the Wedervang Archive, staffed with one full time assistant. From the mid 1980s to the late 1980s Nordvik and Lewis R. Fischer worked extensively with the archive's impressive files of sailors wages. This research gave new information of considerable importance for international maritime history research.⁴⁷

4.9 New utilization

Due to illness, Nordvik's work on the archive ceased in the 1990s. However, the material was set at free disposal for other scholars and a new group from the Norwegian School of Economics and Business Administration, under the leadership of Professor Fritz Hodne used records from the archive in order to construct real wage series for Norway from the mid nineteenth century to the mid twentieth century. Two papers were published internationally as part of a European project.⁴⁸ Later, two new textbooks on Norwegian economic history in the nineteenth and twentieth century also included new series from the archive.⁴⁹ Ola Honningdal Grytten, who was part of Hodne's team, continued this work together with Kjell Bjørn Minde, a former research assistant at the archive. Two new international publications were put forward.⁵⁰

After the sudden death of Professor Nordvik in 1998, Professor Grytten took the responsibility of the Wedervang Archive in 1999. In 2004 he was appointed leader of a steering committee, with Bjørn L. Basberg and Jarle Møen as members. The archive was moved to more secure premises and it was reorganized according to the original catalogues made in the 1970s and 1980s with Odd Magne Havneraas as archivist. A new project aiming at improving the basic catalogues was started. After a careful examination of the content of all records and files a new catalogue was completed in 2006.⁵¹

⁴²Minde and Ramstad 1986, 90–121.

⁴³Minde 1987.

⁴⁴Ramstad 1984a, Ramstad 1984b, Ramstad 1985a, Ramstad 1985b.

⁴⁵Gladsø 1983.

⁴⁶Lønningdal 1984

⁴⁷Nordvik 1985, 117–148, Fischer and Nordvik 1986a, 519–544, Fischer and Nordvik 1986b, 139–170, Fischer and Nordvik 1986c, 103–132, Fischer and Nordvik 1987a, 41–66, Fischer and Nordvik 1987b, 99–116, Fischer and Nordvik 1988a, 17–42, Fischer and Nordvik 1988b, 1–21, Fischer and Nordvik 1988c, 14–35, Fischer and Nordvik 1988d, 159–186, Fischer and Nordvik 1991, 77–96.

⁴⁸Hodne, Grytten and Alme 1994, 59–72, Hodne, Grytten and Alme 1995, 61–75.

⁴⁹Hodne and Grytten 2000, Hodne and Grytten 2002.

⁵⁰Minde and Grytten 1997, 42–58, Grytten and Minde 1998, 61–82.

⁵¹Grytten 2006.

At the same time, Norges Bank (The Central Bank of Norway) took interest in the under-utilized archive. The bank was working on a project providing historical monetary statistics for Norway back to 1819, and Grytten was asked to construct historical price and production series. This was done on the basis of several sources, the archive being one of the most central in the work with the GDP-series and the most central one in the work with the consumer price index. The resulting historical time series, a.o. a consumer price index for Norway 1516–2003 and a GDP-series for Norway 1830–2003, were published by the Central Bank in 2004 as part of its project on Historical Monetary Statistics.⁵² The same year a consumer price index for Norway 1819–1871 was published in the *European Review of Economic History*.⁵³ In 2005 another work on real wages from the eighteenth century till present was printed in a second publication related to the project by Norges Bank.⁵⁴ An finally, new historical series on wages, containing data drawn from the archive, are presented in Chapter 5 and 6 of this volume of Historical Monetary Statistics for Norway.

Internationally, David S. Jacks at the University of California, Davis, USA and later Simon Fraser University, Vancouver, Canada, among other foreign scholars, visited the archive several times in the early 2000s. Data from the archive is used in Jacks' PhD on international economic integration in the nineteenth century.⁵⁵ This is also the case for several other papers by Jacks, published in top international journals like *The Journal of Economic History and Explorations in Economic History*.⁵⁶

⁵²Grytten 2004a, 47–98, Grytten 2004b, 241–288.

⁵³Grytten 2004c, 61–80.

⁵⁴Grytten 2005, 57–80.

⁵⁵Jacks 2004a.

⁵⁶Jacks 2004b, 285–329, Jacks 2005a, 381–413, Jacks 2005b, 625–649, Jacks 2006, 383–412.

4.10 The present structure of the archive

Today the archive holds 471 files of documentation, raw data, systematic data and processed series. Each file has its own number. These numbers were basically given chronologically, which implies that they were given as running numbers and not thematically.⁵⁷ The files are classified into five major sections according to their content, as listed below.⁵⁸

Content classification:

1. Administration of the archive
2. Wages
3. Prices
4. Accounts
5. Miscellaneous

Wages and prices by far constitute the two largest groups, with 242 and 122 files correspondingly. The files are presented very differently, and the levels of processed raw data vary considerably. In the catalogue the files are also classified by four different kinds of content according to their state of processing.⁵⁹

Processing classification:

1. Overview material
2. Basic material
3. Systematic material
4. Processed material

Overview material contains descriptions of sources, information on the data or topics related to these. These files also include some analysis carried out on the basis of the material in the archive. Basic material is in principle raw data or primary data recorded or copied in the archive. Systematic material includes data, which are organized in a systematic way in order to being utilized by users of the archive. Processed material is data, which has been organized and processed in order to find different kinds of aggregated series.

Table 4.1 below reports the classifications of the files in the archive according to their content and the state of processing of the data. As the archive stands today, most of its records are classified as

⁵⁷Gjøølberg 1974a, 7–53.

⁵⁸Grytten 2006.

⁵⁹Grytten 2006.

basic material, i.e., 244 files. However, the level of data classified as systematic material, i.e. 82, or processed material, also 82, enable us to come up with some aggregated series on wages and prices for some products quite easily.⁶⁰

TABLE 4.1
Files in the Wedervang Archive according to classifications

	Number of files				
	Overview material	Basic material	Systematic material	Processed material	All material
1. Administration	3	7	1		11
1.1. Correspondence	1	6			7
1.2. Documentation	2		1		3
1.3. Others		1			1
2. Wages	19	120	48	55	242
2.1. Merchant fleet	11	60	40	33	144
2.2. Road construction	7	18	7	17	49
2.3. Railway construction	1	5		2	8
2.4. Manufacturing		24	1	1	26
2.5. Agriculture		7			7
2.6. Others		6		2	8
3. Prices	19	60	21	22	122
3.1. Documentation	14				14
3.2. Market prices		9	2	6	17
3.3. Prices on goods		35	14	14	63
3.4. Agricultural prices	2	6	2	2	12
3.5. Fish prices	3	10	3		16
4. Accounts	11	57	11	3	82
4.1. Farm accounts	4	21	1	1	27
4.2. Dairy accounts	3	33	10		46
4.3. Construction accounts		2			2
4.4. Others	4	1		2	7
5. Miscellaneous	11		1	2	14
5.1. Correspondence	3				3
5.2. Exchange rates	1		1	1	3
5.3. Others	7			1	8
Total	63	244	82	82	471

Source, Grytten 2006.

⁶⁰Grytten 2006.

4.11 Content of the archive

As already shown, the content of the archive is manifold. And if one seeks a detailed description of the files one has to search through the catalogues. However, a few lines can be said about the data, following the content classification above.⁶¹

4.11.1 Administration of the archive

This part basically holds correspondence, documentation of the work in progress, reports, letters of recommendation and general information of the work on the establishment of the archive. Thus, it deals with technical-administrative aspects. Unfortunately, some of the files were not sent along with the bulk of the archive from the University of Oslo to the Norwegian School of Economics and Business Administration in 1941, and still remain in Oslo.

Correspondence

The bulk of the administrative section of the archive holds important correspondence in connection with the data collection and the work on the archive and the different projects it sorted under. Here we also find records of employees, and important traces of the archive's first history.⁶²

Documentation

This part gives documentation of data collection, sources and work organization. It gives a fairly good insight in how the principles of the archive structure were established, and the importance of well documented and empirically sound data files.

Others

This part offers working lists and letters of recommendation for Wedervang's staff. From this file we can get a feel for how the archive was established, how the data were collected and how various challenges of different matters were solved. It also gives a fairly good impression of Wedervang's personal care for his employees.

4.11.2 Wages

This material consists of detailed wage data from a number of sources, stretching from public offices to merchants and ship owners. Although the exact number of observations is unknown, the archive is probably reflecting a two-digit million observations.⁶³

⁶¹Alme 1992a.

⁶²Gjølberg 1974a, 5–6.

⁶³Wedervang Archive, W516, W517 and W324.

Merchant fleet

According to the documentation files in the archive, this material holds several hundred thousands of data, reporting individual wages for almost 1.5 million sailors.⁶⁴ After a closer look at the material, however, these numbers may not take into consideration double counting. Nevertheless, this is one of the richest international data source for sailor's wages in the eighteenth and nineteenth century. The data stretches from 1751 till 1921. The main source is public recruitment offices in the Norwegian ports. Wages are reported in different ways. By direct reports written by the ship captains, contracted salaries and *ex post* salaries. These are often overlapping, and thus, can be controlled against each other. All capacities of crew, except captains, are included, implying up to 26 different capacities in 26 ports. Wages from both foreign going and domestic going vessels are recorded, and even some international wages from foreign ports.

Some of this material has been systemized and processed into regional or even national aggregates for different capacities of crew. The data is very well organized from 1819 onwards. The number of observations is also reported in the aggregated tables.

Road Construction

The magnitude of this part of the wage material is second only to the merchant fleet. It basically consists of wage and financial account reports from public road construction financed by the national parliament and carried out in the counties. It stretches from 1850 onwards and reports daily and hourly payments for employees on fixed and piecework wages (from 1854). A substantial number of observations are also given for hired workers with horse. Most of the data are given county-wise, while some series are aggregated up to national levels.⁶⁵

According to these files, there are several million observations of public road construction workers. One has to keep in mind, however, that these are not direct observations, but wage costs divided by working time. The data becomes poorer in 1915 and cease around 1920.⁶⁶

Railway construction

These files basically report daily and weekly wages for day hired labor on piecework and labor on fixed contracts. Some observations are also reported in hourly wages. The numbers of observations are estimated in the same manner as for public road construction. Thus, it is very high. The data basically start in 1873 and end as late as 1940, however, with a lacuna 1884–1891, when railway construction activity was low.⁶⁷

Like for public road construction, the wage data for railway construction reflect a two-digit million number of observations of daily and hourly wages. However, the number of direct observations is significantly smaller.

⁶⁴Wedervang Archive, W201

⁶⁵Alme 1992b, 4–9.

⁶⁶Ramstad 1984a, Ramstad 1984b, Ramstad 1985a, Ramstad 1985b.

⁶⁷Alme 1993, 15–16.

Manufacturing

The files containing manufacturing wages are fragmented. Most of them are records from individual companies or manufacturing plants. Some of these date back to 1820. However, the bulk of data stems from the second half of the nineteenth century. Also, parts of the newer data often reflect the state of professions, industries and sub-industries rather than that of individual companies. Some data are taken from branches of the Employers Federation, founded in 1900.⁶⁸ The best example of this kind of material is probably wage data from the mechanical engineering employers' federation.

A substantial part of the data is taken in towns and urban areas. They were taken as annual, monthly, weekly, daily or hourly wages. Some include board and lodging, some do not. All in all, they cover most years 1820–1930. Admittedly, they have a regional bias in favor of the Oslo-region. However, this was also the center of the manufacturing industry in the nineteenth century.

Agriculture

Most data on agriculture is kept in the section for farm accounts. Moreover, wages from seven farms and two foresting employers are also in separate files in the archive. Here we can trace wages within agriculture and forestry from 1820 till 1913. Most data are reported as daily, some are taken weekly, monthly or annually. Some include board and lodging.⁶⁹ In addition to these files the farm account section of the archive holds important data on wages in agriculture and forestry.⁷⁰

Others

This section holds six files of basic and two of processed material. The wage files cover smaller parts of various industries, branches, sectors and professions, like mining, crafts, the public sector or just different kinds of occupations in towns and urban areas.⁷¹ The two processed files hold data reports and calculations of the value of boarding and lodging.

4.11.3 Prices

The price data also stem from a number of sources, both private and public. They come from merchant archives, business accounts, local product bourses and exchanges, public offices, institutions and government ministries. It is the second largest group in the archive, stretching back to 1641 and ending in 1940.⁷²

⁶⁸ Alme 1993, 16–18.

⁶⁹ Gjølberg 1974a, 22–30.

⁷⁰ Alme 1993, 13–15.

⁷¹ Gjølberg 1974a, 31–37.

⁷² Wedervang Archive, files W134, W135, W212, W254 and W388.

Documentation

The first sub-section of prices deals with documentation. In all the 14 files we find well documented descriptions of how the price data was collected both at first hand and by the Wedervang staff. The user is also provided with information on how observations taken in different currencies are transformed into one unit, basically the krone.

These files also reveal that some price series are converted into fixed currency, i.e. they are adjusted for currency fluctuations. The documentation files' detailed descriptions of the sources and the data compilations also enable the user to examine the validity and reliability of the price material in the archive.⁷³

Market prices

This is the second largest sub-section of price data, and one of the best documented, classified and organized parts of the price section. The data reported are basically market place prices to consumers registered by public servants in the larger towns and cities of Norway. They start as early as 1830 and continue till 1920. Prices on some 70 products were reported, half of them must be considered consumer products. However, it is not possible to follow all items continuously over the time.⁷⁴

The local magistrates were formally responsible for the data collection. The prices were reported to the statistical office of the Ministry of Domestic Affairs and organized and processed by them. Most files report prices by cities or towns, some at national levels. They were partly taken monthly, partly quarterly.

Prices on goods

In this sub-section we find the richest source of prices in the archive. It holds different sorts of market prices. The most important is publicly reported market prices on a set of 15–72 products.⁷⁵ These were assembled by decree from the government. Again, magistrates and public servants were responsible for the collection of data. There were strict standards for how these prices were to be measured. They included both typical consumption goods and gross products and inputs to production. The prices were to be taken at least quarterly, often monthly or even more frequently. The archive includes data from 40 Norwegian towns and cities from 1832 onwards.⁷⁶ These are also to a great magnitude aggregated on product levels and geographical levels.

Other important sources for this sub-section of prices is retail prices from shops, merchant houses and different kinds of market places, special time-limited markets or product exchanges. It also holds price currents from newspapers, bourses or trade chambers. Likewise, it reports gross and product prices (factory gate) from similar sources. In this sub-section we can also find institutional prices

⁷³Gjøølberg 1974a, 38–48.

⁷⁴Grytten 2004, 52–53.

⁷⁵Wedervang Archive, W272, W273, W274, W275 and W276.

⁷⁶Grytten 2004a, 58–61.

for hospitals, garrisons, prisons, local governments and similar institutions. Most price series end between 1910 and 1914, some of them continue till the 1930s.

All in all this part of the archive consists of 63 files, which has served as the main source in the construction of price indices previous to 1900 for Norway. Still, many of the files can be considerably further explored.

Agricultural prices

Despite this part contains only 12 files it is rather interesting. In the first place it includes prices on crops from 1641 onwards.⁷⁷ Secondly, it includes the northernmost parts of Norway better than most other sources and files. Thirdly, some series in these records are reported as imports, product, gross, retail and even export prices. Fourthly, they are very well documented. The bulk of the data stretches from 1860s onwards. However, officially collected market prices on crops, peas and potatoes exist from 1736, when official appraisal prices go even further back in time; to 1641.

Some series also include prices of milk and milk products along with different kinds of meet, wool and wood. Most of them cover the period up to World War I, when some continue into the early 1920s.

Fish prices

These files are also very rich on price data. Some of them can be traced back to 1700 and cover the period till 1940, when the bulk covers the nineteenth century.⁷⁸ Again this sub-section, as the previous one, reports many kinds of fish prices, i.e. catch prices, gross prices, market place prices, retail prices, export prices etc. Some fish products are reported in stunning numbers of qualities, and often according to the waters and seasons in which fish was caught.

An important reason for this remarkably detailed material is the impressive fish price records from Bergen, where prices were recorded at the local commodity bourse (the fish market) by merchants and public servants. However, the archive also reports fish prices from many other ports of exports and towns of consumption, e.g. Stavanger, Haugesund, Ålesund, Kristiansund, Tromsø and Oslo. The data continues to the mid 1930s.

4.11.4 Accounts

These make up the third largest group in the archive, with 82 files. They are taken from farms, dairies, construction work and miscellaneous kinds of bodies and activities. Dairy accounts (milk factories included) constitute the largest of these groups, followed by farm accounts. Both of them, in particular the latter, is supplemented with files on farm and dairy wages and prices.⁷⁹

⁷⁷Wedervang Archive, file W155.

⁷⁸Wedervang Archive, files W051, W097, W098, W099, W100, W101, W102, W208, W397 and W408.

⁷⁹Grytten 2006.

Farm accounts

All in all, the 27 files of farm accounts along with files on farm wages give information from 57 farms, basically major farms in eastern Norway. Though, some accounts exist for farms located in other parts of the country. Most of these files hold basic material, i.e., raw or unprocessed data. Some of them stretch back to 1820.⁸⁰ They mostly cease before World War I.

They provide reasonably good information on prices, wages and working conditions, and may serve as tool for the calculation of non-cash payments. Information on different sets of prices, input, output and value added can also be drawn from these files.

Dairy accounts

The 46 files of dairy accounts constitute another impressive part of the Wedervang Archive. The accounts are taken from dairies located in eastern Norway, mid-Norway and all along the coast from the south to the northern parts of the country.

The accounts hold information on wages, costs, sales, input, output and corresponding prices. Hence, they may serve as solid sources for the calculation of reliable value added series for this industry back to the 1860s.⁸¹ Unfortunately, the data in these files, which primarily must be classified as basic material, have hardly been used for research purposes.

Construction accounts

The archive holds two files with construction accounts.⁸² The most interesting of these is probably construction accounts for the Royal Palace in Oslo from the nineteenth century. However, we can also draw information on other public and private construction accounts from the material in this sub-section.

Others

This sub-section has seven files, containing public and private accounts and a detailed consumption survey. Of special interest is two studies led by Wedervang himself. One is on the profitability in the merchant fleet in the 1930s, when the other is on the income and cost structure of colonial gross trade during the same decade.⁸³ In the records we find data from the nineteenth century until the end of the interwar period.

⁸⁰Gjøølberg 1974a, 22–30.

⁸¹Wedervang Archive, files W138, W367 and W374.

⁸²Wedervang Archive, files W410 and W411.

⁸³Wedervang Archive, files W022B and W057.

4.11.5 Miscellaneous

In this section we find 14 files with correspondence, documentation and data related to the pioneer projects the Wedervang Archive was part of. Thus, we find technicalities concerning the data and the data collection along with the administration of the data files. We also find surveys and census data along with manuscripts with link to the data in the archive. This implies that this section has a substantial degree of overview material and hardly any basic data.

Correspondence

This sub-section contains three files with correspondence on data collection and related issues. We find correspondence both among the Wedervang staff and between the staff and different bodies providing data.⁸⁴ This material gives a good insight into how the work with data processing was conducted.

Exchange rates

Here we find descriptions of the Norwegian currency system and exchange rates covering a very difficult period in monetary history 1757–1842.⁸⁵ These have been used in several price and wage series in the archive to correct for exchange rate fluctuations from currency par values. This implies that some of the time series on wages and prices in the archive are not nominal, but real series, in the sense that they are exchange rate adjusted.

Others

The final eight files have different contents, covering comments, manuscripts, letters, censuses, conference proceedings etc. Seven of these files are classified as overview material, whereas one is considered processed material.⁸⁶ They give insight into how the data were meant to be used by the senior staff of the archive at the time of its creation.

4.12 Conclusions

Since the ambitious start of the Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices in January 1932, the archive was left so to say untouched from 1941 to the autumn of 1973. From then on, the focus on the archive has fluctuated substantially. During limited time spans it has been used by small groups of researchers, but then left alone when their projects came to an end.

⁸⁴Wedervang Archive, files W073 and W505.

⁸⁵Wedervang Archive, file W155.

⁸⁶Grytten 2006.

During the last five years the archive has caught the interest of numerous scholars, both Norwegian and foreign, and the number of visitors is increasing. In 2006 the archive had 118 registered visitors of whom 84 Norwegians and 34 foreigners. The majority of visitors were economic historians, followed by economists and then historians. In addition, a total of 81 requests were made about the archive, of which 37 from domestic scholars and 44 from abroad. Along with new research activity initiated by Norges Bank, the Norwegian School of Economics and Business Administration and staff from the Simon Fraser University, this implies that the archive is now probably more used for international research purposes than ever before.

Still the files of one of the largest manual historical archive on wages and prices in the world must be considered under-utilized, and the bulk of data has still not been used at all. In view of the great visions of the two pioneers of the archive, Wedervang and Frisch, and in light of the overwhelming analytical possibilities hidden in the data, considerably more research could and should still be carried out on the basis of the archive.

Bibliography

- Alme, Jørund 1992a, “Professor Dr. Ingvar B. Wedervangs lønns- og prishistoriske arkiv: en introduksjon: kataloger og litteratur”, memo, Bergen: NHH
- Alme, Jørund 1992b, “Katalog over Professor Dr. Ingvar B. Wedervangs Lønns- og Prishistoriske Arkiv: veiarbeidermaterialet”, memo, Bergen: NHH.
- Alme, Jørund 1993, “Lønninger i Norge 1850–1914”, memo, Bergen: NHH.
- Bairoch, Paul and Maurice Levy-Leboyer (eds) 1981, *Disparities in economic development since the industrial revolution*, London: Macmillan.
- Bekkelund, Per Kr. 1977, *Veibygging i Finnmark 1870–1905: bevilgning – rekruttering – lønn*, Bergen: NHH.
- Bergh, Trond and Tore Jørgen Hanisch 1984, *Vitenskap og politikk. Linjer i norsk sosialøkonomi gjennom 150 år*, Oslo: Aschehoug.
- Bjerkholt, Olav 2000, “A turning point in the development of Norwegian economics – the establishment of the University Institute of Economics in 1932”, memo 36/2000, Oslo: Department of Economics University of Oslo.
- Coward, Dag 1961, “Ingvar Wedervang og hans innsats”, *Statsøkonomisk Tidsskrift* 75, 184–197.
- Coward, Dag 1962, “Ingvar Wedervang 1891–1961”, *Review of the International Statistical Institute*, 2/1962, 283–286.
- Eitheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds) 2004, *Historical Monetary Statistics for Norway 1819–2003*, Oslo: Norges Bank.

- Eitrheim, Øyvind and Jan F. Qvigstad (eds) 2005, *Tilbakeblikk på norsk pengehistorie: Historisk monetær statistikk for Norge*, Oslo: Norges Bank.
- Fischer, Lewis R. and G. R. Panting (eds) 1985, *Change and adaptation in maritime history: the North Atlantic fleets in the nineteenth century*, St. John's: MHG.
- Fischer, Lewis R. and Helge W. Nordvik 1986a, "Maritime transport and the integration of the North Atlantic economy 1850–1914", Fischer, Wolfram, R. Marvin McInnis and Jürgen Schneider (eds), *The emergence of a world economy 1500–1914*, Wiesbaden: Klett-Cotta, 519–544.
- Fischer, Lewis R. and Helge W. Nordvik 1986b, "Fish and ships: the social structure of the labour force of Haugesund, Norway in the 1870s", *Maritime historical yearbook*, Bergen: Bergen Maritime Museum, 139–170.
- Fischer, Lewis R. and Helge W. Nordvik 1986c, "Salaries of the sea: maritime wages in Stavanger 1892–1914", *Stavanger Museum's yearbook*, Stavanger: Stavanger Museum, 103–132.
- Fischer, Lewis R. and Helge W. Nordvik 1987a, "From Namsos to Halden: myth and realities in the history of Norwegian seamen's wages", *Scandinavian Economic History Review*, 1/1987, 41–66.
- Fischer, Lewis R. and Helge W. Nordvik 1987b, "Myths and realities in Baltic shipping: the wood trade to Britain 1863–1908", *Scandinavian Journal of History*, 2/1987, 99–116.
- Fischer, Lewis R. and Helge W. Nordvik 1988a, "Floating capital: investment in the Canadian and Norwegian merchant marines in comparative perspective 1850–1914", *Scandinavian – Canadian Studies*, vol 3, Ottawa, 17–42.
- Fischer, Lewis R. and Helge W. Nordvik 1988b, "International maritime labour 1863–1900: wages and trends", *The Great Circle*, 1/1988, 1–21.
- Fischer, Lewis R. and Helge W. Nordvik 1988c, "Wages in the Norwegian maritime sector 1850–1914", Fischer, Lewis R. and Helge W. Nordvik (eds), *Shipping and trade in the northern seas*, manuscript, Bergen/St. John's, 14–35.
- Fischer, Lewis R. and Helge W. Nordvik 1988d, "Regional wages in the age of sail: the price of sailing ship labour in towns along the Oslofjord 1899–1914", *Norwegian Maritime Museum's yearbook*, Oslo: Norwegian Maritime Museum, 159–186.
- Fischer, Lewis R. and Helge W. Nordvik 1991, "Norwegian matroser: wages and labour markets for seafaring labour 1850–1914", *Scandinavian – Canadian Studies*, vol 4, Ottawa, 77–96.
- Fischer, Wolfram, R. Marvin McInnis and Jürgen Schneider (eds) 1986, *The emergence of a world economy 1500–1914*, Wiesbaden: Terra Klotta.
- Frisch, Ragnar, Wilhelm Keilhau and Ingvar Wedervang 1936, *Plan til en økonomisk strukturoversikt for Norge*, Oslo: Fabritius.

- Gjøølberg, Ole 1974a, “Professor Dr. Ingvar Wedervangs prishistoriske arkiv: en systematisk oversikt”, memo, Bergen: NHH.
- Gjøølberg, Ole 1974b, Reallønnsutvikling og levekår for jordbruksarbeidere ca 1830–1880, Bergen: NHH.
- Gjøølberg, Ole 1975, “Teoretiske og metodiske problemer ved estimering av norske sjøfolks reallønns og levestandardsutvikling 1830–1870”, memo, Bergen: NHH.
- Gjøølberg, Ole 1976, “Om skipsfartens økonomi før 1914: for-forståelse og hypoteser, memo”, Bergen: NHH.
- Gjøølberg, Ole 1977a, “A note on wages, standards of living, and social stability among Norwegian seamen between 1832 and 1914”, memo, Bergen: NHH.
- Gjøølberg, Ole 1977b, “Internasjonale skipsfartskonjunkturer 1866–1913”, Discussion paper, Bergen: NHH.
- Gjøølberg, Ole 1978a, “A method for analyzing changes in distribution of income – applied to historical data from Norwegian shipping”, memo, Bergen: NHH.
- Gjøølberg, Ole 1978b, “Herskap og tjenere: Om hushjelpplønninger i Kristiania 1897–1910”, memo, Bergen: NHH.
- Gjøølberg, Ole 1979a, Økonomi, teknologi og historie: analyser av skipsfart og økonomi 1866–1913, Bergen: NHH.
- Gjøølberg, Ole 1979b, “En model for analyser av arbeidsmarked, lønn og økonomisk vekst i Norge 1822–65 og lønnsdata fra Blindern Hovedgaard”, Discussion paper, Bergen: NHH.
- Gjøølberg, Ole 1980, “The substitution of steam for sail in Norwegian shipping 1866–1914: a study in the economics of diffusion”, *Scandinavian Economic History Review*, 2/1980, 135–146.
- Gladsø, Øivind, Trond Olav Seim and Geir-Helge Sjøtrø 1983, *Dualøkonomi og norsk økonomisk historie 1851–1907*, Bergen: NHH.
- Grytten, Ola Honningdal and Kjell Bjørn Minde 1998, “The demand for consumer goods in Norway 1850–1920”, *Scandinavian Economic History Review*, 1/1998, 42–58.
- Grytten, Ola Honningdal 2004a, “A consumer price index for Norway 1516–2003”, Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds) 2004, *Historical Monetary Statistics for Norway 1819–2003*, Oslo: Norges Bank, 47–98.
- Grytten, Ola Honningdal 2004b, “The gross domestic product for Norway 1830–2003”, Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds), *Historical Monetary Statistics for Norway 1819–2003*, Oslo: Norges Bank, 241–288.

- Grytten, Ola Honningdal 2004c, "A Norwegian consumer price index 1819–1913 in a Scandinavian perspective", *European Review of Economic History*, 1/2004, 61–80.
- Grytten, Ola Honningdal 2005, "Historisk lønnsstatistikk 1726–2004", Eitrheim, Øyvind and Jan F. Qvigstad (eds), *Tilbakeblikk på norsk pengehistorie: historisk monetær statistikk for Norge*, Oslo: Norges Bank, 57–80.
- Grytten, Ola Honningdal 2006, *Overview catalogue of Professor Dr. Ingvar B. Wedervangs Historical Archive on Wages and Prices*, Bergen: NHH.
- Hodne, Fritz and Jan Ramstad 1980, "Produktivitetutviklingen i norsk jordbruk 1865–1910", memo, Bergen: NHH.
- Hodne, Fritz 1981, *Norges økonomiske historie 1815–1970*, Oslo: Cappelen.
- Hodne, Fritz and Ole Gjølberg 1981, "Market integration during the period of industrialization in Norway", Bairoch, Paul and Maurice Levy-Leboyer (eds), *Disparities in economic development since the industrial revolution*, London: Macmillan.
- Hodne, Fritz, Ola Honningdal Grytten and Jørund Alme (1994), "Real wages in Norway 1850–1940", Zamagni, Vera and Peter Scholliers (eds), *Real wages in the nineteenth and twentieth century*, Milan: Bocconi University, 59–72.
- Hodne, Fritz, Ola Honningdal Grytten and Jørund Alme (1995), "Norwegian real wages: trends in prices and wages 1850–1950", Scholliers, Peter and Vera Zamagni (eds), *Labour's Reward: real wages and economic change in 19th and 20th century Europe*, London: Edward Elgar, 61–75 and 238–248.
- Hodne, Fritz and Ola Honningdal Grytten 2000, *Norsk økonomi i det nittende århundre*, Bergen: Fagbokforlaget.
- Hodne, Fritz and Ola Honningdal Grytten 2002, *Norsk økonomi i det tyvende århundre*, Bergen: Fagbokforlaget.
- Jacks, David S. et al 2002, "Real Inequality in Europe since 1500", *Journal of Economic History* 2/2002, 322–355.
- Jacks, David S. 2004a, *Economic integration and growth in the long nineteenth century*, University of California-Davis.
- Jacks, David S. 2004b, "Market Integration in the North and Baltic Seas, 1500–1800", *Journal of European Economic History*, 3/2004, 285–329.
- Jacks, David S. 2005a, "Intra- and International Commodity Market Integration in the Atlantic Economy, 1800–1913." *Explorations in Economic History* 3/2005, 381–413.

- Jacks, David S. 2005b, "Immigrant Stocks and Trade Flows, 1870–1913." *Journal of European Economic History* 3/2005, 625–649.
- Jacks, David S. 2006, "What Drove 19th Century Commodity Market Integration?", *Explorations in Economic History*, 3/2006, 383–412.
- Jensen, Olav Harald and Arnljot Strømme Svendsen 1986, *Norges Handelshøyskole femti år*, Bergen: NHH.
- Karlsson, Gunnar (ed), *Levestandarden i Norden 1750–1914*, Reykjavik: University of Reykjavik.
- Keilhau, Wilhelm, Ingvar B. Wedervang and Ragnar Frisch 1932, *Verdensøkonomien i etterkrigstiden*, Oslo: Aschehoug.
- Lønningdal, Torill 1984, *Tjenestejentelønninger i jordbruket: en studie av tjenestejentelønninger på 17 større gårder i østlandsområdet 1850–1910*, Bergen: NHH.
- Minde, Kjell Bjørn and Jan Ramstad 1986, "The development of real wages in Norway about 1730–1910", *Scandinavian Economic History Review*, 2/1986, 90–121.
- Minde, Kjell Bjørn 1987, "Levestandarden i Norge 1750–1914", Karlsson, Gunnar (ed), *Levestandarden i Norden 1750–1914*, Reykjavik: University of Reykjavik.
- Minde, Kjell Bjørn and Ola Honningdal Grytten 1997, "Konsum og levestandard under industrialiseringen i Norge: endringer i kjøpekraft og privat konsum 1850–1920", Söderberg, Johan and Lars Magnusson (eds), *Kultur och konsum i Norden 1750–1950*, Helsinki: FHS, 61–82.
- NFI 1987, *Wedervangprosjektet*, Oslo: NSD.
- Nordvik, Helge W. 1981, "Norwegian sailors in the Canadian merchant marine 1863–1914: a preliminary survey", Hope, Einar (ed), *Studies in Shipping Economics*, Oslo: Bedriftsøkonomens forlag.
- Nordvik, Helge W. 1985, "The shipping industries of the Scandinavian countries 1850–1914", Fischer, Lewis R. and G. R. Panting (eds), *Change and adaptation in maritime history: the North Atlantic fleets in the nineteenth century*, St. John's: MHG, 117–148.
- Nordvik, Helge W. 1989, "Professor Dr. Ingvar Wedervang: An Historical Perspective", paper presented at Nordic Conference on Wage and Price History.
- Ramstad, Jan 1981, "Reallønnsutvikling og lønns-struktur for kvinner i tekstilindustrien på Sagaene i Kristiania under det industrielle gjennombudd", working paper, NHH: Bergen.
- Ramstad, Jan 1982, *Kvinnelønn og pengeøkonomi: en studie av kvinners lønn i tekstilindustrien i Kristiania ca 1850–1910*, Bergen: NHH.

- Ramstad, Jan 1983, "Presentasjon av en ny levekostnadsindeks for Kristiania (Oslo) 1850–1910: problem, metode, resultater", Discussion paper, Bergen: NHH.
- Ramstad, Jan 1984a, "Veiarbeiderlønninger i Hordaland 1856–1920", Wedervang Archive Occasional Papers, 1/1984, Bergen: NHH.
- Ramstad, Jan 1984b, "Veiarbeiderlønninger i Hedmark 1854–1920", Wedervang Archive Occasional Papers, 2/1984, Bergen: NHH.
- Ramstad, Jan 1985a, "Veiarbeiderlønninger i Sogn og Fjordane 1857–1920", Wedervang Archive Occasional Papers, 1/1985, Bergen: NHH.
- Ramstad, Jan 1985b, "Veiarbeiderlønninger i Telemark 1850–1920", Wedervang Archive Occasional Papers, 2/1985, Bergen: NHH.
- Reinholdt, Lasse 1975, Sjømenns lønnsforhold i Tønsberg 1847–1914, Bergen: NHH.
- Scholliers, Peter and Vera Zamagni (eds) 1995, *Labour's Reward: real wages and economic change in 19th and 20th century Europe*, London: Edward Elgar.
- Söderberg, Johan and Lars Magnusson (eds), *Kultur och konsumtion i Norden 1750–1950*, Helsinki: FHS.
- Teigen, Håvard 1976, *Økonomisk utvikling i Nord-Gudbrandsdalen og Toten ca 1870–1910*, Bergen: NHH.
- Tjeldnes, Agnar 1977, *Vegarbeiderlønninger i Helgeland og Lofoten og Vesterålen ca 1870–1910*, Bergen: NHH.
- Zamagni, Vera and Peter Scholliers (eds) 1994, *Real wages in the nineteenth and twentieth century*, Milan: Bocconi University.
- Wedervang, Ingvar B. 1924, *Om seksualproporsjonen ved fødselen. Dens typer og disses variasjoner med særlig henblikk på fosterdødeligheten*, Oslo: Steenske Forlag.
- Wedervang, Ingvar B. 1926, "Nasjonalinntekten i Norge", *Statsøkonomisk Tidsskrift*, 2/1926, 149–201 and 237–298.
- Wedervang, Ingvar B. 1929, "Av inntektsstatistikkens metodeområde", *Nordisk Statistisk Tidsskrift*, 3/1929, 241–268.
- Wedervang, Ingvar B. 1930, "Forslag til nyordning av det statsøkonomiske studium", Oslo: University of Oslo.
- Wedervang, Ingvar B. and Dag Coward 1933a, *Omsetnings- og omkostningsforhold innen jernvarehandelen 1931*, Oslo: University of Oslo.

Wedervang, Ingvar B. and Dag Coward 1933b, Omsetnings- og omkostningsforhold innen detaljhandelen med kolonialvarer 1931, Oslo: University of Oslo.

Wedervang, Ingvar B. and Dag Coward 1934a, Omsetnings- og omkostningsforhold innen bokhandelen 1931, Oslo: Den norske bokhandlerforening.

Wedervang, Ingvar B. and Dag Coward 1934b, Omsetnings- og omkostningsforhold innen jernvarehandelen 1932, Oslo: University of Oslo.

Wedervang, Ingvar B. and Dag Coward 1934c, Omsetnings- og omkostningsforhold innen manufakturvarehandelen 1933, Oslo: Tanum.

Wedervang, Ingvar B. and Dag Coward 1935a, Omsetnings- og omkostningsforhold innen jernvarehandelen 1934, Oslo: Tanum.

Wedervang, Ingvar B. and Dag Coward 1935b, Omsetnings- og omkostningsforhold innen tobakkhandelen i Bergen og Oslo, Oslo: Tanum.

Archival sources

Wedervang Archive, files W001, W002, W003, W022B, W051, W057, W073, W097, W098, W099, W100, W101, W102, W134, W135, W138, W155, W201, W202, W208, W212, W228, W254, W260, W272, W273, W274, W275, W276, W324, W326, W344, W364, W367, W374, W381, W388, W397, W408, W410, W411, W505, W516 and W517.

CHAPTER 5

Nominal wages in Norway 1726–1940 by occupation

Ola H. Grytten¹

This chapter presents historical wage series organized by occupation for more than 100 different types of jobs in the Norwegian labor market from 1726 to 1940. The bulk of the data are collected from the Wedervang Archive, which is presented in Chapter 4, and supplemented with data from private archives and previous research into historical wages along with data from Statistics Norway.

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5.1 Introduction

On the basis of research connected to the project on Historical Monetary Statistics hosted by Norges Bank, the present chapter offers an overview of historical nominal wages for Norway covering the period between 1726–1940. For corresponding data for the years 1940 onwards, we refer to a very rich material published by Statistics Norway.^{2,3}

We have been able to follow the development of wages for several different categories of labor, industries and sub-industries. We have not been able to follow the same classification as Statistics Norway use for their modern wage data, but have, however, tried to follow a similar approach to that of Statistics Norway for their historical wage statistics.⁴ Thus, on the basis of available historical data and historical classifications by Statistics Norway, we are currently able to present wage series for different occupations in the following eight main industries:

1. Agriculture and Forestry
2. Construction
3. Manufacturing and Mining
4. Crafts
5. Communications
6. Maritime transport
7. Domestic services
8. Public services

Whereas the data for the first seven industries basically reflect *ex post* wages, the data for the last industry, public services, reflect *ex ante* wages. This implies that additional payments, e.g., inflation adjusted and family responsibility compensation are excluded from this latter industry.

We stress that the data presented here reflect wages as compensation for labor input, and not total income. Thus, capital income and subsidies are not included. The data used here are basically drawn from three different sources. The first and most important source is Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices kept at the Norwegian School of Economics and Business Administration in Bergen.⁵ The second source is Statistics Norway, from where the data are taken from different publications. The third major source is records from previous research into Norwegian historical wages.

²See e.g. www.ssb.no/emner/lonn, NOS 1978, 537–555, NOS 1994, 253–278 and NOS 1990, 1991, 1992, 1993, 1995, 1996, 1997, 1999, 2001, 2002, 2004 (Wage Statistics), 32–138.

³Data for the two sub-periods can of course be combined, and in Chapter 6 of this volume we present annual wage series which cover the entire period 1726–2006, classified by industry.

⁴NOS 1994, 253–278 and www.ssb.no/emner/06/05.

⁵See Chapter 4 for a detailed description of the Wedervang Archive.

By compiling relevant data from these sources we arrive at relevant and consistent wage series for labor in different occupations in eight industries, covering the bulk of the Norwegian labor market 1726–1940.

5.2 Historiography

Substantial effort has been put into research on the development of wages in Norway. Most of this work has been rather fragmental, however, and few aggregated series at a nation wide level have been published. Most studies concentrate on local industrial plants, communities or branches of industries. Most of these studies are results of rather inductive historical research taking advantage of available sources. Thus, the Wedervang Archive at the Norwegian School of Economics and Business Administration has been used widely as source in many of these studies.

5.2.1 Agriculture and domestic services

In 1974 Ole Gjølberg conducted his first research on wages in the agricultural sector of the 1800s.⁶ On the basis of data from the Wedervang Archive and Statistics Norway, he gave estimates of farm wages for the period 1830–1850 and, thereafter, more precise computations up to 1880. Torill Lønningdal continued this work with an analysis of domestic servants' wages on 17 major farms in Eastern Norway 1850–1910.⁷ These series included both domestic services and agriculture.

Håvard Teigen presented wage data from the Wedervang Archive in his analysis of the economic development, including wage development, in rural parts of Eastern Norway.⁸ For the period after 1910 wage data on manpower in agriculture has been assembled by Ola Honningdal Grytten and calculated into real wage series in order to map the development of living standards and examine causes of unemployment.⁹

5.2.2 Construction

Per Kristian Bekkelund and Agnar Tjeldnes also used the Wedervang Archive in order to map wage development for public road construction workers in Northern Norway during the last decades of the nineteenth century and the early 1900s.¹⁰ Later, Jan Ramstad mapped public road construction wages in Southern Norway. These were deflated by available international price indices and by working time units per barrel of crops in order to conclude on the development of real wages.¹¹ Given the rich data material on construction wages in the Wedervang Archive, surprisingly little has been done in order to examine wage developments and the standard of living for construction workers.

⁶Gjølberg 1974.

⁷Lønningdal 1984, 78–109.

⁸Teigen 1976.

⁹Grytten 2000, 22–41, Grytten 1992, 163–164.

¹⁰Bekkelund 1977 and Tjeldnes 1977.

¹¹Ramstad 1984a, Ramstad 1984b, Ramstad 1985a, Ramstad 1985b.

5.2.3 Mining, manufacturing and crafts

A substantial part of historical studies on wages in Norway have been carried out on the manufacturing industry. An early work in this field was Erling Petersen's series of wages for employees in the engineering industry with main focus on 1900–1950. The series were taken from the national association of employers, NAF. These series were deflated into real wages by using available cost of living and consumer price indices reported by Statistics Norway.¹²

In 1979 Ingeborg Fløystad presented her pioneering work on the Baaseland and Næs Jernverk, an iron producing company located in southern Norway. She gave wages for different occupations connected to the company. Her work covers the period from 1726 till 1806. In the work by Fløystad nominal wages were deflated by prices on staple food products, basically grain and potatoes. She presents five-annual wages for mining, manufacturing and crafts.¹³ One problem with her series is that they fail to fully take into account the different values of the changing currencies at the time. Thus, they do not satisfactory reflect the development of real wages in the eighteenth century. Another problem is that some of her data are adjusted for exchange rate fluctuations. Thus, they are not fully nominal, as assumed by her.

Matti Goksøyr offers annual data of manufacturing and crafts wages 1820–1865, taken from the old industrial plant and village connected to the Alvøen paper mill, founded in 1797, on the outskirts of Bergen.¹⁴ His data reflect money wages, and thus boarding and lodging for the families of the employees have to be added, as is also the case with most wage series from this period. In order to find real wages, he offers estimates of necessary working time in order to buy units of grain.

Jan Ramstad solely uses the Wedervang Archive in his efforts to map female wages in the manufacturing industry in Christiania 1850–1910.¹⁵ The wages compiled by Ramstad were basically drawn from female labor force in the textile industry. Ramstad also constructed a new cost of living index for Christiania covering the period 1850–1910 to obtain his real wage estimates.

Kjell Bjørn Minde has paid attention to the standard of living for working families in one of Norway's first modern textile manufacturing companies, Arne Fabrikker, also located at the outskirts of Bergen.¹⁶ He has presented wages from the start up in 1846 to 1920.¹⁷ His data are not annually taken, but quite detailed. He also focuses on comparative analyzes with other occupations, companies and industries.

Christian Venneslan of the Norwegian School of Economics and Business Administration has examined the manufacturing industry's breakthrough in Norway 1896–1939 in a quantitative manner. As part of his study, Venneslan gives valid and reliable series of manufacturing wages for several sub-industries. His estimates are calculated on the basis of thousands of observations drawn from

¹²Petersen 1950, 666–673.

¹³Fløystad 1979, 595–596.

¹⁴Goksøyr 1982.

¹⁵Ramstad 1982, 335–457. Christiania was written Kristiania from 1877 and changed name back to its original name Oslo in 1925.

¹⁶Minde 1983, 47–51.

¹⁷Minde 1996, 69–88.

Statistics Norway's statistical records of the manufacturing industry of the period in question. Along with the wage series, he also reports product prices, which enables him to calculate product real wages, i.e. nominal wages deflated by prices at the factory gate.¹⁸

5.2.4 Maritime services

The Norwegian merchant marine became the world's third largest international fleet during the 1870s. Wages for all capacities of crew except ship captains were recorded in recruitment offices located in all major ports of the country. Thus, due to a very rich data source of maritime wages kept at the Wedervang Archive, substantial efforts have been carried out in order to analyze wages and living conditions for sailors.

The first scholar to widely utilize the records of sailors' wages was the American economic historian Lee Soltow, who compiled and examined annual sailors' wages from ports around the Oslo fiord in the 1960s.¹⁹ A decade later Lasse Reinholdt utilized the Wedervang Archive to examine seamen's wages in the important maritime port Tønsberg, also located by the Oslofjord.²⁰

Later Ole Gjølberg used the data from the archive both to examine wage development and the transformation from sail to steam in the Norwegian merchant fleet. Thus, he examined sailors' wages from sailing and steam vessels.²¹ Then, in the 1980s another American took up the challenge left by Soltow. Together with Helge W. Nordvik of the Norwegian School of Economics and Business Administration, Lewis R. Fischer, from Memorial University of Newfoundland, Canada, used the records from the Wedervang Archive to examine sailors' wages both as cost component and as indicator of the standard of living.²²

5.2.5 Public services

Wage series for public services have been scarce. However, in 1993 Kjell Bjørn Minde published his PhD-dissertation on the profitability of higher education in Norway in the late nineteenth and the twentieth century. In his work he came up with estimated career-long wages in public services. Wages are also given on an annual basis in his work.²³

In order to establish numbers of the size of the Norwegian public sector 1830–1865 Elisabeth Bjørsvik used data on public wages in order to calculate the sector's contribution to GDP.²⁴ Implicitly, real wages for the public sector can be drawn from both Minde and Bjørsvik. However, they are not continuous and not directly comparable to most other wage series at hand.

¹⁸Venneslan 2007.

¹⁹Soltow 1965.

²⁰Reinholdt 1975.

²¹Gjølberg 1975, 1976, 1977a, 1977b, 1978a, 1978b and 1979.

²²Nordvik 1981, 79–86, 1985, Fischer and Nordvik 1987a, 41–64, 1987b, 99–116, 1988a, 17–142, 1988b, 1–21, 1988c, 14–35, 1988d, 159–186 and 1991, 77–96.

²³Minde 1993, A25–A123.

²⁴Bjørsvik 2003, 288–310.

5.2.6 Aggregated series

Some scholars have tried to map more general trends of Norwegian wage development. In the 1980s Kjell Bjørn Minde and Jan Ramstad were hired into a project, aiming at initializing research on the basis of the Wedervang Archive. As a result, a significant amount of work was undertaken mapping the macro development of nominal and real wages. Their most cited work was published in the *Scandinavian Economic History Review* in 1986 under the title “The development of real wages in Norway 1730–1910”.²⁵ In this work they assembled available wage series representing some key industries of Norway at the time. However, the most important part of this paper was a presentation of Jan Ramstad’s new cost of living index for Oslo starting in 1850 ending in 1910. This price index made it possible to offer reliable annual real wage series as far back as 1850.

Minde and Ramstad’s wage series were quite fragmented before 1850 with considerable lacunas. However, they served as the first step of analyzing wage developments for Norway during the eighteenth and the nineteenth centuries. Minde also published widely on wage developments of different industries basically in the nineteenth and early twentieth century.²⁶

Along with the work of Minde and Ramstad, John Eivind Myhre gave an overview of Norwegian wage developments and research into this field from the mid eighteenth century till the outbreak of World War I, also published in the *Scandinavian Economic History Review*.²⁷ Axel Kiel and Lars Mjøset, compiled existing wage series for different industries wage formation in Norway 1840–1985 in the same journal.²⁸

In the 1990s another group of scholars from the Norwegian School of Economics and Business Administration published new aggregated series of wages for Norway 1850–1950, covering six different industries, i.e. road construction, manufacturing, agriculture, the merchant fleet and domestic services (housekeeping).²⁹ Again the research was carried out chiefly on the basis of the Wedervang Archive and the Ramstad cost of living index. The work was part of a European project on the standard of living in the nineteenth and twentieth centuries. Minde and Grytten continued the work on aggregated real wage series for key occupations, industries and sectors of the Norwegian economy 1850–1940.³⁰

Finally, Grytten, as part of the Historical Monetary Statistics project in Norges Bank, tried to tie up the loose ends by combining the previous work with un- and under-utilized sources to construct aggregated and economy-wide wage series for able seamen and manufacturing workers in Norway from the early 1700s till present days.³¹ The nominal wage series were deflated by the consumer price index published in the first volume from the Historical Monetary Statistics project³² to arrive at real wage series.

²⁵Minde and Ramstad 1986, 90–121

²⁶Minde 1987, 46–66.

²⁷Myhre 1986, 159–161.

²⁸Kiel and Mjøset 1990, 19–49.

²⁹Hodne, Grytten and Alme 1994, 59–72, Hodne, Grytten and Alme 1995, 61–75 and 238–248 and Alme 1993, 25–85.

³⁰Minde and Grytten 1997, 61–82 and Grytten and Minde 1998, 42–58.

³¹Grytten 2005, 57–80.

³²Grytten 2004a, 47–98.

5.3 Problems connected to historical wage data

Working with historical wage data is a complicated task for several reasons. In the first place, the data is not always in abundance. The longer we go back in time, the more difficult it is to trace relevant data, or in fact, data at all. Often we are left with rather few observations, and their validity and reliability may often be questioned. In this work we have set certain requirements for the data to be used. There should be several observations for an occupation in any year to be taken into account. Also, the reported figures need to be representative for a wider group of workers belonging to this occupational group.

Secondly, time series often lack consistency and persistency. Very often time series on wages as well as other variables continue for a limited period. Thereafter, we have to construct new series from other sources, often based on different principles of accounting and different variable definitions. Some series may be given in annual wages, some in monthly and some in daily or even hourly wages. When we take into account that the definition of e.g. a craftsman versus a manufacturing worker can differ substantially between sources and over time, we can easily see that we may be running into problems. Thus, we seek to construct consistent series by splicing them and calculating them into a comparable unit of account, both in terms of currency, time and wage units.³³

This brings us to a third challenge: definitions and classifications. The character of different occupations has changed widely during the last three centuries. Hence, we have to decide on definitions and classifications of occupational belonging. We have decided a historical or dynamic approach, i.e. one belongs to a certain occupational group according to standard definitions or understandings at that time.³⁴ This means that what we nowadays would probably classify as craftsmen or artisans could be defined as manufacturing workers in the eighteenth, nineteenth and early twentieth century, depending on the understanding at that time. By choosing this method, we use a standard historical approach to the past; understanding history on its own terms.

A fourth major challenge is to reconcile present and historical wages. One basic problem here is how to treat boarding and lodging. For most employees in the eighteenth and early decades of the nineteenth century cash payments just made up a fraction of total wages. Very often the employers provided housing and food, and often even clothing for their employees' families. In many cases wages were in fact provided for families and not for individuals. On the other hand, the families had to offer their entire manpower to the employers. Thus, cash wages are not representative for total wages, and we should not look at individual payments, but family income from work.

Another problem connected to these arrangements is that the way of organizing these ties between employers and employees differed not only through time, but also within time, industries, sub-industries and even within companies. In some cases the company fully provided clothing, housing and food, in other cases only partly.³⁵ Thus, we have tried to find the necessary additions for boarding and lodging for each wage series in order to make them consistent over time. We will also

³³Grytten 2005, 62–65.

³⁴NOS 1994, 253–260.

³⁵Minde 1996, 69–76.

stress that this work does not focus on total income, but on wages. Additionally, our basic unit of study is not the household or the family, but the individual. This does not imply that salary paid with regard to support responsibilities do not count. Rather we are focusing on payment granted for the work effort carried out by each individual.

In the fifth place, there is a challenge connected to changing currencies and their par values, devaluations and revaluations. In early work on historical prices and wages from the nineteenth and early twenty centuries there is a clear tendency that scholars adjusted their data according to fluctuations in market values of currencies.³⁶ This implies that prices and wages were indirectly adjusted for inflation. In fact, this is a way of making nominal series more like real series. Here, in order to establish nominal series we omit and in a few cases even have to reverse this procedure. However, we are still left with huge challenges when it comes to different currencies used in the period we cover in the present work. In particular the period previous to 1816 is very difficult, as wages were reported in different kinds of currencies. As for the period 1813–1816, the Norwegian economy experienced monetary chaos with several monetary revisions and devaluations.³⁷ Thus, wages were reported in different currencies with different and fluctuating values. Through a thorough study of our data, exchange rates, monetary revisions and par contra devaluated values of currencies we have been able to sort out this problem in order to make the series consistent over time. Another problem is that money had different bargaining values at local markets. However, this was basically a problem for the price quotations more than for the wage data.³⁸

5.4 Sources

As already mentioned, the Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices constitute the most important source for the new and revised series presented here.

The archive holds price data back to 1641 and wage data back to 1751.³⁹ The bulk of the records, however, stems from the nineteenth century, and basically covers the period up to 1920. But some data also exist for some newer observations. It is probably one of the richest manual archives of its kind worldwide, with some million direct observations on both prices and wages. These are compiled and partly aggregated from a considerably higher number of observations. Thus, they are believed to represent a two-digit million observations on both prices and wages. We do not know the exact numbers.

The data kept in the archive are collected from various original sources. The most important ones are public records, local exchanges and bourses, trade and commerce chambers, merchant houses, industrial plants and different accounting material. Most wage data from the public sector are collected from public offices connected to the central or local governments and later Statistics Norway.

³⁶See e.g. NOS 1915, 2*.

³⁷Eitrheim 2005, 1–17.

³⁸Grytten 2004, 61–63.

³⁹Wedervang Archive, W043, W044 and W155.

Sailors' wages, which start as early as 1751, are basically collected from recruitment offices in the Norwegian ports, where the ship owners or captains by decree were to report wages of their crew.⁴⁰

Private wages for other industries are basically collected from the accounts of private companies, branch reports or later registrations made by Statistics Norway. For the period prior to 1850 the data in the archive, with the exception for sailors, are scarce when it comes to salaries. However, they are good enough to construct persistent annual series of crafts, manufacturing, agriculture and domestic services from the 1820s and 1830s. These never cover as many occupations as the registrations from Statistics Norway do for the period 1885–1910.⁴¹ Nevertheless, the archive offers annual data, whereas Statistics Norway offers data for six years with five years intervals only. Thus, the Wedervang Archive is the best source for wages from 1820 till the first two decades of the 1900s.

A second source of data in the series presented is, as already mentioned, Statistics Norway. In several publications they report both public and private wages for different industries and occupations along with information on income and property.⁴² These basically start in 1850. The records were originally taken by the magistrates in towns and cities and by the local police authority in the countryside (sheriffs (lensmenn) and their deputies). They were chiefly assembled by the ministry of domestic affairs until Statistics Norway was founded in 1883. Before 1875 the data basically covered domestic servants and hands hired by the major farms in the high seasons. The bulk of the data were not taken on an annual basis. The five-annual wage data were published by Statistics Norway under the title *Tables concerning Wages*.⁴³ Annual records on wages were not recorded regularly by Statistics Norway before the interwar years, despite the fact that they start earlier for some industries.

The third main source of data for wages are research works published by different scholars, especially the pioneer works done by Ingeborg Fløystad and Matti Goksøyr.⁴⁴ These records report wages for employees in manufacturing and crafts from the entire eighteenth century and the early nineteenth century. The data also enable us to include non-cash payments. Both Fløystad and Goksøyr have compiled their data from company records and accounts. In addition to these series, we use branch association records of payments per employee. The most important series is daily and hourly wages representative for all blue-collar employees in the mechanical engineering industry. These have later been included into the records of both Statistics Norway and the Wedervang Archive. The best overview of wages in the mechanical (engineering) industry is, perhaps, given in the work on the Norwegian Employers Association by Erling Petersen.⁴⁵

⁴⁰Wedervang Archive, W327.

⁴¹NOS 1911, 154–155.

⁴²NOS 1949, 360–368, NOS 1969, 545–560, NOS 1978, 537–574 and NOS 1994, 253–288.

⁴³NOS 1888, 1895, 1900, 1905, 1910, 1915, 1919, 1920 and 1921.

⁴⁴Fløystad 1979 and Goksøyr 1982.

⁴⁵Petersen 1950, 670–673.

5.5 Aggregates

The series presented here are basically meant to represent different occupations. Both micro and aggregated series are offered. In order to establish estimates of aggregates, we add several occupations within corresponding industries or sub-industries by giving each series a weight. For some occupations and industries, e.g. sailors in the merchant fleet, we do have annual numbers of observed wage units. When these are representative for the group we are dealing with, they serve as annual weights according to a Paasche approach. However, for most series we do not have these annual registrations of the number of employers belonging to each group. Thus, we have to find information elsewhere.

This is basically found in the national population censuses, taken approximately every tenth year,⁴⁶ which give information on the size of industries, sub-industries and occupational groups as well as on the distribution of gender in the labor force. Hence, by using these records we can give each series a weight according to their coverage, i.e. the size of the labor force within their industry they serve as representative indicators for. We can use this information to find constant weights covering several years. By combining them with the wage data we reach at weighted averages by a Laspeyres approach. Due to variable coverage at different periods, we do not always calculate “pure” averages. This would, in the first place, have caused breaks in the series. Secondly, we would have had sub-periods with wage levels not reflecting the total picture, but only the industries present in the data set. However, by splicing series we adjust for this problem. In consequence, we end up with conditional, but nevertheless representative averages rather than unconditional but not representative averages.

5.6 Wage series

In the following section we present nominal wages for several occupations within eight main industries. In order to make the series comparable they are presented in daily units. This is not a straightforward task. Those who were paid hourly, weekly, monthly or by annual salaries did not necessarily have full normal working days. Some of them were seasonal workers, some just hired in when useful. This implies that we need to be careful not drawing premature conclusions on the level of general income per day. In this chapter daily wages has been chosen as the basic unit of presenting continuous series, but we also refer some monthly and annual wages.

The series are also presented in Norwegian kroner, implying that the spesidaler (originally specie-daler) before 1875 and the riksdaler (originally rigsdaler) before 1816 are transformed into kroner. For the spesidaler we use the par exchange rate, i.e. four kroner to one spesidaler. For the different kinds of riksdaler we use, with some modifications, the official exchange rate of the outgoing currency against the incoming currency.⁴⁷ Hence, we arrive at continuous wage series from the early eighteenth century and up till 1940. As for the period after 1940, we refer to wage data published by Statistics Norway.

⁴⁶NOS 1949, 34–37 and NOS 1978, 36–37.

⁴⁷Eitheim 2005, 5–10 and Grytten 2004a, 54–61.

5.6.1 Agriculture and forestry

Most Norwegian farmers were independent small-scale farmers, and were not employed on a permanent basis on farms owned by others. However, during the high seasons the largest estates had to hire help from the smaller farmers in order to keep up with all the necessary work required to produce efficiently. In many cases such kind of work was to compensate for land rents, i.e. land rents were paid from small-scale farmers to landowners by working on the latter ones' farms. Our data from the agricultural industry stems from hired work.

The data are basically recorded from two sources, i.e. public records and the Wedervang Archive. The data in the Wedervang Archive were collected from 57 farms starting as early as 1820. These were some of the main farms in Norway at the time. Thus, they might not give a representative picture of the average income for farm hands. Also, they include different kinds of workers, like domestic servants, craftsmen, proto manufacturing workers, labor in forestry and work leaders. Hence, these data have to be critically used. They basically cover male labor up to 1850 and thereafter both male and female workers. However, some data exist for women also before 1850. Both summer and winter seasons are included. Most workers were partly paid in non-cash wages, which has to be included in our series. The coverage is best from 1850, with annual observations put together by Gjølberg and Lønningdal, but also the data from 1830 onwards can be used.⁴⁸ Additionally, a deeper dive into the Wedervang Archive makes it possible to include data from 1820 onwards.⁴⁹

In public records, later held and collected by Statistics Norway, we find observations of daily wages for agricultural workers for every fifth year starting in 1850 for men and 1875 for women. The records report daily wages for both the summer and the winter season. The five-annual series from the bureau can be complimented on the basis of annual figures given by the Wedervang Archive as indicator of the development from year to year. These records continue till 1915, when they are substituted with annual and more detailed wage series published by Statistics Norway.⁵⁰ In these latter series there is good coverage of both traditional agricultural industry and forestry. They also reflect seasonal differences, as data are given for four kinds of agricultural occupation for men and women during the summer season, i.e. spring, summer and autumn, and general farm work for men and women during the winter season. Additionally, they report wages paid for men in forestry during both summer and winter.

As said, the records report both wages with and without boarding. Here we include both, but with an emphasis on full cash wages without boarding. These were paid to workers who provided their own food. We prefer these when possible because they have the best coverage. Additionally, the difference between cash wages for workers with and without boarding to some extent mirror the value of boarding. For the period previous to 1850, most wage data do not include food provided for the workers on the farms. Thus, it has to be added to the cash wages. However, some workers were paid in cash only, and we do have some data on their wages previous to 1850 too. After 1850

⁴⁸Gjølberg 1974, 135–153 and Lønningdal 1984, 141–163.

⁴⁹Wedervang Archive, W027, W028, W204, W205 and W207.

⁵⁰NOS 1949, 366–367.

the picture is mixed. Full cash payments were more common from the last decades of the nineteenth and the dawn of the twentieth century, in particular during the interwar period. However, still a significant part, perhaps as many as all of the agricultural workers, were partly paid in non-wages until the post World War II era. Nevertheless, we give priority to the cash wages here, due to their relative preciseness.

There has been done some work on the value of extras, basically food and lodging. Both the Wedervang staff, Lønningdal and Gjølborg have tried to map the value of these services and added them into their wage series.⁵¹ They all conclude that boarding and lodging was by far the most important factor of income for hired labor in agriculture during the nineteenth century. A problem with most of these estimates is that they, with a possible exception for the Wedervang estimates, add a more or less fixed share of non-cash wages to the cash wages. Here, we try to examine annual values of non-cash wages independently of cash wages.

Food provided to labor on the farms has been added on the basis of a normal consumption basket for working class families, which is the closest we can come to agricultural workers in the existing public consumption surveys for years close up to the observations.⁵² Instead of adding a constant factor for food or a variable with a constant ratio to cash wages, we have found estimates of consumption in base years, i.e. 1850, 1880 and 1910 and calculated annual consumption by interpolation with a CPI as indicator of the fluctuations.⁵³ By doing this we find that previous additions for boarding and lodging tend to be both too static and too high, in some cases far too high.⁵⁴

The data for agriculture make it possible to compare male and female wages annually from the 1870s. Drawing more information from the Wedervang Archive it is also possible to give estimates on female wages in agriculture back to 1820. This is done by using information from farm accounts in the archive and estimates of the annual value of boarding and lodging on the basis of the above-mentioned consumption surveys.⁵⁵ In years where we do not have sufficient information on female wages we calculate them as a residual between total average and average male wages.

By connecting the data from Statistics Norway and the Wedervang Archive we arrive at continuous and persistent data for nominal wages in the agricultural sector in Norway 1820–1940. These are reported for men and women in Figure 5.6.1.

By looking at the relative share of female to male wages, we notice an interesting phenomenon. Female wages stayed relatively stable at around 60 per cent of male wages during the first decades. Then, after a short boom in the mid- and late 1850s they approached 65 per cent in the 1880s and 1890s. However, in the early 1900s female wages fell dramatically to male wages and were almost touching 50 percent just before the outbreak of World War I. Thereafter the gap was significantly narrowed until the late 1930s.

⁵¹Wedervang Archive, W089 and W091, Gjølborg 1974, 139–144, Lønningdal 1984, 37–43.

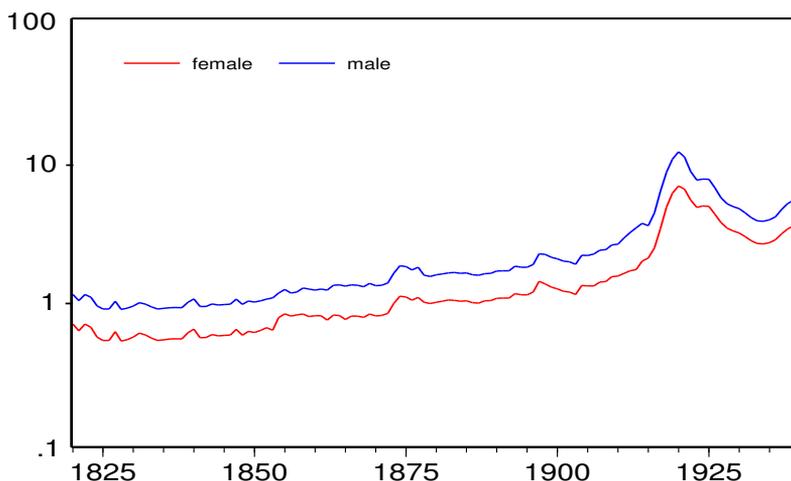
⁵²Statistical Office of Kristiania 1915, 144–149, Ramstad 1982, 482–492, Minde and Grytten 1997, 79 and Grytten and Minde 1998, 52–55,

⁵³Grytten 2004, 78–93.

⁵⁴Lønningdal 1984, 108, Wedervang Archive, W089 and W091

⁵⁵Wedervang Archive, W027, W205, Gjølborg 1974, 85–93.

FIGURE 5.1 Daily male and female wages in agriculture, incl. boarding and lodging, in NOK, 1820-1940. Semi-logarithmic scale.



Sources, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205, W207, NOS 1949, 366–367, Gjølborg 1974, 31–103 and Lønningdal 1984, 141–163.

A natural explanation for this development is that non-cash wages played a major role in the 1800s, whereas cash wages became more important during the increased market orientation of Norwegian farming in the 1900s. Thus, female wages dropped first. Then in the 1920s and 1930s one saw a general trend towards narrowing the gender gap.

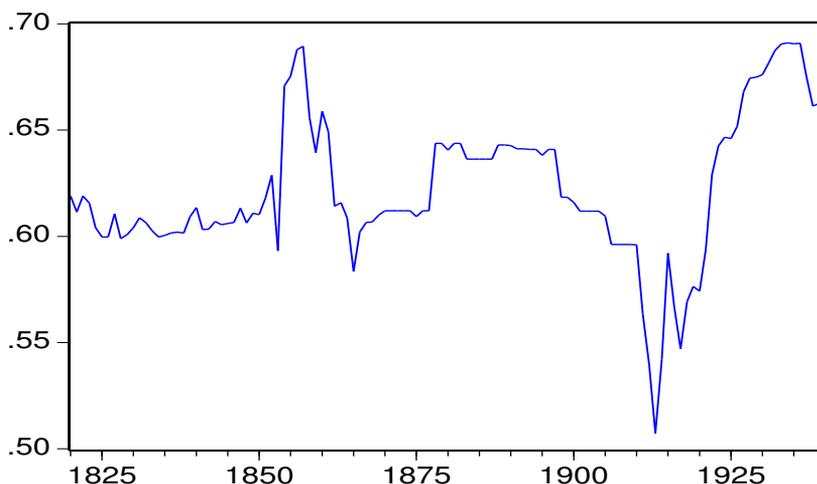
5.6.2 Construction

Within this industry we have labor from five different occupations: road construction, railway construction, bricklayers, telecommunication and harbor construction and maintenance. Our data start in 1850 and cover every year till 1940. Again, the data are taken basically from the Wedervang Archive the entire period up till 1940, and supplemented by data published by Statistics Norway for the interwar years.

The road construction data cover construction and maintenance work on public roads financed by local or central governments. The wages are reported on a daily basis. An astonishing number of more than 13.4 million observations were taken to arrive at annual numbers for piecework employees from the start in 1850 up to the interwar period. The corresponding number for workers on fixed salaries was almost 1.1 million. The data are reported practically from the entire country.⁵⁶ The wages were in principle paid in cash for the entire period. In many cases the workers were provided

⁵⁶Wedervang Archive, W118, W119A, W120A and W249.

FIGURE 5.2 Ratio of female to male wages in agriculture, 1820–1940.



Sources, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205, W207, NOS 1949, 366–367, Gjølborg 1974, 31–103 and Lønningdal 1984, 141–163.

food at work, for which they had to pay with a deduction in their cash wages. However, the wages reported in the archive were gross and not net wages in this respect. In addition, there were, to our knowledge, no significant change of practice during the period we are looking at. Thus, the reported wages are representative and consistently measured over the entire period. In consequence, we use them here. Both summer and winter season data are included.

From 1915 onwards, we also draw our series from Statistics Norway, which from 1921 becomes a major source for our data along with the data from the Wedervang Archive.⁵⁷ The data from the bureau include both fixed and piecework salaries in public road construction all over the country.

The second most important group within construction, reported here, is public railway construction. The main source up to the interwar period is again the Wedervang Archive.⁵⁸ The series in the archive starts in 1873 and goes on till 1940, with a significant lacuna 1884–1891. For the last 20–25 years the data on railway construction worker's wages from the Wedervang Archive are supplemented by data from Statistics Norway.⁵⁹ On the basis of the Archival data it has also been possible to give rough estimates on railway construction data back to 1854. The wages are partly reported as daily wages and partly as hourly wages. We use daily wages here. Thus, we have to transform hourly into daily wages. Till 1913 it was common with ten working hours per day, which is clearly reflected in the wage lists for railway construction workers. For 1914 we find records with both nine and ten

⁵⁷NOS 1949, 365.

⁵⁸Wedervang Archive, W245 and W249.

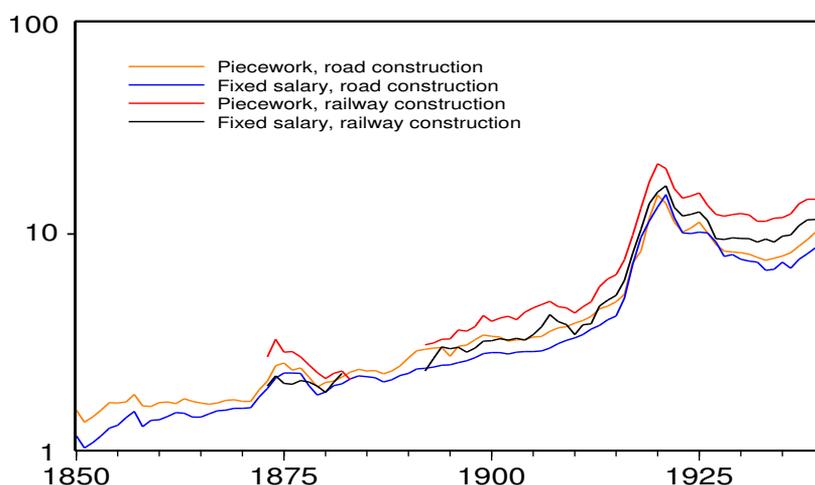
⁵⁹NOS 1949, 365.

hours as normal working days. For the period 1915–1917 a normal working day was nine hours, before it, at least officially, became eight in 1918.

As for food, we find the same pattern as for public road construction workers. Thus, we make no addition for boarding and lodging in these series. The number of observations of daily piecework and fixed wages for railway construction workers, which is the basis of the records in the Wedervang Archive, is an impressive number of 11.6 and 1.7 million respectively. The number of observations of hourly wages reflected in the archive is astonishingly 139.3 and 22.8 million respectively.⁶⁰ These numbers are not direct observations, but deducted from total wage expenses divided by total working hours.

Figure 5.6.2 maps the level and development of fixed paid and piecework labor within public road construction 1850–1940 and public railway construction 1873–1940. As revealed in the figure, hands engaged in piecework were paid significantly better than those engaged on fixed salaries. An exception is reported for road construction in the early 1920s, when the postwar depression caused less demand for labor. This primarily affected workers hired on short term and renewable piecework contracts, whereas workers on fixed long term contracts kept their full jobs longer.

FIGURE 5.3 Daily wages for piecework and fixed contracts in construction, in NOK, 1850–1940. Semi-logarithmic scale.



Sources, Wedervang Archive, W118, W119A, W120A, W245 and W249 and Alme 1993, 64–65.

From the interwar period we also include bricklayers, port (harbor) construction and maintenance workers and telegraph construction and maintenance workers into our series. These data were recorded and published by Statistics Norway annually with coverage for the up to 40 main cities and towns at the time. They were also taken at different months of the year. Hence, their coverage

⁶⁰Wedervang Archive, W245 and W249 and Alme 1993, 64–65.

must be considered good. These series were gathered and reported partly as hourly and partly as daily wages. We have transformed them all into daily wages in order to be able to summarize them consistently into aggregated series.⁶¹

5.6.3 Manufacturing and mining

In order to establish continuous wage series for manufacturing and mining we have to modify various kinds of data and link these to each other. By doing this we are able to come up with nominal series for every fifth year for several occupations as early as 1726–1806, and thereafter, annual series from 1820 onwards till 1940. The data are drawn from a variety of sources, basically the Wedervang Archive, Statistics Norway, records from industrial associations and previous work done on the basis of business archives.

Our first source is the work carried out by Ingeborg Fløystad on wages for labor connected to Baasland and Næs Jernverk, a significant Norwegian iron producer in the eighteenth century, located close to Arendal.⁶² Fløystad reports wages for different occupations within manufacturing and crafts every fifth year, starting in 1726 and ending in 1806. The records give annual wages, where cash, boarding and lodging are all included. They are reported in riksdaler, ort and skilling (previously named schilling). A problem connected to this is the use of different types of the currencies called dalers, which tended to depreciate not only according to their decreasing silver content, but also relative to their formal silver value. Thus, we use the unit closest to the par silver value. Thereafter we have spliced the series in overlapping years according to formal exchange rates.⁶³

The next important source is the thesis by Matti Goksøyrr on working conditions at the Alvøen industrial plant outside Bergen, founded in 1897 and a pioneer in paper production based on hydraulic power.⁶⁴ The data cover different sets of observations. Here we use wage data covering the period from 1820 till 1865. Adding data from the Wedervang Archive we arrive at annual series for these years. They represent individual contracts between employees, their families and the plant. The payment depended on the contracts and remained fixed for several years. The wage level was, thus, a consequence of when the contracts were signed, the size of the family and the number of working hands in the family. Goksøyrr did not find signed contracts for every year. Thus, his series of cash wages tend to be stable over longer periods, which was in fact common at the time.

In addition to the cash wages, boarding and lodging counted for a significant part of total wages of the labor force at Alvøen. As already mentioned, consumption surveys from the mid 1800s provide us with information on the size of these non-cash payments. We arrive at about 60 per cent in 1850 and around 70 per cent in the early 1820s. By using the previously established consumer price index for Norway as indicator of the price movements of the non-cash wages, we are able to express these in current prices instead of fixed ratios, which is common among most writers on this topic. We add

⁶¹NOS 1920–1940.

⁶²Fløystad 1979, 595–596.

⁶³Eitrheim 2005, 8–10 and Grytten 2005, 65–66.

⁶⁴Goksøyrr 1982.

this to the cash wages and arrive at annual nominal wages 1820–1865.⁶⁵

In the Wedervang Archive we also find relevant wage information dating back to the early decades of the nineteenth century. A central source here is the records from Cappelen-Ulefoss, containing data of more than 20 different kinds of occupations related to manufacturing 1833–1867.⁶⁶ This source reveals that women were often paid only 25–30 per cent in cash wages, compared with men for similar types of manufacturing work. The files have significant lacunas, but are nevertheless very detailed, with records of names, dates of birth, family conditions and responsibilities, kinds of work and working hours. Thus, we are able to construct an annual series for daily wages among manufacturing workers at this important Norwegian industrial plant at the time. Our series derived from the Cappelen-Ulefoss files are for most years made up of more than 100 observations.

Another important source in the Wedervang Archive is economic records from the Kongsberg Sølvverk, a state controlled silver mine company dating back to 1624. In the records we have found wage data from 1820 onwards, just after the company restarted its silver production after a halt during the Napoleonic wars. The data report sporadic wages for blue collar, forestry and transport workers, whereas it is easier to follow the annual development of mining and manufacturing workers.⁶⁷ Due to the implicit way of reporting salaries, we hold these wage data to be somewhat inferior to the data collected from Cappelen-Ulefoss and Alvøen.

From the middle of the nineteenth century, the Wedervang Archive is the by far best source for manufacturing wages. The archive holds wages for various occupations in various manufacturing companies. Admittedly, the data are somewhat biased as the eastern parts of the country are best represented. For the 1830s and 1840s the data in the archive are dominated by huge industrial conglomerates within mining, wood and paper.⁶⁸ From the late 1840s textiles and mechanical industry take over this dominant position.⁶⁹ Women are included in the material for most years. For some series we have to add boarding and lodging. From the 1870s the archive reports annual data on the basis of some thousands observations of hourly, daily, weekly monthly and annual wages.⁷⁰ The most common unit is daily wages. The number of observations is increasing until 1920, thereafter falling.

Christian Venneslan's PhD-dissertation on the Norwegian manufacturing industry 1896–1939 provides new reliable and valid series of wages in manufacturing companies under the governmental demanded national insurance scheme. Most employees of companies of a certain size were covered by this arrangement, and thus, the series provided by Venneslan are of high value.⁷¹

For the last years prior to 1920 Statistics Norway becomes our main source for manufacturing wages, collected in up to almost 50 towns and industrial settlements.⁷² Additionally, Statistics Nor-

⁶⁵Grytten and Minde 1998, 52–54 and Grytten 2004, 90–93.

⁶⁶Wedervang Archive, W046, W048, W055 and W082.

⁶⁷Wedervang Archive W417

⁶⁸Wedervang Archive, W046, W047, W048, W055 W074, W082 and W417.

⁶⁹Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

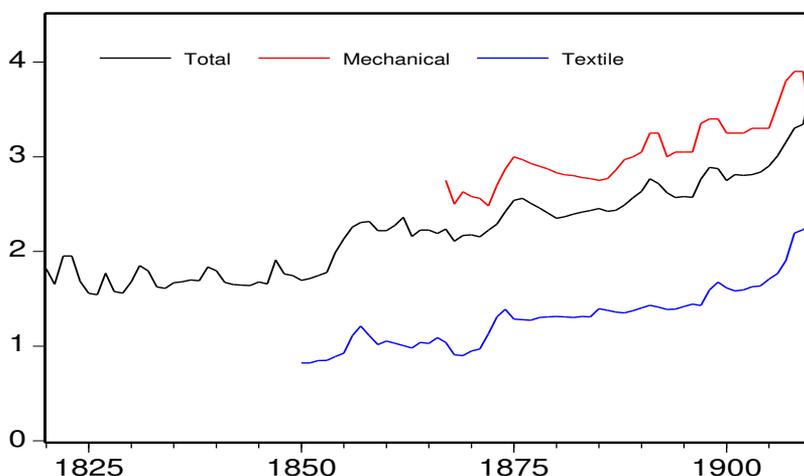
⁷⁰See e.g. Wedervang Archive. W284.

⁷¹Venneslan 2007.

⁷²NOS 1918–1941.

way give data on average manufacturing wages for key manufacturing branches and aggregated series for manufacturing as a whole. These, of course, have a very broad coverage of manufacturing wages in the interwar period, and represent both valid and reliable aggregated series of manufacturing wages during the last decades prior to World War II. However, in the data there is a negative bias towards new manufacturing industry in suburban areas and towards smaller companies located all over the country. Manufacturing plants organized in employers' federations are also better represented in these data than non-organized companies.⁷³ Erling Petersen is a main source for wages in mechanical engineering industry 1910–1940, through the rich and convincing data collection and presentation in his book on the Norwegian Employers Association 1900–1950.⁷⁴

FIGURE 5.4 Daily nominal wages in manufacturing industry, in NOK, 1820–1910.



Source, Goksøyrr 1982, NOS 1918–1941, NOS 1949, 364–365, Petersen 1950, 670–671, Grytten 1992, 159–167, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417.

In Figure 5.6.3 we compare daily nominal wages for the “new” industries mechanical engineering and textile. As seen from the figure, mechanical (engineering) industry soon became a wage leader, whereas textile was lagging constantly behind. A major reason for the latter development was of course the huge share of female and young labor force in the textile industry, whereas mechanical engineering on the other hand had a significant share of skilled male workers.

⁷³NOS 1949, 364–365 and NOS 1918–1941.

⁷⁴Petersen 1950, 670–671.

5.6.4 Crafts

The data for crafts, like manufacturing, start in 1726. Again, our first source is Ingeborg Fløystad's work on the Baasland and Næs iron plant.⁷⁵ Fløystad reports five-annual wages for hammer-men and their assistants in manufacturing and for craftsmen connected to the iron plant in general. She also includes boarding and lodging in her series. The series constructed by Fløystad are reported as wages per year. In order to make them comparable with other data for crafts they are expressed as daily wages here by dividing them by the estimated number of 300 working days per year. These series conclude in 1806, just before the start of the high inflation period connected to the Napoleonic wars.

Thereafter, the Wedervang Archive is again our main source. First, we use wage data for senior blue-collar workers at the Kongsberg Sølvverk (silver plant) starting in 1820. These data report craftsmen responsible for smaller labor units. Again, the files basically provide us with implicit material on wages, which have to be extracted from financial records.⁷⁶ However, they serve as the best indicator we have available for salaries in crafts 1820–1833. The records stretch further up towards the end of the nineteenth century. We use them up to 1850. Boarding and lodging has been added here according to the same principles as for manufacturing workers.

We have persistent wage data on crafts from 1833 onwards. Most data for the first decades are taken from the Cappelen-Ulefoss industrial plant.⁷⁷ From 1875 the data have a significantly better coverage, reporting daily wages for painters, masons, carpenters, bakers, tailors, shoe makers. These data were basically collected in urban areas, i.e. in 18–40 towns and cities. From 1915 they include eleven different occupations within crafts, and data are given for both urban and rural labor nation-wide, despite a clear Oslo bias. Thus, the data from 1875 onwards reflect thousands of observations.⁷⁸ After 1915 Statistics Norway takes over as our most important source. They also reports an aggregated series of daily wages for skilled artisans 1914–1940, with a significant lacuna during three of the war years 1915–1917.⁷⁹

A problem with the data from Oslo is that they suddenly start chiefly to report piecework during the second half of the 1890s, and they also to some extent give priority to tariff wages compared to *ex post* paid wages. However, the generous information in the Wedervang Archive provides the opportunity to adjust for these pitfalls. This has not been done previously, and is, thus, done for the first time here. By revising the data previously used and adding new unused data from the archive we arrive at new series with more moderate fluctuations both at the second part of the 1870s and at the second part of the 1890s. Figure 5.6.4 clearly reveals the differences between the “revised” and the “old” figures.

This latter series from Statistics Norway shows higher wages than the other series covering the

⁷⁵Fløystad 1979, 595–596.

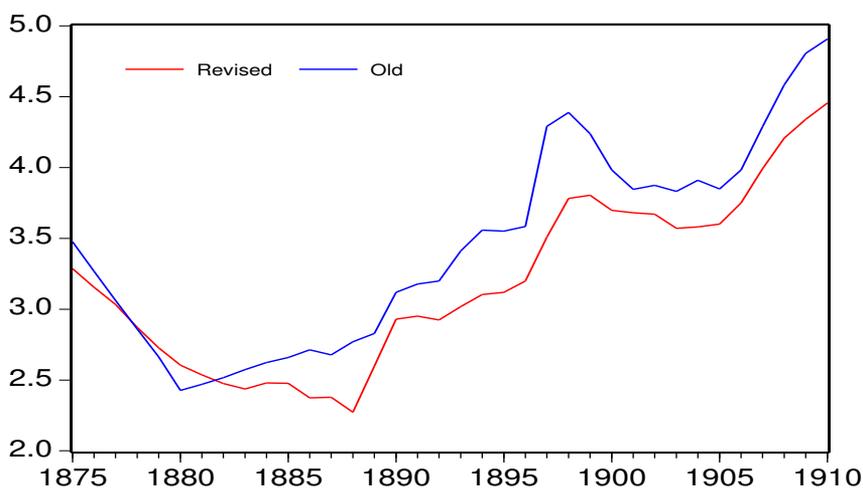
⁷⁶Wedervang Archive, W417.

⁷⁷Wedervang Archive, W046 and W055.

⁷⁸Wedervang Archive, W284.

⁷⁹NOS 1915–1941 and NOS 1949, 364–365.

FIGURE 5.5 Daily nominal wages for crafts, old and revised version, in NOK, 1875–1910.



Sources, Old: Alme 1993, 77–79. Revised NOS 1949, 364–365, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, W046, W055, W284 and W417.

same period. This is due to the fact that the series only include skilled artisans, whereas the other series also reflect artisans under training. The latter series is also more heavily based on artisans in organized industrial companies, which generally had higher wages than elsewhere. Finally, the aggregated series on skilled artisans from Statistics Norway does not include suburban labor to the same degree as the other series. Thus, they show higher wages.

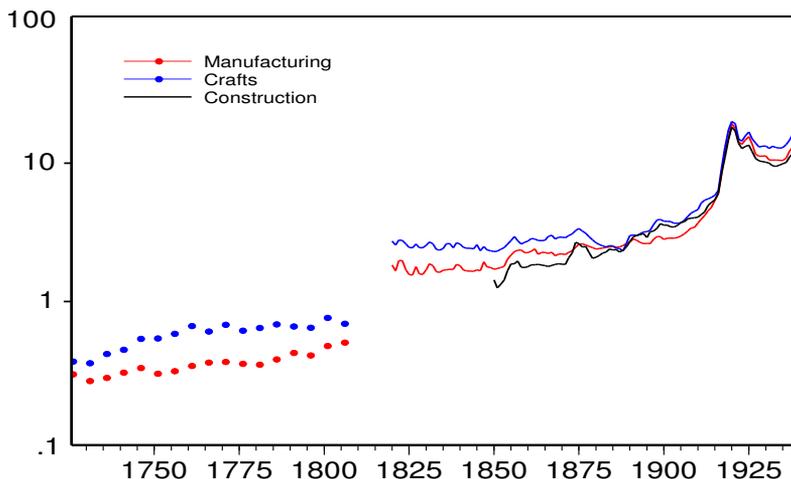
A drawback with the data on crafts is the wide exclusion of women. However, very few women had such occupations before the post World War II-period. Thus, the series presented here represent a fair share of labor in this industry.

Figure 5.6.4 shows the developments in representative average nominal wages for manufacturing, construction and crafts in Norway 1726–1940. Representative averages are meant as weighted averages according to the representability of the series. Thus, we only use the most representative and solid data sets. These are weighted by the size of the corresponding industry they seem to represent.

5.6.5 Communications

This industry is perhaps one of the most challenging in order to construct valid, reliable and persistent series. A major problem is to decide which occupations that historically were engaged within communications. Should, e.g. railway and telegraph maintenance in the nineteenth century be considered construction or communication? A related problem is that the sources do not always reveal differences of occupations. In other words: what does the term railway-worker include? In some cases

FIGURE 5.6 Daily nominal wages in construction, manufacturing and crafts, in NOK, 1726–1940. Semi-logarithmic scale.



Sources, Construction: Hodne, Grytten and Alme 1995, 242–243 ,Alme 1993, 64–65, NOS 1920–1940, NOS 1949, 365, Wedervang Archive, files W118, W119A, W120A, W245 and W249. Manufacturing: Fløystad 1979, 595–596, Goksøyr 1982, NOS 1918–1941, NOS 1949, 364–365, Petersen 1950, 670–671, Grytten 1992, 159–167, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, files W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417. Crafts: Fløystad 1979, 595–596, NOS 1915–1941, NOS 1949, 364–365, Hodne, Grytten and Alme 1995, 240–241 and Wedervang Archive, files W046, W055, W284 and W417.

it may include conductors, cleaners, maintenance workers, construction workers and even railway station staff. In many cases we do not have sufficient information about the observations to separate one group from the other. Thus, it is tempting to define this anonymous group of railway workers as part of the communication industry. This is in principle, what we have done here.

Our data, compiled from the Wedervang Archive, start in 1850 with public road construction workers providing their own horses. Thus, these men obviously provided transport or communication services. The number of daily observations varied between 225 in 1851 and 29,685 in 1896. The data were originally assembled all over the country.⁸⁰ Since the payments included the hire of the workers' horses, they are of course higher than corresponding series of workers not providing their own horses. In the 1850s the difference seems to have fluctuated around 100 per cent, i.e. a 100 per cent wage compensation for bringing ones own horse. In the 1890s the compensation fluctuated around 29–36 per cent. The gap was closing even further and reached 22 per cent in 1914.⁸¹

From 1854 the mentioned data are supplemented with other files from the Wedervang Archive. In this case these are records of daily wages from railways, i.e. the Norwegian Main Railway Network

⁸⁰Wedervang Archive, W118, W119A, W120A and W249.

⁸¹Alme 1993, 62–63.

1854–1910.⁸² The staff of the archive had to work fast with these sources, as they were in the process of being destructed due to reluctance of investigation into internal affairs by the railway trade union. However, the Wedervang staff was able to compile information on daily wages for up to 237 workers during a single year.⁸³ To the degree they were provided with food and housing by their employer this was basically included in their cash wages. Thus, we do not have to add extras for boarding and lodging in order to compare this group with other groups of occupation.

From 1915 we can also utilize data from Statistics Norway. From then on we have data on forestry transport by labor providing their own horse.⁸⁴ From 1920 onwards, Statistics Norway also give data for drivers. They include both horse drivers and motor drivers, and thus, reflect an important part of passenger and goods transport nation wide. From 1921 the records from Statistics Norway also include an aggregated series for labor in ports occupied with maintenance, transportation, and loading and unloading cargo and passenger vessels.⁸⁵

From 1918 onwards Statistics Norway reports hourly wages for telegraph workers, and from 1921 daily wages paid by port authorities. Data are given for both fixed wages and piecework.⁸⁶ The sources do not always distinguish between construction, maintenance and communication work, and the data are presented in an aggregated form. Unfortunately we have not been able to solve this problem by looking into the original sources, since the best tracks we find also give aggregated series. Thus, we include these series both under construction and communication.

In Figure 5.6.5 we try to illustrate the uneven development of wages within communication inclusive and exclusive of horses provided by the hired labor force. This is not a straightforward task, as the data do not cover the same occupations during the entire period. Thus, we have to splice different kinds of occupations within transport. In consequence, the levels of wages for some occupations have to be adjusted upwards, whereas others have to be adjusted downwards. Anyhow, the graph gives information both on levels and developments of wages for labor providing and not providing their own horse. The figure also plots a graph for average wages in communication 1850–1940.

We read from the figure that the relative wages of manpower providing their own horse came down until the first years of World War I. During the war the supply of horsepower became insufficient, and thus, we see a rapid relative increase in wages for hands providing their own horses. This development continued during the post-war boom from 1919 to the spring of 1920. The difference was thereafter reversed during the years of crises both in the 1920s and 1930s. In the mid-1930s the extra payment for providing ones own horse became marginal according to this graph. However, for this decade the wage data are not easily comparable, as wages for men with their own horses basically are taken from forestry, which was more depressed than most other industries during the 1930s. On the other hand, the negative development of extra payment for horses mirrors the trend towards of more motorized vehicles, and thus, surplus in supply of pure horsepower.

⁸²Wedervang Archive, W058.

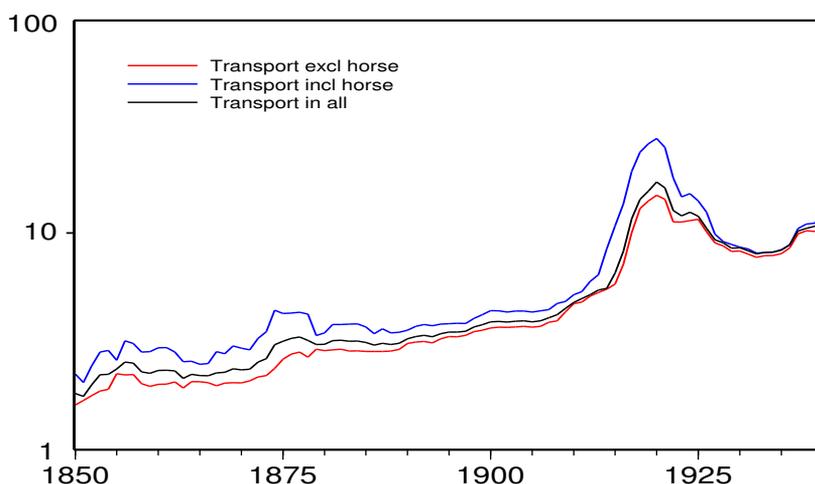
⁸³Alme 1993, 19 and Wedervang Archive, file 058.

⁸⁴NOS 1949, 367.

⁸⁵NOS 1949, 365.

⁸⁶NOS 1918–1941.

FIGURE 5.7 Daily nominal wages in domestic communications, in NOK, 1850–1914. Semi-logarithmic scale.



Sources, Wedervang Archive, files W058, W118, W119A, W120A, W245, W249 and NOS 1949, 366–367 and NOS 1918–1941.

5.6.6 Maritime transport

We present wages for sailors from the merchant fleet from 1751 till 1940, which means that these series stretches almost eighty years longer back than most previously established series for seamen in the Norwegian merchant fleet. Additionally, the new series presented here include all capacities of crew listed at all ports where the records were taken. For the years up to 1844, we have data from sailing vessels only, since steamers were not permanently introduced to the Norwegian ocean going merchant fleet at that time.⁸⁷ From 1844 till 1921, we have data from sailing and steam vessels. Diesel motor ships are added when they first came into use in the early 1900s.⁸⁸ Finally, from 1920/1921 we have data for steam and motorized ships. In the records, seamen’s wages are measured as monthly wages, without boarding and lodging.⁸⁹

The Wedervang Archive is used as source up till 1921. The section containing maritime wages is one of the richest and most impressive in the archive. The data in the section was collected from basically three types of sources. The first, which is a minor source, is *discharge lists* (“avmønstringslister”).⁹⁰ They were forms completed when sailors were discharged in domestic ports. The second source is *crew lists* (“bemandingslister”).⁹¹ These contain detailed information on the voyage, crew, replacement of crew and their salary in domestic and foreign ports. In many ways

⁸⁷Wedervang Archive, file W043.

⁸⁸Wedervang Archive, file W044.

⁸⁹Akstun 1960, 45–52 and NOS 1921–1941.

⁹⁰Wedervang Archive, files W173, W193, W320 and W407.

⁹¹Wedervang Archive, files W327, W329 and W330.

the *crew lists* constitute the best sources, since they include replacements in foreign ports. However, they were not utilized by the Wedervang team very often. The third, and most important source is *recruitment lists* (“pãmønstringslister”), i.e. forms completed when sailors were recruited.⁹² These provide information on the name of crew members, residence, occupation on board, port and date of signing-on, and wages. One should note that this information is given only on crew joining in Norwegian ports on Norwegian ocean going vessels. Domestic ocean transport is excluded from the data.

The *recruitment lists* form by far the bulk of data on maritime labor in the archive. The wage data in the present paper are, thus, basically compiled from the *recruitment lists*. The total number of monthly wage observations taken from the archive is almost 690000, of which close to 440000 are taken from sailing vessels, and the rest from steam ships and a few thousands from motor engine vessels.⁹³ The seamen’s wages in the archive are compiled from 26 major ports. Records are taken for 26 capacities of crew, of which 15 are from sailing ships and 25 cover steam or motorized ships.⁹⁴ Table 5.1 reports the number of observations by crew capacity for the Norwegian ocean going merchant fleet reported in the Wedervang Archive and used in the present work.

TABLE 5.1
Number of observations applied to present wages for sailors 1751–1921

	Number of observations		In all
	Sailing vessels	Motorized vessels	
Officers:			
First Mates	64427	26187	90614
Second Mates	10886	10940	21826
Third Mates	11469	12535	24004
Mates		479	479
	42072	2233	44305
Engine Officers:		29100	29100
First Engineers		11088	11088
Second Engineers		14727	14727
Third Engineers		2299	2299
Engineers		986	986
Ordinary Crew:			
Bestmen	320776	93595	414371
Bosuns	20920	1078	21998
Carpenters	10356	4671	15027
Sailmakers	27748	5490	33238
Able Seamen	3505		3505
Ordinary Seamen	121323	42449	163772
Junior Seamen	58089	25691	83780
Boys I (Dekkgutt)	56580	8730	65310
Boys II (Dreng)	9852	5030	14882
	12403	456	12859

⁹²Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188 and W189.

⁹³Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

⁹⁴Wedervang Archive, files W043 and W044

TABLE 5.1
 Number of observations applied to present wages for sailors 1751–1921

	Number of observations		
	Sailing vessels	Motorized vessels	In all
Engine Crew:		73918	73918
Assistant Engineers		1911	1911
Donkeymen		4902	4902
Stokers		55525	55525
Coal Heavers		10696	10696
Engine Boys		884	884
Mess Crew:	52212	28153	80365
Stewards	15599	12155	27754
Cooks and Stewards	8933	535	9468
Cooks	27680	10954	38634
Mess Boys		4509	4509
In all	437415	250953	688368

Sources, Wedervang Archive files W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

The data are taken from several lists in the archive, reporting both local registrations and national aggregates.⁹⁵ By combining these files, missing data have been added and calculation errors and misunderstandings by the Wedervang staff have been discovered and corrected.⁹⁶ The empirical bases of the series are quite strong from the early 1800s, and particularly from 1816 onwards.

For the period up to 1813, the data are reported in riksdaler. For the period 1813–1816, different types of the riksdaler and riksbankdaler have been used. From 1816 through 1876, wages are reported in spesidaler.⁹⁷ From 1877 onwards, they are reported in kroner. We have converted all data into kroner according to the procedure mentioned above.⁹⁸

For the interwar period, we use two different sources: data collected by Frode Akstun and by Statistics Norway. These are both taken from crew lists kept and reported by the ship owner's association.⁹⁹ Unfortunately, the number of crew capacities in these data is down to nine, and they basically account for steam and motor engine vessels. We don't know the exact number of observations these data are reflecting. However, on the basis of our sources, we can estimate them to more than 196.000.¹⁰⁰ The data here are presented without boarding and lodging, since they are omitted in the entire data set. Thus, it is best to exclude them when comparing relative developments within the wage series of the merchant fleet.

Since the well organized files containing sailors' wages in the Wedervang Archive include the number of observations for each port and capacity of crew, it is easy to compute aggregated series. Figure 5.6.6 reports wages for officers, ordinary sailors and mess crew (services), recruited in domestic ports by the Norwegian ocean going merchant fleet 1751–1940.

5.6.7 Domestic services

Also in the case of domestic services the Wedervang Archive is the key source for the early decades of the nineteenth century. For the period 1830–1850, we have traced data on female domestic servants in accounts from major Norwegian farms, basically quoted as daily, but also as weekly or monthly wages.¹⁰¹ These data are partly processed by Gjølberg in his work on farm wages from 1974.¹⁰² We have recalculated them into daily wages for the reason of comparison. According to these records, cash-wages stayed stable, whereas the supplements for housing and lodging fluctuated significantly. We have aggregated data from different farms up to one series. The statistical basis for this series is week, since the amount of annual observations are few, and even in some cases wages are just reported to have been stable over spans of several years. However, they still serve as indicators of the wage development in the period.

⁹⁵Wedervang Archive, files W043, W044, W248 and W329.

⁹⁶Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188 and W189

⁹⁷Wedervang Archive, files W043, W044.

⁹⁸Eitrheim 2005, 8–10 and Grytten 2005, 62–65.

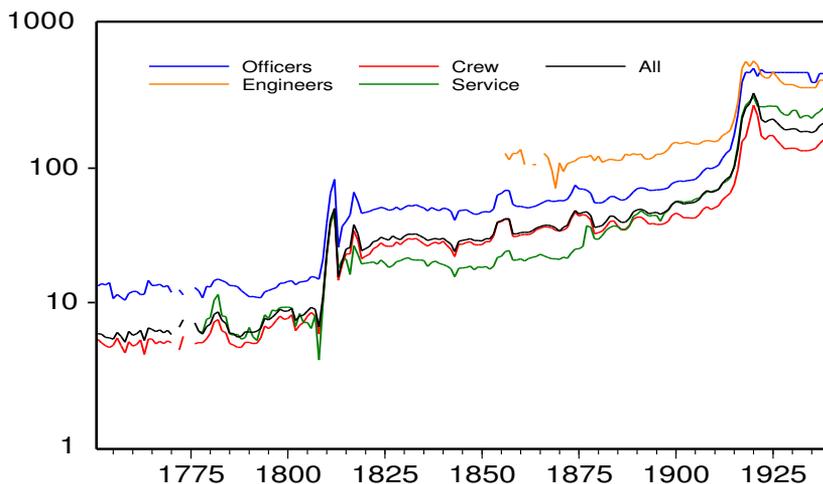
⁹⁹Akstun 1960, 45–52 and NOS 1921–1941.

¹⁰⁰Akstun 1960, 11–25 and NOS 1969, 77–80.

¹⁰¹Wedervang Archive, files W028 and W204.

¹⁰²Gjølberg 1974, 85–107.

FIGURE 5.8 Monthly wages for sailors in the Norwegian merchant fleet, in NOK, 1751–1940. Semi-logarithmic scale



Sources, Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349, Akstun 1960, 45–52 and NOS 1921–1941.

For the period between 1850–1920 the records improve significantly. Statistics Norway gives quinquennial data on wages for domestic male and female servants in rural and urban areas for this period.¹⁰³ The records are given for cash-wages only. Thus, one has to add for non-cash supplements, such as food and housing. By looking into the original material for these records, copied and kept at the Wedervang Archive, we find that there are some minor discrepancies between these copies of the original sources and the figures given by Statistics Norway for the first decades. Thus, we adjust the latter accordingly.

Alongside these records, we use Torill Lønningdal’s aggregated annual series of wages for domestic female servants on major farms in eastern Norway 1850–1910.¹⁰⁴ These are constructed on the basis of files from the Wedervang Archive.¹⁰⁵ We use these records, with assistance from Ole Gjølberg’s work on the wage development of agricultural workers and the annual series for female domestic servants in nineteenth century Norway, to construct estimates of annual wages for male servants from 1850 onwards.¹⁰⁶ It is reassuring that the records from the Wedervang Archive and Statistics Norway are closely correlated both in levels and in movements.

We run into two major challenges working with the data given for 1850 onwards. In the first place, they are primarily given as annual, secondarily as monthly or weekly salaries. In order to

¹⁰³NOS 1949, 366–367.

¹⁰⁴Lønningdal 1984, 141–163.

¹⁰⁵Wedervang Archive, files W009, W013, W014 and W021.

¹⁰⁶Gjølberg 1974, 85–107.

improve their comparability, we transform them into daily wages. Then, the central question is: how many days a year did they work? From the work by Lønningdal we know that it was common with one day off per week including vacations, which were not commonly given.¹⁰⁷ This lasted way up to World War II. Hence, the number of working days should be 313 per year. By dividing annual cash wages with these we arrive at daily numbers.

Our second challenge is to add for non-cash payments, basically housing and food (boarding and lodging) provided by the household or the farm where they served. Lønningdal has suggested fixed sums to be added to cash wages. These are given for periods stretching over several years.¹⁰⁸ However, by examining the composition of consumption expenditures from the nineteenth century, we conclude that the supplements must have been given a far too high value.¹⁰⁹ By finding the share of the household budget used on food and housing, we find reasonable sums to be added to the cash wages.¹¹⁰ These values differed between town and countryside. Their value is adjusted according to the price movements for food and housing in the Norwegian consumer price index for the period. Hence, by adding these extras to the cash wages we arrive at annual series of nominal daily wages for domestic servants stretching until World War II.

From 1915 Statistics Norway gives annual records of domestic female servants, and from 1918 also for cleaning and laundry ladies.¹¹¹ These data are given for the urban areas. By taking a closer look at the records from the statistical office, we notice that there is some confusion about boarding and lodging. An example of this can be taken from the office's publication *Statistical Survey 1948*. According to table 194, page 367, female domestic servants in rural areas earned an average annual salary of 291 kroner, including boarding and lodging in the early 1930s. This implies daily wages, boarding and lodging included, below one krone, which is significantly less than half of the value of boarding and lodging calculated by Statistics Norway for female domestic servants in urban areas. By crosschecking the data, we notice that the annual series for rural domestic services do not include boarding and lodging. We must also conclude, according to consumption surveys, that the values for non-cash payments are far too high in the other tables by the office.¹¹² By using the cash-wages and adding estimated non-cash wages provided for these women on the basis of consumption surveys and price developments, we obtain representative series of their full wages.¹¹³

To obtain annual wages for male and female servants in the urban areas, we have interpolated with the development of wages for men and women serving in rural areas. The interpolations are run between the five-annual observations up till 1915. For male labor in rural domestic services we have interpolated between the five-annual observations 1850–1875 with the help of series for domestic services in agriculture left by Gjølberg along with corresponding female series by Lønningdal.¹¹⁴

¹⁰⁷Lønningdal 1984, 23–36.

¹⁰⁸Lønningdal 1984, 104–109.

¹⁰⁹Minde and Grytten 1997, 61–82.

¹¹⁰Grytten and Minde 1998, 42–58.

¹¹¹NOS 1949, 364–365 and NOS 1918–1941.

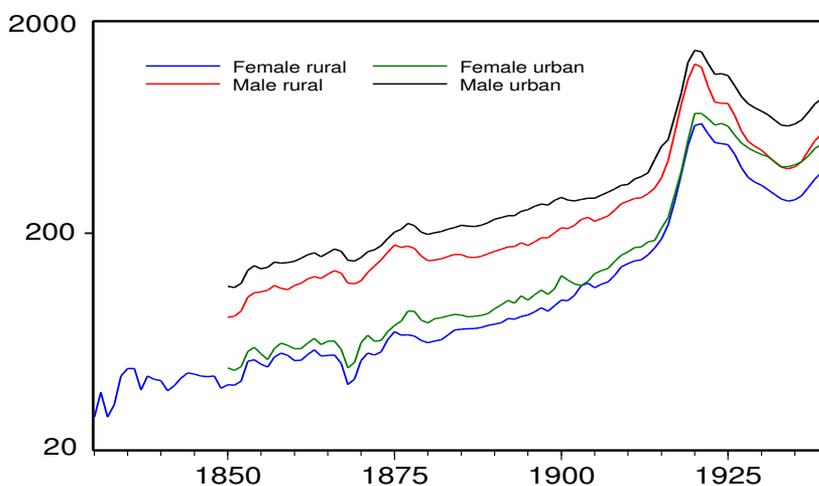
¹¹²Grytten 1992, 162.

¹¹³NOS 1978, 530–532 and 576 and Grytten 2004, 92–93.

¹¹⁴Gjølberg 1974, 61–68 and 94–107.

This, of course, means that three of the four data sets for domestic services before 1875 have weaker foundation than most other series. Figure 5.6.7 shows the development of urban and rural wages for domestic services both for men and women.

FIGURE 5.9 Annual wages for domestic servants, incl. boarding and lodging, in NOK, 1830–1940. Semi-logarithmic scale



Sources, Wedervang Archive, files Wedervang Archive, files W009, W013, W014, W021, W028 and W204, NOS 1949, 364–367, NOS 1918–1941, Gjølberg 1974, 61–68 and 85–107, Lønningdal 1984, 23–36, 104–109 and 141–163, Minde and Grytten 1997, 61–82, Grytten and Minde 1998, 42–58, NOS 1978, 530–532 and 576 and Grytten 2004, 92–93.

5.6.8 Public services

This is in fact one of the most difficult groups to map wage developments for. Neither the Wedervang Archive nor Statistics Norway is rich on wage data from this sector. Admittedly, the Wedervang Archive holds some sporadic data from the early nineteenth century, but these are not consistent with the series presented here.¹¹⁵ Also, Elisabeth Bjørsvik has studied salaries for public servants in her PhD-dissertation on the public sector's contribution to GDP in Norway 1830–1865. However, she does not give consistent series of individual wages.¹¹⁶

The best available source is probably Kjell Bjørn Minde, who studied the profitability of higher education in Norway 1885–1960. In his work he gives annual salaries for public servants according to their tariffs.¹¹⁷ We neither know the composition of employees nor how long they had been serving. In addition, we do not now their actual extra incomes for family responsibilities or compensation

¹¹⁵Wedervang Archive, file W028.

¹¹⁶Bjørsvik 2004, 290–310.

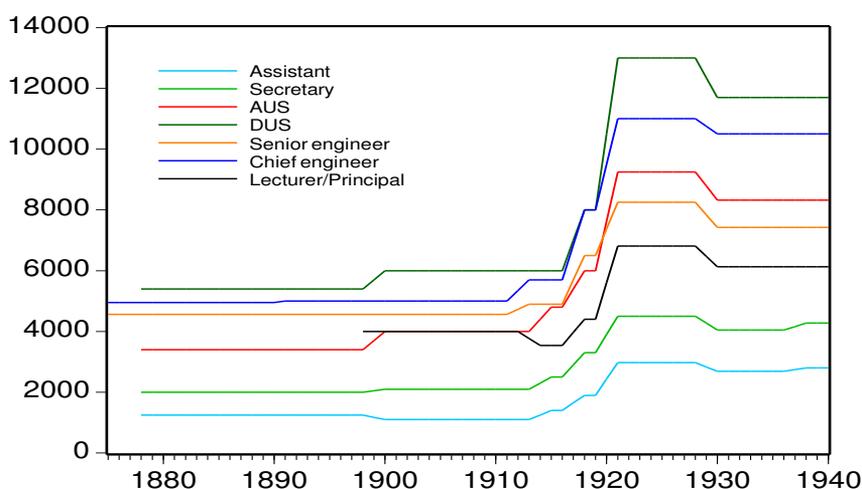
¹¹⁷Minde 1993, 25–123* (appendix).

for high inflation periods. Hence, these data are just tariffs and not at all *ex post* wages. Thus, they cannot be compared with the other figures presented here. They do not fluctuate as much as the other series, and in particular during high inflation periods they do not step up as much as wages for other occupations.

Anyway, on the basis of the work by Minde, we present average annual tariff wages for civil servants hired by both the central and local governments. These are civil servants employed by the central ministries, i.e. assistants and senior assistants, secretaries and senior secretaries, undersecretaries of state (AUS) and deputy undersecretaries of state (DUS). In addition, we present central government tariff wages for lecturers and training principals, assistant engineers, engineers, senior engineers and chief engineers.

Figure 5.6.8 offers a picture of the levels and developments of tariff wages for employees in the public sector from 1875 till 1940. Note the stability in relative wages between the different occupations.

FIGURE 5.10 Annual tariff wages for civil servants, in NOK, 1875–1940



Source, Minde 1993, 25–123* (appendix).

5.7 Conclusions

This chapter offers an overview of existing, new and revised historical wage figures for different professions within eight main industries in Norway from the early eighteenth century till 1940. The main industries represented are agriculture and forestry, construction, manufacturing and mining, crafts, communications, maritime transport, domestic services and public services. The most long-

reaching series start as early as 1726, i.e. manufacturing and crafts, whereas the series with the highest coverage, i.e. sailors, start in 1751. All series presented here conclude in 1940. From the post-World War II years and onwards, Statistics Norway has a valid and systematic coverage of wage data, which can be spliced with those presented here. This is discussed in Chapter 6 of this book.

Three major sources have been utilized in order to compile the data. The most important is the Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices, kept at the Norwegian School of Economics and Business Administration in Bergen. The archive holds an impressive number of observations and is probably one of the richest of its kind in the world. The second most important source is records from Statistics Norway, whereas the third important source is previous work carried out on the basis of private business archives.

In order to make our data comparable, we have transformed the cited wages into one basic unit of account within the different professions. All series are transformed into kroner. This is in principle done by using par exchange values between outgoing and incoming currencies at the moment of exchange. Most series are also presented in daily wages here. However, for sailors we offer persistent and continuous series on monthly wages. As for public servants, we use annual salaries. For all groups we use *ex post* wages, except for employees in the public sector, where we use tariff wages. Thus, they cannot be directly compared to the other series.

We include both cash and non-cash payments in most of our series. Hence, we have calculated the value of boarding and lodging and added to the cash payments when necessary. However, this is not done for sailors. The main reason for this is that these data are reported persistently without boarding and lodging for the entire period. Also, boarding and lodging was not necessarily considered part of the sailors' wages. The sailors still had their own houses and provided their families own food.

The figures provided here should make a sound ground for comparisons between professions, within periods and over time. They also make it possible to compare payments for men compared to women, piecework compared to fixed wages and urban labor compared to rural labor.

Bibliography

- Bairoch, Paul and Maurice Levy-Leboyer (eds) 1981, *Disparities in economic development since the industrial revolution*, London: Macmillan.
- Bekkelund, Per Kr. 1977, *Veibygging i Finnmark 1870–1905: bevilgning – rekruttering – lønn*, Bergen: NHH.
- Bergh, Trond and Tore Jørgen Hanisch 1984, *Vitenskap og politikk. Linjer i norsk sosialøkonomi gjennom 150 år*, Oslo: Aschehoug.
- Bjørsvik, Elisabeth 2004, *Public services in Norway 1830–1865 within the framework of historical national accounts*, Bergen: NHH.
- Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds.) 2004, *Historical Monetary Statistics for Norway 1819–2003*, Occasional Paper no. 35, Oslo: Norges Bank.
- Eitrheim, Øyvind and Jan F. Qvigstad (eds.) 2005, *Tilbakeblikk på norsk pengehistorie: historisk monetær statistikk for Norge*, Occasional Paper no. 37, Oslo: Norges Bank.
- Ellingsæther, Sverre 2007, *Konsum og priser i Norge 1870–1910*, Bergen: NHH.
- Fischer, Lewis R. and G. R. Panton (eds) 1985, *Change and adaptation in maritime history: the North Atlantic fleets in the nineteenth century*, St. John's: MHG.
- Fischer, Lewis R. and Helge W. Nordvik 1986a, "Maritime transport and the integration of the North Atlantic economy 1850–1914", Fischer, Wolfram, R. Marvin McInnis and Jürgen Schneider (eds), *The emergence of a world economy 1500–1914*, Wiesbaden: Klett-Cotta, 519–544.

- Fischer, Lewis R. and Helge W. Nordvik 1986b, “Fish and ships: the social structure of the labour force of Haugesund, Norway in the 1870s”, *Maritime historical yearbook*, Bergen: Bergen Maritime Museum, 139–170.
- Fischer, Lewis R. and Helge W. Nordvik 1986c, “Salaries of the sea: maritime wages in Stavanger 1892–1914”, *Stavanger Museum’s yearbook*, Stavanger: Stavanger Museum, 103–132.
- Fischer, Lewis R. and Helge W. Nordvik 1987a, “From Namsos to Halden: myth and realities in the history of Norwegian seamen’s wages”, *Scandinavian Economic History Review*, 1/1987, 41–66.
- Fischer, Lewis R. and Helge W. Nordvik 1987b, “Myths and realities in Baltic shipping: the wood trade to Britain 1863–1908”, *Scandinavian Journal of History*, 2/1987, 99–116.
- Fischer, Lewis R. and Helge W. Nordvik 1988a, “Floating capital: investment in the Canadian and Norwegian merchant marines in comparative perspective 1850–1914”, *Scandinavian – Canadian Studies*, vol 3, Ottawa, 17–42.
- Fischer, Lewis R. and Helge W. Nordvik 1988b, “International maritime labour 1863–1900: wages and trends”, *The Great Circle*, 1/1988, 1–21.
- Fischer, Lewis R. and Helge W. Nordvik 1988c, “Wages in the Norwegian maritime sector 1850–1914”, Fischer, Lewis R. and Helge W. Nordvik (eds), *Shipping and trade in the northern seas*, manuscript, Bergen/St. John’s, 14–35.
- Fischer, Lewis R. and Helge W. Nordvik 1988d, “Regional wages in the age of sail: the price of sailing ship labour in towns along the Oslofjord 1899–1914”, *Norwegian Maritime Museum’s yearbook*, Oslo: Norwegian Maritime Museum, 159–186.
- Fischer, Lewis R. and Helge W. Nordvik 1991, “Norwegian matroser: wages and labour markets for seafaring labour 1850–1914”, *Scandinavian – Canadian Studies*, vol 4, Ottawa, 77–96.
- Fischer, Wolfram, R. Marvin McInnis and Jürgen Schneider (eds) 1986, *The emergence of a world economy 1500–1914*, placeCityWiesbaden: Terra Klotta.
- Fløystad, Ingeborg 1980, *Arbeidsmandens Lod, det nødtøftige Brød: Arbeiderlevestandard og Næs jernverk 1725–1807*, Bergen: University of Bergen.
- Gjøølberg, Ole 1974, *Reallønnsutvikling og levestandard for jordbruksarbeidere ca 1830–1880*, Bergen: NHH.
- Gjøølberg, Ole 1975, “Teoretiske og metodiske problemer ved estimering av norske sjøfolks reallønns og levestandardutvikling 1830–1870”, memo, Bergen: NHH.
- Gjøølberg, Ole 1976, “Om skipsfartens økonomi før 1914: for-forståelse og hypoteser, memo”, Bergen: NHH.

- Gjøølberg, Ole 1977a, "A note on wages, standards of living, and social stability among Norwegian seamen between 1832 and 1914", memo, Bergen: NHH.
- Gjøølberg, Ole 1977b, "Internasjonale skipsfartskonjunkturer 1866–1913", Discussion paper, Bergen: NHH.
- Gjøølberg, Ole 1978a, "A method for analyzing changes in distribution of income – applied to historical data from Norwegian shipping", memo, Bergen: NHH.
- Gjøølberg, Ole 1978b, "Herskap og tjenere: Om hushjelpplønninger i Kristiania 1897–1910", memo, Bergen: NHH.
- Gjøølberg, Ole 1979a, Økonomi, teknologi og historie: analyser av skipsfart og økonomi 1866–1913, Bergen: NHH.
- Gjøølberg, Ole 1979b, "En model for analyser av arbeidsmarked, lønn og økonomisk vekst i Norge 1822–65 og lønnsdata fra Blindern Hovedgaard", Discussion paper, Bergen: NHH.
- Gjøølberg, Ole 1980, "The substitution of steam for sail in Norwegian shipping 1866–1914: a study in the economics of diffusion", *Scandinavian Economic History Review*, 2/1980, 135–146.
- Gladsø, Øivind, Trond Olav Seim and Geir-Helge Sjøtrø 1983, *Dualøkonomi og norsk økonomisk historie 1851–1907*, Bergen: NHH.
- Goksøyr, Matti 1982, *Fra tjener til arbeider? En undersøkelse av Alvøen-arbeidernes rekruttering og lønnsforhold, 1801–1865*, Bergen: University of Bergen.
- Grytten, Ola Honningdal 2000, "Differences in the standard of living in inter-war Norway", *Scandinavian Economic History Review*, 3/2000, 22–41.
- Grytten, Ola Honningdal 2004a, "A consumer price index for Norway 1516–2003", Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds) 2004, *Historical Monetary Statistics for Norway 1819–2003*, Oslo: Norges Bank, 47–98.
- Grytten, Ola Honningdal 2004b, "The gross domestic product for Norway 1830–2003", Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds), *Historical Monetary Statistics for Norway 1819–2003*, Oslo: Norges Bank, 241–288.
- Grytten, Ola Honningdal 2004c, "A Norwegian consumer price index 1819–1913 in a Scandinavian perspective", *European Review of Economic History*, 1/2004, 61–80.
- Grytten, Ola Honningdal 2005, "Historisk lønnsstatistikk 1726–2004", Eitrheim, Øyvind and Jan F. Qvigstad (eds), *Tilbakeblikk på norsk pengehistorie: historisk monetær statistikk for Norge*, Oslo: Norges Bank, 57–80.

- Grytten, Ola Honningdal and Kjell Bjørn Minde 1998, “The demand for consumer goods in Norway 1850–1920”, *Scandinavian Economic History Review*, 1/1998, 42–58.
- Hegreberg, Mona 2003, *En konsumprisindeks for Norge 1871–1910*, Bergen: NHH.
- Hodne, Fritz and Ola Honningdal Grytten 2000, *Norsk økonomi i det nittende århundre*, Bergen: Fagbokforlaget.
- Hodne, Fritz and Ola Honningdal Grytten 2002, *Norsk økonomi i det tyvende århundre*, Bergen: Fagbokforlaget.
- Hodne, Fritz, Ola Honningdal Grytten and Jørund Alme (1994), “Real wages in Norway 1850–1940”, Zamagni, Vera and Peter Scholliers (eds), *Real wages in the nineteenth and twentieth century*, Milan: Bocconi University, 59–72.
- Hodne, Fritz, Ola Honningdal Grytten and Jørund Alme (1995), “Norwegian real wages: trends in prices and wages 1850–1950”, Scholliers, Peter and Vera Zamagni (eds), *Labour’s Reward: real wages and economic change in 19th and 20th century Europe*, London: Edward Elgar, 61–75 and 238–248.
- Jacks, David S. 2004a, *Economic integration and growth in the long nineteenth century*, University of California-Davis.
- Jacks, David S. 2004b, “Market Integration in the North and Baltic Seas, 1500–1800”, *Journal of European Economic History*, 3/2004, 285–329.
- Jacks, David S. 2005a, “Intra- and International Commodity Market Integration in the Atlantic Economy, 1800–1913.” *Explorations in Economic History* 3/2005, 381–413.
- Jacks, David S. 2005b, “Immigrant Stocks and Trade Flows, 1870–1913.” *Journal of European Economic History* 3/2005, 625–649.
- Jacks, David S. 2006, “What Drove 19th Century Commodity Market Integration?”, *Explorations in Economic History*, 3/2006, 383–412.
- Jacks, David S. et al 2002, “Real Inequality in country-region Europe since 1500”, *Journal of Economic History* 2/2002, 322–355.
- Jensen, Olav Harald and Arnljot Strømme Svendsen 1986, *Norges Handelshøyskole femti år*, Bergen: NHH.
- Jenssen, Lars Chr. 1992, *Lønn for strevet. Tarifforhandlinger og hyrer under den sosialdemokratiske orden i Nortraship-flåten*, Oslo: University of Oslo.
- Johansen, Anne Marie Anonsen 2007, *Commodity price integration in Norway 1832–1871*, Bergen: NHH.

- Karlsson, Gunnar (ed) 1987, *Levestandarden i Norden 1750–1914*, Reykjavik: University of Reykjavik.
- Kiel, Anders and Lars Mjøset 1990, Wage formation in the Norwegian industry 1840–1985, *Scandinavian Economic History Review*, 1/1990, 19–49.
- Lønningdal, Torill 1984, *Tjenestejentelønninger i jordbruket: en studie av tjenestejentelønninger på 17 større gårder i østlandsområdet 1850–1910*, Bergen: NHH.
- Minde, Kjell Bjørn 1983, *Fabrikkstedet Ytre Arna: Arbeiderkår 1846–1879*, Bergen: University of Bergen.
- Minde, Kjell Bjørn 1987, “Levestandarden i Norge 1750–1914”, Karlsson, Gunnar (ed), *Levestandarden i Norden 1750–1914*, Reykjavik: University of Reykjavik.
- Minde, Kjell Bjørn 1996, “Levestandarden på fabrikkstaden dei første 75 år”, Mjeldheim, Leiv (ed), *Fabrikken og folket*, Bergen.
- Minde, Kjell Bjørn and Jan Ramstad 1986, “The development of real wages in country-regioncountry-regionNorway about 1730–1910”, *Scandinavian Economic History Review*, 2/1986, 90–121.
- Minde, Kjell Bjørn and Ola Honningdal Grytten 1997, “Konsum og levestandard under industrialiseringen i Norge: endringer i kjøpekraft og privat konsum 1850–1920”, Söderberg, Johan and Lars Magnusson (eds), *Kultur och konsum i Norden 1750–1950*, Helsinki: FHS, 61–82.
- Mjeldheim, Leiv (ed), *Fabrikken og folket*, Bergen.
- Myhre, John Eivind 1986, “Research into Norwegian living conditions in the period 1750–1914”, *Scandinavian Economic History Review*, 2/1986.
- NFI 1987, *Wedervangprosjektet*, Oslo: NSD.
- Nordvik, Helge W. 1981, “Norwegian sailors in the Canadian merchant marine 1863–1914: a preliminary survey”, Hope, Einar (ed), *Studies in Shipping Economics*, Oslo: Bedriftsøkonomens forlag.
- Nordvik, Helge W. 1985, “The shipping industries of the Scandinavian countries 1850–1914”, Fischer, Lewis R. and G. R. Panting (eds), *Change and adaptation in maritime history: the North Atlantic fleets in the nineteenth century*, St. John’s: MHG, 117–148.
- Nordvik, Helge W. 1989, “Professor Dr. Ingvar Wedervang: An Historical Perspective”, paper presented at Nordic Conference on Wage and Price History.
- NOS B 999 1990, *Wage Statistics*, Oslo: Statistics Norway.

- NOS C 46 1991, Wage Statistics, Oslo: Statistics Norway.
- NOS C 100 1992, Wage Statistics, Oslo: Statistics Norway.
- NOS C 181 1993, Wage Statistics, Oslo: Statistics Norway.
- NOS C 188 1994, Historical Statistics 1994, Oslo: Statistics Norway.
- NOS C 250 1994, Wage Statistics, Oslo: Statistics Norway.
- NOS C 345 1995, Wage Statistics, Oslo: Statistics Norway.
- NOS C 411 1996, Wage Statistics, Oslo: Statistics Norway.
- NOS C 494 1997, Wage Statistics, Oslo: Statistics Norway.
- NOS C 630 1999, Wage Statistics, Oslo: Statistics Norway.
- NOS C 722 2001, Wage Statistics, Oslo: Statistics Norway.
- NOS D 285 2002, Wage Statistics, Oslo: Statistics Norway.
- NOS III 321 1895, Arbeidslønninger, Kristiania: Statistics Norway.
- NOS III 61 1888, Tabeller vedkommende Arbeidslønninger 1875, 1880, 1885 samt delvis tidligere Aar, Kristiania: Statistics Norway.
- NOS IV 60 1900, Arbeidslønninger, Kristiania: Statistics Norway.
- NOS V 212 1910, Arbeidslønninger, Kristiania: Statistics Norway.
- NOS V 60 1905, Arbeidslønninger, Kristiania: Statistics Norway.
- NOS VI 157 1919, Lønninger, Kristiania: Statistics Norway.
- NOS VI 93 1915, Arbeidslønninger, Kristiania: Statistics Norway.
- NOS VII 9 1920, Lønninger, Kristiania: Statistics Norway.
- NOS VII 44 1921, Arbeidslønninger, Kristiania: Statistics Norway.
- NOS X 178 1949, Historical Survey 1948, Oslo: Statistics Norway.
- NOS XII. 245 1969, Historical Statistics 1968, Oslo: Statistics Norway.
- NOS XII. 291 1978, Historical Statistics 1978, Oslo: Statistics Norway.
- Petersen, Erling 1950, Norsk Arbeidsgiver Forening 1900–1950, Oslo: NAF.
- Ramstad, Jan 1981, “Reallønnsutvikling og lønns-struktur for kvinner i tekstilindustrien på Sagene i Kristiania under det industrielle gjennombrudd”, working paper, NHH: Bergen.

- Ramstad, Jan 1982, *Kvinnelønn og pengeøkonomi: en studie av kvinners lønn i tekstilindustrien i Kristiania ca 1850–1910*, Bergen: NHH.
- Ramstad, Jan 1983, “Presentasjon av en ny levekostnadsindeks for Kristiania (Oslo) 1850–1910: problem, metode, resultater”, Discussion paper, Bergen: NHH.
- Ramstad, Jan 1984a, “Veiarbeiderlønninger i Hordaland 1856–1920”, Wedervang Archive, Occasional Papers, 1/1984, Bergen: NHH.
- Ramstad, Jan 1984b, “Veiarbeiderlønninger i Hedmark 1854–1920”, Wedervang Archive, Occasional Papers, 2/1984, Bergen: NHH.
- Ramstad, Jan 1985a, “Veiarbeiderlønninger i Sogn og Fjordane 1857–1920”, Wedervang Archive, Occasional Papers, 1/1985, Bergen: NHH.
- Ramstad, Jan 1985b, “Veiarbeiderlønninger i Telemark 1850–1920”, Wedervang Archive, Occasional Papers, 2/1985, Bergen: NHH.
- Reinholdt, Lasse 1975, *Sjømenns lønnsforhold i Tønsberg 1847–1914*, Bergen: NHH.
- Rørvik, Mari 2007, *Boligpriser og norske konjunkturer*, Bergen: NHH.
- Scholliers, Peter and Vera Zamagni (eds) 1995, *Labour’s Reward: real wages and economic change in 19th and 20th century Europe*, London: Edward Elgar.
- Soltow, Lee 1965, *Towards income equality in country-region Norway*, Maddison University of Wisconsin Press.
- Statistical Office of Kristiania 1915, *Husholdningsregnskaper fort av en del mindre bemidlede familier i Kristiania, Bergen, Kristiansand og Hamar i Aaret 1912/13*, Kristiania.
- Söderberg, Johan and Lars Magnusson (eds), *Kultur och konsumtion i Norden 1750–1950*, Helsinki: FHS.
- Teigen, Håvard 1976, *Økonomisk utvikling i Nord-Gudbrandsdalen og Toten ca 1870–1910*, Bergen: NHH.
- Tjeldnes, Agnar 1977, *Vegarbeiderlønninger i Helgeland og Lofoten og Vesterålen ca 1870–1910*, Bergen: NHH.
- Venneslan, Vhristian 2007, *Industrial development in Norway 1896–1939: in view of historical national accounts*, Bergen: NHH.
- Zamagni, Vera and Peter Scholliers (eds) 1994, *Real wages in the nineteenth and twentieth century*, Milan: Bocconi University.

Archival sources

Wedervang Archive, files W009, W013, W014, W021, W027, W028, W030, W032, W034, W035, W036, W038, W039, W043, W044, W046, W047, W048, W049, W054, W055, W056, W058, W063, W071, W072, W074, W075, W080, W081, W082, W089, W091, W118, W119A, W120A, W121, W155, W172, W173, W174, W176, W177, W182, W184, W185, W186, W187, W189, W193, W204, W205, W207, W245, W248, W249, W284, W320, W327, W329, W330, W349, W407 and W417,

5.A Daily wages

5.A.1 Female labor force in agriculture

TABLE 5.A.1
Daily wages for female labor force in agriculture

	Spring	Summer season			Mean	Winter season Work	Total Repr mean
		Summer	Autumn	Others			
1820							0.72
1821							0.64
1822							0.72
1823							0.68
1824							0.58
1825							0.55
1826							0.55
1827							0.64
1828							0.55
1829							0.56
1830							0.58
1831							0.62
1832							0.60
1833							0.57
1834							0.55
1835							0.56
1836							0.56
1837							0.57
1838							0.56
1839							0.62
1840							0.66
1841							0.58
1842							0.58
1843							0.61
1844							0.59
1845							0.60
1846							0.60
1847							0.66
1848							0.60
1849							0.64
1850							0.63
1851							0.65
1852							0.68
1853							0.65
1854							0.80
1855							0.85
1856							0.82
1857							0.83
1858							0.85
1859							0.81
1860							0.82
1861							0.82
1862							0.77
1863							0.83

TABLE 5.A.1
Daily wages for female labor force in agriculture

	Spring	Summer season		Others	Mean	Winter season Work	Total Repr mean
		Summer	Autumn				
1864							0.83
1865							0.78
1866							0.82
1867							0.82
1868							0.80
1869							0.85
1870							0.82
1871							0.83
1872							0.86
1873							1.00
1874							1.13
1875					1.19	0.89	1.12
1876							1.06
1877							1.11
1878							1.02
1879							1.00
1880					1.09	0.83	1.03
1881							1.04
1882							1.06
1883							1.06
1884							1.04
1885					1.12	0.84	1.05
1886							1.02
1887							1.01
1888							1.05
1889							1.05
1890					1.16	0.89	1.09
1891							1.10
1892							1.10
1893							1.18
1894							1.16
1895					1.23	0.93	1.16
1896							1.21
1897							1.44
1898							1.38
1899							1.31
1900					1.36	1.02	1.28
1901							1.22
1902							1.21
1903							1.16
1904							1.35
1905					1.42	1.08	1.34
1906							1.34
1907							1.42
1908							1.44
1909							1.55
1910					1.66	1.29	1.57
1911							1.64
1912							1.71

TABLE 5.A.1
Daily wages for female labor force in agriculture

	Spring	Summer season			Mean	Winter season Work	Total Repr mean
		Summer	Autumn	Others			
1913							1.74
1914							2.00
1915	2.12	2.35	2.22	2.00	2.21	1.78	2.10
1916	2.44	2.66	2.54	2.65	2.59	2.13	2.47
1917	3.35	3.59	3.52	3.66	3.55	2.87	3.38
1918	4.68	5.07	5.10	5.20	5.05	4.09	4.81
1919	5.98	6.49	6.42	6.10	6.31	5.13	6.02
1920	6.81	7.37	7.13	6.76	7.09	5.74	6.75
1921	6.61	7.16	6.94	5.80	6.74	5.44	6.41
1922	5.58	6.02	5.82	4.70	5.63	4.61	5.38
1923	4.88	5.27	5.07	4.45	4.99	4.12	4.77
1924	4.93	5.30	5.12	4.86	5.10	4.24	4.89
1925	4.98	5.32	5.14	4.58	5.07	4.24	4.86
1926	4.47	4.77	4.58	3.80	4.47	3.72	4.29
1927	3.86	4.12	3.99	3.44	3.91	3.22	3.73
1928	3.52	3.75	3.64	3.16	3.56	2.95	3.41
1929	3.36	3.55	3.43	3.13	3.40	2.84	3.26
1930	3.23	3.44	3.34	2.96	3.28	2.78	3.16
1931	3.04	3.26	3.16	2.77	3.10	2.61	2.98
1932	2.84	3.05	2.94	2.60	2.90	2.43	2.78
1933	2.71	2.90	2.80	2.52	2.77	2.32	2.65
1934	2.67	2.87	2.77	2.56	2.75	2.30	2.64
1935	2.72	2.93	2.83	2.63	2.81	2.35	2.69
1936	2.84	3.05	2.96	2.81	2.94	2.47	2.83
1937	3.10	3.32	3.25	3.18	3.24	2.74	3.11
1938	3.37	3.58	3.52	3.31	3.48	3.00	3.36
1939	3.57	3.77	3.71	3.56	3.68	3.17	3.55
1940	3.88	4.11	4.06	3.74	3.99	3.27	3.81

5.A.2 Male labor force in agriculture

TABLE 5.A.2
Daily wages for male labor force in agriculture

	Labor on board (Cash wages)				Summer season work				Winter season	Total Repr mean	
	Day-hired	Summer	Winter	Mean	Board	Spring	Summer	Autumn			Others
1820	0.40				0.46					1.16	
1821	0.40				0.38					1.05	
1822	0.40				0.46					1.16	
1823	0.40				0.42					1.11	
1824	0.40				0.32					0.97	
1825	0.40				0.28					0.92	
1826	0.40				0.28					0.92	
1827	0.40				0.37					1.04	
1828	0.36				0.32					0.91	
1829	0.36				0.33					0.93	
1830	0.38				0.34					0.97	
1831	0.38				0.37					1.02	
1832	0.38				0.36					0.99	
1833	0.38				0.32					0.95	
1834	0.38				0.30					0.92	
1835	0.38				0.31					0.93	
1836	0.38				0.32					0.94	
1837	0.38				0.32					0.94	
1838	0.38				0.32					0.94	
1839	0.43				0.33					1.03	
1840	0.48				0.32					1.08	
1841	0.43				0.28					0.96	
1842	0.44				0.27					0.96	
1843	0.47				0.27					1.00	
1844	0.46				0.27					0.98	
1845	0.45				0.28					0.99	
1846	0.44				0.30					0.99	
1847	0.46				0.34					1.08	
1848	0.43				0.30					0.99	
1849	0.48				0.30					1.05	
1850	0.48	0.61	0.35		0.29				1.23	0.80	1.03
1851	0.50				0.29						1.05
1852	0.52				0.31						1.08
1853	0.47				0.33						1.10
1854	0.61				0.36						1.19
1855	0.65	0.83	0.44		0.38				1.52	1.00	1.26
1856	0.59				0.42						1.19
1857	0.61				0.42						1.21
1858	0.66				0.37						1.29
1859	0.62				0.38						1.27
1860	0.62	1.21	0.44		0.40				1.49	0.93	1.25
1861	0.61				0.41						1.27
1862	0.55				0.40						1.25

Sources: Gjøølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.2
Daily wages for male labor force in agriculture

	Labor on board (Cash wages)				Summer season work				Winter season	Total Repr mean		
	Day-hired	Summer	Winter	Mean	Board	Spring	Summer	Autumn			Others	Mean
1863	0.62				0.40							1.35
1864	0.62				0.40							1.36
1865	0.57	1.23	0.55		0.39					1.59	1.09	1.33
1866	0.60				0.42							1.36
1867	0.59				0.43							1.35
1868	0.56				0.45							1.32
1869	0.63				0.43							1.39
1870	0.60	1.26	0.56		0.42					1.56	1.14	1.34
1871	0.60				0.42							1.35
1872	0.65				0.45							1.40
1873	0.87				0.48							1.64
1874	1.07				0.50							1.85
1875	1.02	1.68	0.89		0.51					2.14	1.60	1.83
1876	0.96				0.50							1.73
1877	1.07				0.51							1.81
1878	0.76				0.47							1.59
1879	0.85				0.43							1.56
1880	0.85	1.53	0.69		0.46					1.83	1.34	1.60
1881	0.87				0.46							1.62
1882	0.90				0.47							1.65
1883	0.92				0.47							1.66
1884	0.91				0.46							1.64
1885	0.92	1.52	0.76		0.43					1.94	1.42	1.65
1886					0.43							1.60
1887					0.42							1.59
1888					0.43							1.63
1889					0.45							1.64
1890		1.26	0.82		0.47					1.99	1.47	1.70
1891					0.47							1.71
1892					0.47							1.71
1893					0.44							1.84
1894					0.44							1.81
1895		1.38	0.90		0.43					2.10	1.58	1.81
1896					0.44							1.89
1897					0.43							2.25
1898					0.45							2.23
1899					0.47							2.12
1900		1.63	1.11		0.49					2.37	1.82	2.07
1901					0.48							2.00
1902					0.47							1.98
1903					0.47							1.90
1904					0.46							2.20
1905		1.73	1.19		0.47					2.50	1.92	2.19
1906					0.48							2.24
1907					0.51							2.38
1908					0.52							2.41

Sources, Gjølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.2
Daily wages for male labor force in agriculture

	Labor on board (Cash wages)				Summer season work					Winter season	Total Repr mean	
	Day-hired	Summer	Winter	Mean	Board	Spring	Summer	Autumn	Others			Mean
1909					0.52							2.60
1910		2.08	1.53		0.54					2.94	2.35	2.63
1911					0.55							2.91
1912					0.59							3.17
1913					0.62							3.43
1914					0.63							3.69
1915		2.82	2.26		0.72	3.64	4.00	3.64	3.32	3.70	3.08	3.55
1916					0.87	4.30	4.72	4.31	4.83	4.56	3.81	4.37
1917					1.08	6.04	6.65	6.12	6.87	6.44	5.37	6.18
1918					1.53	8.40	9.07	8.55	9.26	8.85	7.23	8.45
1919					1.64	10.61	11.35	10.62	10.96	10.94	8.94	10.44
1920		9.05	7.22		1.92	12.03	13.03	12.06	11.95	12.37	9.93	11.76
1921						11.39	12.35	11.41	9.60	11.37	9.08	10.80
1922						9.16	9.85	9.03	7.46	9.02	7.12	8.55
1923						7.75	8.39	7.72	7.01	7.82	6.25	7.43
1924						7.72	8.40	7.78	7.53	7.94	6.42	7.56
1925						7.79	8.42	7.81	7.15	7.89	6.43	7.52
1926						6.94	7.50	6.88	5.84	6.90	5.61	6.58
1927						5.85	6.38	5.79	5.13	5.87	4.74	5.59
1928						5.26	5.73	5.20	4.78	5.31	4.30	5.06
1929						5.02	5.44	4.94	4.62	5.06	4.14	4.83
1930						4.84	5.26	4.79	4.43	4.89	4.01	4.67
1931						4.53	4.93	4.53	4.07	4.58	3.74	4.37
1932						4.19	4.56	4.20	3.78	4.24	3.45	4.04
1933						3.98	4.33	3.97	3.66	4.04	3.27	3.84
1934						3.93	4.27	3.93	3.70	4.00	3.25	3.81
1935						3.99	4.33	4.02	3.84	4.09	3.34	3.90
1936						4.18	4.51	4.20	4.07	4.28	3.52	4.09
1937						4.63	5.02	4.70	4.78	4.82	3.99	4.61
1938						5.10	5.55	5.22	5.06	5.29	4.45	5.08
1939						5.39	5.87	5.50	5.32	5.58	4.72	5.36
1940						5.88	6.38	6.00	5.59	6.03	4.87	5.74

Sources: Gjølborg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

5.A.3 Labor force in forestry

TABLE 5.A.3
Daily wages for labor force in forestry

	Summer season work	Winter season work	Others	Total Repr mean
1913	3.35			3.35
1914	3.54			3.54
1915	3.58		3.69	3.65
1916	4.11		4.59	4.40
1917	5.98		6.93	6.55
1918	9.87	10.67	9.53	9.86
1919	11.22	11.51	11.09	11.21
1920	12.92	13.68	12.60	12.91
1921	10.92	9.44	11.56	10.95
1922	8.23	7.59	8.51	8.24
1923	7.58	7.59	7.58	7.58
1924	7.98	8.19	7.89	7.98
1925	7.44	7.03	7.61	7.44
1926	6.18	5.72	6.38	6.19
1927	5.30	5.08	5.40	5.31
1928	4.88	4.77	4.93	4.88
1929	4.74	4.73	4.75	4.74
1930	4.59	4.51	4.62	4.59
1931	4.25	4.11	4.31	4.25
1932	3.95	3.87	3.99	3.96
1933	3.81	3.77	3.82	3.81
1934	3.85	3.89	3.83	3.85
1935	3.98	4.03	3.96	3.98
1936	4.30	4.44	4.24	4.30
1937	5.14	5.51	4.98	5.13
1938	5.45	5.41	5.46	5.45
1939	5.71	5.87	5.64	5.71
1940	6.29		6.29	6.29

Source, Statistics Norway 1949, 366-367.

5.A.4 Agriculture and forestry

TABLE 5.A.4
Average (mean) daily wages in Agriculture and forestry

	Agriculture		Forestry	Board	Total Repr mean
	female	male			
1820	0.72	1.16		0.46	1.03
1821	0.64	1.05		0.38	0.93
1822	0.72	1.16		0.46	1.03
1823	0.68	1.11		0.42	0.98
1824	0.58	0.97		0.32	0.85
1825	0.55	0.92		0.28	0.81
1826	0.55	0.92		0.28	0.81
1827	0.64	1.04		0.37	0.92
1828	0.55	0.91		0.32	0.81
1829	0.56	0.93		0.33	0.82
1830	0.58	0.97		0.34	0.85
1831	0.62	1.02		0.37	0.90
1832	0.60	0.99		0.36	0.88
1833	0.57	0.95		0.32	0.84
1834	0.55	0.92		0.30	0.81
1835	0.56	0.93		0.31	0.82
1836	0.56	0.94		0.32	0.83
1837	0.57	0.94		0.32	0.83
1838	0.56	0.94		0.32	0.83
1839	0.62	1.03		0.33	0.91
1840	0.66	1.08		0.32	0.96
1841	0.58	0.96		0.28	0.84
1842	0.58	0.96		0.27	0.85
1843	0.61	1.00		0.27	0.88
1844	0.59	0.98		0.27	0.87
1845	0.60	0.99		0.28	0.87
1846	0.60	0.99		0.30	0.88
1847	0.66	1.08		0.34	0.95
1848	0.60	0.99		0.30	0.88
1849	0.64	1.05		0.30	0.92
1850	0.63	1.03		0.28	0.91
1851	0.65	1.05		0.29	0.93
1852	0.68	1.08		0.30	0.97
1853	0.65	1.10		0.32	0.95
1854	0.80	1.19		0.35	1.10
1855	0.85	1.26		0.36	1.16
1856	0.82	1.19		0.39	1.11
1857	0.83	1.21		0.39	1.13
1858	0.85	1.29		0.34	1.17
1859	0.81	1.27		0.34	1.14
1860	0.82	1.25		0.36	1.14
1861	0.82	1.27		0.37	1.15
1862	0.77	1.25		0.36	1.10

Sources, Gjøølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.4
Average (mean) daily wages in Agriculture and forestry

	Agriculture		Forestry	Board	Total Repr mean
	female	male			
1863	0.83	1.35		0.36	1.18
1864	0.83	1.36		0.35	1.18
1865	0.78	1.33		0.34	1.13
1866	0.82	1.36		0.36	1.17
1867	0.82	1.35		0.37	1.17
1868	0.80	1.32		0.38	1.15
1869	0.85	1.39		0.36	1.21
1870	0.82	1.34		0.35	1.16
1871	0.83	1.35		0.35	1.17
1872	0.86	1.40		0.37	1.22
1873	1.00	1.64		0.39	1.44
1874	1.13	1.85		0.41	1.63
1875	1.12	1.83		0.41	1.61
1876	1.06	1.73		0.40	1.52
1877	1.11	1.81		0.41	1.60
1878	1.02	1.59		0.37	1.38
1879	1.00	1.56		0.34	1.37
1880	1.03	1.60		0.36	1.41
1881	1.04	1.62		0.36	1.43
1882	1.06	1.65		0.36	1.46
1883	1.06	1.66		0.36	1.46
1884	1.04	1.64		0.35	1.44
1885	1.05	1.65		0.33	1.45
1886	1.02	1.60		0.32	1.43
1887	1.01	1.59		0.32	1.42
1888	1.05	1.63		0.32	1.46
1889	1.05	1.64		0.33	1.46
1890	1.09	1.70		0.34	1.52
1891	1.10	1.71		0.34	1.53
1892	1.10	1.71		0.34	1.53
1893	1.18	1.84		0.31	1.64
1894	1.16	1.81		0.31	1.62
1895	1.16	1.81		0.31	1.61
1896	1.21	1.89		0.31	1.69
1897	1.44	2.25		0.30	2.01
1898	1.38	2.23		0.32	1.97
1899	1.31	2.12		0.33	1.88
1900	1.28	2.07		0.34	1.83
1901	1.22	2.00		0.33	1.77
1902	1.21	1.98		0.32	1.75
1903	1.16	1.90		0.32	1.68
1904	1.35	2.20		0.31	1.94
1905	1.34	2.19		0.32	1.93
1906	1.34	2.24		0.32	1.97
1907	1.42	2.38		0.33	2.09
1908	1.44	2.41		0.34	2.12

Sources, Gjøllberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

TABLE 5.A.4
Average (mean) daily wages in Agriculture and forestry

	Agriculture		Forestry	Board	Total Repr mean
	female	male			
1909	1.55	2.60		0.34	2.29
1910	1.57	2.63		0.35	2.31
1911	1.64	2.91		0.36	2.53
1912	1.71	3.17		0.38	2.73
1913	1.74	3.43	3.35	0.39	2.92
1914	2.00	3.69	3.54	0.40	3.18
1915	2.10	3.55	3.65	0.47	3.26
1916	2.47	4.37	4.40	0.56	3.99
1917	3.38	6.18	6.55	0.70	5.62
1918	4.81	8.45	9.86	0.99	7.72
1919	6.02	10.44	11.21	1.06	9.56
1920	6.75	11.76	12.91	1.25	10.76
1921	6.41	10.80	10.95		9.92
1922	5.38	8.55	8.24		7.91
1923	4.77	7.43	7.58		6.89
1924	4.89	7.56	7.98		7.02
1925	4.86	7.52	7.44		6.99
1926	4.29	6.58	6.19		6.12
1927	3.73	5.59	5.31		5.22
1928	3.41	5.06	4.88		4.73
1929	3.26	4.83	4.74		4.52
1930	3.16	4.67	4.59		4.37
1931	2.98	4.37	4.25		4.09
1932	2.78	4.04	3.96		3.79
1933	2.65	3.84	3.81		3.61
1934	2.64	3.81	3.85		3.58
1935	2.69	3.90	3.98		3.66
1936	2.83	4.09	4.30		3.84
1937	3.11	4.61	5.13		4.31
1938	3.36	5.08	5.45		4.73
1939	3.55	5.36	5.71		5.00
1940	3.81	5.74	6.29		5.36

Sources, Gjøølberg 1974, 31-103, Lønningdal 1984, 141-163, NOS 1949, 366-367, Statistics Norway 1949, 366-367, Wedervang Archive, W009, W013, W014, W021, W027, W028, W204, W205 and W207.

5.A.5 Road and railway construction

TABLE 5.A.5
Daily wages in road and railway construction

	Road construction			Railway construction		
	Piecework	Fixed contract	Mean	Piecework	Fixed contract	Mean
1850	1.52	1.15	1.43			
1851	1.33	1.01	1.25			
1852	1.41	1.07	1.33			
1853	1.52	1.15	1.43			
1854	1.65	1.25	1.55			1.95
1855	1.64	1.29	1.60			2.58
1856	1.66	1.40	1.64			2.50
1857	1.80	1.50	1.78			2.42
1858	1.59	1.27	1.58			2.30
1859	1.58	1.36	1.57			2.24
1860	1.65	1.37	1.63			2.18
1861	1.66	1.42	1.65			2.34
1862	1.63	1.48	1.62			2.43
1863	1.72	1.47	1.71			2.22
1864	1.67	1.41	1.65			2.29
1865	1.64	1.41	1.63			2.29
1866	1.62	1.46	1.61			2.25
1867	1.64	1.51	1.63			2.32
1868	1.69	1.52	1.68			2.28
1869	1.70	1.55	1.69			2.32
1870	1.67	1.55	1.67			2.37
1871	1.67	1.56	1.67			2.33
1872	1.89	1.75	1.88			2.51
1873	2.08	1.92	2.07	2.70	1.97	2.60
1874	2.46	2.15	2.45	3.27	2.20	3.16
1875	2.53	2.27	2.52	2.84	2.03	2.72
1876	2.34	2.27	2.34	2.86	2.01	2.73
1877	2.40	2.26	2.40	2.70	2.09	2.61
1878	2.17	1.98	2.17	2.48	2.06	2.42
1879	1.95	1.79	1.94	2.28	1.97	2.25
1880	2.05	1.85	2.04	2.14	1.84	2.10
1881	2.08	1.98	2.08	2.26	2.05	2.22
1882	2.17	2.02	2.17	2.32	2.26	2.31
1883	2.29	2.13	2.28	2.11		2.11
1884	2.36	2.20	2.36			
1885	2.32	2.18	2.32			
1886	2.33	2.16	2.32			
1887	2.25	2.06	2.24			
1888	2.32	2.11	2.31			
1889	2.45	2.21	2.44			
1890	2.67	2.26	2.65			
1891	2.89	2.37	2.86			
1892	2.93	2.39	2.90	3.08	2.32	3.05
1893	2.97	2.42	2.93	3.14	2.65	3.08

Sources, Alme 1993, 64-65, Wedervang Archive, W118, W119A, W120A, W245 and W249.

TABLE 5.A.5
Daily wages in road and railway construction

	Road construction			Railway construction		
	Piecework	Fixed contract	Mean	Piecework	Fixed contract	Mean
1894	2.99	2.47	2.95	3.27	3.01	3.23
1895	2.72	2.48	2.70	3.28	2.95	3.25
1896	3.03	2.54	2.98	3.62	3.00	3.51
1897	3.07	2.59	3.03	3.57	2.84	3.53
1898	3.25	2.68	3.19	3.75	2.97	3.65
1899	3.42	2.80	3.36	4.23	3.20	4.10
1900	3.38	2.83	3.32	3.97	3.22	3.88
1901	3.35	2.83	3.29	4.11	3.29	3.98
1902	3.20	2.79	3.15	4.19	3.24	4.03
1903	3.25	2.84	3.21	4.04	3.30	3.85
1904	3.26	2.86	3.22	4.38	3.24	4.15
1905	3.35	2.86	3.30	4.59	3.44	4.55
1906	3.37	2.88	3.32	4.75	3.74	4.71
1907	3.56	2.97	3.50	4.93	4.27	4.89
1908	3.70	3.12	3.64	4.65	3.96	4.60
1909	3.75	3.23	3.69	4.59	3.83	4.53
1910	3.89	3.32	3.83	4.34	3.44	4.28
1911	4.00	3.44	3.95	4.64	3.82	4.61
1912	4.18	3.65	4.13	4.90	3.86	4.83
1913	4.54	3.80	4.47	5.77	4.68	5.70
1914	4.68	4.04	4.61	6.28	4.99	6.18
1915	4.90	4.20	4.82	6.56	5.25	6.40
1916	5.31	5.09	5.29	7.70	6.17	7.38
1917	7.47	7.35	7.46	10.06	8.27	9.64
1918	8.48	9.85	8.63	13.49	10.73	12.71
1919	12.08	11.75	12.04	17.91	14.17	16.77
1920	15.52	13.66	15.32	21.78	16.02	19.54
1921	14.16	15.60	14.59	20.68	17.16	19.50
1922	11.60	12.16	11.77	16.64	13.58	15.95
1923	10.40	10.32	10.38	15.01	12.39	14.55
1924	10.88	10.24	10.69	15.38	12.60	14.96
1925	11.60	10.40	11.24	15.90	12.94	15.45
1926	10.32	10.32	10.32	13.88	11.81	13.60
1927	9.12	9.36	9.19	12.61	9.70	12.29
1928	8.48	8.00	8.34	12.36	9.61	12.08
1929	8.40	8.16	8.33	12.58	9.78	12.34
1930	8.32	7.76	8.15	12.71	9.72	12.50
1931	8.20	7.60	8.02	12.53	9.70	12.33
1932	7.92	7.52	7.80	11.69	9.34	11.52
1933	7.68	6.88	7.44	11.70	9.66	11.56
1934	7.84	6.96	7.58	12.09	9.34	11.94
1935	8.04	7.52	7.88	12.18	9.96	12.02
1936	8.32	7.04	7.94	12.65	10.09	12.47
1937	8.96	7.76	8.60	14.14	11.16	13.86
1938	9.60	8.24	9.19	14.83	11.89	14.53
1939	10.40	8.80	9.92	14.86	11.94	14.60
1940	10.80	9.04	10.27	14.79	11.55	14.29

Sources, Alme 1993, 64-65, Wedervang Archive, W118, W119A, W120A, W245 and W249.

5.A.6 Misc. Construction works

TABLE 5.A.6
Daily wages in misc. Construction works

	Cobblestone layers	Telegraph construction			Port construction		
		Piecework	Fixed contract	Mean	Fixed	Occasional workers	Mean
1895	3.21						
1896							
1897							
1898							
1899							
1900	3.55						
1901							
1902							
1903							
1904							
1905	3.96						
1906							
1907							
1908							
1909							
1910	4.13						
1911							
1912							
1913							
1914							
1915	5.22						
1916							
1917							
1918	10.16	1.52	1.22	13.01			
1919	12.64	2.05	1.52	16.30			
1920	14.96	2.57	1.81	19.04			
1921	16.56	2.26	1.56	16.68	12.08	9.44	10.76
1922	12.96	1.94	1.24	14.12	10.24	8.88	9.56
1923	13.44	1.94	1.27	14.18	10.00	8.48	9.24
1924	13.20	2.26	1.24	16.04	10.32	8.56	9.44
1925	14.16	1.79	1.27	13.28	10.24	8.88	9.56
1926	12.64	1.50	1.17	11.34	10.72	8.96	9.84
1927	11.52	1.13	1.09	8.96	9.84	8.56	9.20
1928	11.20	1.33	1.06	10.10	10.56	7.76	9.16
1929	11.12	1.07	1.02	8.46	10.08	7.60	8.84
1930	11.12	1.01	1.02	8.10	9.68	7.52	8.60
1931	10.96	0.94	0.99	7.62	9.52	7.36	8.44
1932	10.80	0.96	0.98	7.72	9.04	7.20	8.12
1933	10.72	1.08	1.05	8.58	8.96	6.96	7.96
1934	10.64	1.05	1.03	8.36	9.44	7.20	8.32
1935	10.64	1.13	1.03	8.84	9.28	6.96	8.12
1936	10.88	1.20	1.10	9.40	9.76	7.04	8.40
1937	11.68	1.28	1.17	10.02	9.92	8.80	9.36
1938	12.40	1.35	1.23	10.56	10.48	9.36	9.92

Sources, Hodne, Grytten and Alme 1995, 242-243, Statistics Norway, 1949, 365, Wedervang Archive, W245 and W249.

TABLE 5.A.6
Daily wages in misc. Construction works

	Cobblestone layers	Telegraph construction			Port construction		
		Piecework	Fixed contract	Mean	Fixed	Occasional workers	Mean
1939	12.40	1.39	1.31	10.96	11.36	9.36	10.36
1940	12.40	1.77	1.36	13.34	11.04	10.16	10.60

Sources, Hodne, Grytten and Alme 1995, 242-243, Statistics Norway, 1949, 365, Wedervang Archive, W245 and W249.

5.A.7 Construction

TABLE 5.A.7
Average daily wages in construction

	Road construction	Railway construction	Bricklayers	Telegraph construction	Port/Harbour construction	Total Repr mean
1850	1.43					1.43
1851	1.25					1.25
1852	1.33					1.33
1853	1.43					1.43
1854	1.55	2.19				1.65
1855	1.60	2.58				1.85
1856	1.64	2.50				1.85
1857	1.78	2.42				1.94
1858	1.58	2.30				1.76
1859	1.57	2.24				1.74
1860	1.63	2.18				1.77
1861	1.65	2.34				1.82
1862	1.62	2.43				1.82
1863	1.71	2.22				1.84
1864	1.65	2.29				1.81
1865	1.63	2.29				1.80
1866	1.61	2.25				1.77
1867	1.63	2.32				1.81
1868	1.68	2.28				1.83
1869	1.69	2.32				1.85
1870	1.67	2.37				1.84
1871	1.67	2.33				1.83
1872	1.88	2.51				2.04
1873	2.07	2.60				2.21
1874	2.45	3.16				2.63
1875	2.52	2.72				2.57
1876	2.34	2.73				2.44
1877	2.40	2.61				2.45
1878	2.17	2.42				2.23
1879	1.94	2.25				2.02
1880	2.04	2.10				2.06
1881	2.08	2.22				2.11
1882	2.17	2.31				2.20
1883	2.28	2.11				2.24
1884	2.36					2.36
1885	2.32					2.32
1886	2.32					2.32
1887	2.24					2.24
1888	2.31					2.31
1889	2.44					2.44
1890	2.65					2.65
1891	2.86					2.86
1892	2.90	3.05				2.94
1893	2.93	3.08				2.97

Sources, Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249.

TABLE 5.A.7
Average daily wages in construction

	Road construction	Railway construction	Bricklayers	Telegraph construction	Port/Harbour construction	Total Repr mean
1894	2.95	3.23				3.02
1895	2.70	3.25	3.21			2.84
1896	2.98	3.51				3.12
1897	3.03	3.53				3.15
1898	3.19	3.65				3.30
1899	3.36	4.10				3.55
1900	3.32	3.88	3.55			3.46
1901	3.29	3.98				3.46
1902	3.15	4.03				3.37
1903	3.21	3.85				3.37
1904	3.22	4.15				3.46
1905	3.30	4.55	3.96			3.61
1906	3.32	4.71				3.67
1907	3.50	4.89				3.84
1908	3.64	4.60				3.88
1909	3.69	4.53				3.90
1910	3.83	4.28	4.13			3.94
1911	3.95	4.61				4.11
1912	4.13	4.83				4.30
1913	4.47	5.70				4.78
1914	4.61	6.18				5.00
1915	4.82	6.40	5.22			5.22
1916	5.29	7.38				5.81
1917	7.46	9.64				8.00
1918	8.63	12.71	10.16	13.01		10.45
1919	12.04	16.77	12.64	16.30		13.95
1920	15.32	19.54	14.96	19.04		16.92
1921	14.59	19.50	16.56	16.68	10.76	15.98
1922	11.77	15.95	12.96	14.12	9.56	13.05
1923	10.38	14.55	13.44	14.18	9.24	12.00
1924	10.69	14.96	13.20	16.04	9.44	12.41
1925	11.24	15.45	14.16	13.28	9.56	12.68
1926	10.32	13.60	12.64	11.34	9.84	11.47
1927	9.19	12.29	11.52	8.96	9.20	10.23
1928	8.34	12.08	11.20	10.10	9.16	9.82
1929	8.33	12.34	11.12	8.46	8.84	9.73
1930	8.15	12.50	11.12	8.10	8.60	9.64
1931	8.02	12.33	10.96	7.62	8.44	9.46
1932	7.80	11.52	10.80	7.72	8.12	9.10
1933	7.44	11.56	10.72	8.58	7.96	8.99
1934	7.58	11.94	10.64	8.36	8.32	9.16
1935	7.88	12.02	10.64	8.84	8.12	9.36
1936	7.94	12.47	10.88	9.40	8.40	9.60
1937	8.60	13.86	11.68	10.02	9.36	10.49
1938	9.19	14.53	12.40	10.56	9.92	11.11
1939	9.92	14.60	12.40	10.96	10.36	11.55
1940	10.27	14.29	12.40	13.34	10.60	11.84

Sources, Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249.

5.A.8 Early manufacturing

TABLE 5.A.8
Daily wages in early manufacturing

	Wages incl board and lodging			Cash wages				Mean	Board and lodging	Total repr mean
	Furnace	Miners	Others	Skilled	Papermill	Sawmill	Others			
1726	0.21	0.23	0.13						0.20	
1727										
1728										
1729										
1730										
1731	0.21	0.17	0.14						0.18	
1732										
1733										
1734										
1735										
1736	0.22	0.19	0.15						0.19	
1737										
1738										
1739										
1740										
1741	0.19	0.24	0.16						0.20	
1742										
1743										
1744										
1745										
1746	0.22	0.25	0.17						0.22	
1747										
1748										
1749										
1750										
1751	0.22	0.21	0.17						0.20	
1752										
1753										
1754										
1755										
1756	0.23	0.21	0.18						0.21	
1757										
1758										
1759										
1760										
1761	0.36	0.28	0.19						0.28	
1762										
1763										
1764										
1765										
1766	0.33	0.31	0.23						0.30	
1767										
1768										
1769										

Sources, Fløystad 1979, 595-596, Goksøyr 1982, Wedervang Archive, W046, W047, W048, W055, W074, W082 and W417.

TABLE 5.A.8
Daily wages in early manufacturing

	Wages incl board and lodging			Cash wages				Board and lodging	Total repr mean	
	Furnace	Miners	Others	Skilled	Papermill	Sawmill	Others			
1770										
1771	0.34	0.32	0.23						0.30	
1772										
1773										
1774										
1775										
1776	0.33	0.30	0.23						0.29	
1777										
1778										
1779										
1780										
1781	0.33	0.31	0.20						0.29	
1782										
1783										
1784										
1785										
1786	0.38	0.31	0.24						0.32	
1787										
1788										
1789										
1790										
1791	0.40	0.34	0.30						0.35	
1792										
1793										
1794										
1795										
1796	0.39	0.31	0.30						0.34	
1797										
1798										
1799										
1800										
1801	0.59	0.45	0.42						0.49	
1802										
1803										
1804										
1805										
1806	0.62	0.48	0.43						0.52	
.									.	
.									.	
.									.	
1820				1.00	0.67			0.83	1.22	2.05
1821				1.00	0.67			0.84	1.03	1.86
1822				1.00	0.72			0.86	1.34	2.20
1823				1.03	0.73			0.88	1.32	2.20
1824				1.01	0.70			0.85	1.05	1.90
1825				1.01	0.70			0.85	0.90	1.76

Sources, Fløystad 1979, 595-596, Goksøyr 1982, Wedervang Archive, W046, W047, W048, W055, W074, W082 and W417.

TABLE 5.A.8
Daily wages in early manufacturing

	Wages incl board and lodging			Cash wages				Mean	Board and lodging	Total repr mean
	Furnace	Miners	Others	Skilled	Papermill	Sawmill	Others			
1826				1.01	0.70			0.85	0.89	1.74
1827				1.03	0.75			0.89	1.11	2.00
1828				1.02	0.73			0.88	0.90	1.78
1829				1.02	0.73			0.88	0.88	1.76
1830				1.03	0.77			0.90	0.99	1.89
1831				1.07	0.80			0.93	1.15	2.09
1832				1.07	0.80			0.93	1.09	2.02
1833				1.07	0.80	0.67		0.90	0.93	1.83
1834				1.07	0.80	0.73	0.80	0.92	0.89	1.82
1835				1.07	0.83	0.73	0.87	0.94	0.94	1.88
1836				1.07	0.83	0.77	0.80	0.94	0.96	1.89
1837				1.07	0.83	0.80	0.80	0.94	0.98	1.92
1838				1.07	0.83	0.80	0.80	0.94	0.97	1.91
1839				1.07	0.83	0.97	0.87	0.98	1.10	2.07
1840				1.07	0.83		0.87	0.96	1.07	2.03
1841				1.07	0.83		0.90	0.97	0.92	1.89
1842				1.07	0.83		0.90	0.97	0.90	1.86
1843				1.07	0.83		0.90	0.97	0.89	1.85
1844				1.08	0.83		0.90	0.98	0.88	1.85
1845				1.10	0.83	0.93	0.87	0.99	0.91	1.89
1846				1.08	0.83	0.80	0.87	0.96	0.91	1.87
1847				1.07	0.83	1.07	0.90	1.00	1.16	2.16
1848				1.03	0.83		0.90	0.95	1.04	1.99
1849				1.07	0.83		0.90	0.97	1.00	1.97
1850				1.10	0.83		0.90	0.98	1.04	2.02
1851				1.13	0.83			0.98	1.04	2.02
1852					0.83			0.98	1.04	2.03
1853					0.83			0.98	1.07	2.05
1854					1.00			1.18	1.20	2.38
1855					1.00			1.18	1.26	2.44
1856					1.07			1.26	1.33	2.59
1857					1.07			1.26	1.38	2.64
1858					1.13			1.34	1.42	2.75
1859					1.13			1.34	1.33	2.67
1860					1.20			1.42	1.37	2.78

Sources, Fløystad 1979, 595-596, Goksøyr 1982, Wedervang Archive, W046, W047, W048, W055, W074, W082 and W417.

5.A.9 Mechanical (engineering) industry

TABLE 5.A.9
Daily wages in mechanical (engineering) industry

	Wage rates			Wage earnings			Others	Total Repr mean
	Skilled	Unskilled	All	Skilled	Unskilled	All		
1850							1.59	1.88
1851							1.67	1.98
1852							1.76	2.09
1853							1.85	2.19
1854							1.95	2.31
1855							2.42	2.87
1856							2.34	2.77
1857							2.28	2.70
1858							2.2	2.61
1859							2.23	2.64
1860							2.18	2.58
1861							2.34	2.77
1862							2.43	2.88
1863							2.22	2.63
1864							2.29	2.71
1865							2.29	2.71
1866							2.25	2.67
1867			2.75			2.75	2.32	2.75
1868			2.50			2.50	2.28	2.50
1869			2.63			2.63	2.32	2.63
1870			2.58			2.58	2.37	2.58
1871			2.56			2.56	2.33	2.56
1872			2.48			2.48	2.51	2.48
1873			2.70			2.70	2.37	2.70
1874			2.87			2.87	2.49	2.87
1875			3.00			3.00		3.00
1876			2.97			2.97		2.97
1877			2.93			2.93		2.93
1878			2.90			2.90		2.90
1879			2.87			2.87		2.87
1880			2.83			2.83		2.83
1881			2.81			2.81		2.81
1882			2.80			2.80		2.80
1883			2.78			2.78		2.78
1884			2.77			2.77		2.77
1885			2.75			2.75		2.75
1886			2.77			2.77		2.77
1887			2.86			2.86		2.86
1888			2.97			2.97		2.97
1889			3.00			3.00		3.00
1890			3.05			3.05		3.05
1891			3.25			3.25		3.25
1892			3.25			3.25		3.25
1893			3.00			3.00		3.00

Sources, Hodne, Grytten, Alme, 1995, 240-241, NOS 1918-1941, Petersen 1950, 670-671, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

TABLE 5.A.9
Daily wages in mechanical (engineering) industry

	Wage rates			Wage earnings			Others	Total Repr mean
	Skilled	Unskilled	All	Skilled	Unskilled	All		
1894			3.05			3.05		3.05
1895			3.05			3.05		3.05
1896			3.05			3.05		3.05
1897			3.35			3.35		3.35
1898			3.40			3.40		3.40
1899			3.40			3.40		3.40
1900			3.25			3.25		3.25
1901			3.25			3.25		3.25
1902			3.25			3.25		3.25
1903			3.30			3.30		3.30
1904			3.30			3.30		3.30
1905			3.30			3.30		3.30
1906			3.55			3.55		3.55
1907			3.80			3.80		3.80
1908			3.90			3.90		3.90
1909			3.90			3.90		3.90
1910	4.10	2.94	3.20			4.21		4.21
1911	4.20	3.06	3.20			4.28		4.28
1912	4.43	3.22	3.40			4.52		4.52
1913	4.62	3.50	3.60			4.79		4.79
1914	4.74	3.65	3.42			4.96		4.96
1915	4.41	3.42	3.04			4.63		4.63
1916	4.50	3.51	3.20			4.73		4.73
1917	6.57	5.49	4.88			7.74		7.74
1918	8.32	6.80	7.12			9.10		9.10
1919	13.20	11.04	11.28			14.60		14.60
1920	16.72	14.24	14.24	24.00	20.48	19.92		19.88
1921	16.64	13.92	14.24	21.52	18.16	18.40		18.4
1922	12.40	10.24	10.80	15.60	12.96	13.36		13.39
1923	11.84	9.68	10.24	14.40	11.92	12.64		12.67
1924	12.72	10.64	10.88	15.52	12.64	13.44		13.45
1925	13.68	11.60	11.76	17.84	15.76	15.36		15.37
1926	11.84	10.08	10.40	14.96	12.56	13.04		13.02
1927	10.08	8.56	8.80	12.08	10.24	10.48		10.44
1928	9.68	8.16	8.40	12.00	10.32	10.40		10.42
1929	9.60	8.00	8.32	12.08	10.08	10.32		10.34
1930	9.60	8.00	8.32	12.16	10.16	10.40		10.42
1931	9.20	7.84	8.08	10.96	9.20	9.68		9.65
1932	9.20	7.84	8.16	10.96	9.20	9.76		9.78
1933	9.12	7.68	8.16	10.88	8.88	9.76		9.74
1934	9.12	7.60	8.00	11.04	9.12	9.76		9.78
1935	9.12	7.52	7.92	11.28	9.12	9.84		9.82
1936	9.28	7.52	7.92	11.68	9.36	10.00		9.96
1937	10.08	8.32	8.56	13.04	10.48	10.96		10.94
1938	10.88	8.96	9.44	14.08	9.20	12.00		11.97
1939	10.96	8.96	9.44	14.32	11.52	12.24		12.26
1940	11.52	9.60	10.08	14.80	12.24	12.96		12.94

Sources, Hodne, Grytten, Alme, 1995, 240-241, NOS 1918-1941, Petersen 1950, 670-671, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

5.A.10 Textile industry

TABLE 5.A.10
Daily wages in textile industry

	Spinners		Prespinners Fixed	Twiners	Haspers	Weavers Piece- work	Chairmen	Male workers		Female workers		Total Repr mean
	Fixed	Piece- work						Fixed	Piece- work	Fixed	Piece- work	
1850	0.67				1.05							0.82
1851	0.67				1.05							0.82
1852	0.70				1.07							0.85
1853	0.73				1.03							0.85
1854	0.73				1.13							0.89
1855	0.83				1.07							0.93
1856	1.10				1.13							1.11
1857	1.20				1.23							1.21
1858	1.13	1.13				1.04						1.11
1859	1.04	1.04				0.92						1.02
1860	1.10	1.08	1.13			0.91						1.05
1861	0.93	1.14	1.20		1.10	1.02						1.03
1862	0.77	1.07				1.06						1.01
1863	0.70	1.06	0.90	0.70	0.80	1.02						0.98
1864	0.87	1.22	0.97	0.90	0.87	0.98						1.04
1865	0.87	1.13	1.20	1.00	1.03	1.00						1.03
1866	1.07	1.27	1.07	1.10	1.03	0.98						1.09
1867	0.97	1.21	1.07	0.93	1.03	1.02						1.04
1868	0.60	1.15	1.00	1.00	1.00	0.90						0.91
1869	0.80	1.12	0.97	0.93	0.93	0.86						0.90
1870	1.00	1.19	0.93	1.03	1.10	0.83						0.95
1871	0.93	1.13	1.20	1.20	1.20	0.88						0.97
1872	0.97	1.32	1.13	1.20	1.13	1.11						1.13
1873	1.07	1.49	1.30	1.17	1.27	1.36						1.31
1874	1.10	1.65	1.33	1.23	1.30	1.42						1.39
1875	1.13	1.27	1.30	1.23	1.33	1.30		1.97	1.20			1.29
1876	1.17	1.36	1.33	1.20	1.40	1.25		1.90				1.28
1877	1.17	1.28	1.39	1.20	1.41	1.22		1.85				1.27
1878	1.18	1.25	1.38	1.16	1.39	1.39		2.15				1.30
1879	1.13	1.24	1.10		1.38	1.30		2.20				1.31
1880	1.05	1.25	1.14	1.10	1.25	1.29		2.25	1.25			1.31
1881	1.07	1.33	1.20		1.18	1.22		2.20				1.31
1882	1.05	1.26	1.23		1.21	1.17		2.15				1.30
1883	1.07	1.35	1.27		1.38	1.27		2.25				1.31
1884	1.09	1.28	1.26	1.08	1.40	1.18		2.20				1.31
1885	1.10	1.22	1.30	1.10	1.48	1.14	3.75	2.15	1.20	1.40		1.40
1886	1.10	1.25	1.32	1.10	1.39	1.06	3.75	2.10	1.20	1.40		1.38
1887	1.10	1.06	1.31	1.12	1.35	1.08	3.75	2.10	1.20	1.40		1.36
1888	1.06	1.16	1.15	1.22	1.24	1.11	3.75	2.10	1.20	1.40		1.35
1889	1.08	1.10	1.27	1.24	1.39	1.09	3.75	2.10	1.20	1.40		1.37
1890	1.12	1.12	1.29	1.29	1.37	1.18	3.75	2.20	1.20	1.40		1.40
1891	1.10	1.39	1.29	1.37	1.34	1.15	3.75	2.20	1.20	1.40		1.43
1892	1.12	1.26	1.37	1.33	1.34	1.08	3.75	2.20	1.20	1.35		1.41

Sources, NOS 1918-1941, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

TABLE 5.A.10
Daily wages in textile industry

	Spinners		Prespinners	Twiners	Haspers	Weavers	Chairmen	Male workers	Female workers		Total Repr mean
	Fixed	Piece-work	Fixed			Piece-work			Fixed	Piece-work	
1893	1.12	1.25	1.33	1.28	1.21	1.06	3.75	2.20	1.20	1.35	1.39
1894	1.12	1.29	1.20	1.18	1.39	1.12	3.75	2.20	1.20	1.35	1.39
1895	1.13	1.34	1.29	1.30	1.33	1.17	3.75	2.20	1.20	1.35	1.42
1896	1.11	1.35	1.44	1.48	1.34	1.10	3.75	2.20	1.20	1.35	1.44
1897	1.11	1.37	1.38	1.25	1.46	1.10	3.75	2.20	1.20	1.35	1.43
1898	1.20	1.38	1.40	1.50	1.54	1.29	4.00	2.50	1.50	1.63	1.59
1899	1.37	1.41	1.50	1.50	1.72	1.50	4.00	2.50	1.50	1.75	1.68
1900	1.39	1.52	1.33	1.34	1.60	1.22	4.00	2.50	1.50	1.75	1.62
1901	1.40	1.43	1.20	1.22	1.53	1.31	4.00	2.50	1.50	1.75	1.58
1902	1.34	1.60	1.19	1.01	1.32	1.26	4.45	2.75	1.50	1.75	1.59
1903	1.31	1.64	1.33	1.08	1.44	1.25	4.45	2.75	1.50	1.75	1.63
1904	1.31	1.64	1.18	1.03	1.74	1.23	4.45	2.75	1.50	1.75	1.64
1905	1.32	1.58	1.58	1.23	1.88	1.26	4.45	2.75	1.50	1.75	1.71
1906	1.35	1.61	1.77	1.44	1.89	1.39	4.45	2.75	1.50	1.75	1.77
1907	1.33	1.65	1.78	1.44	1.82	1.52	5.25	3.00	1.75	2.13	1.90
1908		1.65				1.61	5.25	3.00	1.90	2.38	2.19
1909		1.67				1.81	5.25	3.00	1.90	2.38	2.23
1910		1.70				1.86					2.30

Sources, NOS 1918-1941, Wedervang Archive, W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

5.A.11 Interwar manufacturing industry

TABLE 5.A.11
Daily wages in interwar manufacturing industry

	Mining Miners	Pulp and paper industry			Sawmill industry			All manufacturing industry			
		Chemical pulp	Mechanical pulp	Papermills	Skilled	Unskilled	Others	Export	Other	All	
1914								4.66	4.57	4.62	
1915										5.18	
1916										5.77	
1917										7.84	
1918								10.46		11.68	
1919								14.13	15.30	14.06	
1920			19.95	18.87	18.19			18.40	17.76	18.08	
1921	16.48		14.97	15.01	14.69	14.49	13.17	15.34	19.06	18.10	18.58
1922	13.28		13.16	13.26	12.94	12.92	11.88	13.66	14.42	13.71	14.07
1923			13.75	13.67	12.8	12.36	11.42	12.99	12.90	13.26	13.10
1924			14.9	14.97	14.03	12.98	11.99	13.65	13.96	14.34	14.15
1925			14.94	14.77	14.17	13.21	12.08	13.92	14.52	15.90	15.21
1926	12.32		12.4	12.24	11.92	13.75	11.42	12.63	13.74	14.34	14.04
1927	10.8		10.6	10.29	10.12	11.03	10.17	11.08	11.78	12.56	12.17
1928	10.16		10.28	9.86	9.87	11.25	9.83	10.58	11.57	11.54	11.56
1929	10.4		10.46	9.94	9.82	11.14	9.59	10.6	11.59	11.59	11.59
1930			10.54	9.79	9.79	10.92	9.93	10.58	11.51	11.66	11.59
1931			9.66	9.02	9.22	9.86	9.23	9.95	11.21	10.89	11.05
1932			9.66	9.02	9.22				11.10	11.17	11.14
1933			9.86	8.88	9.22				11.05	11.07	11.06
1934			9.86	8.88	9.22				10.83	11.20	11.02
1935			9.83	8.52	9.2				10.78	11.22	11.00
1936			10.14	9.67	9.38				11.08	11.53	11.31
1937					11.68				11.79	12.46	12.13
1938					11.44				12.91	13.67	13.29
1939					11.68				12.95	13.91	13.43
1940					12.35				13.65	15.27	14.46

Sources, NOS 1918-1941, NOS 1949, 364-365.

5.A.12 Misc manufacturing industry

TABLE 5.A.12
Daily wages in misc manufacturing industry

	Iron foundry		Brickworks		Tobacco ind Skilled	Destilleries Workers	Others	Total Repr mean
	Casters	Ord workers	Furnace workers	Stone workers				
1850							1.59	1.43
1851							1.67	1.51
1852							1.76	1.59
1853							1.85	1.67
1854							1.95	1.76
1855							2.42	2.18
1856							2.34	2.11
1857							2.28	2.06
1858							2.2	1.98
1859						1.07	2.23	2.01
1860						1.06	2.18	1.99
1861						1.05	2.34	1.97
1862						1.04	2.43	1.96
1863						0.99	2.22	1.86
1864						0.94	2.29	1.77
1865						0.96	2.29	1.81
1866						0.97	2.25	1.82
1867						1.04	2.32	1.96
1868						1.04	2.28	1.96
1869						0.98	2.32	1.84
1870						1.00	2.37	1.88
1871						1.01	2.33	1.90
1872						1.15	2.51	2.16
1873						1.30	2.37	2.44
1874						1.37	2.49	2.58
1875	3.00	2.67	3.00	3.00	3.60	1.42	2.00	2.67
1876	3.45	2.64			3.49	1.38		2.74
1877	3.30	2.61			3.39	1.35		2.66
1878	3.16	2.59			3.29	1.27		2.58
1879	3.02	2.56			3.19	1.20		2.49
1880	2.83	2.51	2.83	2.83	3.08	1.21	1.87	2.45
1881	2.81	2.51			3.26	1.23		2.45
1882	2.80	2.50			3.46	1.29		2.51
1883	2.78	2.49			3.67	1.31		2.56
1884	2.76	2.49			3.88	1.30		2.61
1885	2.75	2.48	2.80	2.80	4.00	1.30	1.85	2.57
1886	2.63	2.59	3.00	2.88	3.75	1.30	1.90	2.58
1887	2.54	2.59	3.00	2.88	3.75	1.27	1.90	2.56
1888	2.68	2.59	3.00	2.88	3.75	1.29	1.90	2.58
1889	2.68	2.59	3.00	2.88	4.25	1.30	1.90	2.66
1890	2.94	2.93	3.25	3.30	4.00	1.32	2.25	2.86
1891	3.19	3.12	3.50	3.48	4.00	1.39	2.38	3.01
1892	3.19	2.67	3.00	3.00	4.00	1.44	2.00	2.76
1893	3.10	2.67	3.00	3.00	4.00	1.44	2.00	2.74
1894	3.10	2.82	3.25	3.20	3.30	1.44	2.00	2.73
1895	3.16	2.82	3.25	3.20	3.30	1.44	2.00	2.74
1896	3.10	2.82	3.25	3.20	3.27	1.44	2.00	2.73

TABLE 5.A.12
Daily wages in misc manufacturing industry

	Iron foundry		Brickworks		Tobacco ind	Distilleries	Others	Total
	Casters	Ord workers	Furnace workers	Stone workers	Skilled	Workers		Repr mean
1897	3.35	3.27	3.50	4.00	3.27	1.49	2.30	3.03
1898	3.39	3.33	3.50	4.00	3.78	1.54	2.50	3.15
1899	3.39	3.42	3.50	4.00	3.50	1.54	2.75	3.16
1900	3.29	3.21	3.13	3.50	3.25	1.54	3.00	2.99
1901	3.25	3.42	3.25	4.00	3.63	1.54	3.00	3.16
1902	3.25	3.33	3.25	4.00	3.63	1.54	2.75	3.11
1903	3.30	3.03	3.10	3.50	3.75	1.56	2.50	2.96
1904	3.48	3.03	3.10	3.50	3.75	1.58	2.50	2.99
1905	3.90	3.03	3.10	3.50	3.75	1.58	2.50	3.05
1906	4.05	3.03	3.10	3.50	3.75	1.58	2.50	3.07
1907	4.20	3.03	3.10	3.50	3.75	1.73	2.50	3.12
1908	4.30	3.33	3.25	4.25	3.75	1.88	2.50	3.32
1909	4.50	3.42	3.25	4.25	3.75	1.88	2.75	3.40
1910	4.65	3.55			3.55			3.52

5.A.13 Manufacturing

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1726	0.20				0.20
1727					
1728					
1729					
1730					
1731	0.18				0.18
1732					
1733					
1734					
1735					
1736	0.19				0.19
1737					
1738					
1739					
1740					
1741	0.20				0.20
1742					
1743					
1744					
1745					
1746	0.22				0.22
1747					
1748					
1749					
1750					
1751	0.20				0.20
1752					
1753					
1754					
1755					
1756	0.21				0.21
1757					
1758					
1759					
1760					
1761	0.28				0.28
1762					
1763					

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249, Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167, Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950, 670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417, Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1764					
1765					
1766	0.30				0.30
1767					
1768					
1769					
1770					
1771	0.30				0.30
1772					
1773					
1774					
1775					
1776	0.29				0.29
1777					
1778					
1779					
1780					
1781	0.29				0.29
1782					
1783					
1784					
1785					
1786	0.32				0.32
1787					
1788					
1789					
1790					
1791	0.35				0.35
1792					
1793					
1794					
1795					
1796	0.34				0.34
1797					
1798					
1799					
1800					
1801	0.49				0.49
1802					
1803					
1804					

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
 NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
 Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167,
 Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
 670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
 W074, W074, W080, W081, W082, W121, W284 and W417,
 Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
 NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1805					
1806	0.52				0.52
.					.
.					.
1820	2.05				1.82
1821	1.86				1.65
1822	2.20				1.95
1823	2.20				1.95
1824	1.90				1.69
1825	1.76				1.56
1826	1.74				1.54
1827	2.00				1.77
1828	1.78				1.58
1829	1.76				1.56
1830	1.89				1.68
1831	2.09				1.85
1832	2.02				1.79
1833	1.83				1.63
1834	1.82				1.61
1835	1.88				1.67
1836	1.89				1.68
1837	1.92				1.70
1838	1.91				1.69
1839	2.07				1.84
1840	2.03				1.80
1841	1.89				1.67
1842	1.86				1.65
1843	1.85				1.64
1844	1.85				1.64
1845	1.89				1.68
1846	1.87				1.66
1847	2.16				1.91
1848	1.99				1.76
1849	1.97				1.74
1850	2.02	1.88	0.82	1.59	1.70
1851	2.02	1.98	0.82	1.67	1.71
1852	2.03	2.09	0.85	1.76	1.74
1853	2.05	2.19	0.85	1.85	1.78
1854	2.38	2.31	0.89	1.95	1.99

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167,
Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
W074, W074, W080, W081, W082, W121, W284 and W417,
Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1855	2.44	2.87	0.93	2.42	2.13
1856	2.59	2.77	1.11	2.34	2.26
1857	2.64	2.70	1.21	2.28	2.31
1858	2.75	2.61	1.11	2.20	2.32
1859	2.67	2.64	1.02	2.01	2.22
1860	2.78	2.58	1.05	1.99	2.22
1861		2.77	1.03	1.97	2.28
1862		2.88	1.01	1.96	2.36
1863		2.63	0.98	1.86	2.16
1864		2.71	1.04	1.77	2.23
1865		2.71	1.03	1.81	2.23
1866		2.67	1.09	1.82	2.19
1867		2.75	1.04	1.96	2.24
1868		2.50	0.91	1.96	2.11
1869		2.63	0.90	1.84	2.17
1870		2.58	0.95	1.88	2.18
1871		2.56	0.97	1.90	2.15
1872		2.48	1.13	2.16	2.22
1873		2.70	1.31	2.44	2.29
1874		2.87	1.39	2.58	2.42
1875		3.00	1.29	2.67	2.54
1876		2.97	1.28	2.74	2.56
1877		2.93	1.27	2.66	2.51
1878		2.90	1.30	2.58	2.46
1879		2.87	1.31	2.49	2.41
1880		2.83	1.31	2.45	2.35
1881		2.81	1.31	2.45	2.37
1882		2.80	1.30	2.51	2.39
1883		2.78	1.31	2.56	2.41
1884		2.77	1.31	2.61	2.43
1885		2.75	1.40	2.57	2.45
1886		2.77	1.38	2.58	2.42
1887		2.86	1.36	2.56	2.43
1888		2.97	1.35	2.58	2.49
1889		3.00	1.37	2.66	2.57
1890		3.05	1.40	2.86	2.63
1891		3.25	1.43	3.01	2.77
1892		3.25	1.41	2.76	2.72
1893		3.00	1.39	2.74	2.62
1894		3.05	1.39	2.73	2.57
1895		3.05	1.42	2.74	2.58

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
 NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
 Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167,
 Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
 670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
 W074, W074, W080, W081, W082, W121, W284 and W417,
 Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
 NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1896		3.05	1.44	2.73	2.57
1897		3.35	1.43	3.03	2.76
1898		3.40	1.59	3.15	2.89
1899		3.40	1.68	3.16	2.88
1900		3.25	1.62	2.99	2.75
1901		3.25	1.58	3.16	2.81
1902		3.25	1.59	3.11	2.80
1903		3.30	1.63	2.96	2.81
1904		3.30	1.64	2.99	2.84
1905		3.30	1.71	3.05	2.90
1906		3.55	1.77	3.07	3.01
1907		3.80	1.90	3.12	3.15
1908		3.90	2.19	3.32	3.30
1909		3.90	2.23	3.40	3.34
1910		4.21	2.30	3.52	3.73
1911		4.28			3.81
1912		4.52			4.06
1913		4.79			4.36
1914		4.96		4.62	4.72
1915		4.63		5.18	5.02
1916		4.73		5.77	5.46
1917		7.74		7.84	7.81
1918		9.10		11.68	10.91
1919		14.60		14.06	14.22
1920		19.88		18.08	18.62
1921		18.4		18.58	18.53
1922		13.39		14.07	13.87
1923		12.67		13.10	12.97
1924		13.45		14.15	13.94
1925		15.37		15.21	15.26
1926		13.02		14.04	13.73
1927		10.44		12.17	11.65
1928		10.42		11.56	11.22
1929		10.34		11.59	11.22
1930		10.42		11.59	11.24
1931		9.65		11.05	10.63
1932		9.78		11.14	10.73
1933		9.74		11.06	10.66
1934		9.78		11.02	10.64
1935		9.82		11.00	10.65
1936		9.96		11.31	10.90

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243,
NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249,
Manufacturing: Fløystad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167,
Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950,
670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072,
W074, W074, W080, W081, W082, W121, W284 and W417,
Crafts: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941,
NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.13
Average daily wages in manufacturing

	Early manufacturing	Mechanical engineering	Textile industry	Others (all types)	Total Repr. mean
1937		10.94		12.13	11.77
1938		11.97		13.29	12.89
1939		12.26		13.43	13.08
1940		12.94		14.46	14.00

Sources, Construction: Alme 1993, 64-65, Hodne, Grytten and Alme 1995, 242-243, NOS 1920-1940, NOS 1949, 365, Wedervang Archive, W118, W119A, W120A, W245 and W249, Manufacturing: Fløyestad 1979, 595-596, Goksøyr 1982, Grytten 1992, 159-167, Hodne, Grytten and Alme 1995, 240-241, NOS 1918-1941, NOS 1949, 364-365, Petersen 1950, 670-671, Wedervang Archive, W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W121, W284 and W417, Crafts: Fløyestad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.14 Small-scale crafts (artisans)

TABLE 5.A.14
Daily wages in small-scale crafts (artisans)

	Painters	Bricklayers		Joiners	Bakers	Shoemakers	Tailors	Total Repr mean
		Skilled	Unskilled					
1833		2.43						2.43
1834		2.41						2.41
1835		2.46						2.46
1836		2.66						2.66
1837		2.67						2.67
1838		2.50						2.50
1839		2.71						2.71
1840		2.65						2.65
1841		2.51						2.51
1842		2.48						2.48
1843		2.48						2.48
1844		2.46						2.46
1845		2.63						2.63
1846		2.38						2.38
1847		2.55						2.55
1848		2.42						2.42
1849		2.38						2.38
1850		2.35						2.35
1851		2.37						2.37
1852		2.44						2.44
1853		2.51						2.51
1854		2.65						2.65
1855		2.80						2.80
1856		3.00						3.00
1857		2.80						2.80
1858		2.65						2.65
1859		2.73						2.73
1860		2.79						2.79
1861		2.90						2.90
1862		2.88						2.88
1863		2.81						2.81
1864		2.80						2.80
1865		2.83						2.83
1866		3.00						3.00
1867		3.06						3.06
1868								
1869								
1870								
1871								
1872								
1873								
1874								
1875	3.60	4.30		3.67	2.25	3.13	3.50	3.45
1876	3.30	4.16		3.49	2.25	2.88	3.30	3.27

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.14
Daily wages in small-scale crafts (artisans)

	Painters	Bricklayers		Joiners	Bakers	Shoemakers	Tailors	Total Repr mean
		Skilled	Unskilled					
1877	3.03	4.02		3.14	2.25	2.63	3.10	3.04
1878	2.77	3.88		2.80	2.25	2.38	2.90	2.83
1879	2.54	3.75		2.45	2.25	2.13	2.70	2.62
1880	2.10	3.58		2.13	2.25	1.88	2.50	2.36
1881	2.23	3.51		2.30	2.25	1.93	2.60	2.44
1882	2.37	3.45		2.35	2.25	1.98	2.70	2.49
1883	2.51	3.39		2.40	2.25	2.03	2.80	2.55
1884	2.67	3.32		2.45	2.25	2.08	2.90	2.60
1885	2.75	3.25		2.25	2.25	2.13	3.00	2.58
1886	2.75	3.00		2.25	2.60	2.00	2.75	2.54
1887	2.75	3.00		2.25	2.66	2.00	2.75	2.55
1888	2.75	3.23		2.44	2.66	2.00	2.75	2.63
1889	2.88	3.29		2.48	2.66	2.13	2.75	2.69
1890	3.13	3.50		2.65	2.97	2.40	2.75	2.89
1891	3.13	3.50		2.78	3.00	2.50	2.75	2.94
1892	3.13	3.50		2.78	3.00	2.50	3.00	2.98
1893	3.50	3.75		3.00	3.00	2.55	3.00	3.15
1894	4.00	4.25		3.00	3.00	2.55	3.25	3.35
1895	4.00	4.25		3.00	3.25	2.50	3.25	3.38
1896	4.00	4.50		3.13	3.58	2.75	3.25	3.53
1897	4.50	5.23		3.58	3.84	3.00	3.50	3.94
1898	4.50	5.23		3.84	3.79	3.00	3.50	4.00
1899	4.50	5.13		3.78	3.71	3.44	3.75	4.05
1900	4.38	4.75		3.78	3.67	3.28	3.67	3.94
1901	4.25	4.40		3.76	3.50	3.17	3.92	3.86
1902	4.00	4.40		3.71	3.67	3.17	4.17	3.85
1903	4.00	4.15		3.71	3.67	3.17	4.17	3.82
1904	4.00	4.70		3.68	3.67	3.17	4.17	3.89
1905	4.25	4.25		3.58	3.67	3.17	4.17	3.85
1906	4.25	4.63		3.71	3.75	3.38	4.17	3.97
1907	4.75	5.50		4.17	3.75	3.38	4.17	4.31
1908	5.25	5.50		4.50	4.33	3.67	4.25	4.62
1909	5.75	5.75		4.75	4.33	4.00	4.25	4.86
1910	6.00	5.75		4.75	4.33	4.36	4.25	4.96
1911								
1912								
1913								
1914								
1915	7.15	7.19	6.51	5.49	5.67	5.53	5.42	6.08
1916								
1917								
1918	11.54	12.73	11.30	12.85	10.35	11.19	12.61	11.88
1919	14.80	16.10	15.30	15.70	12.90	12.20	14.30	14.54
1920	17.17	17.67	16.50	17.17	17.17	18.67	16.83	17.30
1921	17.00	17.67	16.67	16.50	15.83	16.00	16.33	16.55
1922	13.00	13.50	12.50	12.83	13.00	13.83	12.33	12.98
1923	12.50	13.00	12.00	12.33	12.50	13.17	11.83	12.46

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.14
Daily wages in small-scale crafts (artisans)

	Painters	Bricklayers		Joiners	Bakers	Shoemakers	Tailors	Total Repr mean
		Skilled	Unskilled					
1924	14.00	15.00	13.50	14.00	12.00	13.50	13.33	13.64
1925	15.00	16.00	14.50	14.83	12.50	14.33	14.00	14.47
1926	13.67	14.17	13.00	13.17	11.33	12.50	12.33	12.91
1927	12.50	13.00	11.83	12.17	9.67	11.67	11.50	11.80
1928	11.83	12.17	11.00	11.33	9.50	10.33	10.67	11.02
1929	12.00	12.33	11.17	11.67	9.50	10.33	11.00	11.20
1930	12.00	12.33	11.17	11.50	9.33	10.50	11.00	11.16
1931	11.83	12.17	11.00	11.33	9.17	10.33	10.83	11.00
1932	11.67	12.17	11.00	11.33	9.17	10.33	10.83	10.97
1933	11.83	12.17	11.00	11.33	9.17	10.33	10.83	11.00
1934	11.67	12.17	11.00	11.33	9.17	10.33	10.83	10.97
1935	11.83	12.33	11.00	11.50	9.17	10.33	10.83	11.05
1936	11.83	12.33	11.00	11.50	9.17	10.33	10.83	11.05
1937	13.00	13.50	12.50	12.67	9.83	11.17	12.17	12.17
1938	14.00	14.33	13.50	13.67	10.33	11.67	13.33	13.04
1939	14.00	14.33	13.50	13.83	10.33	11.83	13.33	13.10
1940	14.00	14.33	13.50	13.99	10.33	11.99	13.33	13.16

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.15 Large scale crafts

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1726	0.28	0.19	0.21						0.24
1727									
1728									
1729									
1730									
1731	0.31	0.21	0.18						0.24
1732									
1733									
1734									
1735									
1736	0.34	0.25	0.24						0.28
1737									
1738									
1739									
1740									
1741	0.37	0.24	0.26						0.29
1742									
1743									
1744									
1745									
1746	0.47	0.31	0.29						0.35
1747									
1748									
1749									
1750									
1751	0.57	0.25	0.28						0.35
1752									
1753									
1754									
1755									
1756	0.58	0.29	0.29						0.38
1757									
1758									
1759									
1760									
1761	0.83	0.46	0.37						0.54
1762									
1763									
1764									
1765									
1766	0.74	0.41	0.37						0.50
1767									
1768									
1769									

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1770									
1771	0.83	0.49	0.37						0.55
1772									
1773									
1774									
1775									
1776	0.99	0.38	0.38						0.50
1777									
1778									
1779									
1780									
1781	0.83	0.41	0.37						0.53
1782									
1783									
1784									
1785									
1786	0.89	0.44	0.39						0.56
1787									
1788									
1789									
1790									
1791	0.87	0.44	0.42						0.54
1792									
1793									
1794									
1795									
1796	0.80	0.43	0.38						0.53
1797									
1798									
1799									
1800									
1801	1.13	0.69	0.55						0.77
1802									
1803									
1804									
1805									
1806	0.98	0.60	0.56						0.70
.									.
.									.
.									.
1820								2.68	2.68
1821								2.51	2.51
1822								2.72	2.72
1823								2.70	2.70
1824								2.56	2.56
1825								2.42	2.42

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1826								2.40	2.40
1827								2.55	2.55
1828								2.41	2.41
1829								2.40	2.40
1830								2.50	2.50
1831								2.64	2.64
1832								2.56	2.56
1833								2.33	2.33
.									.
.									.
.									.
1867								2.24	2.82
1868								2.11	2.65
1869								2.17	2.73
1870								2.18	2.74
1871								2.15	2.71
1872								2.22	2.80
1873								2.29	2.88
1874								2.42	3.05
1875						3.20		2.54	3.20
1876						3.06			3.06
1877						3.00			3.00
1878						2.94			2.94
1879						2.90			2.90
1880						2.85			2.85
1881						2.60			2.60
1882						2.45			2.45
1883						2.30			2.30
1884						2.33			2.33
1885						2.35			2.35
1886						2.17			2.17
1887						2.17			2.17
1888						2.42			2.42
1889						2.52			2.52
1890						2.96			2.96
1891						2.96			2.96
1892						2.86			2.86
1893						2.86			2.86
1894						2.80			2.80
1895						2.80			2.80
1896						2.80			2.80
1897						3.15			3.15
1898						3.60			3.60
1899						3.60			3.60
1900						3.50			3.50
1901						3.50			3.50

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.15
Daily wages in large scale crafts

	Iron crafters Skilled	Iron crafters Unskilled	Others	Masons Summer	Masons Winter	Carpenters Summer	Carpenters Winter	All types	Total Repr mean
1902						3.50			3.50
1903						3.15			3.15
1904						3.10			3.10
1905						3.20			3.20
1906						3.40			3.40
1907						3.60			3.60
1908						3.70			3.70
1909						3.70			3.70
1910						3.80		4.10	3.80
1911								4.20	3.89
1912								4.43	4.11
1913								4.62	4.28
1914								4.77	4.42
1915				4.88	4.26	4.81	4.26		4.61
1916				6.56	5.10	6.43	5.09		5.94
1917				9.38	7.22	9.23	7.24		8.48
1918				12.59	9.87	12.41	9.96	12.65	12.07
1919				14.91	12.20	14.72	12.19	17.46	15.88
1920				16.07	13.71	16.14	13.71	19.72	17.80
1921				12.86	12.69	13.29	12.83	19.39	16.80
1922				10.36	10.15	10.53	10.27	14.94	13.10
1923				9.81	9.16	9.99	9.28	14.54	12.55
1924				10.44	9.31	10.62	9.54	15.95	13.56
1925				9.89	8.96	10.10	9.20	17.10	14.08
1926				8.30	7.98	8.58	8.23	15.44	12.57
1927				7.27	6.94	7.53	7.20	14.54	11.62
1928				6.85	6.35	7.11	6.54	13.66	10.88
1929				6.70	6.05	6.93	6.20	13.88	10.92
1930				6.40	5.80	6.65	6.02	14.01	10.89
1931				5.93	5.50	6.10	5.71	13.33	10.32
1932				5.60	5.14	5.88	5.34	14.09	10.65
1933				5.44	4.93	5.65	5.13	13.70	10.34
1934				5.44	4.87	5.79	5.06	13.50	10.22
1935				5.56	4.94	5.79	5.14	13.62	10.32
1936				5.88	5.19	6.15	5.42	14.58	11.01
1937				6.77	5.78	7.04	6.07	15.57	11.91
1938				7.07	6.33	7.34	6.62	17.30	13.12
1939				7.59	6.73	7.92	7.04	17.65	13.52
1940				7.97	7.02	8.32	7.35	17.51	13.57

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241, NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.16 Crafts

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1726		0.24		0.24
1727				
1728				
1729				
1730				
1731		0.24		0.24
1732				
1733				
1734				
1735				
1736		0.28		0.28
1737				
1738				
1739				
1740				
1741		0.29		0.29
1742				
1743				
1744				
1745				
1746		0.35		0.35
1747				
1748				
1749				
1750				
1751		0.35		0.35
1752				
1753				
1754				
1755				
1756		0.38		0.38
1757				
1758				
1759				
1760				
1761		0.54		0.54
1762				
1763				
1764				
1765				
1766		0.50		0.50
1767				
1768				
1769				

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1770				
1771		0.55		0.55
1772				
1773				
1774				
1775				
1776		0.50		0.50
1777				
1778				
1779				
1780				
1781		0.53		0.53
1782				
1783				
1784				
1785				
1786		0.56		0.56
1787				
1788				
1789				
1790				
1791		0.54		0.54
1792				
1793				
1794				
1795				
1796		0.53		0.53
1797				
1798				
1799				
1800				
1801		0.77		0.77
1802				
1803				
1804				
1805				
1806		0.70		0.70
.				.
.				.
.				.
1820			2.68	2.68
1821			2.51	2.51
1822			2.72	2.72
1823			2.70	2.70
1824			2.56	2.56
1825			2.42	2.42

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1826			2.40	2.40
1827			2.55	2.55
1828			2.41	2.41
1829			2.40	2.40
1830			2.50	2.50
1831			2.64	2.64
1832			2.56	2.56
1833	2.43		2.33	2.33
1834	2.41			2.31
1835	2.46			2.37
1836	2.66			2.56
1837	2.67			2.57
1838	2.50			2.40
1839	2.71			2.60
1840	2.65			2.55
1841	2.51			2.42
1842	2.48			2.38
1843	2.48			2.38
1844	2.46			2.36
1845	2.63			2.52
1846	2.38			2.29
1847	2.55			2.45
1848	2.42			2.32
1849	2.38			2.29
1850	2.35			2.26
1851	2.37			2.28
1852	2.44			2.34
1853	2.51			2.41
1854	2.65			2.55
1855	2.80			2.69
1856	3.00			2.88
1857	2.80			2.69
1858	2.65			2.55
1859	2.73			2.63
1860	2.79			2.68
1861	2.90			2.79
1862	2.88			2.77
1863	2.81			2.70
1864	2.80			2.69
1865	2.83			2.72
1866	3.00			2.88
1867	3.06	2.82	2.24	2.94
1868		2.65	2.11	2.77
1869		2.73	2.17	2.85
1870		2.74	2.18	2.86
1871		2.71	2.15	2.83
1872		2.80	2.22	2.92

Sources: Fløyestad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1873		2.88	2.29	3.01
1874		3.05	2.42	3.18
1875	3.45	3.20	2.54	3.29
1876	3.27	3.06		3.15
1877	3.04	3.00		3.03
1878	2.83	2.94		2.87
1879	2.62	2.90		2.73
1880	2.36	2.85		2.60
1881	2.44	2.60		2.54
1882	2.49	2.45		2.47
1883	2.55	2.30		2.44
1884	2.60	2.33		2.48
1885	2.58	2.35		2.48
1886	2.54	2.17		2.37
1887	2.55	2.17		2.38
1888	2.63	2.42		2.27
1889	2.69	2.52		2.60
1890	2.89	2.96		2.93
1891	2.94	2.96		2.95
1892	2.98	2.86		2.92
1893	3.15	2.86		3.02
1894	3.35	2.80		3.10
1895	3.38	2.80		3.12
1896	3.53	2.80		3.20
1897	3.94	3.15		3.51
1898	4.00	3.60		3.78
1899	4.05	3.60		3.80
1900	3.94	3.50		3.70
1901	3.86	3.50		3.68
1902	3.85	3.50		3.67
1903	3.82	3.15		3.57
1904	3.89	3.10		3.58
1905	3.85	3.20		3.60
1906	3.97	3.40		3.75
1907	4.31	3.60		3.99
1908	4.62	3.70		4.21
1909	4.86	3.70		4.34
1910	4.96	3.80	4.10	4.46
1911		3.89	4.20	4.96
1912		4.11	4.43	5.20
1913		4.28	4.62	5.31
1914		4.42	4.77	5.44
1915	6.08	4.61		5.63
1916		5.94		6.08
1917		8.48		8.68
1918	11.88	12.07	12.65	12.30
1919	14.54	15.88	17.46	16.27

Sources: Fløystad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

TABLE 5.A.16
Average daily wages in crafts

	Small scale	Large scale	Others	Total Repr mean
1920	17.30	17.80	19.72	18.61
1921	16.55	16.80	19.39	18.02
1922	12.98	13.10	14.94	13.98
1923	12.46	12.55	14.54	13.52
1924	13.64	13.56	15.95	14.78
1925	14.47	14.08	17.10	15.71
1926	12.91	12.57	15.44	14.11
1927	11.80	11.62	14.54	13.13
1928	11.02	10.88	13.66	12.31
1929	11.20	10.92	13.88	12.48
1930	11.16	10.89	14.01	12.53
1931	11.00	10.32	13.33	12.03
1932	10.97	10.65	14.09	12.46
1933	11.00	10.34	13.70	12.22
1934	10.97	10.22	13.50	12.08
1935	11.05	10.32	13.62	12.19
1936	11.05	11.01	14.58	12.81
1937	12.17	11.91	15.57	13.82
1938	13.04	13.12	17.30	15.19
1939	13.10	13.52	17.65	15.46
1940	13.16	13.57	17.51	15.42

Sources: Fløyestad 1979, 595-596, Hodne, Grytten and Alme 1995, 240-241,
NOS 1915-1941, NOS 1949, 364-365, Wedervang Archive, W046, W055, W284 and W417.

5.A.17 Communications

TABLE 5.A.17
Average daily wages in communications

	Railway staff	Drivers excl horse	Road work incl horse	Forrestry incl horse	Piece- work	Telegraph Fixed	Mean	Fixed	Port authorities Occasional	Mean	Total Repr mean
1850		1.59	2.22								1.80
1851		1.67	2.03								1.75
1852		1.76	2.43								1.98
1853		1.85	2.82								2.20
1854	1.95	1.82	2.87								2.21
1855	2.58	1.88	2.58								2.35
1856	2.50	1.90	3.18								2.53
1857	2.42	2.00	3.09								2.50
1858	2.30	1.70	2.82								2.27
1859	2.24	1.65	2.83								2.24
1860	2.18	1.80	2.95								2.31
1861	2.34	1.65	2.96								2.32
1862	2.43	1.65	2.82								2.30
1863	2.22	1.60	2.54								2.12
1864	2.29	1.80	2.55								2.21
1865	2.29	1.80	2.47								2.19
1866	2.25	1.80	2.49								2.18
1867	2.32	1.60	2.83								2.25
1868	2.28	1.75	2.77								2.27
1869	2.32	1.73	3.01								2.35
1870	2.37	1.67	2.94								2.33
1871	2.33	1.80	2.89								2.34
1872	2.51	1.80	3.27								2.53
1873	2.37	2.00	3.51								2.63
1874	2.49	2.23	4.43								3.05
1875	2.65	2.57	4.28								3.17
1876	2.81	2.70	4.30								3.27
1877	2.90	2.73	4.33								3.32
1878	3.00	2.33	4.25								3.19
1879	3.44	2.37	3.37								3.06
1880	3.35	2.37	3.47								3.06
1881	3.20	2.57	3.80								3.19
1882	3.24	2.57	3.80								3.20
1883	3.13	2.57	3.81								3.17
1884	3.14	2.57	3.82								3.18
1885	3.10	2.57	3.70								3.12
1886	3.10	2.57	3.44								3.04
1887	3.10	2.57	3.62								3.10
1888	3.13	2.57	3.47								3.06
1889	3.07	2.73	3.49								3.10
1890	3.25	2.93	3.57								3.25
1891	3.28	3.00	3.72								3.33
1892	3.29	3.03	3.80								3.37

Sources: Sources, NOS 1918-1941, NOS 1949, 366-367, Wedervang Archive, files W058, W118, W119A, W120A, W245 and W249.

TABLE 5.A.17
Average daily wages in communications

	Railway staff	Drivers excl horse	Road work incl horse	Forrestry incl horse	Telegraph			Port authorities			Total Repr mean
					Piece- work	Fixed	Mean	Fixed	Occasional	Mean	
1893	3.20	3.03	3.75								3.33
1894	3.34	3.17	3.81								3.44
1895	3.39	3.27	3.83								3.50
1896	3.38	3.27	3.85								3.50
1897	3.49	3.27	3.84								3.53
1898	3.55	3.47	4.06								3.69
1899	3.67	3.47	4.22								3.79
1900	3.82	3.50	4.41								3.91
1901	3.87	3.50	4.40								3.92
1902	3.86	3.50	4.34								3.90
1903	3.90	3.50	4.39								3.93
1904	3.95	3.50	4.39								3.95
1905	3.87	3.50	4.34								3.90
1906	3.95	3.50	4.40								3.95
1907	4.28	3.50	4.46								4.08
1908	4.25	3.65	4.76								4.22
1909	5.00	3.70	4.87								4.52
1910	5.10	4.40	4.94								4.81
1911		4.40	5.02								5.02
1912		4.70	5.24								5.24
1913		4.90	5.51								5.51
1914		4.90	5.61								5.61
1915		5.30		11.03							6.62
1916		6.73		13.98							8.39
1917		9.20		19.86							11.92
1918		12.72		24.46	1.52	1.22	13.01				14.68
1919		14.00		26.73	2.05	1.52	16.30				16.04
1920		15.33		28.36	2.57	1.81	19.04				16.60
1921		14.67		25.73	2.26	1.56	16.68	12.08	9.44	10.76	16.60
1922		11.50		18.45	1.94	1.24	14.12	10.24	8.88	9.56	12.99
1923		11.50		15.09	1.94	1.27	14.18	10.00	8.48	9.24	12.28
1924		11.67		15.60	2.26	1.24	16.04	10.32	8.56	9.44	12.78
1925		11.83		14.42	1.79	1.27	13.28	10.24	8.88	9.56	12.23
1926		10.67		11.13	1.50	1.17	11.34	10.72	8.96	9.84	10.74
1927		10.00		8.80	1.13	1.09	8.96	9.84	8.56	9.20	9.48
1928		9.33		8.10	1.33	1.06	10.10	10.56	7.76	9.16	9.17
1929		9.00		7.86	1.07	1.02	8.46	10.08	7.60	8.84	8.67
1930		9.33		7.63	1.01	1.02	8.10	9.68	7.52	8.60	8.70
1931		9.17		7.15	0.94	0.99	7.62	9.52	7.36	8.44	8.42
1932		8.83		6.73	0.96	0.98	7.72	9.04	7.20	8.12	8.14
1933		9.00		6.48	1.08	1.05	8.58	8.96	6.96	7.96	8.28
1934		9.00		6.50	1.05	1.03	8.36	9.44	7.20	8.32	8.30
1935		9.17		6.69	1.13	1.03	8.84	9.28	6.96	8.12	8.47
1936		9.83		7.03	1.20	1.10	9.40	9.76	7.04	8.40	8.99
1937		11.67		8.40	1.28	1.17	10.02	9.92	8.80	9.36	10.42
1938		11.67		9.17	1.35	1.23	10.56	10.48	9.36	9.92	10.74

Sources: Sources, NOS 1918-1941, NOS 1949, 366-367, Wedervang Archive, files W058, W118, W119A, W120A, W245 and W249.

TABLE 5.A.17
Average daily wages in communications

	Railway staff	Drivers excl horse	Road work incl horse	Forrestry incl horse	Telegraph			Port authorities			Total Repr mean
					Piece- work	Fixed	Mean	Fixed	Occasional	Mean	
1939		11.83		9.25	1.39	1.31	10.96	11.36	9.36	10.36	10.96
1940				10.55	1.77	1.36	13.34	11.04	10.16	10.60	11.68

Sources: Sources, NOS 1918-1941, NOS 1949, 366-367, Wedervang Archive, files W058, W118, W119A, W120A, W245 and W249.

5.B Monthly wages

5.B.1 Sailors on sailing vessels, excl. board

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1751	8.87	3.71		4.09
1752	9.22	3.51		4.05
1753	9.05	3.36		3.84
1754	9.38	3.27		3.82
1755	7.22	3.38		3.73
1756	7.73	3.81		4.17
1757	9.23	4.22		4.89
1758	8.79	3.74		4.45
1759	9.84	4.49		5.30
1760	10.13	4.17		4.98
1761	10.17	4.27		5.09
1762	9.64	4.61		5.40
1763	9.70	3.65		4.58
1764	12.16	4.68		5.62
1765	11.20	4.68		5.46
1766	11.22	4.34		5.28
1767	11.41	4.51		5.43
1768	10.94	4.34		5.18
1769	11.20	4.54		5.39
1770	10.00	4.41		5.05
1771				
1772	10.40	3.92		5.68
1773	9.60	4.90	6.00	6.40
1774				
1775				
1776	10.80	4.33		6.09
1777	10.24	4.43	5.33	5.16
1778	9.13	4.41	5.20	5.08
1779	11.05	4.70	6.46	5.73
1780	10.92	5.14	6.62	5.97
1781	12.15	6.18	8.80	6.99
1782	12.41	6.44	9.66	7.28
1783	12.14	5.36	6.84	6.36
1784	11.81	5.19	6.75	6.02
1785	11.18	4.36	5.08	5.14
1786	11.15	4.23	5.00	5.11
1787	11.00	4.09	5.07	4.82
1788	10.27	4.09	4.67	4.91
1789	9.81	4.44	4.80	5.28
1790	9.33	4.43	5.66	5.25
1791	9.37	4.35	4.86	5.21

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1792	9.22	4.37	4.57	5.32
1793	9.16	4.75	5.70	5.57
1794	10.11	5.80	6.96	6.57
1795	10.33	5.54	6.54	6.39
1796	10.56	5.82	7.52	6.67
1797	10.82	6.35	7.39	7.11
1798	11.59	6.82	7.82	7.61
1799	14.54	8.07	9.80	9.20
1800	14.93	8.19	9.85	9.24
1801	15.13	8.69	9.72	9.63
1802	14.18	6.69	7.19	7.92
1803	14.80	7.31	8.87	8.52
1804	14.93	7.66	7.66	8.64
1805	15.10	8.49	7.67	9.24
1806	16.14	9.02	6.95	9.80
1807	16.02	8.55	8.61	9.49
1808	15.46	6.34	4.17	7.12
1809	21.47	11.08	10.33	11.65
1810	38.53	22.74	22.78	23.94
1811	62.79	38.97	38.44	40.66
1812	78.63	46.44	45.20	48.99
1813	26.04	15.21	18.50	16.06
1814	36.64	19.78	21.26	20.84
1815	39.59	23.45	21.53	25.29
1816	44.07	23.35	16.73	25.95
1817	63.91	34.01	26.80	37.71
1818	54.89	29.18	23.19	32.40
1819	45.30	21.62	19.82	24.62
1820	45.96	22.53	20.14	25.48
1821	46.58	23.15	20.23	26.38
1822	48.14	25.48	20.54	28.60
1823	48.73	26.30	19.82	29.00
1824	49.81	28.03	21.14	30.70
1825	49.02	26.60	20.06	29.90
1826	47.59	26.46	18.74	29.26
1827	48.08	26.55	19.32	31.26
1828	50.00	28.41	20.60	30.13
1829	47.90	27.14	20.94	29.48
1830	49.65	28.79	21.64	31.15
1831	51.39	29.96	21.94	32.27
1832	50.92	29.65	21.24	32.20
1833	51.96	30.05	21.18	32.35
1834	50.51	28.90	21.16	31.38
1835	49.36	27.51	21.04	30.42
1836	47.05	26.58	19.07	29.05
1837	49.71	27.65	20.31	29.68
1838	48.19	28.28	20.81	30.02

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1839	47.25	27.53	20.04	29.52
1840	49.26	28.78	19.68	30.15
1841	48.67	26.84	19.19	28.82
1842	46.73	25.24	18.39	27.44
1843	40.39	22.36	16.12	24.21
1844	47.13	27.30	18.51	28.64
1845	47.51	27.37	18.62	29.17
1846	47.83	28.16	18.72	29.42
1847	46.11	28.48	19.16	30.01
1848	44.67	27.17	18.08	29.04
1849	44.68	27.08	18.91	29.09
1850	46.17	27.19	18.76	28.82
1851	46.48	28.56	19.04	29.97
1852	46.20	28.50	18.22	29.79
1853	48.55	31.27	19.03	32.25
1854	60.83	38.73	22.05	39.32
1855	62.51	39.57	22.42	40.10
1856	65.82	41.14	24.15	41.42
1857	65.55	40.83	24.66	41.38
1858	52.02	30.94	21.01	32.23
1859	50.40	31.06	21.04	32.28
1860	50.62	31.77	21.61	32.98
1861	49.72	32.08	20.80	33.21
1862	49.36	31.88	21.68	33.11
1863	49.97	32.74	22.15	33.98
1864	50.87	34.59	22.43	35.63
1865	52.56	35.39	23.30	36.42
1866	54.14	36.32	22.62	37.27
1867	55.28	36.16	22.06	37.33
1868	54.34	35.66	21.64	36.99
1869	55.00	34.32	21.60	36.12
1870	55.43	34.00	21.36	36.38
1871	55.13	34.32	22.04	36.39
1872	56.73	35.74	21.58	37.65
1873	61.74	41.30	23.18	42.85
1874	71.37	46.15	24.77	48.20
1875	66.34	43.18	25.16	45.65
1876	66.27	44.12	25.94	46.34
1877	65.42	43.45	36.82	46.08
1878	62.42	40.48	36.00	43.43
1879	53.28	32.05	29.57	35.31
1880	53.14	32.63	29.38	35.77
1881	53.58	33.74	31.45	36.89
1882	55.48	36.08	34.07	39.22
1883	58.55	39.41	35.46	42.21
1884	59.57	40.04	36.82	42.87
1885	56.66	36.47	35.82	39.77

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.1
Monthly wages for sailors on sailing vessels, excl. board

	Officers	Crew	Mess	Total Mean all
1886	55.13	34.55	33.91	37.94
1887	55.25	34.32	33.66	37.63
1888	57.85	36.48	36.13	39.71
1889	62.18	40.70	42.42	44.36
1890	66.09	42.08	43.75	45.94
1891	66.81	42.03	46.29	46.54
1892	65.99	39.99	43.73	44.77
1893	63.91	36.91	41.71	41.92
1894	63.29	36.70	41.84	41.81
1895	62.64	35.82	41.71	41.14
1896	63.49	35.96	41.71	41.08
1897	64.45	36.58	42.45	41.73
1898	65.68	38.02	44.92	43.23
1899	69.56	42.32	49.39	47.40
1900	72.39	44.03	52.37	49.25
1901	73.48	42.70	53.26	48.51
1902	71.90	38.90	50.10	45.19
1903	72.28	39.26	50.68	45.51
1904	73.06	38.80	50.94	45.41
1905	74.25	38.77	53.11	45.59
1906	77.81	40.50	53.42	46.94
1907	86.92	44.64	57.15	51.78
1908	91.85	44.88	60.23	52.76
1909	90.93	43.09	60.39	51.42
1910	93.91	44.79	62.89	52.83
1911	100.22	45.87	64.85	54.92
1912	116.21	50.44	74.25	61.30
1913	127.79	52.67	80.30	65.45
1914	129.93	54.31	83.92	67.78
1915	196.45	74.18	112.97	90.06
1916	292.33	96.80	157.98	125.26
1917	397.08	128.97	238.57	168.19
1918	496.40	163.70	309.50	224.42
1919	426.59	171.54	330.87	245.87
1920	471.30	232.33	422.06	309.19
1921	400.00	115.00		172.00

Sources: Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

5.B.2 Sailors on steam and motorized vessels, excl board

TABLE 5.B.2
Monthly wages for sailors on steam and motorized vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1844			30.00		30.00
1845					
1846					
1847					
1848					
1849					
1850					
1851					
1852		110.00	30.60	28.00	42.62
1853				40.00	40.00
1854		40.00	32.00		32.62
1855	64.00		36.00	36.00	38.55
1856	72.00	120.00	38.00	39.00	48.64
1857	62.00	108.00	36.56	39.00	43.09
1858	100.00	120.00	34.10	39.00	44.21
1859	72.00	120.00	35.38	39.00	42.52
1860	59.20	128.00	34.07		43.03
1861	65.60	100.00	34.06		41.68
1862	72.00		36.47		40.21
1863	73.00	100.00	39.41		47.15
1864	75.20	100.00	37.38		46.11
1865	78.50		39.20		44.44
1866	94.29	120.00	38.10		46.17
1867	92.31	112.00	39.22		52.91
1868	90.33	92.00	38.08		45.25
1869	82.67	68.00	40.76	32.00	47.11
1870	86.86	103.00	39.92	28.00	52.75
1871	69.07	89.00	37.76	39.33	48.59
1872	75.00	101.82	40.19	42.67	49.30
1873	78.27	103.69	48.46	56.67	56.51
1874	82.40	106.33	46.31	54.00	56.88
1875	116.10	111.50	48.92	52.00	68.62
1876	86.36	113.20	47.51	51.33	57.94
1877	84.21	112.82	45.27	40.08	55.69
1878	81.33	116.27	44.68	45.00	54.72
1879	68.98	106.12	40.07	46.21	51.18
1880	76.00	114.94	41.68	43.13	53.07
1881	70.58	103.78	40.73	35.78	50.33
1882	76.91	106.90	44.17	49.18	54.56
1883	75.07	109.19	42.72	48.48	56.69
1884	68.33	108.13	42.90	49.09	53.80
1885	75.86	106.97	40.45	54.68	55.20
1886	78.26	107.56	41.35	55.55	57.45
1887	77.51	118.87	42.37	52.00	56.40

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.2

Monthly wages for sailors on steam and motorized vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1888	79.50	116.11	42.86	46.67	58.37
1889	81.00	119.38	44.81	53.10	60.90
1890	78.81	117.51	45.84	56.31	59.34
1891	82.62	118.59	46.10	57.19	59.37
1892	79.30	110.03	43.51	56.21	57.84
1893	76.06	109.17	42.68	53.55	57.89
1894	77.26	111.70	43.87	53.11	58.11
1895	80.99	118.32	43.99	51.35	59.43
1896	78.29	118.19	43.94	37.66	53.49
1897	78.76	121.13	43.98	56.02	59.52
1898	78.30	127.89	44.82	55.52	60.07
1899	83.72	140.09	46.24	59.25	61.78
1900	82.45	143.83	47.62	61.76	63.11
1901	82.40	140.43	46.47	60.07	62.87
1902	82.59	141.75	45.98	61.37	61.94
1903	84.20	144.96	45.84	61.13	62.36
1904	84.18	140.83	45.73	62.04	63.02
1905	84.33	139.79	45.93	62.75	64.04
1906	87.79	140.19	47.18	61.91	63.80
1907	92.23	145.61	50.77	63.92	67.96
1908	96.10	147.69	53.40	66.84	71.45
1909	94.48	146.89	50.57	65.85	68.64
1910	96.55	145.05	51.72	66.83	69.29
1911	99.16	148.46	52.95	67.26	70.31
1912	109.46	160.15	57.77	73.35	76.54
1913	119.09	166.63	61.19	75.60	81.57
1914	126.75	174.20	63.87	79.91	84.17
1915	158.65	209.03	71.68	95.94	96.10
1916	219.21	276.51	91.89	136.09	129.65
1917	380.47	476.19	146.23	220.46	212.82
1918	448.02	535.95	156.27	261.00	252.93
1919	446.64	493.69	204.38	278.82	270.85
1920	479.89	539.98	263.64	300.88	320.39
1921	419.11	505.55	222.73	258.07	275.31
1922	470.00	430.00	159.19	256.31	208.40
1923	447.00	409.00	150.52	256.62	199.16
1924	447.00	409.00	160.27	259.62	206.82
1925	447.00	452.00	160.51	257.62	209.86
1926	447.00	418.00	147.87	259.00	198.14
1927	447.00	387.00	138.69	236.15	186.17
1928	447.00	368.00	129.12	224.85	176.23
1929	447.00	368.00	129.88	223.38	176.61
1930	447.00	368.00	130.51	241.46	179.35
1931	447.00	359.00	130.16	242.15	178.53
1932	447.00	350.00	125.18	213.08	170.50
1933	447.00	350.00	125.22	220.62	171.48
1934	447.00	350.00	125.18	222.69	171.71

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.2
 Monthly wages for sailors on steam and motorized vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1935	380.00	350.00	126.79	211.85	167.82
1936	380.00	350.00	130.62	228.08	172.72
1937	440.00	395.00	140.69	236.54	187.90
1938	440.00	395.00	149.43	251.23	196.27
1939	440.00	395.00	152.10	255.31	198.77
1940	440.00	395.00	153.08	257.31	199.75

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

5.B.3 Sailors on all vessels, excl board

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1751	13.86		5.80		6.40
1752	14.40		5.48		6.33
1753	14.14		5.26		6.01
1754	14.66		5.11		5.98
1755	11.29		5.28		5.83
1756	12.08		5.96		6.52
1757	11.54		5.27		6.11
1758	10.98		4.67		5.56
1759	12.30		5.61		6.63
1760	12.66		5.22		6.23
1761	12.71		5.34		6.36
1762	12.05		5.76		6.75
1763	12.13		4.56		5.72
1764	15.20		5.85		7.02
1765	14.00		5.85		6.83
1766	14.02		5.42		6.60
1767	14.26		5.64		6.79
1768	13.67		5.43		6.48
1769	14.00		5.67		6.74
1770	12.50		5.51		6.31
1771					
1772	13.00		4.90		7.10
1773	12.00		6.13	7.50	8.00
1774					
1775					
1776	13.50		5.41		7.61
1777	12.80		5.53	6.67	6.62
1778	11.42		5.51	6.50	6.35
1779	13.81		5.88	8.07	7.16
1780	13.65		6.43	8.27	7.46
1781	15.18		7.73	11.00	8.74
1782	15.52		8.05	12.08	9.11
1783	15.18		6.70	8.55	7.95
1784	14.77		6.49	8.44	7.53
1785	13.97		5.45	6.35	6.42
1786	13.93		5.29	6.25	6.38
1787	13.75		5.11	6.33	6.02
1788	12.83		5.11	5.84	6.13
1789	12.27		5.55	6.00	6.59
1790	11.67		5.54	7.07	6.56
1791	11.71		5.43	6.07	6.52
1792	11.52		5.46	5.71	6.65
1793	11.45		5.94	7.12	6.96

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1794	12.64		7.25	8.70	8.21
1795	12.91		6.93	8.18	7.99
1796	13.20		7.28	9.40	8.34
1797	13.53		7.94	9.24	8.88
1798	14.49		8.52	9.77	9.52
1799	14.54		8.07	9.80	9.20
1800	14.93		8.19	9.85	9.24
1801	15.13		8.69	9.72	9.63
1802	14.18		6.69	7.19	7.92
1803	14.80		7.31	8.87	8.52
1804	14.93		7.66	7.66	8.64
1805	15.10		8.49	7.67	9.24
1806	16.14		9.02	6.95	9.80
1807	16.02		8.55	8.61	9.49
1808	15.46		6.34	4.17	7.12
1809	21.47		11.08	10.33	11.65
1810	38.53		22.74	22.78	23.94
1811	62.79		38.97	38.44	40.66
1812	78.63		46.44	45.20	48.99
1813	26.04		15.21	18.50	16.06
1814	36.64		19.78	21.26	20.84
1815	39.59		23.45	21.53	25.29
1816	44.07		23.35	16.73	25.95
1817	63.91		34.01	26.80	37.71
1818	54.89		29.18	23.19	32.40
1819	45.30		21.62	19.82	24.62
1820	45.96		22.53	20.14	25.48
1821	46.58		23.15	20.23	26.38
1822	48.14		25.48	20.54	28.60
1823	48.73		26.30	19.82	29.00
1824	49.81		28.03	21.14	30.70
1825	49.02		26.60	20.06	29.90
1826	47.59		26.46	18.74	29.26
1827	48.08		26.55	19.32	31.26
1828	50.00		28.41	20.60	30.13
1829	47.90		27.14	20.94	29.48
1830	49.65		28.79	21.64	31.15
1831	51.39		29.96	21.94	32.27
1832	50.92		29.65	21.24	32.20
1833	51.96		30.05	21.18	32.35
1834	50.51		28.90	21.16	31.38
1835	49.36		27.51	21.04	30.42
1836	47.05		26.58	19.07	29.05
1837	49.71		27.65	20.31	29.68
1838	48.19		28.28	20.81	30.02
1839	47.25		27.53	20.04	29.52

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1840	49.26		28.78	19.68	30.15
1841	48.67		26.84	19.19	28.82
1842	46.73		25.24	18.39	27.44
1843	40.39		22.36	16.12	24.21
1844	47.13		27.31	18.51	28.64
1845	47.51		27.37	18.62	29.17
1846	47.83		28.16	18.72	29.42
1847	46.11		28.48	19.16	30.01
1848	44.67		27.17	18.08	29.03
1849	44.68		27.08	18.91	29.07
1850	46.17		27.19	18.76	28.82
1851	46.48		28.56	19.04	29.97
1852	46.20	110.00	28.52	18.27	29.90
1853	48.55		31.27	19.11	32.24
1854	60.83	40.00	38.69	22.05	39.29
1855	62.51		39.55	22.47	40.09
1856	65.87	120.00	41.12	24.25	41.47
1857	65.51	108.00	40.79	24.70	41.38
1858	52.20	120.00	30.97	21.08	32.35
1859	50.56	120.00	31.13	21.18	32.40
1860	50.72	128.00	31.80	21.61	33.06
1861	49.87	100.00	32.10	20.80	33.25
1862	49.45		31.90	21.68	33.10
1863	50.16	100.00	32.81	22.15	34.09
1864	51.05	100.00	34.61	22.43	35.65
1865	52.84		35.44	23.30	36.41
1866	54.48	120.00	36.35	22.62	37.22
1867	55.89	112.00	36.20	22.06	37.30
1868	54.92	92.00	35.72	21.64	36.78
1869	55.09	68.00	34.35	21.61	35.75
1870	55.69	103.00	34.06	21.36	33.74
1871	55.35	89.00	34.37	22.17	36.08
1872	56.92	101.82	35.81	21.72	37.25
1873	62.04	103.69	41.49	23.65	42.54
1874	71.50	106.33	46.15	25.28	47.37
1875	67.34	111.50	43.27	25.36	44.78
1876	67.17	113.20	44.31	26.36	45.85
1877	66.01	112.82	43.53	36.90	46.50
1878	62.66	116.27	40.58	36.06	43.67
1879	53.74	106.12	32.37	29.91	35.94
1880	53.59	114.94	33.01	29.62	36.44
1881	53.75	103.78	33.82	31.49	37.06
1882	56.05	106.90	36.40	34.46	39.83
1883	59.30	109.19	39.64	35.98	43.24
1884	59.70	108.13	40.10	37.00	43.10
1885	57.52	106.97	36.71	36.49	40.77

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1886	55.99	107.56	34.90	34.56	39.02
1887	56.67	118.87	35.03	34.51	39.31
1888	59.74	116.11	37.09	36.58	41.62
1889	64.06	119.38	41.16	43.07	46.33
1890	67.59	117.51	42.63	44.63	47.92
1891	68.54	118.59	42.61	47.30	48.40
1892	67.83	110.03	40.60	45.12	47.12
1893	65.80	109.17	37.90	43.27	44.91
1894	65.88	111.70	38.28	43.65	45.60
1895	66.20	118.32	37.87	43.74	46.00
1896	66.51	118.19	37.64	39.82	44.53
1897	67.22	121.13	38.27	45.01	46.06
1898	68.42	127.89	39.82	47.44	47.94
1899	73.42	140.09	43.69	51.94	52.51
1900	75.45	143.83	45.37	55.21	54.54
1901	76.51	140.43	44.10	55.28	54.08
1902	76.08	141.75	41.94	54.10	52.60
1903	76.96	144.96	42.20	54.68	53.27
1904	77.57	140.83	41.85	55.08	53.49
1905	78.76	139.79	41.99	57.17	54.42
1906	83.25	140.19	44.31	58.14	56.99
1907	90.09	145.61	48.46	61.19	62.23
1908	94.65	147.69	50.41	64.47	65.46
1909	93.36	146.89	48.20	64.20	63.68
1910	95.76	145.05	49.59	65.67	64.70
1911	99.43	148.46	51.18	66.71	66.83
1912	110.76	160.15	56.33	73.52	73.83
1913	120.71	166.63	59.62	76.33	78.94
1914	127.14	174.20	62.83	80.35	82.54
1915	162.16	209.03	71.94	97.49	95.55
1916	225.91	276.51	92.34	137.82	129.30
1917	381.28	476.19	145.41	220.96	211.04
1918	450.05	535.95	156.56	262.45	251.99
1919	445.84	493.69	203.79	279.67	270.40
1920	479.53	539.98	263.16	302.24	320.22
1921	419.09	505.55	222.67	258.07	275.27
1922	470.00	430.00	159.19	256.31	208.40
1923	447.00	409.00	150.52	256.62	199.16
1924	447.00	409.00	160.27	259.62	206.82
1925	447.00	452.00	160.51	257.62	209.86
1926	447.00	418.00	147.87	259.00	198.14
1927	447.00	387.00	138.69	236.15	186.17
1928	447.00	368.00	129.12	224.85	176.23
1929	447.00	368.00	129.88	223.38	176.61
1930	447.00	368.00	130.51	241.46	179.35
1931	447.00	359.00	130.16	242.15	178.53

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

TABLE 5.B.3
Average monthly wages for sailors on all vessels, excl board

	Officers	Engineers	Crew	Mess	Total Mean all
1932	447.00	350.00	125.18	213.08	170.50
1933	447.00	350.00	125.22	220.62	171.48
1934	447.00	350.00	125.18	222.69	171.71
1935	380.00	350.00	126.79	211.85	167.82
1936	380.00	350.00	130.62	228.08	172.72
1937	440.00	395.00	140.69	236.54	187.90
1938	440.00	395.00	149.43	251.23	196.27
1939	440.00	395.00	152.10	255.31	198.77
1940	440.00	395.00	153.08	257.31	199.75

Sources, Akstun 1960, 45-52, NOS 1921-1941, Wedervang Archive, W030, W032, W034, W035, W036, W038, W039, W043, W044, W063, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W248 and W349.

5.C Domestic services

5.C.1 Annual wages, domestic servants

TABLE 5.C.1
Annual wages in domestic services, domestic servants

	Rural			Urban			Total Repr mean Rur and urb		
	Cash wages Female	Male	Board and lodging	Mean	Cash wages Female	Male		Board and lodging	Mean
1830	28		128	172					181
1831	37		106	157					166
1832	28		128	172					181
1833	32		118	165					174
1834	44		88	145					153
1835	48		78	138					146
1836	48		78	138					146
1837	38		103	155					164
1838	44		88	145					153
1839	42		92	147					156
1840	42		93	149					157
1841	37		104	156					165
1842	40		99	152					161
1843	43		90	146					155
1844	46		84	142					150
1845	45		85	143					151
1846	44		88	145					153
1847	44		88	145					153
1848	44		88	145					153
1849	39		92	143					151
1850	40	83	89	142	48	116	107	169	149
1851	40	84	90	143	47	114	109	169	150
1852	42	89	95	151	49	120	115	177	158
1853	52	103	100	167	57	138	121	194	174
1854	52	108	111	180	60	145	133	210	188
1855	50	109	117	184	56	140	140	213	192
1856	49	111	127	194	53	142	152	223	201
1857	54	117	126	199	59	151	152	229	207
1858	56	113	112	186	63	149	135	215	193
1859	55	112	113	185	61	150	135	214	193
1860	52	117	119	190	59	152	143	220	198
1861	52	120	122	195	59	157	147	226	203
1862	55	126	120	196	63	163	144	227	205
1863	58	128	120	199	66	166	144	230	208
1864	55	126	118	194	62	160	142	224	202
1865	55	132	115	193	64	166	138	223	201
1866	55	137	122	202	64	173	147	233	211
1867	50	134	127	202	59	169	153	233	211
1868	40	120	131	196	48	154	158	227	204
1869	43	119	125	191	51	152	151	222	200

Sources, Gjølborg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.1
Annual wages in domestic services, domestic servants

	Rural				Urban				Total Repr mean Rur and urb
	Cash wages		Board and lodging	Mean	Cash wages		Board and lodging	Mean	
	Female	Male			Female	Male			
1870	52	123	121	194	63	158	145	227	204
1871	56	135	123	202	68	168	147	236	212
1872	55	144	130	212	64	172	156	242	221
1873	57	154	138	224	65	180	166	253	232
1874	65	168	143	239	71	195	172	268	248
1875	71	181	145	249	76	208	175	277	257
1876	68	176	144	245	80	215	173	280	255
1877	69	179	147	248	89	229	176	293	262
1878	68	174	133	233	88	223	160	275	246
1879	65	161	121	215	81	208	146	252	226
1880	63	153	131	221	78	203	158	261	233
1881	64	154	131	222	82	207	157	264	235
1882	65	156	134	226	83	210	161	269	239
1883	69	160	132	228	84	215	159	269	241
1884	72	164	129	228	86	219	155	267	240
1885	73	163	122	222	85	224	147	259	234
1886	73	159	120	219	83	222	145	256	231
1887	73	158	119	218	84	221	143	254	229
1888	74	160	122	222	85	224	146	259	233
1889	76	165	126	229	86	230	152	267	241
1890	77	169	130	235	91	239	157	277	249
1891	78	173	131	238	95	244	158	282	252
1892	82	177	129	240	99	249	156	285	255
1893	81	178	121	232	97	249	146	273	245
1894	84	185	121	235	105	260	145	281	250
1895	85	180	120	234	100	265	145	278	248
1896	88	187	121	239	106	275	145	285	254
1897	92	196	119	242	111	282	143	289	258
1898	89	196	126	246	106	279	151	292	262
1899	94	207	131	258	113	294	157	306	275
1900	100	218	136	271	130	303	163	328	291
1901	99	216	133	267	124	294	160	318	285
1902	105	224	129	270	119	291	155	309	283
1903	117	239	129	282	117	296	155	308	291
1904	120	244	126	283	122	300	151	309	292
1905	114	234	130	280	133	300	156	323	295
1906	118	241	132	287	137	311	158	330	302
1907	122	248	138	298	141	320	166	343	314
1908	131	264	143	313	152	332	171	359	329
1909	143	283	141	326	162	345	169	368	341
1910	148	291	146	337	168	348	176	380	353
1911	153	299	151	347	176	369	181	396	365
1912	154	302	161	360	177	379	194	412	379
1913	163	316	168	377	187	395	202	431	397
1914	175	335	170	394	190	456	205	448	414
1915	193	374	196	443	217	525	235	514	469

Sources, Gjølborg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.1
Annual wages in domestic services, domestic servants

	Rural			Mean	Urban			Mean	Total Repr mean Rur and urb
	Cash wages Female	Cash wages Male	Board and lodging		Cash wages Female	Cash wages Male	Board and lodging		
1916	226	451	235	528	243	565	283	590	551
1917	289	603	293	676	311	723	353	746	702
1918	389	829	414	934	402	933	497	1005	961
1919	532	1082	444	1141	562	1304	534	1244	1180
1920	658	1278	521	1365	749	1482	627	1522	1424
1921	672	1238	484	1326	749	1458	582	1473	1381
1922	601	1000	409	1130	709	1281	492	1316	1200
1923	547	846	386	1022	661	1144	464	1221	1098
1924	542	838	425	1055	673	1152	511	1280	1141
1925	536	834	435	1060	653	1129	523	1271	1141
1926	482	733	372	929	593	1011	447	1124	1004
1927	418	621	336	815	545	899	404	1019	894
1928	376	555	315	745	517	833	379	959	829
1929	357	525	304	711	497	796	365	922	793
1930	345	505	294	687	481	769	354	893	768
1931	329	473	281	653	469	738	338	861	735
1932	312	442	277	628	445	696	333	829	708
1933	298	420	276	610	421	660	332	801	686
1934	291	412	277	605	421	656	333	802	684
1935	295	421	284	617	430	669	342	819	698
1936	308	445	292	641	445	698	352	847	725
1937	337	500	316	701	473	758	380	910	786
1938	369	558	329	754	514	832	395	972	843
1939	397	600	333	791	538	880	400	1006	879
1940	425	657	390	885	506	882	469	1051	953

Sources, Gjølberg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

5.C.2 Daily wages, misc private services

TABLE 5.C.2
Daily wages in domestic services, misc private services

	Housekeeper	Cleaninglady	Launderette worker	Total Repr mean
1914	1.95			2.25
1915	2.33			2.68
1916	2.70			3.11
1917	3.07			3.54
1918	3.45	4.50	4.50	3.98
1919	4.80	5.80	5.30	5.20
1920	6.40	8.70	8.50	7.51
1921	6.40	7.90	8.50	7.27
1922	6.05	7.00	7.50	6.63
1923	5.65	6.80	7.33	6.33
1924	5.75	7.00	7.33	6.44
1925	5.60	6.80	7.83	6.41
1926	5.10	6.45	6.67	5.82
1927	4.70	5.85	6.00	5.31
1928	4.45	5.50	5.42	4.96
1929	4.30	5.35	5.50	4.86
1930	4.15	5.25	5.33	4.72
1931	4.05	4.95	5.17	4.54
1932	3.85	4.80	5.00	4.37
1933	3.65	4.75	4.67	4.18
1934	3.65	4.70	4.67	4.17
1935	3.70	4.75	5.00	4.28
1936	3.85	4.90	5.33	4.46
1937	4.20	5.00	6.00	4.80
1938	4.40	5.50	6.33	5.12
1939	4.60	5.60	6.33	5.25
1940	4.70	5.70	6.33	5.33

Sources, NOS 1918-1941, NOS 1949, 365-366.

5.C.3 Average daily wages

TABLE 5.C.3
Average daily wages in domestic services

	Domestic servants			Others	Total Repr mean
	Rural	Urban	Mean		
1830	0.55		0.58		0.69
1831	0.50		0.53		0.63
1832	0.55		0.58		0.69
1833	0.53		0.56		0.66
1834	0.46		0.49		0.58
1835	0.44		0.47		0.55
1836	0.44		0.47		0.55
1837	0.50		0.52		0.62
1838	0.46		0.49		0.58
1839	0.47		0.50		0.59
1840	0.47		0.50		0.59
1841	0.50		0.53		0.62
1842	0.49		0.51		0.61
1843	0.47		0.49		0.59
1844	0.45		0.48		0.57
1845	0.46		0.48		0.57
1846	0.46		0.49		0.58
1847	0.46		0.49		0.58
1848	0.46		0.49		0.58
1849	0.46		0.48		0.57
1850	0.45	0.54	0.47		0.56
1851	0.46	0.54	0.48		0.57
1852	0.48	0.57	0.50		0.60
1853	0.53	0.62	0.56		0.66
1854	0.57	0.67	0.60		0.71
1855	0.59	0.68	0.61		0.73
1856	0.62	0.71	0.64		0.76
1857	0.64	0.73	0.66		0.78
1858	0.59	0.69	0.62		0.73
1859	0.59	0.68	0.62		0.73
1860	0.61	0.70	0.63		0.75
1861	0.62	0.72	0.65		0.77
1862	0.63	0.73	0.65		0.78
1863	0.64	0.73	0.66		0.79
1864	0.62	0.71	0.65		0.77
1865	0.62	0.71	0.64		0.76
1866	0.65	0.75	0.67		0.80
1867	0.65	0.75	0.67		0.80
1868	0.62	0.73	0.65		0.77
1869	0.61	0.71	0.64		0.76
1870	0.62	0.73	0.65		0.77
1871	0.65	0.75	0.68		0.80

Sources, Gjølborg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58,
Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163,
Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978,
530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.3
Average daily wages in domestic services

	Domestic servants			Others	Total Repr mean
	Rural	Urban	Mean		
1872	0.68	0.77	0.71		0.84
1873	0.72	0.81	0.74		0.88
1874	0.76	0.86	0.79		0.94
1875	0.80	0.88	0.82		0.98
1876	0.78	0.89	0.81		0.97
1877	0.79	0.94	0.84		0.99
1878	0.74	0.88	0.78		0.93
1879	0.69	0.81	0.72		0.86
1880	0.71	0.83	0.75		0.88
1881	0.71	0.85	0.75		0.89
1882	0.72	0.86	0.77		0.91
1883	0.73	0.87	0.77		0.92
1884	0.73	0.86	0.77		0.92
1885	0.72	0.84	0.75		0.89
1886	0.71	0.82	0.74		0.88
1887	0.70	0.82	0.74		0.88
1888	0.72	0.84	0.76		0.90
1889	0.74	0.87	0.78		0.93
1890	0.76	0.90	0.81		0.96
1891	0.77	0.92	0.82		0.97
1892	0.78	0.93	0.83		0.98
1893	0.76	0.89	0.80		0.95
1894	0.77	0.92	0.82		0.97
1895	0.77	0.91	0.81		0.97
1896	0.78	0.93	0.83		0.99
1897	0.80	0.95	0.85		1.01
1898	0.81	0.96	0.86		1.02
1899	0.85	1.01	0.91		1.08
1900	0.90	1.08	0.96		1.14
1901	0.89	1.05	0.94		1.12
1902	0.89	1.02	0.94		1.11
1903	0.94	1.02	0.97		1.15
1904	0.94	1.03	0.97		1.15
1905	0.93	1.08	0.98		1.17
1906	0.96	1.10	1.01		1.20
1907	1.00	1.15	1.05		1.25
1908	1.05	1.21	1.11		1.31
1909	1.09	1.24	1.14		1.36
1910	1.14	1.28	1.19		1.41
1911	1.17	1.33	1.23		1.46
1912	1.22	1.39	1.28		1.52
1913	1.27	1.46	1.34		1.59
1914	1.33	1.52	1.40	2.25	1.66
1915	1.50	1.74	1.59	2.68	1.93
1916	1.80	2.01	1.87	3.11	2.25

Sources, Gjølberg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58, Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163, Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978, 530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

TABLE 5.C.3
Average daily wages in domestic services

	Domestic servants			Others	Total Repr mean
	Rural	Urban	Mean		
1917	2.30	2.54	2.39	3.54	2.74
1918	3.19	3.43	3.28	3.98	3.50
1919	3.89	4.25	4.03	5.20	4.39
1920	4.68	5.21	4.88	7.51	5.69
1921	4.54	5.04	4.73	7.27	5.51
1922	3.87	4.51	4.11	6.63	4.89
1923	3.50	4.18	3.76	6.33	4.55
1924	3.61	4.38	3.91	6.44	4.69
1925	3.63	4.35	3.91	6.41	4.68
1926	3.18	3.85	3.44	5.82	4.17
1927	2.79	3.49	3.06	5.31	3.75
1928	2.55	3.29	2.84	4.96	3.49
1929	2.43	3.16	2.72	4.86	3.38
1930	2.35	3.06	2.63	4.72	3.27
1931	2.24	2.95	2.52	4.54	3.14
1932	2.15	2.84	2.42	4.37	3.02
1933	2.09	2.74	2.35	4.18	2.91
1934	2.07	2.75	2.34	4.17	2.90
1935	2.11	2.81	2.39	4.28	2.97
1936	2.20	2.90	2.48	4.46	3.09
1937	2.40	3.12	2.69	4.80	3.34
1938	2.58	3.33	2.89	5.12	3.57
1939	2.71	3.45	3.01	5.25	3.69
1940	3.03	3.60	3.26	5.33	3.89

Sources, Gjøølberg 1974, 61-68 and 85-107, Grytten and Minde 1998, 42-58,
Grytten 2004, 92-93, Lønningdal 1984, 23-36, 104-109 and 141-163,
Minde and Grytten 1997, 61-82, NOS 1918-1941, NOS 1949, 364-367, NOS 1978,
530-532 and 576, Wedervang Archive, W009, W013, W014, W021, W028 and W204.

5.D Public services

5.D.1 Annual tariff wages, central administration

TABLE 5.D.1
Annual tariff wages in public services, central administration

	Assistant I	Assistant II	Secretary I	Secretary II	Assistant under- secretary of state	Deputy under- secretary of state	Total Repr mean
1878	1500	1248	2000	2000	3400	5400	1997
1879	1500	1248	2000	2000	3400	5400	1997
1880	1500	1248	2000	2000	3400	5400	1997
1881	1500	1248	2000	2000	3400	5400	1997
1882	1500	1248	2000	2000	3400	5400	1997
1883	1500	1248	2000	2000	3400	5400	1997
1884	1500	1248	2000	2000	3400	5400	1997
1885	1500	1248	2000	2000	3400	5400	1997
1886	1500	1248	2000	2000	3400	5400	1997
1887	1500	1248	2000	2000	3400	5400	1997
1888	1500	1248	2000	2000	3400	5400	1997
1889	1500	1248	2000	2000	3400	5400	1997
1890	1500	1248	2000	2000	3400	5400	1997
1891	1500	1248	2000	2000	3400	5400	1997
1892	1500	1248	2000	2000	3400	5400	1997
1893	1500	1248	2000	2000	3400	5400	1997
1894	1500	1248	2000	2000	3400	5400	1997
1895	1500	1248	2000	2000	3400	5400	1997
1896	1500	1248	2000	2000	3400	5400	1997
1897	1500	1248	2000	2000	3400	5400	1997
1898	1500	1248	2000	2000	3400	5400	1997
1899	1563	1174	2400	2050	3700	5700	2127
1900	1625	1100	2800	2100	4000	6000	2256
1901	1625	1100	2800	2100	4000	6000	2256
1902	1625	1100	2800	2100	4000	6000	2256
1903	1625	1100	2800	2100	4000	6000	2256
1904	1625	1100	2800	2100	4000	6000	2256
1905	1625	1100	2800	2100	4000	6000	2256
1906	1625	1100	2800	2100	4000	6000	2256
1907	1625	1100	2800	2100	4000	6000	2256
1908	1625	1100	2800	2100	4000	6000	2256
1909	1625	1100	2800	2100	4000	6000	2256
1910	1625	1100	2800	2100	4000	6000	2256
1911	1625	1100	2800	2100	4000	6000	2256
1912	1625	1100	2800	2100	4000	6000	2256
1913	1625	1100	2800	2100	4000	6000	2256
1914	1825	1250	3050	2300	4400	6000	2464
1915	2025	1400	3300	2500	4800	6000	2671
1916	2025	1400	3300	2500	4800	6000	2671
1917	2375	1650	3900	2900	5400	7000	3111
1918	2725	1900	4500	3300	6000	8000	3551

Sources, Source, Minde 1993, 25-123* (appendix).

TABLE 5.D.1
Annual tariff wages in public services, central administration

	Assistant I	Assistant II	Secretary I	Secretary II	Assistant under- secretary of state	Deputy under- secretary of state	Total Repr mean
1919	2725	1900	4500	3300	6000	8000	3551
1920	3312	2438	5250	3900	7625	10500	4360
1921	3900	2975	6000	4500	9250	13000	5169
1922	3900	2975	6000	4500	9250	13000	5169
1923	3900	2975	6000	4500	9250	13000	5169
1924	3900	2975	6000	4500	9250	13000	5169
1925	3900	2975	6000	4500	9250	13000	5169
1926	3900	2975	6000	4500	9250	13000	5169
1927	3900	2975	6000	4500	9250	13000	5169
1928	3900	2975	6000	4500	9250	13000	5169
1929	3810	2831	5825	4275	8788	12350	4963
1930	3720	2688	5650	4050	8325	11700	4757
1931	3720	2688	5650	4050	8325	11700	4757
1932	3720	2688	5650	4050	8325	11700	4757
1933	3720	2688	5650	4050	8325	11700	4757
1934	3720	2688	5650	4050	8325	11700	4757
1935	3720	2688	5650	4050	8325	11700	4757
1936	3720	2688	5650	4050	8325	11700	4757
1937	3720	2744	5650	4163	8325	11700	4788
1938	3720	2800	5650	4275	8325	11700	4819
1939	3720	2800	5650	4275	8325	11700	4819
1940	3720	2800	5650	4275	8325	11700	4819

Sources, Source, Minde 1993, 25-123* (appendix).

5.D.2 Annual tariff wages, technical and higher schooling

TABLE 5.D.2
Annual tariff wages in public services, technical and higher schooling

	Assitant engineer	Engineer	Engineering Senior engineer	Chief engineer	Mean	Schooling Lecturer/ Principal
1875	2040	3333	4560	4950	3223	
1876	2040	3333	4560	4950	3223	
1877	2040	3333	4560	4950	3223	
1878	2040	3333	4560	4950	3223	
1879	2040	3333	4560	4950	3223	
1880	2040	3333	4560	4950	3223	
1881	2040	3333	4560	4950	3223	
1882	2040	3333	4560	4950	3223	
1883	2040	3333	4560	4950	3223	
1884	2040	3333	4560	4950	3223	
1885	2040	3333	4560	4950	3223	
1886	2040	3333	4560	4950	3223	
1887	2040	3333	4560	4950	3223	
1888	2040	3333	4560	4950	3223	
1889	2040	3333	4560	4950	3223	
1890	2040	3333	4560	4950	3223	
1891	2040	3360	4560	5000	3236	
1892	2040	3360	4560	5000	3236	
1893	2040	3360	4560	5000	3236	
1894	2040	3360	4560	5000	3236	
1895	2040	3360	4560	5000	3236	
1896	2040	3360	4560	5000	3236	
1897	2040	3360	4560	5000	3236	
1898	2040	3360	4560	5000	3236	4000
1899	2040	3360	4560	5000	3236	4000
1900	2040	3360	4560	5000	3236	4000
1901	2040	3360	4560	5000	3236	4000
1902	2040	3360	4560	5000	3236	4000
1903	2040	3360	4560	5000	3236	4000
1904	2040	3360	4560	5000	3236	4000
1905	2040	3360	4560	5000	3236	4000
1906	2040	3360	4560	5000	3236	4000
1907	2040	3360	4560	5000	3236	4000
1908	2040	3360	4560	5000	3236	4000
1909	2040	3360	4560	5000	3236	4000
1910	2040	3360	4560	5000	3236	4000
1911	2040	3360	4560	5000	3236	4000
1912	2270	3580	4730	5350	3463	4000
1913	2500	3800	4900	5700	3690	3771
1914	2500	3800	4900	5700	3690	3543
1915	2500	3800	4900	5700	3690	3543
1916	2500	3800	4900	5700	3690	3543
1917	3100	4400	5700	6850	4385	3972

Sources, Source, Minde 1993, 25-123* (appendix).

TABLE 5.D.2

Annual tariff wages in public services, technical and higher schooling

	Assitant engineer	Engineer	Engineering Senior engineer	Chief engineer	Mean	Schooling Lecturer/ Principal
1918	3700	5000	6500	8000	5080	4400
1919	3700	5000	6500	8000	5080	4400
1920	4225	5875	7375	9500	5878	5606
1921	4750	6750	8250	11000	6675	6813
1922	4750	6750	8250	11000	6675	6813
1923	4750	6750	8250	11000	6675	6813
1924	4750	6750	8250	11000	6675	6813
1925	4750	6750	8250	11000	6675	6813
1926	4750	6750	8250	11000	6675	6813
1927	4750	6750	8250	11000	6675	6813
1928	4750	6750	8250	11000	6675	6813
1929	4513	6413	7838	10750	6372	6472
1930	4275	6075	7425	10500	6068	6131
1931	4275	6075	7425	10500	6068	6131
1932	4275	6075	7425	10500	6068	6131
1933	4275	6075	7425	10500	6068	6131
1934	4275	6075	7425	10500	6068	6131
1935	4275	6075	7425	10500	6068	6131
1936	4275	6075	7425	10500	6068	6131
1937	4500	6075	7425	10500	6158	6131
1938	4725	6075	7425	10500	6248	6131
1939	4725	6075	7425	10500	6248	6131
1940	4725	6075	7425	10500	6248	6131

Sources, Source, Minde 1993, 25-123* (appendix).

5.D.3 Average annual tariff wages

TABLE 5.D.3
Average annual tariff wages in public services

	Central administration	Technical sector (engineers)	Higher schools	Total Repr mean
1875		3223		2750
1876		3223		2750
1877		3223		2750
1878	1997	3223		2733
1879	1997	3223		2733
1880	1997	3223		2733
1881	1997	3223		2733
1882	1997	3223		2733
1883	1997	3223		2733
1884	1997	3223		2733
1885	1997	3223		2733
1886	1997	3223		2733
1887	1997	3223		2733
1888	1997	3223		2733
1889	1997	3223		2733
1890	1997	3223		2733
1891	1997	3236		2740
1892	1997	3236		2740
1893	1997	3236		2740
1894	1997	3236		2740
1895	1997	3236		2740
1896	1997	3236		2740
1897	1997	3236		2740
1898	1997	3236	4000	2769
1899	2127	3236	4000	2834
1900	2256	3236	4000	2899
1901	2256	3236	4000	2899
1902	2256	3236	4000	2899
1903	2256	3236	4000	2899
1904	2256	3236	4000	2899
1905	2256	3236	4000	2899
1906	2256	3236	4000	2899
1907	2256	3236	4000	2899
1908	2256	3236	4000	2899
1909	2256	3236	4000	2899
1910	2256	3236	4000	2899
1911	2256	3236	4000	2899
1912	2256	3463	4000	2967
1913	2256	3690	3771	2989
1914	2464	3690	3543	3047
1915	2671	3690	3543	3151
1916	2671	3690	3543	3151
1917	3111	4385	3972	3666
1918	3551	5080	4400	4180

Sources, Source, Minde 1993, 25-123* (appendix).

TABLE 5.D.3
Average annual tariff wages in public services

	Central administration	Technical sector (engineers)	Higher schools	Total Repr mean
1919	3551	5080	4400	4180
1920	4360	5878	5606	5064
1921	5169	6675	6813	5949
1922	5169	6675	6813	5949
1923	5169	6675	6813	5949
1924	5169	6675	6813	5949
1925	5169	6675	6813	5949
1926	5169	6675	6813	5949
1927	5169	6675	6813	5949
1928	5169	6675	6813	5949
1929	4963	6372	6472	5687
1930	4757	6068	6131	5425
1931	4757	6068	6131	5425
1932	4757	6068	6131	5425
1933	4757	6068	6131	5425
1934	4757	6068	6131	5425
1935	4757	6068	6131	5425
1936	4757	6068	6131	5425
1937	4788	6158	6131	5467
1938	4819	6248	6131	5510
1939	4819	6248	6131	5510
1940	4819	6248	6131	5510

Sources, Source, Minde 1993, 25-123* (appendix).

CHAPTER 6

Norwegian wages 1726–2006 classified by industry

Ola H. Grytten¹

In this chapter the data on nominal wages by occupation presented in Chapter 5 are aggregated into data for nominal annual wages for 18 industries and sub-industries. In addition we present a national series for average annual wages 1726–2006. Our main sources for data are previous work by writers on Norwegian historical wages, The Wedervang Archive and records from Statistics Norway.

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6.1 Introduction

In this chapter we present 18 annual wage series for different industries and sub-industries. In addition, we present a series of national average wages for 1726–2006. We basically draw on the material presented in the previous two chapters of this book. To recall, Chapter 4 describes the creation and working of Professor Dr. Ingvar B. Wedervang’s Historical Archive on Prices and Wages at the Norwegian School of Economics and Business Administration, whereas Chapter 5 contains historical wage data (by occupation) mainly derived from the Wedervang Archive, supplemented by private records and data from Statistics Norway. The spliced wage series combine data from various sources. The most important sources up to the nineteenth century are previous historical research on wages compiled from different private archives. The Wedervang Archive serves as the single most important source for the period 1751–1940, whereas public records kept by different bodies at national or local levels provide us with a substantial amount of data for the nineteenth century up till 1940. Thereafter, our computations basically rest on wage data from Statistics Norway.

6.2 Classification

All wage series are transformed into annual wages measured in Norwegian kroner. In order to make this transformation, we have provided new estimates of normal working hours per man-year for the different industries. Table 1 shows our classification of wage data across the different industries and sub-industries.

Note that the series for aggregated industries are not averages of the quoted sub-industries, but representative numbers for the entire industry. Similarly, the last group *Total* is not the average of the quoted industries, but representative numbers for average wages for the entire economy.

TABLE 6.1
Classification of wage data by industry

Number	Classification	Industry and sub-industry
1	1.0.	Primary industries
2	1.1.	Agriculture and forestry
3	2.0.	Secondary industries
4	2.1.	Construction
5	2.2.	Manufacturing and mining
6	2.2.1.	Textile
7	2.2.2.	Engineering
8	2.3.	Crafts
9	3.0.	Transport and communication industries
10	3.1.	Maritime transport
11	3.2.	Domestic transport
12	3.3.	Communications
13	4.0.	Private services
14	4.1.	Domestic services

TABLE 6.1
Classification of wage data by industry

Number	Classification	Industry and sub-industry
15	4.1.1.	Housekeeping (domestic servants)
16	5.0.	Public services
17	5.1.	Public administration
18	5.2.	Public education
19	6.0.	Total

6.3 Methodological challenges with the data

It is not a straightforward task to construct continuous wage series for a period covering almost 300 years. In the methodological field we have to come up with a number of creative solutions to numerous data challenges.

One problem has to do with the definition and classification of industries, in addition to occupations within the industries. The nature and title of most industries and occupations have changed dramatically over the decades and centuries, e.g. professions which in nature belonged to crafts in the eighteenth century later became manufacturing industry and finally service industries. Thus, it is very difficult to make valid classifications of industries and occupations over time. The present approach is to use the same classifications as were used historically. Nevertheless, we will have to bear in mind that the character of work and industry changed substantially over time.

Another methodological challenge is time units for wages. Some data are given in hourly wages, some in daily, weekly, monthly or annual wages. Data are sometimes given for piecework or as fixed time unit salaries. In order to compare these different time units, we have basically tried to recalculate all wages within each industry into one unit of time account, i.e. annual wages. Thus, we have found estimates of normal man-years by industry and by that transformed wages given in other time units into annual wages. As for piecework versus fixed wages, we recalculate the piecework wages into time unit wages according to their average salary per time unit worked. Then we find average wages for both piecework and fixed wage employees.

A third methodological challenge with the data is non-cash payments. In the eighteenth and first part of the nineteenth century these commonly made up the bulk of the wages for ordinary employees. Thus, we try to add them. Previously, non-cash payments were usually added as a fixed share of cash payments or just as a fixed sum. Here, non-cash payments are considered a basket of goods and services, basically boarding and lodging. The aggregated value of these products is calculated by multiplying estimated volumes of non-cash payments with their current price. By doing so, we arrive at variable non-cash payments, fluctuating with volume and prices.

The fourth challenge we will address here is the problem of different currencies used as unit of value account. In 1671 the Danish-Norwegian currency Rigsdaler Species was officially set to a

silver value of 9.25 dalers per mark fine silver. Rigsdaler Courant was originally set to a value of 81.6 per cent of the Rigsdaler Species. In 1795 this value was changed to 80 per cent. During the Danish-Norwegian King's involvement on the French side during the Napoleonic wars, Norway saw a period of monetary turbulence, with strong inflation and currency depreciation and devaluation. New currencies were introduced in order to regain control of the daler in the market. However, these attempts at restoring a stable currency system were unsuccessful and Norway went into monetary chaos 1813–1816.² Admittedly, one could argue this chaos started earlier and lasted until 1822. During this period it is very difficult to come up with consistent series of wages.

Additionally, for the period 1726–1842 the data sources tend to present manipulated data, by correcting them according to fluctuations in exchange rates. This was done in order to present them in par values of the daler. Moreover, in 1874–1877 the daler ceased as the key currency, which now became the krone.

In order to obtain continuous series of wages and prices in current values we use krone as our unit of account. The data adjusted for exchange rate fluctuations have been readjusted, whereas data in other currency units principally are transformed into krone by their formal values at the time when the observations were taken.

6.4 Paasche and Laspeyres wage series

Here the wage data are added up from micro series to occupational series, and from occupational series to series for sub-industries, industries and the total economy. Ideally we would use annual quantity weights for each micro series in our aggregated series according to the Paasche approach (V_P). That is, we would prefer to use the annual number of employed persons in each micro series in order to compute running annual aggregated series of average wages, as shown in equation 6.1:

$$V_{P,t} = \sum_j (v_{jt} q_{jt}) \quad (6.1)$$

Here v denotes nominal wages, q volumes, j industry and t year of observation. However, in many cases this formula has not been applicable due to shortage of employment observations. In consequence, we have used aggregated Laspeyres series with fixed weights during time intervals, according to equation 6.2:

$$V_{L,t} = \sum_j (v_{jt} q_{j0}) \quad (6.2)$$

²Eitheim 2004, 1–18.

6.5 Weights

In order to arrive at aggregated series, we have to sum up sub-series. For the period 1946–2006 we use the same weights as Statistics Norway. For the period 1930–1945 we use annual weights according to the historical national accounts statistics concerning man-years carried out in the Norwegian industries.³ Thus, the total average wages 1930–2006 are calculated by a Paasche approach. For the years previous to 1930 we use benchmark year estimates of employment in the historical national accounts along with data from the population censuses.⁴ Hence, we use a Laspeyres approach in order to calculate total aggregated wages 1726–1929.

6.6 Man-years

In order to establish comparable figures, all series are presented as annual wages in the present chapter. From 1946 we have man-year data for all industries and sub-industries. For the pre-1945 period we have man-year wages for some industries, like public administration, education, domestic services and partly farming. For the rest we have to find man-years estimates for the period prior to 1946.

Most of our sources provide data in average daily wages. These take into account that the number of working hours shifted over time. Thus, we have to find the number of working days during a year. When the working hours in manufacturing was reduced to eight hours per day in 1919, the man-year became significantly shorter. We have taken this into account in our calculations. Holidays are excluded. As the number of vacation days was increasing, the number of working days decreased. Nevertheless, the number of actual working days stayed almost constant before 1900, despite that the number of working hours was falling. The number of working days varied between the industries. Agriculture had the most, whereas public administration had less than most other sectors.

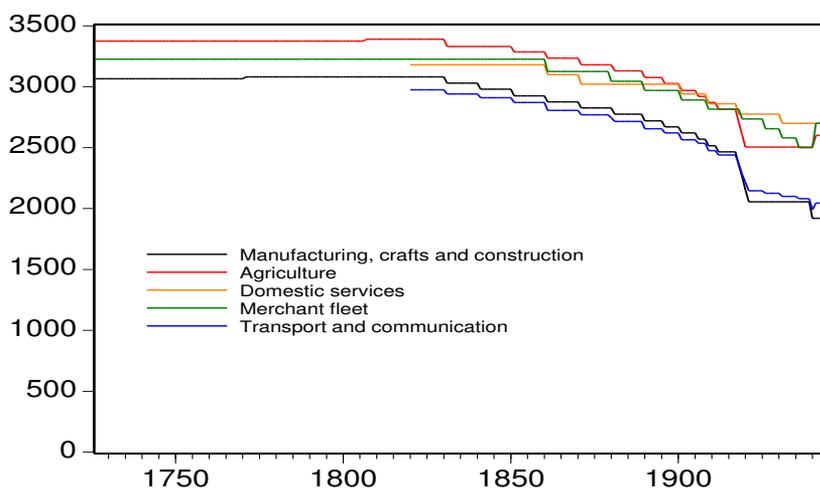
We have been able to find estimates of the number of working hours per man-year by dividing reported annual salaries by reported hourly wages. Again, the Wedervang Archive and Statistics Norway are our most important sources. One should note that time efficiency of work probably increased substantially during the nineteenth century. Thus, the formal working hours were significantly lower in the late nineteenth century than in the eighteenth century. However, the utilization of the working time was considerable higher in the nineteenth than the eighteenth century. It may be a valid assumption that the number of efficient working hours were at least as high in 1850 as in 1750. Nevertheless, this is not mirrored in the formal working hours, which we have to use here in order to arrive at representative annual wages. Figure 6.6 below reports the number of normal working hours assumed in this work. Note that these are not necessarily the working hours per actual man-year, but the working hours adopted here in order to transform our data into meaningful annual wage series.

For sailors we have monthly wages. They stayed on land substantial parts of the year. However,

³NOS 1965, 328–337.

⁴Bjerke 1966, 30–65.

FIGURE 6.1 Number of working hours per normal man-year used in present calculations, 1726–1945



Sources, Wedervang Archive, files W089 and W091, Minde 1993, 65–78 and Grytten 1994. 238–267.

the extra value of boarding has been estimated to about the same value as their free time on land. Thus, their monthly wages are multiplied with a factor of twelve to arrive at annual wages. For the period prior to 1798 boarding is included in the wages from the archive.

6.7 Wages by industry

By assembling data from various sources we have been able to map nominal wages back to 1726 for mining, manufacturing and crafts, 1751 for the merchant fleet, 1820 for agriculture, 1830 for domestic services, 1850 for communication and construction and 1875 for public services.

The major sources for the period up to the first decades of the nineteenth century are previous research on private records along with files from the Wedervang Archive. For the period stretching from 1820–1920 the Wedervang Archive is the basic source, whereas Statistics Norway takes over as the major provider of data thereafter.

6.7.1 Primary industries

We have been able to establish a dataset of wages for the primary industries back to 1899. For the sub-industries agriculture and forestry we have been able to trace the development back to 1820.

Historical wage data for hired labor on farms can be extracted from the Wedervang Archive, which keep records of farm accounts from 57 major Norwegian farms. Almost 50 of these can be

used as source for historical farm wages. Some of the data start as early as 1820, whereas the bulk of the records are taken from the mid nineteenth century onwards.⁵

The files report wages for both genders, though female wages are scarce until 1850. Both summer and winter seasons are included. Most observations are recorded as cash-wages for hired labor, exclusive of board and lodging. Thus, these have to be added. Ole Gjølberg and Torill Lønningdal have compiled substantial parts of the available data from the archive from the mid 1800s.⁶

In public records published by Statistics Norway, we find observations of daily wages for agricultural workers for every fifth year, starting in 1850 for men and in 1875 for women.⁷ The records report wages both in the summer and in the winter season. The five-annual series from Statistics Norway can be complemented with annual figures found in the Wedervang Archive to obtain an indicator of annual developments. The public records continue till 1915, when they are substituted with annual and more detailed wage series published by Statistics Norway.⁸ The latter series have good coverage of both farm and forestry wages. They also reflect seasonal differences, reporting spring, summer, autumn, and winter wages.

As for the period previous to 1850, most wage data do not include food provided for the workers by the farms. Thus, it has to be added to the cash wages. After 1850 the picture is mixed. Full cash payments were more common from the last decades of the nineteenth and the dawn of the twentieth century. Nevertheless, still as many as about half of all agricultural workers were compensated in non-cash wages until the post World War II era.

Both the Wedervang staff, Lønningdal and Gjølberg tried to map the value of non-cash payments.⁹ They all concluded that boarding and lodging was by far the most important factor of income for hired labor in agriculture in the nineteenth century. A problem with most of these estimates is that they add a more or less fixed share of compensation to the cash wages. Here, we try to examine annual values of compensation independently of cash wages.

We estimate food provided on farms according to a normal consumption basket for working class families, which is the closest we can get to farm labor in the existing consumption surveys for the period.¹⁰ Instead of adding a constant factor for food and lodging, we have taken estimates of consumption in three base years, 1850, 1880 and 1910. Thereafter, we have calculated annual consumption by interpolation with CPI as indicator of the fluctuations.¹¹ This operation provides us with more reliable series of non-cash wages in agriculture than hitherto.¹²

For the period from 1940–1945 we use wages in agriculture as reported by Statistics Norway in their historical survey of 1948.¹³ Thereafter we use quotations of wages in agriculture, forestry

⁵Wedervang Archive, files W027, W028, W204, W205 and W207.

⁶Gjølberg 1974, 135–153 and Lønningdal 1984, 141–163.

⁷NOS 1949, 366–367.

⁸NOS 1949, 366–367.

⁹Wedervang Archive, files W089 and W091, Gjølberg 1974, 139–144, Lønningdal 1984, 37–43.

¹⁰Statistical Office of Kristiania 1915, 144–149, Ramstad 1982, 482–492, Minde and Grytten 1997, 79 and Grytten and Minde 1998, 52–55,

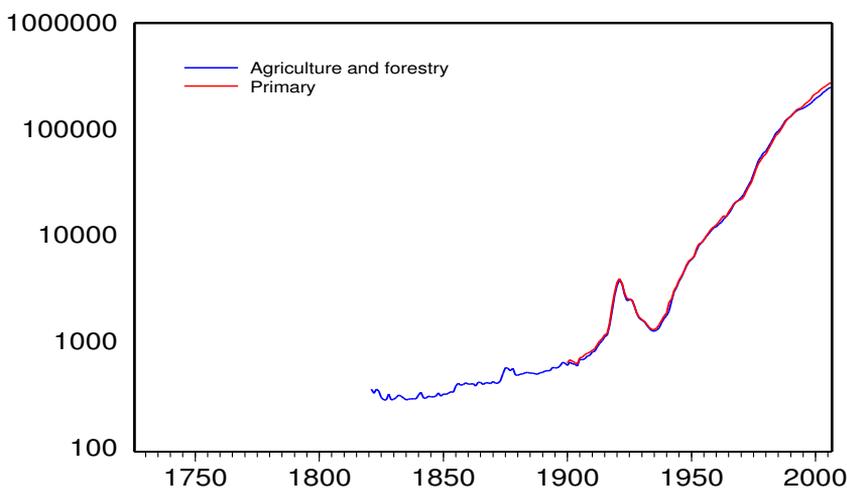
¹¹Grytten 2004a, 78–93.

¹²Lønningdal 1984, 108, Wedervang Archive, files W089 and W091

¹³NOS 1949, 366–367.

and fisheries drawn from the national accounts' department at Statistics Norway. These are given in nominal figures for 2005 and thereafter calculated for every year 1946–2006 on the basis of reported annual changes in nominal wages for the different industries within the primary sector.¹⁴ It should be noted that Statistics Norway recommends the data on agriculture to be used with caution.

FIGURE 6.2 Annual wages in primary industries, in NOK, per man-year, 1726–2006. Semi-logarithmic scale.



Sources, Wedervang Archive, files W009, W013, W014, W021, W027, W028, W204, W205, W207, NOS 1949, 366–367, Gjølborg 1974, 31–103, Lønningdal 1984, 141–163 and data provided by Tor Skoglund, Statistics Norway.

6.7.2 Secondary industries

The available sources enable us to construct consistent series of wages for secondary industries as far back as 1726. We have been able to trace the development of the construction industry, the manufacturing and mining industry with its two sub-industries, engineering and textile, and finally, crafts.

Construction

The main source of information on wages within construction work is again the Wedervang Archive 1850–1920 and thereafter Statistics Norway. On the basis of these sources we are able to follow five different occupations over some time. These are road construction, railway construction, bricklayers, telecommunication and harbor construction and maintenance.

The road construction data cover construction and maintenance work on public roads financed by local or central governments. The series have been calculated by dividing wage costs by the total

¹⁴Data provided by Tor Skoglund, Statistics Norway 2007.

number of working days. They reflect more than 13.4 million estimated observations of daily wages for piecework from 1850 till about 1920. The corresponding number for workers on fixed salaries was almost 1.1 million. The data are reported practically from the entire country.¹⁵ The reported data make up continuous series for summer and winter wages over the entire period.

From 1915 onwards, we also draw our series from Statistics Norway, which from 1921 becomes the major source for our data.¹⁶ The data from the bureau also include both fixed and piecework salaries in public road construction all over the country.

The second most important group of wage data in the construction industry stems from public railway construction. The main source up to the interwar period is again the Wedervang Archive.¹⁷ The data starts in 1873 and continue till 1940, except for a lacuna 1884–1891. For the last 20–25 years the data from the Wedervang Archive are supplemented by records from Statistics Norway.¹⁸ On the basis of the archival data it has also been possible to give rough estimates on railway construction data back to 1854. The data are partly reported as daily and partly as hourly wages. We use daily wages here. Thus, we have to transform hourly wages into daily wages. Till 1913 it was common with ten working hours per day. In 1914 the normal was nine to ten hours per day, between 1915–1917 nine hours, and finally eight hours from 1918.

The records in the Wedervang Archive rest on 11.6 million and 1.7 million observations of piecework and fixed daily wages respectively. Hence, the number of indirect observations of hourly wages reflected in the archive is astonishingly 139.3 million and 22.8 million respectively.¹⁹

For the interwar period we also include bricklayers, port construction and maintenance workers and telegraph construction and maintenance workers into our series. These data were recorded and published annually by Statistics Norway with coverage for up to 40 main Norwegian urban areas. They are taken at different months of the year. Hence, the coverage must be considered good. These series were collected and reported partly as hourly and partly as daily wages. We have transformed all into daily, and thereafter to annual wages.²⁰

As for 1940–1945, we again find our data in Statistic Norway's historical survey of 1948.²¹ Thereafter, we use the office's accounts of yearly changes in annual wages in construction up to 2006.²² 2005 is used as the reference year, and the time series of annual changes is linked to this reference year in order to come up with annual series of wages in construction 1945–2006. Finally, all series are linked into a complete series of annual wages in the construction industry 1726–2006.

¹⁵Wedervang Archive, files W118, W119A, W120A and W249.

¹⁶NOS 1949, 365.

¹⁷Wedervang Archive, files W245 and W249.

¹⁸NOS 1949, 365.

¹⁹Wedervang Archive, files W245 and W249 and Alme 1993, 64–65.

²⁰NOS 1920–1940.

²¹NOS 1949, 364–368.

²²Data provided by Tor Skoglund, Statistics Norway 2007.

Manufacturing and mining

Wage data on manufacturing and mining are compiled from various sources. They have to be modified in order to arrive at consistent time series. Our source for the period 1726–1806 is Ingeborg Fløystad's work on working conditions, including wages, at the iron manufacturing plant Baasland and Næs Jernverk, outside Arendal.²³ Fløystad gives wages for manufacturing and crafts five-annually, starting in 1726 and ending in 1806, cash, boarding and lodging included. They are reported in riksdaler, ort and skilling. A problem connected to her data is different currency units. Formally they were all called daler. However, there were different versions of them, and they tended to depreciate. Here, we prefer the unit closest to the par silver value and splice the series in overlapping years according to official exchange rates.²⁴

A second source is the work by Matti Goksøyr on working conditions at the Alvøen industrial plant outside Bergen. The company was founded in 1797 and was a pioneer in paper production based on hydraulic power.²⁵ Here we use wage data covering the period from 1820 till 1865 combined with records from the Wedervang Archive. The employees had individual contracts, where wage conditions for them and their families were set. The contracts spanned over a number of years, so that wages stayed fairly constant within intervals. Wage levels were thus consequences of when the contracts were signed, the size of the families and the number of working hands in the households. Boarding and lodging have to be added to the cash wages. Surveys from the mid 1800s provide us with information on the size of these non-cash payments. We arrive at about 60 per cent in 1850 and 70 per cent in the early 1820s. By using the CPI for Norway as indicator of the price movements in order to interpolate non-cash wages, we arrive at the total annual wages between 1820–1865.²⁶

From the 1820s the Wedervang Archive gradually takes over as the key source of Norwegian manufacturing wages. In the 1830s and 1840s the data found in the archive are dominated by huge industrial conglomerates within mining, wood and paper industry.²⁷ From the late 1840s textiles and mechanical industry take over the dominant position.²⁸ Women are included in the material for most years. For some series we have to add boarding and lodging. From the 1870s the archive reports annual data on the basis of some thousand observations of hourly, daily, weekly monthly and annual wages.²⁹ The most common unit is daily wages. The number of observations is increasing until 1920, thereafter falling.

Statistics Norway becomes our main source for manufacturing wages prior to 1920, as the bureau recorded data from almost 50 towns and industrial communities.³⁰ Admittedly, small-scale and new industries along with unorganized workers are under-represented in the files. Nevertheless, covering

²³Fløystad 1979, 595–596.

²⁴Eitheim 2005, 8–10 and Grytten 2005, 65–66.

²⁵Goksøyr 1982.

²⁶Grytten and Minde 1998, 52–54 and Grytten 2004, 90–93.

²⁷Wedervang Archive, files W046, W047, W048, W055 W074, W082 and W417.

²⁸Wedervang Archive, files W045, W049, W054, W056, W071, W072, W075, W080, W081, W121 and W284.

²⁹See e.g. Wedervang Archive, file W284.

³⁰NOS 1918–1941.

the bulk of the manufacturing labor force, they represent both valid and reliable aggregated series for the last decades prior to World War II.³¹

In addition to the records by Statistics Norway, Erling Petersen offers wages for mechanical engineering industry 1910–1940.³² Christian Venneslan of the Norwegian School of Economics and Business Administration is about to publish a new and rich dataset on manufacturing wages 1896–1939 as part of his PhD-dissertation. These cover the manufacturing industry better than any established series hitherto.³³

Finally we use data from Statistics Norway for the period from 1940 to present times. Again, the data covering the war years are taken from the historical survey of 1948, whereas annual wages 1946–2006 are compiled from records sent us by the national accounts' department at Statistics Norway.³⁴ Originally these cover 14 sub-industries of manufacturing. However, we are only able to follow two of these consistently well back into the nineteenth century, i.e. textiles and engineering.

Crafts

Ingeborg Fløystad gives five-annual wage series for craftsmen in iron production 1726–1806.³⁵ She includes boarding and lodging in her series. These series are reported as wages per year. From 1820 the Wedervang Archive serves as our main source. We first use wage data for senior blue-collar workers at the Kongsberg Sølvverk up to 1850. These have been extracted from financial records. Boarding and lodging have been added here according to the same principles as for manufacturing workers. From 1833 we also compile wages from the Wedervang files recorded from the Cappelen-Ulefoss industrial plant.³⁶

From 1875 the data have a significantly better coverage, reporting daily wages for painters, masons, carpenters, bakers, tailors, shoe makers in urban areas of Norway. From 1915 they include thousands of observations of eleven occupations. Data are given for both urban and rural labor nation-wide, despite a clear Oslo bias.³⁷ A problem with the data from Oslo is that in the second half of the 1890s they report piecework only, and they also give priority to tariff *ex ante* wages as opposed to *ex post* wages. However, information from the Wedervang Archive gives us the opportunity to adjust for these pitfalls. Female workers were basically excluded from the Wedervang records for crafts. Nevertheless, few women did work as craftsmen before the post World War II-period.

³¹NOS 1949, 364–365 and NOS 1918–1941.

³²Petersen 1950, 670–671.

³³Venneslan 2007.

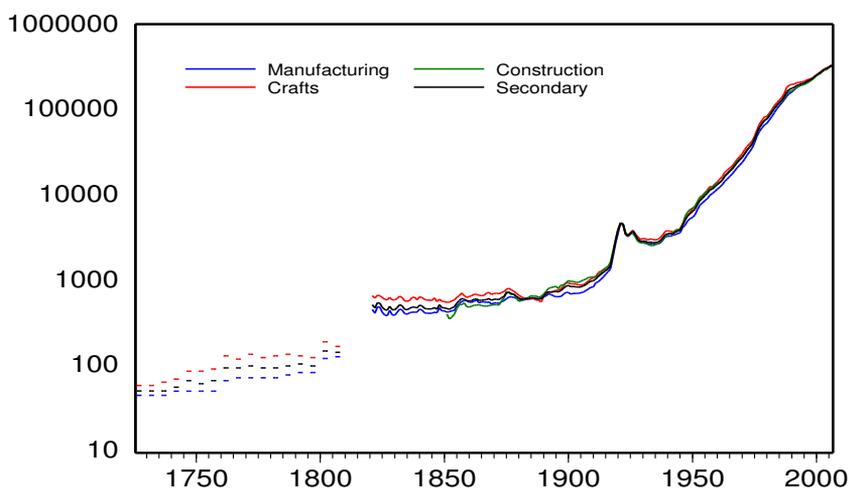
³⁴NOS 1949, 364–365 and data provided by Tor Skoglund, Statistics Norway 2007.

³⁵Fløystad 1979, 595–596.

³⁶Wedervang Archive, files W046 and W055.

³⁷Wedervang Archive, file W284.

FIGURE 6.3 Annual wages in secondary industries (per man-year in NOK), 1726–2006. Semi-logarithmic scale.



Sources, Wedervang Archive, files W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W118, W119A, W120A, W121, W245, W249, W284, W417, NOS 1949, 364–365, NOS 1915–1941, Petersen 1950, 670–671, Fløystad 1979, 595–596, Goksøyr 1982, Grytten 1992, 159–167, Alme 1993, 64–65, Hodne, Grytten and Alme 1995, 240–243 and data provided by Tor Skoglund, Statistics Norway.

After 1915 Statistics Norway takes over as our most important source. They also report an aggregated series of daily wages for skilled artisans in 1914 and 1918–1940.³⁸ From 1940 onwards, Statistics Norway constitutes our only source. Daily wages for crafts are used up to 1946.³⁹ Thereafter we use persistent series of changes in annual salaries up till 2006.⁴⁰

6.7.3 Transport and communication industries

This group of industries stretches back to 1751 for maritime transports. It increases its coverage with domestic transport from the mid nineteenth century and then includes most types of private and public transport and communication from 1946 onwards.

Merchant fleet

We use data from the Wedervang Archive on sailors' wages dating back to 1751. These continue till 1921. Then, we use data from Frode Akstun till 1940 and Statistics Norway till present. The series from the Wedervang Archive are based on all capacities of crew listed at all ports where records were taken, i.e. up to 26 capacities in up to 26 ports. For the years before 1844 we have data from sailing

³⁸NOS 1915–1941 and NOS 1949, 364–365.

³⁹NOS 1949, 364–365.

⁴⁰Data provided by Tor Skoglund, Statistics Norway 2007.

vessels only, since steamers were not permanently introduced to the Norwegian ocean going merchant fleet at that time.⁴¹ From 1844 till 1921 we have data from sailing and steam vessels. Diesel motor ships are added when they first came into use in the early 1900s.⁴² From 1920/1921 we basically have data for steam and motorised ships, and for the post World War II-period chiefly motorised vessels. In the records seamen's wages are basically measured without boarding and lodging until the last decades.⁴³

The data culled from the Wedervang Archive was collected from basically three types of sources, i.e., recruitment lists, crew lists and dischargement lists, of which the first category is the one mostly used by us.⁴⁴ Note that this information is given only on crew joining in Norwegian ports on Norwegian ocean going vessels. Domestic ocean transport is excluded from the data. The empirical basis of the series is quite strong from the early 1800s, and particularly from 1816 onwards.

For the interwar period we use data from Akstun and Statistics Norway. These were originally taken from crew lists kept and reported by the ship owner's association.⁴⁵ The number of capacities of crew in these data is down to nine, and they basically account for steam and motor engine vessels. For the World War II-period we draw information from Lars Chr. Jenssen's work on working conditions for sailors on vessels belonging to the Norwegian state controlled ship owner company, Nortraship.⁴⁶ For the post-war period we use records from Statistics Norway only.

Domestic transport

Our data start in 1850 and are compiled from The Wedervang Archive. An important group of labor for the first decades is public road construction workers providing their own horses. The number of daily observations taken from all over the country varied between 225 in 1851 and 29,685 in 1896.⁴⁷ The data also include hire for horses. In the 1850s workers with horse were paid about twice as much as those without. In the 1890s the compensation for bringing a horse fluctuated around 29–36 per cent, and finally fell to 22 per cent in 1914.⁴⁸ For the period 1854–1910 the Wedervang Archive also provides records of daily wages from railways. These were taken from the railway workers union.⁴⁹

From 1915 we use data from Statistics Norway for this sector. These include transport in forestry by workers providing their own horse.⁵⁰ From 1920 onwards, Statistics Norway also give general wage data for drivers. This set of data includes both horse and motor drivers. Hence, they reflect an important part of passenger and goods transport nation wide.

⁴¹ Wedervang Archive, file W043.

⁴² Wedervang Archive, file W044.

⁴³ Akstun 1960, 45–52 and NOS 1921–1941.

⁴⁴ Wedervang Archive, files W030, W032, W034, W035, W036, W038, W039, W063, W172, W173, W174, W176, W182, W184, W185, W186, W187, W188, W189, W193, W320, W327, W329, W330 and W407.

⁴⁵ Akstun 1960, 45–52 and NOS 1921–1941.

⁴⁶ Jenssen, 1992, 17–53.

⁴⁷ Wedervang Archive, files W118, W119A, W120A and W249.

⁴⁸ Alme 1993, 62–63.

⁴⁹ Wedervang Archive, file W058.

⁵⁰ NOS 1949, 367.

From 1940 till 2006 we use data from Statistics Norway only. For the war years 1940–1945 only rough estimates are available, but from 1946 more reliable wage series have been constructed on the basis of data reported to Statistics Norway in order to construct representative wage series for the national accounts.⁵¹ These basically report changes in annual wages. However, the levels are given for several years. Again we use the 2005 level and splice the series with this observation. Hence, we obtain continuous series till 2006.

Communications

The historical frontiers between the transport and communication industry and the construction industry are not always clear. E.g. should nineteenth century railway and telegraph maintenance be considered construction or transports and communications? The sources do not always leave us with clear indications. The term railway worker may include conductors, cleaners, maintenance workers, construction workers and railway station staff. Since we do not have sufficient information to classify this group according to their actual profession, it seems natural to classify them as part of the transport and communication industry, as we do here. These data start in 1850 and increase their coverage significantly in the 1870s.⁵²

From 1918 Statistics Norway also report hourly wages for telegraph workers, and from 1921 daily wages paid by port authorities. Data are given for both fixed wages and piecework.⁵³ Statistics Norway serves as our only source from 1940 onwards. For the first five years of this period we trace data from different sources published by the bureau.⁵⁴ Finally, we use the wage data set from the national accounts department from 1946 onwards.⁵⁵

6.7.4 Private services

When it comes to private services the sources are fairly scarce up to the twentieth century. However, there is basically one exception, private domestic services, and within this group chiefly housekeeping. A problem connected to this sub-industry is that domestic services were basically low paid jobs, whereas other private services, e.g. finance and consulting, were well-paid occupations. Private series as an aggregate is found by splicing Statistics Norway's data on annual wages in the private sector 1946–2006 with other series of private services 1915–1940 and private domestic services 1830–1915. Transport and communication is also used as an inter- and extrapolator for the development of wages in private services.

⁵¹Data have been kindly provided by Tor Skoglund, Statistics Norway 2007.

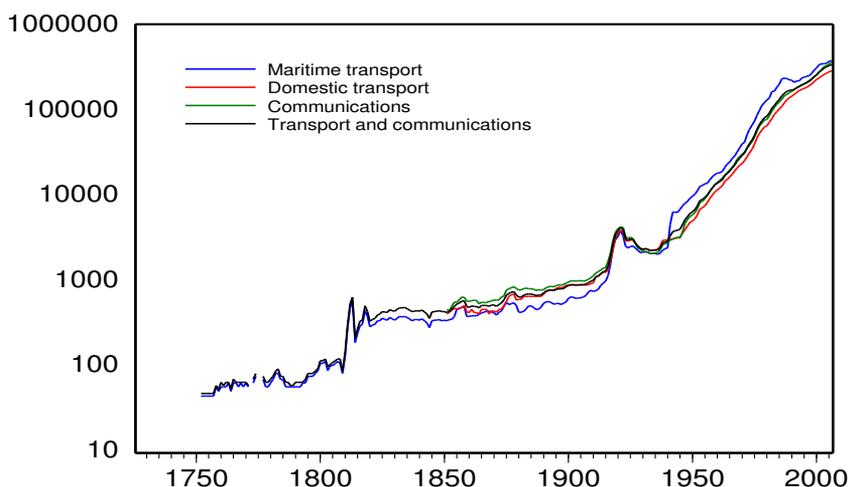
⁵²Wedervang Archive, files W058, W118, W119A, W120A, W245 and W249

⁵³NOS 1918–1941.

⁵⁴NOS 1949, 366–367 and NOS 1940–1948.

⁵⁵Data have been kindly provided by Tor Skoglund, Statistics Norway 2007.

FIGURE 6.4 Annual wages in transport and communication industries (per man-year in NOK), 1726–2006. Semi-logarithmic scale.



Sources, Wedervang Archive, files W009, W013, W014, W021, W028, W030, W032, W034, W035, W036, W038, W039, W043, W044, W058, W063, W118, W119A, W120A, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W204, W245, W248, W249, W349, NOS 1949, 364–367, NOS 1918–1941, NOS 1978, 530–532 and 576, Akstun 1960, 45–62, Minde and Grytten 1997, 61–82, Grytten 2004a, 92–93, Grytten and Minde 1998, 42–58 and data provided by Tor Skoglund, Statistics Norway.

Domestic services

The Wedervang Archive serves as the most important source for domestic services. Our aggregated series start in 1830. We use data on wages for female domestic servants on major Norwegian farms.⁵⁶ On the basis of Gjølberg's work on farm wages we are able to construct estimates of annual wages for male domestic servants from 1850 onwards.⁵⁷ We also use Lønningdal's aggregated annual series of wages for domestic female servants on major farms in eastern Norway 1850–1910.⁵⁸ From about 1850 till their conclusion in 1920 the records in the Wedervang Archive improve significantly. In addition, five-annual data on wages for domestic male and female servants are drawn from records held by Statistics Norway.⁵⁹ The data from the Wedervang Archive and Statistics Norway are closely correlated both in levels and in movements.

In order to arrive at annual data of wages for domestic services in the urban eras before 1915, we have interpolated the five-annual urban data with annual rural data. For rural male labor we have interpolated between the five-annual observations 1850–1875 with the help of data left by Gjølberg

⁵⁶Wedervang Archive, files W028 and W204.

⁵⁷Gjølberg 1974, 85–107.

⁵⁸Lønningdal 1984, 141–163.

⁵⁹NOS 1949, 366–367.

along with corresponding female series by Lønningdal.⁶⁰

According to the records, cash-wages stayed fairly stable during intervals. Admittedly, boarding and lodging were stable in volume. However, their values fluctuated with price movements. Lønningdal proposed fixed sums to be added as non-cash wages. These are given for intervals.⁶¹ By examining the composition of consumption expenditures from the nineteenth century, we find that Lønningdal must have over-estimated their value.⁶² Using estimates of households' budget shares on food in selected base years, we calculate an appropriate sum to be added to the cash wages in these years. The annual values of non-cash payments is then interpolated between the base years according to prices on food and housing in the consumer price index for the period. By adding this estimated value of non-cash compensation to the cash wages, we arrive at annual series of nominal daily payments for domestic servants 1830–1940.

From 1915 Statistics Norway provides wage data for domestic servants, and from 1918 also for cleaning and laundry personnel.⁶³ There is some confusion about boarding and lodging in these latter series. By crosschecking the data, we notice that, contrary to the claim from Statistics Norway, the series for rural domestic services do not include boarding and lodging. Also, according to consumption surveys, the values for compensational payments are far too high in other tables by the office.⁶⁴ By using cash-wages and adding estimated non-cash wages on the basis of consumption surveys and price developments, we obtain representative series of their full wages.⁶⁵

From 1940 onwards Statistics Norway is our major source for wages in domestic services. Again the historical survey of 1948 serves as our most important source between 1940–1945, whereas data from the national accounts' section of Statistics Norway is our main provider of wage data for domestic services from 1946 onwards.⁶⁶ By linking these annual series to the series covering previous years, we arrive at continuous nominal wage series spanning over 176 years from 1830 till 2006.

6.7.5 Public services

It is difficult to map wages in public services prior to 1945. The Wedervang Archive holds some sporadic data from the early nineteenth century, but these are not consistent with the series presented here.⁶⁷ Elisabeth Bjørsvik has studied salaries for public servants in her PhD-dissertation on the public sector's contribution to GDP 1830–1865. However, she does not give any consistent series of individual wages.⁶⁸

⁶⁰Gjølborg 1974, 61–68 and 94–107.

⁶¹Lønningdal 1984, 104–109.

⁶²Minde and Grytten 1997, 61–82.

⁶³NOS 1949, 364–365 and NOS 1918–1941.

⁶⁴Grytten 1992, 162.

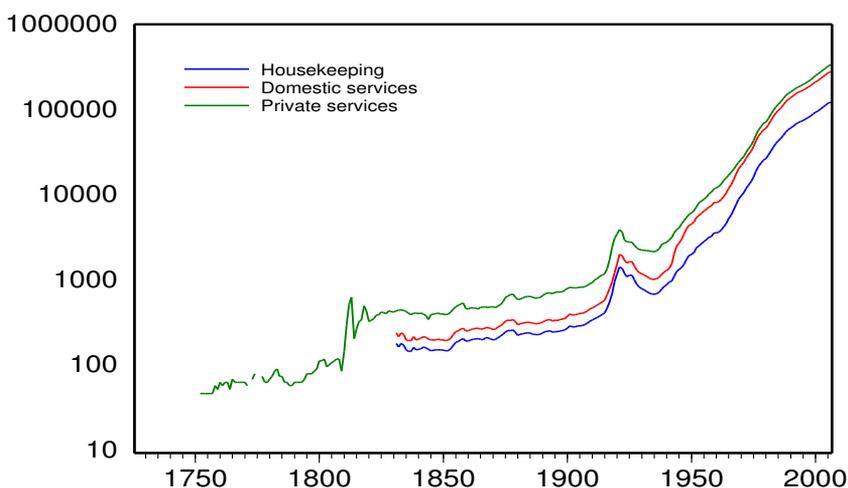
⁶⁵NOS 1978, 530–532 and 576 and Grytten 2004a, 92–93.

⁶⁶NOS 1949, 365–368 and data kindly provided by Tor Skoglund, Statistics Norway 2007.

⁶⁷Wedervang Archive, file W028.

⁶⁸Bjørsvik 2004, 290–310.

FIGURE 6.5 Annual wages in private services, in NOK, per man-year, 1726–2006. Semi-logarithmic scale.



Sources, Wedervang Archive, files W009, W013, W014, W021, W028, W030, W032, W034, W035, W036, W038, W039, W043, W044, W058, W063, W118, W119A, W120A, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W204, W245, W248, W249, W349, NOS 1949, 364–367, NOS 1918–1941, NOS 1978, 530–532 and 576, Akstun 1960, 45–62, Gjøølberg 1974, 61–68 and 85–107, Lønningdal 1984, 23–36, 104–109 and 141–163, Minde and Grytten 1997, 61–82, Grytten 2004a, 92–93, Grytten and Minde 1998, 42–58 and data provided by Tor Skoglund, Statistics Norway.

The best available source is Kjell Bjørn Minde’s, study on the profitability of higher education 1885–1960, which offers annual tariff salaries for public servants.⁶⁹ By diving into the works of Minde and his sources, we have been able to come up with representative estimates of *ex post* wages for public services. Admittedly, these do not have the same sound empirical basis as other series in this chapter. Nevertheless, they serve as a valid indicator for the development of wages in the public sector till 1940. Thereafter we use data published by Statistics Norway on annual wages in public services.⁷⁰

Public administration

Minde primarily pays attention to public administration and education. He offers wage data on public servants in the central and local public administration. Most of his data report wages of senior bureaucrats. Thus, they are higher than the average. However, he also gives wages for technical personnel and assistants and more junior secretaries. By adding extra payments to the tariff wages and constructing a normal distribution of employees according to the tariffs, we arrive at reliable estimates of public administration wages, inclusive central ministries up to 1946.⁷¹

⁶⁹Minde 1993, 25–123* (appendix).

⁷⁰Data kindly provided by Tor Skoglund, Statistics Norway 2007.

⁷¹Minde 1993, 25–123* (appendix).

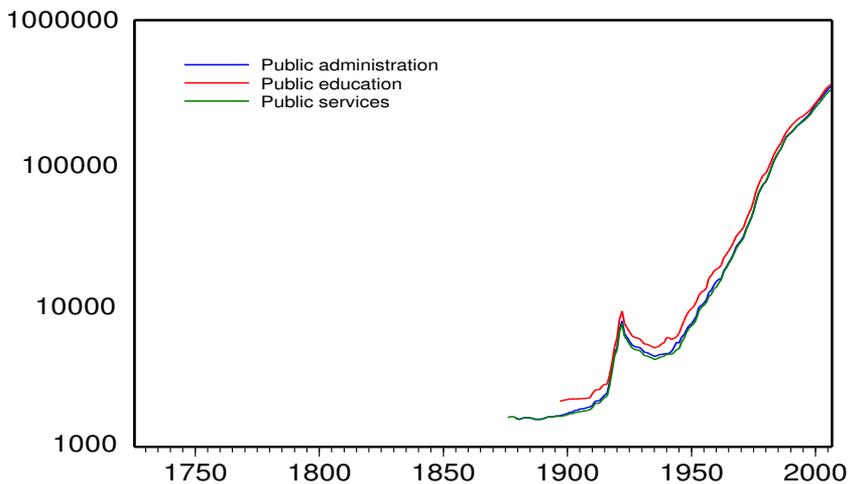
For the period after 1946 we use data provided by Statistics Norway.⁷² We have gained access to unpublished files and have been able to construct one combined series of annual wages in public administration. This is spliced to the pre-World War II series, and thus we arrive at annual wages for public administration from the late nineteenth century till present.

Public education

Minde also reports wages of teachers, lecturers, assistant professors and professors from the late nineteenth century till 1960. Again, these are tariff wages. However, by diving deeper into his material, including estimated *ex post* wage determinants, we find actual salaries.⁷³ Admittedly, Minde's series are biased in that they basically cover senior staff, but by linking them to Statistics Norway's data on the level of over-all salaries in education in 1946, we arrive at representative numbers for the years prior to World War II.

The data from Statistics Norway represent the total educational sector of Norway, and provide annual wages from 1946 till 2006.⁷⁴ By splicing the post- and pre-World War II-series, we conclude with a joint series wages for public education in Norway from the 1890s till 2006.

FIGURE 6.6 Annual wages in public services, in NOK, per man-year, 1726–2006. Semi-logarithmic scale.



Sources, Minde 1993, 25–123* (appendix) and data provided by Tor Skoglund, Statistics Norway.

⁷²Data kindly provided by Tor Skoglund, Statistics Norway 2007.

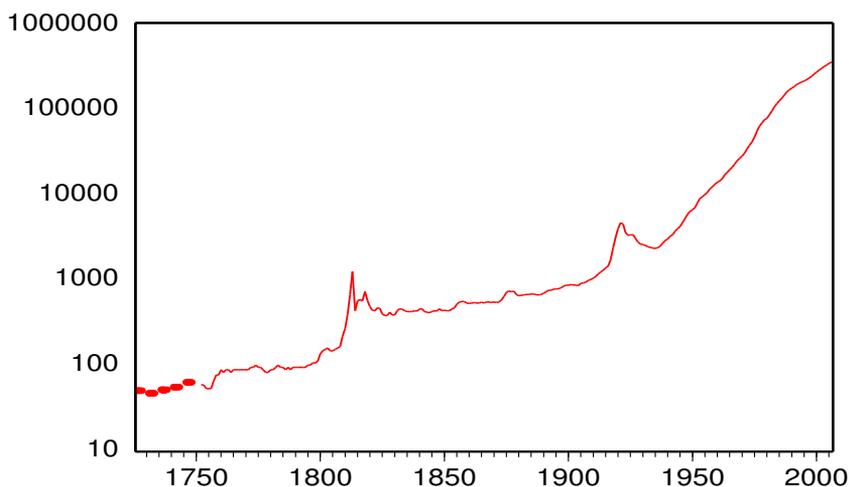
⁷³Minde 1993, 25–123* (appendix).

⁷⁴Data provided by Tor Skoglund, Statistics Norway 2007.

6.7.6 Total

By summing up the 18 series, we arrive at average wages for the total Norwegian labor force for the 280 years spanning from 1726 till 2006. In order to do so, we have to give all series by industry and sub-industry weights. And, in order to make that happen, we have to come up with the same unit of account, which is kroner per man-year.

FIGURE 6.7 Total average annual wages in Norway, in NOK, per man-year, 1726–2006. Semi-logarithmic scale.



Sources, Agriculture and forestry: Wedervang Archive, files W009, W013, W014, W021, W027, W028, W204, W205, W207, NOS 1949, 366–367, Gjølberg 1974, 31–103, Lønningdal 1984, 141–163 and data provided by Tor Skoglund, Statistics Norway. Secondary: Wedervang Archive, files W045, W046, W047, W048, W049, W054, W055, W056, W071, W072, W074, W074, W080, W081, W082, W118, W119A, W120A, W121, W245, W249, W284, W417, NOS 1949, 364–365, NOS 1915–1941, Petersen 1950, 670–671, Fløystad 1979, 595–596, Goksøy 1982, Grytten 1992, 159–167, Alme 1993, 64–65, Hodne, Grytten and Alme 1995, 240–243 and data provided by Tor Skoglund, Statistics Norway. Public services: Minde 1993, 25–123* (appendix) and data provided by Tor Skoglund, Statistics Norway. Private services: Wedervang Archive, files W009, W013, W014, W021, W028, W030, W032, W034, W035, W036, W038, W039, W043, W044, W058, W063, W118, W119A, W120A, W172, W174, W176, W182, W184, W185, W186, W187, W188, W189, W204, W245, W248, W249, W349, NOS 1949, 364–367, NOS 1918–1941, NOS 1978, 530–532 and 576, Akstun 1960, 45–62, Gjølberg 1974, 61–68 and 85–107, Lønningdal 1984, 23–36, 104–109 and 141–163, Minde and Grytten 1997, 61–82, Grytten 2004a, 92–93, Grytten and Minde 1998, 42–58 and data provided by Tor Skoglund, Statistics Norway.

Behind Figure 6.7.6 we know there are significant wage differences between industries (see appendix). In particular, public services were comparatively well off until World War II. Thereafter, we find a rapid convergence and simultaneous development up till present days. For the years prior to 1911, we find a tendency towards somewhat lower nominal wages in the secondary sector than believed hitherto. This is, however, due to the fact that our new series have better coverage than previous figures.

6.8 Conclusions

As part of Norges Bank's project on Historical Monetary Statistics this chapter offers 18 series of nominal wages classified by industry back to 1726. We have also presented an aggregated series for total average annual wages in Norway between 1726–2006. The data are collected and compiled from various sources. The most important ones are previous work done by other scholars on the basis of private and public archives, the Professor Dr. Ingvar B. Wedervang's Historical Archive on Wages and Prices, located at the Norwegian School of Economics and Business Administration, and records held by Statistics Norway.

In order to make the series comparable, they are calculated into man-years and annual wages. We then arrive at annual nominal wages 1726–2006. The results reveal that nominal wages in the long run stayed fairly stable both in the eighteenth and nineteenth century, before they started to grow on a more permanent basis in the twentieth century, in particular during the post-World War II period. Our results also reveal that a convergence of wages between industries took place. In particular, public services lost ground as a high wage industry during the twentieth century.

In Chapter 7 we provide estimates of real wages between 1726–2006 by deflating the time series of total annual wages with the consumer price index presented Chapter 3 of the first volume of Historical Monetary Statistics of Norway.⁷⁵

⁷⁵Grytten 2004a, 47–98.

Bibliography

- Akstun, Frode 1960, *Mannskapsstatistikk*, Oslo: Skipsfartens Arbeidsgiverforening.
- Alme, Jørund 1993, "Lønninger i Norge 1850–1914", memo, Bergen: NHH.
- Bjørsvik, Elisabeth 2004, *Public services in Norway 1830–1865 within the framework of historical national accounts*, Bergen: NHH.
- Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds.) 2004, *Historical Monetary Statistics for Norway 1819–2003*, Occasional Paper no. 35, Oslo: Norges Bank.
- Eitrheim, Øyvind and Jan F. Qvigstad (eds.) 2005, *Tilbakeblikk på norsk pengehistorie: Historisk-monetær statistikk for Norge*, Occasional Paper no. 37, Oslo: Norges Bank.
- Fløystad, Ingeborg 1979, *Arbeidsmandens Lod, det nødtøftige Brød: Arbeiderlevekår ved Baaseland-/Nes jernverk 1725–1807*, Bergen: University of Bergen.
- Gjøølberg, Ole 1974, *Reallønnsutvikling og levekår for jordbruksarbeidere ca 1830–1880*, Bergen: NHH.
- Goksøyr, Matti 1982, *Fra tjener til arbeider? En undersøkelse av Alvøen-arbeidernes rekruttering og lønnsforhold, 1801–1865*, Bergen: University of Bergen.
- Grytten, Ola Honningdal 1992, *Nytt syn på arbeidsledigheten i mellomkrigstiden: en makroøkonomisk analyse av arbeidsløshetens omfang og årsaker 1919–1939*, Bergen: NHH.
- Grytten, Ola Honningdal 2004a, "A consumer price index for Norway 1516–2003", Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds.) 2004, *Historical Monetary Statistics for Norway 1819–2003*, Occasional Paper no. 35, Oslo: Norges Bank, 47–98.

- Grytten, Ola Honningdal 2004b, “A Norwegian consumer price index 1819–1913 in a Scandinavian perspective”, *European Review of Economic History*, 1/2004, 61–80.
- Grytten, Ola Honningdal 2005, “Historisk lønnsstatistikk 1726–2004”, Eitrheim, Øyvind and Jan F. Qvigstad (eds), *Tilbakeblikk på norsk pengehistorie: historisk monetær statistikk for Norge*, Occasional Paper no. 37, Oslo: Norges Bank, 57–80.
- Grytten, Ola Honningdal and Kjell Bjørn Minde 1998, “The demand for consumer goods in Norway 1850–1920”, *Scandinavian Economic History Review*, 1/1998, 42–58.
- Hodne, Fritz, Ola Honningdal Grytten and Jørund Alme 1994, “Real wages in Norway 1850–1940”, Zamagni, Vera and Peter Scholliers (eds), *Real wages in the nineteenth and twentieth century*, Milan: Bocconi University, 59–72.
- Hodne, Fritz, Ola Honningdal Grytten and Jørund Alme 1995, “Norwegian real wages: trends in prices and wages 1850–1950”, Scholliers, Peter and Vera Zamagni (eds), *Labour’s Reward: real wages and economic change in 19th and 20th century Europe*, London: Edward Elgar, 61–75 and 238–248.
- Jenssen, Lars Chr. 1992, *Lønn for strevet. Tarifforhandlinger og hyrer under den sosialdemokratiske orden i Nortraship-flåten*, Oslo: University of Oslo.
- Karlsson, Gunnar (ed) 1987, *Levestandarden i Norden 1750–1914*, Reykjavik: University of Reykjavik.
- Lønningdal, Torill 1984, *Tjenestejentelønninger i jordbruket: en studie av tjenestejentelønninger på 17 større gårder i østlandsområdet 1850–1910*, Bergen: NHH.
- Minde, Kjell Bjørn 1993, *Om den privatøkonomiske lønnsomheten av å investere i utdanning etter folkeskole i Norge 1885–1960*, Bergen: NHH.
- Minde, Kjell Bjørn 1996, “Levestandarden på fabrikkstaden dei første 75 år”, Mjeldheim, Leiv (ed), *Fabrikken og folket*, Bergen.
- Minde, Kjell Bjørn and Jan Ramstad 1986, “The development of real wages in Norway about 1730–1910”, *Scandinavian Economic History Review*, 2/1986, 90–121.
- Minde, Kjell Bjørn and Ola Honningdal Grytten 1997, “Konsum og levestandard under industrialiseringen i Norge: endringer i kjøpekraft og privat konsum 1850–1920”, Söderberg, Johan and Lars Magnusson (eds), *Kultur och konsum i Norden 1750–1950*, Helsinki: FHS, 61–82.
- Mjeldheim, Leiv (ed) 1996, *Fabrikken og folket*, Bergen.
- Myhre, John Eivind 1986, “Research into Norwegian living conditions in the period 1750–1914”, *Scandinavian Economic History Review*, 2/1986.

NOS X 178 1949, Historical Survey 1948, Oslo: Statistics Norway.

NOS XII 163 1965, National Accounts 1865–1960, Oslo: Statistics Norway.

NOS XII. 245 1969, Historical Statistics 1968, Oslo: Statistics Norway.

NOS XII. 291 1978, Historical Statistics 1978, Oslo: Statistics Norway.

Petersen, Erling 1950, Norsk Arbeidsgiver Forening 1900–1950, Oslo: NAF.

Ramstad, Jan 1982, Kvinnelønn og pengeøkonomi: en studie av kvinners lønn i tekstilindustrien i Kristiania ca 1850–1910, Bergen: NHH.

Scholliers, Peter and Vera Zamagni (eds) 1995, Labour's Reward: real wages and economic change in 19th and 20th century Europe, London: Edward Elgar.

Statistical Office of Kristiania 1915, Husholdningsregnskaper fort av en del mindre bemidlede familier i Kristiania, Bergen, Kristiansand og Hamar i Aaret 1912/13, Kristiania.

Söderberg, Johan and Lars Magnusson (eds), Kultur och konsumtion i Norden 1750–1950, Helsinki: FHS.

Venneslan, Christian 2007, Industrial development in Norway 1896–1939: in view of historical national accounts, Bergen: NHH.

Zamagni, Vera and Peter Scholliers (eds) 1994, Real wages in the nineteenth and twentieth century, Milan: Bocconi University.

Archival sources

Wedervang Archive, files W009, W013, W014, W021, W027, W028, W030, W032, W034, W035, W036, W038, W039, W043, W044, W046, W047, W048, W049, W054, W055, W056, W058, W063, W071, W072, W074, W075, W080, W081, W082, W089, W091, W118, W119A, W120A, W121, W155, W172, W173, W174, W176, W177, W182, W184, W185, W186, W187, W188, W189, W193, W204, W205, W207, W245, W248, W249, W284, W320, W327, W329, W330, W349, W407 and W417,

6.A Nominal annual wages 1726-2006 in NOK

TABLE 6.A.1
Nominal annual wages 1726-2006 in NOK.

	1.0 Primary industries	1.1 Agriculture and forestry	2.0 Secondary industries	2.1 Construction	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1726			54		51			61
1727								
1728								
1729								
1730								
1731			51		45			60
1732								
1733								
1734								
1735								
1736			56		48			69
1737								
1738								
1739								
1740								
1741			61		52			74
1742								
1743								
1744								
1745								
1746			69		56			89
1747								
1748								
1749								
1750								
1751			67		51			89
1752								
1753								
1754								
1755								
1756			71		53			96
1757								
1758								
1759								
1760								
1761			98		72			137
1762								
1763								
1764								
1765								
1766			96		77			125
1767								
1768								
1769								
1770								

TABLE 6.A.1
Nominal annual wages 1726-2006 in NOK.

	1.0 Primary industries	1.1 Agriculture and forestry	2.0 Secondary industries	2.1 Construction	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1771			102		78			139
1772								
1773								
1774								
1775								
1776			96		75			127
1777								
1778								
1779								
1780								
1781			97		74			132
1782								
1783								
1784								
1785								
1786			104		81			140
1787								
1788								
1789								
1790								
1791			108		90			135
1792								
1793								
1794								
1795								
1796			105		86			132
1797								
1798								
1799								
1800								
1801			153		126			195
1802								
1803								
1804								
1805								
1806			150		133			177
1807								
1808								
1809								
1810								
1811								
1812								
1813								
1814								
1815								
1816								
1817								
1818								

TABLE 6.A.1
Nominal annual wages 1726-2006 in NOK.

	1.0 Primary industries	1.1 Agriculture and forestry	2.0 Secondary industries	2.1 Construction	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1819								
1820		378	530		467			676
1821		343	487		424			633
1822		378	556		501			686
1823		362	555		501			681
1824		314	497		433			646
1825		299	463		400			610
1826		299	459		396			605
1827		339	511		454			643
1828		297	466		405			608
1829		303	462		400			605
1830		314	491		431			630
1831		332	532		475			666
1832		323	516		461			646
1833		309	469		417			589
1834		299	464		414			583
1835		302	479		429			596
1836		305	495		431			645
1837		307	500		436			648
1838		305	485		434			605
1839		334	527		471			656
1840		352	516		461			643
1841		311	484		430			609
1842		312	477		424			601
1843		325	476		422			601
1844		319	473		421			596
1845		321	492		431			636
1846		323	471		425			577
1847		351	529		490			619
1848		322	492		452			586
1849		341	487		448			577
1850		336	480	410	435	224	495	569
1851		344	471	360	440	224	520	574
1852		356	486	381	448	231	548	591
1853		352	502	410	457	231	576	608
1854		404	551	474	510	242	607	642
1855		428	593	531	548	252	753	679
1856		410	624	533	579	303	729	727
1857		417	616	557	592	330	710	679
1858		431	591	505	595	303	685	643
1859		419	588	500	570	277	694	662
1860		419	595	508	570	287	679	675
1861		422	614	523	584	281	729	704
1862		404	620	525	606	274	757	698
1863		435	596	528	554	267	691	682
1864		435	600	521	571	283	713	679
1865		416	601	516	571	280	713	685
1866		432	611	509	562	297	701	727

TABLE 6.A.1
Nominal annual wages 1726-2006 in NOK.

	1.0 Primary industries	1.1 Agriculture and forestry	2.0 Secondary industries	2.1 Construction	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1867		431	624	519	574	283	722	741
1868		422	597	527	541	248	657	698
1869		445	612	532	557	245	691	718
1870		427	613	529	558	259	678	720
1871		430	607	527	553	264	672	713
1872		448	638	587	571	308	651	737
1873		530	664	634	588	357	709	758
1874		601	723	755	621	378	754	802
1875		592	741	739	652	350	788	828
1876		561	721	700	658	348	780	796
1877		591	705	704	644	347	770	765
1878		510	669	641	631	355	762	724
1879		506	635	581	618	356	754	688
1880		519	621	592	604	358	743	657
1881		526	620	607	608	356	738	640
1882		536	623	633	615	355	735	624
1883		539	624	644	620	358	730	614
1884		532	638	677	625	356	728	625
1885		534	637	666	630	380	722	624
1886		525	625	668	622	376	728	599
1887		522	620	645	625	370	751	600
1888		536	620	665	639	368	780	573
1889		540	668	701	659	374	788	655
1890		559	721	762	676	382	801	739
1891		562	751	823	711	390	854	744
1892		562	749	845	697	384	854	737
1893		605	751	852	673	378	788	761
1894		595	758	868	659	379	801	783
1895		595	748	815	662	386	801	787
1896		621	775	896	660	393	801	807
1897		673	825	906	709	389	880	885
1898		662	874	950	741	434	893	954
1899	663	629	893	1019	738	456	893	959
1900	712	675	864	995	706	440	854	933
1901	687	651	869	996	722	431	854	928
1902	670	645	860	969	720	434	854	926
1903	644	619	851	968	722	443	867	900
1904	742	716	861	993	729	445	867	903
1905	754	713	880	1039	745	465	867	908
1906	796	725	909	1054	773	481	932	946
1907	818	771	958	1105	809	518	998	1006
1908	835	781	995	1115	848	597	1024	1061
1909	872	842	1014	1122	858	607	1024	1094
1910	899	852	1064	1133	957	626	1106	1124
1911	983	932	1132	1182	979	666	1124	1250
1912	1062	1007	1193	1237	1042	711	1187	1311
1913	1119	1077	1267	1373	1120	764	1258	1339
1914	1222	1173	1329	1438	1212	818	1303	1372

TABLE 6.A.1
Nominal annual wages 1726-2006 in NOK.

	1.0 Primary industries	1.1 Agriculture and forestry	2.0 Secondary industries	2.1 Construction	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1915	1243	1200	1391	1500	1287	840	1216	1420
1916	1556	1471	1518	1670	1401	902	1242	1532
1917	2270	2069	2149	2301	2005	1346	2033	2190
1918	3017	2844	2966	3003	2800	1799	2390	3102
1919	3768	3522	3912	4009	3651	2498	3835	4102
1920	4108	3965	4768	4864	4780	3324	5222	4693
1921	3710	3657	4635	4595	4756	3248	4833	4544
1922	3018	2916	3595	3750	3560	2420	3517	3526
1923	2661	2541	3390	3451	3330	2281	3328	3409
1924	2647	2588	3632	3568	3579	2452	3533	3727
1925	2587	2576	3866	3646	3917	2729	4037	3961
1926	2268	2254	3481	3296	3526	2422	3420	3557
1927	1945	1923	3100	2940	2991	2030	2742	3312
1928	1773	1742	2951	2823	2880	1982	2737	3105
1929	1694	1665	2961	2796	2879	1985	2716	3148
1930	1632	1609	2961	2771	2884	2000	2737	3160
1931	1530	1507	2843	2721	2729	1888	2535	3033
1932	1424	1397	2871	2630	2754	1908	2569	3143
1933	1364	1329	2837	2612	2738	1898	2558	3081
1934	1359	1319	2839	2678	2733	1897	2569	3047
1935	1405	1349	2867	2749	2733	1900	2579	3074
1936	1508	1414	2971	2834	2799	1940	2616	3230
1937	1672	1589	3221	3116	3022	2105	2874	3484
1938	1830	1744	3509	3317	3310	2305	3144	3829
1939	1955	1843	3590	3465	3358	2344	3220	3898
1940	2447	2036	3636	3649	3358	2410	3349	3871
1941	2661	2558	3598	3494	3455	2450	3430	3787
1942	3200	3086	3735	3947	3512	2585	3765	3798
1943	3464	3375	3863	4041	3616	2834	3868	3969
1944	3961	3856	3926	3999	3681	2964	3971	4096
1945	4353	4241	4519	4544	4271	3310	4482	4721
1946	4807	4814	5188	5746	4534	3590	5157	5412
1947	5523	5382	5761	6430	5063	4078	5688	5954
1948	6010	5883	6174	6918	5387	4216	6086	6397
1949	6261	6216	6573	7188	5621	4384	6262	7022
1950	6593	6558	6995	7483	5998	4691	6626	7562
1951	7813	7478	7918	8605	6916	5522	7785	8366
1952	8656	8424	8793	9707	7759	6190	8571	9127
1953	8916	8905	9424	10182	8279	6636	9171	9951
1954	9513	9465	10139	10926	8784	6994	9786	10833
1955	10312	10229	10789	11428	9302	7574	10119	11689
1956	11107	10802	11724	12114	10130	8301	11171	12875
1957	12062	11671	12036	12695	10688	8675	11618	12805
1958	12544	12357	12850	13698	11265	8970	12292	13707
1959	13058	12557	13571	14109	12019	9679	13103	14592
1960	13920	13291	14320	14448	12644	10153	13863	15705
1961	15076	13820	15383	15430	13555	11056	14487	16953
1962	15950	14875	17016	17128	14802	12018	15718	18883

TABLE 6.A.1
Nominal annual wages 1726-2006 in NOK.

	1.0 Primary industries	1.1 Agriculture and forestry	2.0 Secondary industries	2.1 Construction	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1963	15615	15732	18090	18498	15720	12812	16645	19909
1964	17302	16686	19338	19589	16867	13785	17860	21342
1965	18893	18227	20688	21313	18115	15122	19468	22550
1966	20650	20221	22600	23402	19764	16695	21570	24580
1967	21580	21540	24609	25461	21463	18265	23469	26829
1968	22206	22281	26402	27192	22944	19470	24947	28932
1969	22716	23658	28371	28797	24688	20599	27043	31328
1970	23897	25134	31168	31100	27058	22700	29287	34806
1971	26765	27949	34380	34366	30143	25129	32567	38097
1972	29549	30716	37316	37493	32916	27642	35596	41055
1973	32563	34156	40590	40905	36405	30434	39298	44055
1974	37382	39416	46541	46959	42157	35456	45232	50116
1975	43475	45407	55116	55177	50335	42228	53691	59260
1976	49214	52264	63686	63619	57080	47929	60724	69509
1977	53545	57229	70827	70872	63017	52482	66796	77632
1978	58096	62322	77374	77463	68373	56838	72608	85193
1979	60594	64192	79458	81491	70903	59566	75149	85672
1980	66836	70419	86785	89069	77568	65761	81687	93421
1981	74254	77672	96192	98600	86023	72468	90591	103586
1982	81977	85827	106348	108460	95141	79933	100012	114834
1983	90748	95354	115219	116594	105036	88006	109714	123270
1984	94650	99550	124178	123707	114174	95310	118271	133227
1985	102601	106120	133263	129768	123993	101982	128561	143558
1986	112553	115671	146403	141837	135276	109937	140003	158993
1987	122796	125734	166555	157013	148804	121150	154143	188050
1988	130532	131644	176801	167219	158030	131569	163546	199215
1989	136536	137436	183400	172570	166563	140121	171232	204901
1990	144046	145682	188860	178783	176391	150911	180993	206068
1991	154273	151801	197524	188079	187151	158154	190947	212504
1992	161524	157114	203267	195038	194637	164797	199731	215962
1993	163624	159628	207683	199134	201254	169905	207320	218652
1994	171641	163459	212379	203117	207493	175172	214369	222444
1995	181081	168036	219077	209007	215378	179201	222087	228607
1996	187419	174589	227103	217994	224424	186907	231414	235139
1997	197727	180350	235550	229330	234298	195692	242291	240532
1998	215325	191352	248096	243090	248591	208803	257071	250793
1999	223723	200345	261655	257189	262760	220705	270181	263480
2000	230435	207958	273411	267734	273008	229092	282069	277312
2001	244491	216693	288228	282191	286931	242837	297301	293136
2002	254515	228828	303503	298841	302426	252793	312760	307360
2003	262313	237752	312914	303323	312103	264169	324020	319619
2004	273593	247975	324511	319096	329269	282133	339249	323732
2005	283600	256900	340829	332500	343100	293700	351800	344047
2006	294145	266408	353615	344801	357508	303686	368687	355717

TABLE 6.A.2
Nominal annual wages 1726-2006 in NOK.

	3.0 Transport and communications	3.1 Merchant fleet	3.1. Transport	3.2. Communications	4.0 Private services	4.1 Domestic services	4.1.1 Housekeeping
1726							
1727							
1728							
1729							
1730							
1731							
1732							
1733							
1734							
1735							
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1743							
1744							
1745							
1746							
1747							
1748							
1749							
1750							
1751	52	49			52		
1752	52	48			52		
1753	50	46			50		
1754	49	45			49		
1755	48	45			48		
1756	54	50			54		
1757	63	59			63		
1758	57	53			57		
1759	68	64			68		
1760	64	60			64		
1761	66	61			66		
1762	70	65			70		
1763	59	55			59		
1764	72	67			72		
1765	70	66			70		
1766	68	63			68		
1767	70	65			70		
1768	67	62			67		
1769	70	65			70		
1770	65	61			65		
1771							
1772	73	68			73		
1773	83	77			83		

TABLE 6.A.2
Nominal annual wages 1726-2006 in NOK.

	3.0 Transport and communications	3.1 Merchant fleet	3.1. Transport	3.2. Communications	4.0 Private services	4.1 Domestic services	4.1.1 Housekeeping
1774							
1775							
1776	79	73			79		
1777	68	64			68		
1778	65	61			65		
1779	74	69			74		
1780	77	72			77		
1781	90	84			90		
1782	94	87			94		
1783	82	76			82		
1784	78	72			78		
1785	66	62			66		
1786	66	61			66		
1787	62	58			62		
1788	63	59			63		
1789	68	63			68		
1790	68	63			68		
1791	67	63			67		
1792	69	64			69		
1793	72	67			72		
1794	85	79			85		
1795	82	77			82		
1796	86	80			86		
1797	92	85			92		
1798	98	91			98		
1799	119	110			119		
1800	119	111			119		
1801	124	116			124		
1802	102	95			102		
1803	110	102			110		
1804	111	104			111		
1805	119	111			119		
1806	126	118			126		
1807	122	114			122		
1808	92	85			92		
1809	152	140			152		
1810	314	287			314		
1811	537	488			537		
1812	651	588			651		
1813	214	193			214		
1814	280	250			280		
1815	342	303			342		
1816	352	311			352		
1817	515	453			515		
1818	445	389			445		
1819	342	295			342		
1820	356	306			354		
1821	370	317			368		

TABLE 6.A.2
Nominal annual wages 1726–2006 in NOK.

	3.0 Transport and communications	3.1 Merchant fleet	3.1. Transport	3.2. Communications	4.0 Private services	4.1 Domestic services	4.1.1 Housekeeping
1822	404	343			400		
1823	414	348			410		
1824	443	368			436		
1825	436	359			429		
1826	431	351			422		
1827	465	375			453		
1828	453	362			439		
1829	447	354			434		
1830	473	374			451	248	187
1831	490	387			456	227	171
1832	489	386			463	248	187
1833	491	388			462	239	179
1834	476	377			440	209	157
1835	462	365			425	200	151
1836	441	349			409	200	151
1837	450	356			426	225	169
1838	456	360			424	209	157
1839	448	354			420	213	160
1840	458	362			427	215	161
1841	438	346			416	226	170
1842	417	329			398	220	166
1843	368	291			357	212	159
1844	435	344			407	206	155
1845	443	350			413	207	156
1846	447	353			417	209	157
1847	456	360			424	210	158
1848	441	348			413	209	157
1849	441	349			412	207	156
1850	434	346	412	465	405	204	153
1851	441	360	433	451	412	205	154
1852	471	359	456	511	438	216	162
1853	510	387	480	570	476	239	179
1854	537	472	472	572	504	257	193
1855	559	481	487	606	522	263	198
1856	583	498	493	653	545	276	207
1857	590	497	519	647	553	284	213
1858	503	388	441	587	480	265	199
1859	495	389	428	579	474	264	198
1860	519	397	467	597	495	272	204
1861	506	399	428	598	487	278	209
1862	504	397	428	594	487	281	211
1863	487	409	415	548	475	284	214
1864	520	428	467	572	498	277	209
1865	521	437	467	565	498	276	207
1866	524	447	467	563	505	289	217
1867	512	448	415	581	496	289	217
1868	525	441	454	585	503	280	211
1869	527	429	449	608	502	274	206

TABLE 6.A.2
Nominal annual wages 1726-2006 in NOK.

	3.0 Transport and communications	3.1 Merchant fleet	3.1. Transport	3.2. Communications	4.0 Private services	4.1 Domestic services	4.1.1 Housekeeping
1870	511	405	433	601	491	279	210
1871	534	433	467	604	513	290	218
1872	556	447	467	653	534	302	227
1873	606	510	519	678	578	318	239
1874	687	568	578	788	647	340	255
1875	718	537	666	818	676	353	265
1876	744	550	700	845	695	349	263
1877	755	558	708	858	706	358	270
1878	694	524	604	825	652	336	253
1879	653	431	614	790	611	310	233
1880	656	437	614	791	617	320	240
1881	689	445	666	824	643	323	242
1882	701	478	666	827	655	329	246
1883	712	519	666	819	664	332	248
1884	712	517	666	821	664	331	248
1885	698	489	666	807	650	323	241
1886	682	468	666	784	637	319	238
1887	689	472	666	800	642	318	236
1888	695	499	666	790	648	324	240
1889	733	556	708	800	682	336	249
1890	772	575	760	839	716	346	256
1891	789	581	778	861	730	352	260
1892	790	565	786	871	732	356	262
1893	776	539	786	859	718	343	252
1894	803	547	822	889	740	351	258
1895	819	552	848	903	752	349	256
1896	813	534	848	904	751	357	262
1897	823	553	848	913	760	364	266
1898	864	575	900	954	794	369	269
1899	892	630	900	978	822	389	283
1900	914	655	907	1010	847	411	299
1901	914	649	907	1013	844	404	293
1902	905	631	907	1007	837	402	292
1903	911	639	907	1015	846	414	300
1904	913	642	907	1019	848	416	301
1905	913	653	907	1008	850	421	304
1906	928	684	907	1020	866	433	311
1907	962	747	907	1054	898	450	323
1908	1002	785	946	1090	937	474	339
1909	1027	764	959	1168	963	490	351
1910	1124	776	1141	1243	1043	509	363
1911	1152	802	1141	1297	1071	527	376
1912	1229	890	1218	1354	1138	548	390
1913	1294	957	1270	1423	1197	574	408
1914	1318	1005	1270	1449	1225	601	426
1915	1503	1170	1374	1709	1400	697	483
1916	1940	1590	1745	2167	1777	815	568
1917	2835	2608	2385	3078	2525	991	723

TABLE 6.A.2
Nominal annual wages 1726–2006 in NOK.

	3.0 Transport and communications	3.1 Merchant fleet	3.1. Transport	3.2. Communications	4.0 Private services	4.1 Domestic services	4.1.1 Housekeeping
1918	3588	3115	3298	3791	3200	1264	990
1919	3909	3342	3630	4143	3562	1587	1215
1920	4291	3958	3974	4287	4022	2055	1467
1921	4044	3402	3803	4287	3810	1992	1423
1922	3138	2576	2981	3356	3036	1766	1236
1923	3033	2462	2981	3172	2913	1646	1131
1924	3127	2556	3025	3300	2898	1696	1175
1925	3103	2594	3067	3158	2875	1691	1175
1926	2809	2449	2766	2774	2633	1508	1034
1927	2580	2301	2593	2450	2461	1357	921
1928	2448	2178	2419	2370	2358	1263	853
1929	2372	2183	2333	2239	2329	1220	817
1930	2417	2217	2419	2246	2300	1183	791
1931	2373	2207	2377	2176	2288	1136	758
1932	2282	2107	2289	2102	2270	1092	729
1933	2314	2119	2333	2138	2233	1053	707
1934	2318	2122	2333	2144	2225	1049	704
1935	2333	2074	2377	2187	2273	1073	719
1936	2463	2135	2548	2322	2400	1116	746
1937	2830	2322	3025	2692	2700	1206	810
1938	2894	2426	3025	2774	2813	1289	869
1939	2940	2457	3067	2832	2878	1334	905
1940	3394	4566	3111	3017	3038	1406	982
1941	3819	6480	3141	3121	3257	1600	1005
1942	3915	6450	3204	3215	3705	2100	1136
1943	3969	6432	3243	3265	4036	2560	1296
1944	4078	7004	3285	3220	4221	2811	1374
1945	4627	7680	3690	3842	4713	3109	1454
1946	5296	8272	4055	4802	5170	3595	1581
1947	5726	8669	4464	5306	5600	4113	1809
1948	6232	9406	4893	5736	6063	4540	1997
1949	6543	9961	5095	6023	6354	4708	2071
1950	6941	10546	5421	6378	6726	4944	2174
1951	7692	11604	6017	7131	7463	5611	2468
1952	8811	12937	6968	8372	8300	5903	2596
1953	9167	13342	7323	8682	8778	6287	2765
1954	9630	13869	7682	9289	9188	6651	2925
1955	10292	14193	8373	10228	9676	7004	3080
1956	11355	15429	9344	11301	10578	7424	3265
1957	12502	16947	10270	12522	11162	7662	3369
1958	13461	17836	11173	13662	12093	8382	3686
1959	14125	18575	11777	14372	12502	8415	3701
1960	14722	18708	12436	15306	12929	8584	3775
1961	15527	19465	13232	16179	13889	9099	4001
1962	17298	21710	14899	17683	15331	9917	4361
1963	18437	23654	15674	18744	16315	10830	4763
1964	19611	24991	16662	20131	17574	12281	5401
1965	21393	27627	18061	21822	19002	13693	6022

TABLE 6.A.2
Nominal annual wages 1726-2006 in NOK.

	3.0 Transport and communications	3.1 Merchant fleet	3.1. Transport	3.2. Communications	4.0 Private services	4.1 Domestic services	4.1.1 Housekeeping
1966	23177	29490	19759	23699	20686	15679	6895
1967	25602	32774	21320	26993	22800	18125	7971
1968	27812	36574	22855	28964	24924	20807	9151
1969	30074	40927	24203	30962	27049	22950	10093
1970	32047	43014	26115	32944	29008	24741	10880
1971	36738	52521	29014	36403	32520	27734	12197
1972	41139	60660	32090	39715	35884	30563	13441
1973	45643	68112	35427	43607	39625	33711	14825
1974	51718	76080	40670	49451	44662	38094	16753
1975	60698	88728	48153	57759	52296	44569	19601
1976	69004	101112	54413	66076	59212	50408	22168
1977	76950	116088	59746	72221	65601	55398	24363
1978	83052	124632	64645	78287	71313	59997	26385
1979	86718	134268	66649	79305	73784	62396	27441
1980	93822	141348	73114	87711	81138	68636	30185
1981	107662	169044	81376	98851	91811	77078	33897
1982	115442	170208	90571	110416	101646	85865	37762
1983	126092	188940	98089	119250	111068	94366	41500
1984	135599	204972	105151	127120	118837	100877	44363
1985	150428	238476	113038	137163	128767	108342	47646
1986	160058	241632	124341	149919	139606	117659	51744
1987	169126	239386	134537	155466	151135	128249	56401
1988	172827	231486	142744	163395	160369	136585	60067
1989	176244	228708	148739	168787	167349	143278	63010
1990	178499	215215	156325	178070	174857	150871	66350
1991	186966	224254	164610	186261	183867	158717	69800
1992	192881	224926	172676	193898	190770	165224	72662
1993	202097	243370	177856	200490	197785	170511	74987
1994	207661	248968	183370	206104	204415	175797	77312
1995	213893	254694	187771	214142	211388	181774	79940
1996	221821	257496	196784	225492	220614	189954	83537
1997	233898	275520	205442	236992	230981	197552	86879
1998	251799	300868	220645	251685	246432	209405	92092
1999	265321	319522	232781	262256	259432	219038	96328
2000	284272	345723	242557	283236	272369	226704	99699
2001	300300	358169	255413	306178	287404	239626	105382
2002	316700	356378	267162	329754	303222	251847	110757
2003	329000	360655	276245	338987	317088	264943	116516
2004	338500	381573	287295	352886	331724	278455	122458
2005	348900	389200	296200	373000	348170	288200	126744
2006	366100	395820	310123	392023	365345	299153	131561

TABLE 6.A.3
Nominal annual wages 1726–2006 in NOK.

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1726				50
1727				
1728				
1729				
1730				
1731				47
1732				
1733				
1734				
1735				
1736				52
1737				
1738				
1739				
1740				
1741				55
1742				
1743				
1744				
1745				
1746				63
1747				
1748				
1749				
1750				
1751				61
1752				59
1753				58
1754				55
1755				56
1756				65
1757				79
1758				82
1759				89
1760				86
1761				90
1762				92
1763				85
1764				93
1765				92
1766				91
1767				92
1768				90
1769				92
1770				90
1771				96
1772				95
1773				100

TABLE 6.A.3
Nominal annual wages 1726-2006 in NOK.

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1774				98
1775				95
1776				94
1777				87
1778				86
1779				90
1780				91
1781				99
1782				102
1783				98
1784				98
1785				92
1786				96
1787				94
1788				94
1789				98
1790				97
1791				97
1792				98
1793				98
1794				105
1795				102
1796				106
1797				110
1798				114
1799				140
1800				150
1801				158
1802				160
1803				149
1804				150
1805				155
1806				164
1807				167
1808				222
1809				275
1810				394
1811				674
1812				1249
1813				440
1814				569
1815				588
1816				566
1817				729
1818				573
1819				490
1820				444
1821				437

TABLE 6.A.3
Nominal annual wages 1726–2006 in NOK.

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1822				471
1823				469
1824				403
1825				385
1826				383
1827				422
1828				393
1829				391
1830				437
1831				460
1832				455
1833				436
1834				425
1835				426
1836				428
1837				435
1838				429
1839				454
1840				461
1841				429
1842				421
1843				414
1844				426
1845				435
1846				430
1847				463
1848				435
1849				442
1850				435
1851				438
1852				457
1853				472
1854				520
1855				551
1856				560
1857				563
1858				537
1859				529
1860				538
1861				543
1862				537
1863				539
1864				548
1865				540
1866				553
1867				553
1868				543
1869				557

TABLE 6.A.3
Nominal annual wages 1726-2006 in NOK.

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1870				546
1871				553
1872				580
1873				643
1874				717
1875	1580			742
1876	1595			727
1877	1605			739
1878	1579	1575		679
1879	1540	1536		656
1880	1540	1536		659
1881	1568	1564		669
1882	1573	1569		678
1883	1575	1571		682
1884	1567	1563		685
1885	1554	1550		682
1886	1534	1530		670
1887	1542	1538		669
1888	1532	1528		676
1889	1545	1541		699
1890	1568	1564		731
1891	1590	1586		753
1892	1601	1598		757
1893	1589	1585		777
1894	1620	1617		786
1895	1620	1617		788
1896	1601	1631	2060	807
1897	1619	1649	2081	850
1898	1634	1665	2101	868
1899	1654	1690	2117	865
1900	1674	1715	2130	885
1901	1683	1728	2132	875
1902	1712	1773	2135	871
1903	1717	1778	2140	858
1904	1736	1808	2142	908
1905	1746	1819	2150	925
1906	1755	1834	2150	944
1907	1773	1854	2169	988
1908	1785	1873	2169	1013
1909	1853	1913	2324	1058
1910	1972	2045	2451	1105
1911	1999	2073	2485	1174
1912	2004	2081	2485	1239
1913	2109	2178	2642	1311
1914	2188	2274	2711	1386
1915	2239	2352	2711	1454
1916	2645	2775	3140	1704
1917	3405	3570	3914	2384

TABLE 6.A.3
Nominal annual wages 1726–2006 in NOK.

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1918	4329	4470	4999	3152
1919	4722	4932	5789	3982
1920	6372	6656	7813	4657
1921	7278	7602	8923	4523
1922	5905	6157	7263	3605
1923	5599	5853	6850	3341
1924	5241	5490	6386	3378
1925	4904	5138	5974	3394
1926	4792	5029	5820	3080
1927	4739	4967	5768	2785
1928	4714	4950	5717	2644
1929	4540	4784	5467	2593
1930	4327	4556	5219	2541
1931	4326	4554	5219	2450
1932	4242	4467	5114	2411
1933	4148	4365	5011	2361
1934	4064	4275	4910	2350
1935	4098	4309	4958	2389
1936	4184	4404	5050	2497
1937	4247	4418	5248	2709
1938	4290	4445	5342	2903
1939	4434	4473	5804	3019
1940	4406	4478	5779	3239
1941	4432	4664	5628	3391
1942	4559	4958	5746	3752
1943	4767	5391	5879	3975
1944	4828	5296	6188	4224
1945	5379	5866	6930	4734
1946	5754	6049	7639	5261
1947	6287	6587	8341	5882
1948	6740	7035	8917	6358
1949	7032	7275	9292	6670
1950	7280	7711	9682	7057
1951	7897	8220	10456	7988
1952	8974	9519	11502	9010
1953	9512	9785	12204	9533
1954	9847	10196	12435	10038
1955	10301	10655	12983	10661
1956	11285	12040	15255	11631
1957	11759	12630	16002	12398
1958	12855	13615	17058	13242
1959	13185	14432	17706	13943
1960	14049	14952	18043	14529
1961	15041	15236	18963	15488
1962	16997	17201	21333	17130
1963	18008	18234	22443	18243
1964	19341	19619	23812	19575
1965	20802	20973	25574	21121

TABLE 6.A.3
Nominal annual wages 1726-2006 in NOK.

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1966	22548	22945	27594	22916
1967	24671	25423	30105	24956
1968	26330	26973	31731	26753
1969	27741	28349	33286	28519
1970	29643	30163	35083	30714
1971	33403	33904	39433	34554
1972	36793	36853	43219	37871
1973	40653	40649	47455	41847
1974	45654	45324	53766	47497
1975	53151	52757	62369	55761
1976	60234	60512	69790	63345
1977	66154	66018	76770	69869
1978	71270	70838	82374	75948
1979	73465	73175	84598	78530
1980	80687	80566	91873	86226
1981	90518	90798	101428	96487
1982	101422	101331	112585	107487
1983	110269	109336	121254	117160
1984	117847	117536	129499	126065
1985	126107	125764	138435	135519
1986	137566	137208	150617	147852
1987	149571	151066	162064	160715
1988	155787	157411	171464	170358
1989	163124	162605	181752	177853
1990	170709	169435	190112	186390
1991	178852	177737	196576	195896
1992	185370	185558	204242	203536
1993	191106	192609	209961	210456
1994	196676	200506	215210	216981
1995	202805	207122	221236	224141
1996	211943	216029	230307	234227
1997	221271	227694	238828	245470
1998	235064	243405	252680	261426
1999	247392	258496	264303	275543
2000	258602	272455	278047	288218
2001	270858	284715	294452	303493
2002	287659	302937	312414	319882
2003	302605	315964	330846	331718
2004	316001	331446	344411	347308
2005	328678	345700	357500	361200
2006	341163	360563	369653	376010

CHAPTER 7

Historical Monetary Statistics for Norway - some cross checks of the new data

Øyvind Eitrheim, Ola H. Grytten and Jan T. Klovland¹

This chapter provides an overview over the new historical data in this volume. We discuss some of their macro implications for implied revisions of money and credit aggregates and the long run development of short term and long term real interest rates and aggregated real wages.

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7.1 Introduction

During the course of work with the Historical Monetary Statistics project the main focus has been on documenting the validity and reliability of the historical data which are collected and systematized. Most of the preceding chapters of the two volumes has focused solely on the construction of data of a particular type, like e.g. the *consumer price index* in Grytten (2004a, Chapter 3) or *bond yields* in Klovland (2004a, Chapter 4) of the first volume of Historical Monetary Statistics for Norway. Similarly, Klovland's work on the balance sheet of *savings banks* in Chapter 2 and *commercial banks* in Chapter 3 of the present volume, or Grytten's work on daily, monthly or annual *wages by occupation* in Chapter 5 or annual *wages by industry* in Chapter 6 are also examples where data of a particular type are discussed in isolation. Throughout the work we have resisted the temptation to start analyzing the data beyond what we believe has been necessary to provide documentation on how the data have been constructed. We will use this final chapter to provide some simple cross checks on the validity and reliability of the data presented. For this purpose we will combine historical information from different chapters of the two volumes of Historical Monetary Statistics and construct new variables which can be of help for the evaluation.

We offer cross checks in three areas. First, we combine the long term bond yields presented in Klovland (2004a, Chapter 4) with the short term interest rates presented in Chapter 1 of this volume. In addition we calculate *long term real bond yields* and *short term real interest rates* using a smoothed inflation rate as a proxy for inflation expectations, drawing on the historical consumer price data presented in Grytten (2004a, Chapter 3). The data for aggregate bank deposits and bank loans which can be derived from the historical data on the balance sheets of individual savings banks and commercial banks in Chapters 2 and 3 can be compared with previous estimates in Klovland (2004b, Chapter 5) and Eitheim et al (2004, Chapter 10). We investigate the absolute and relative size of the revisions of these estimates and compare them with the nominal GDP-series presented in Grytten (2004b, Chapter 6). Finally we present estimates of *real annual wages* by deflating the estimates of historical annual wages presented in Chapter 6 of this volume with the consumer price index presented in Grytten (2004a, Chapter 3), and we also compare the real wage data with the real GDP per capita series presented in Grytten (2004b, Chapter 6).

7.2 Long term and short term interest rates 1818–2007

Figure 7.1 plots the long term nominal yields on government bonds against the short term nominal interest rate on marginal Central Bank liquidity and nominal interest rates on bank deposits and bank loans from 1818 to 2007. The interest rate on marginal Central Bank liquidity is set equal to the Norges Bank discount rate before 1965, thereafter it is constructed from the rates on various liquidity instruments. See Chapter 1 for details.

Firstly, we note that the marginal liquidity rate is always higher than the reported rate on bank deposits which indicates that banks have to pay a positive premium on Central Bank liquidity above

the compensation offered to depositors.

Secondly, we find that the reported deposit rate seems to move quite closely with the marginal liquidity rate over this period although, as we see from inspecting the 1970s and 1980s, with considerable lag during some sub-periods.

Thirdly, the marginal liquidity rate seems to be considerable more volatile than the bond yield throughout the entire period and also more volatile than the bank interest rates from the mid 1960s. The marginal liquidity rate and the short term money market rates gradually converge during the latter half of 20th century. This may be due to the fact that the money market becomes more developed, but it may also reflect the fact that monetary policy becomes more market oriented.

FIGURE 7.1 Long term and short term nominal interest rates, 1818–2007. The nominal bond yield is plotted against the nominal interest rate on marginal CB-liquidity and nominal interest rates on bank deposits and bank loans.

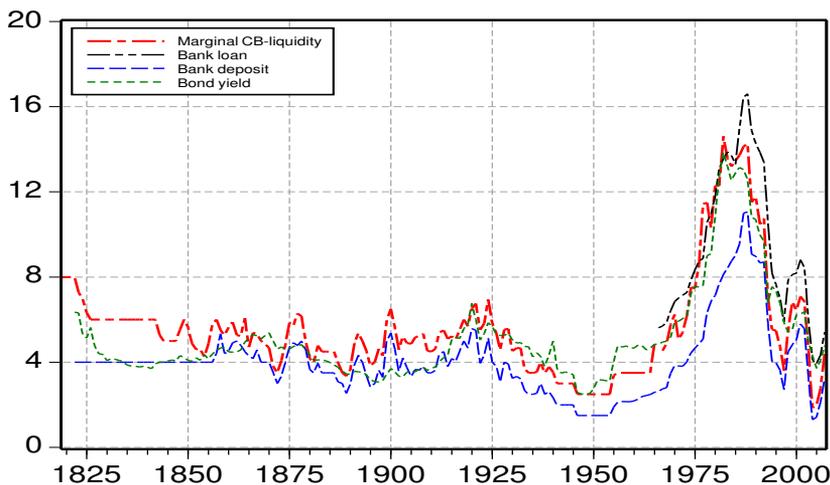
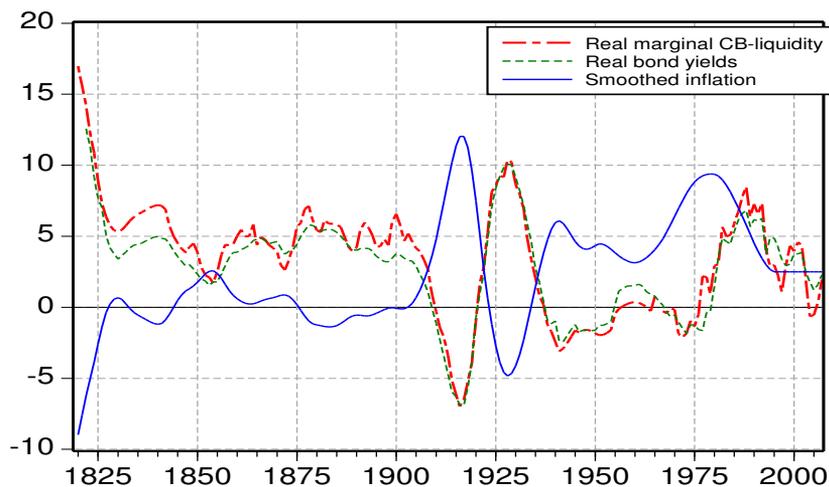


Figure 7.2 plots the real yield on long term government bonds, the real short term marginal liquidity rate and a smoothed measure of inflation as a proxy for low frequency changes in inflation expectations. Admittedly, this is a crude and mechanical approach to represent real interest rates. However, it may serve as a simple first attempt to cross check the historical interest rate data. From 1995 the calibrated measure of inflation expectations is set equal to the current inflation target 2.5 per cent.

FIGURE 7.2 Long term and short term real interest rates, 1818–2007. The real bond yield is plotted against the real interest rate on marginal CB-liquidity.



We observe that whereas the real interest rates fluctuated around a relatively high level during the 19th century, they remained at historically low levels during the post-World War II until the late 1970s when inflation had already gained momentum and were approaching its peak level close to 10 per cent around 1980. Interestingly, there has been more volatility in the short term real interest rate based on the marginal liquidity rate over the last 15 years of the sample than in the case of the real yield on government bonds.²

7.3 Revised data on bank deposits, bank loans and aggregate money holdings 1822–1918

The new estimates of bank deposits and bank loans in the savings banks and commercial banks presented in Chapters 2 and 3 above imply some revisions to the estimates of aggregate money holdings presented in Klovland (2004b, Chapter 5/Volumne I). Table 7.C.1 in the appendix contains the new time series of aggregate savings bank and commercial bank deposits for all years through 1918. More details on the construction of these data can be found in Chapter 2 in the case of savings banks and in Chapter 3 concerning commercial banks.

The currency component is not revised, but the new estimates of bank deposits differ somewhat

²We have used the same measure of inflation expectations in the calculations of the long term and short term real interest rates. Other assumptions based on a more volatile measure of short term inflation expectations might have yielded even more volatile short term real interest rates compared with the long term real interest rate.

from the previous ones, particularly in the case of commercial banks, which were partly based on the estimates in Matre(1992) before 1900. Some of the increase in the amount of deposits in the latter half of the 1870s and early 1880s found in the old data is shifted forward to the period 1870-1873 in the new series. In addition, there is a sharper decline in the years 1875 and 1877. In both cases the revised data reinforce the positive correlation between money and nominal income. The early 1870s were peak years of economic activity in Norway³, nominal GDP expanded at an annual rate of 11.5 per cent between 1870 and 1873. Conversely, both 1875 and 1877 registered a fall in the money stock and in nominal GDP.

FIGURE 7.3 New and old money aggregates, 1819–1918. End-of-month observations of broad money M2

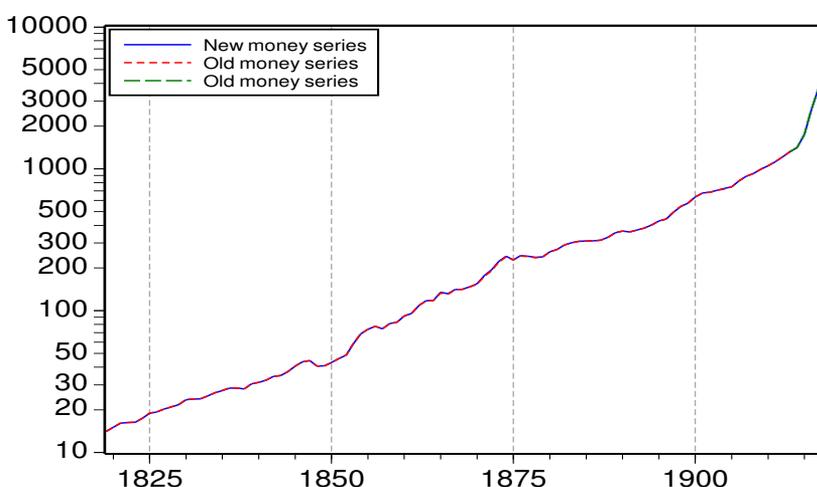
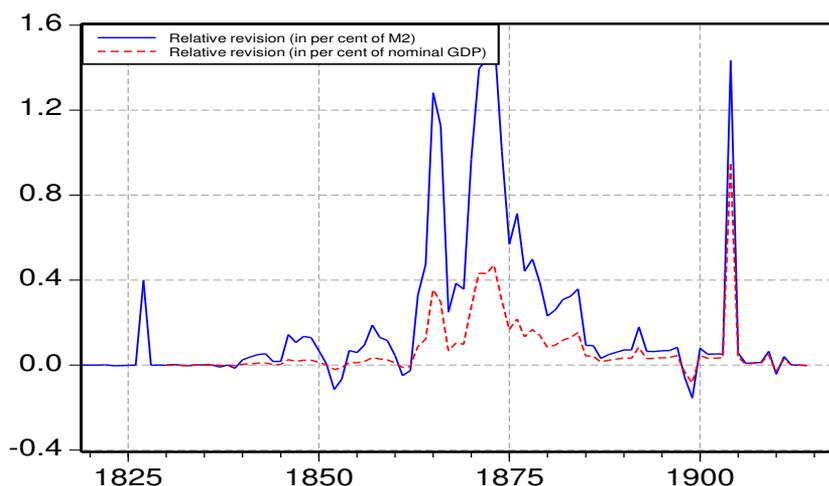


Figure 7.3 shows the old and new estimates of aggregate money holdings from 1819 to 1918. It is hard to distinguish the two series based on eye-balling the graph. We have calculated the relative size of the revisions measured in per cent of the old estimates as well as in per cent of nominal GDP. Figure 7.4 shows that the largest revisions are recorded in the early 1870s when the revisions amount to around 1.5 per cent of the previous money stock estimates and close to 0.5 per cent of nominal GDP. This is in accord with the explanation given above.

Time series of bank loans from commercial and savings banks were presented in Eitrheim et al. (2004), but their data were incomplete prior to 1869, and were based on rather less satisfactory sources prior to 1900. Collecting the estimates of chapters 2 and 3 we are now able to present a revised and complete series of bank loans from 1822 to 1918, which are found in Table 7.C.2. This table also summarizes the revised estimates of the number of savings banks and commercial banks.

³See Klovland (1989) for an account of Norwegian business cycles in this period.

FIGURE 7.4 Revisions of money aggregates, 1819–1918. In per cent of old estimates and nominal GDP



The new estimates of commercial and savings banks' loans thus provide us with a complete annual record of bank loans in Norway beginning with the establishment of the first savings bank in 1822. These data can be linked to the time series of commercial and savings bank lending after 1918 in Table A2 of Eitheim et al. (2004) to form a continuous time series of bank loans extending over nearly two centuries.

Figure 7.5 shows the old and new estimates of bank loans from 1822 to 1918. Firstly, we note that the estimated amount of credit from 1840 to 1875 seems to be quite close to the previous estimates which were only available for every fifth year in this period. When we make a closer look at the size of revisions they turn out to be sizable relative to the amount of credit due to the rapid expansion of the banking sector in this period, cf. Figure 7.6. Bank credit revisions gradually increase to a level around 3 per cent during the period 1875-1880 when measured relative to nominal GDP. Revisions of bank credit also picks up temporarily around the turn of the century.

FIGURE 7.5 New and old data on aggregate bank loans, 1822–1918. End-of-month observations of total bank loans

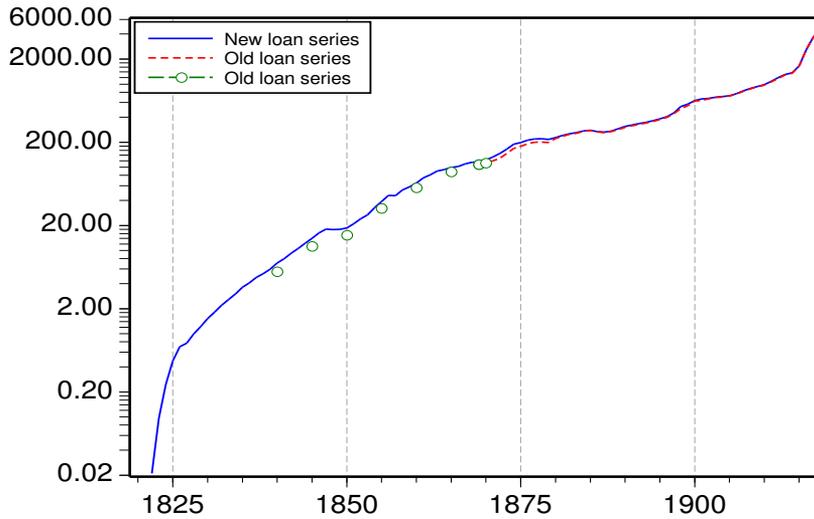
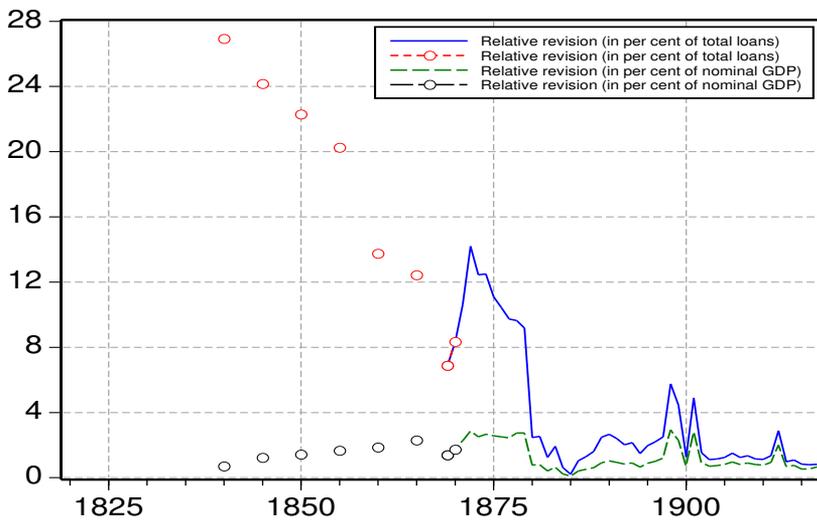


FIGURE 7.6 Revisions of data on aggregate bank loans, 1822–1918. In per cent of old estimates and nominal GDP



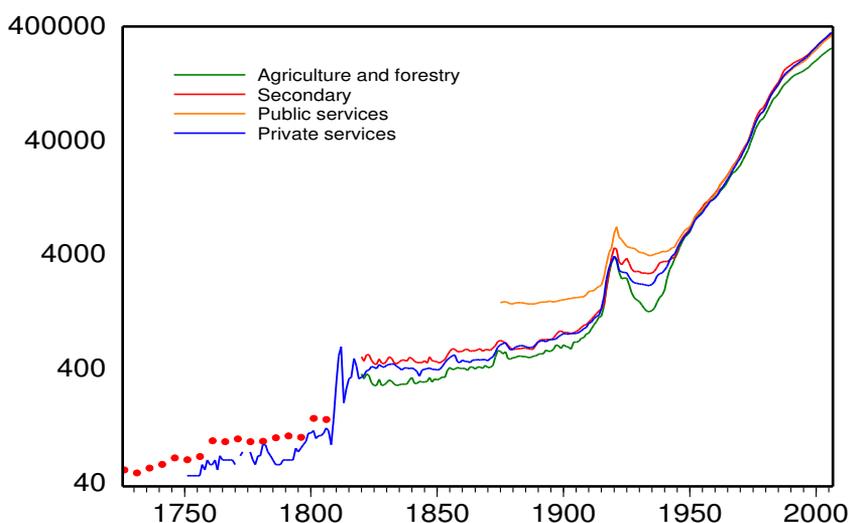
Total lending from private banks is an important indicator of credit market activity, but falls short of covering the whole loan market. A broader credit aggregate before 1900 would also have to comprise the loans provided by (1) Norges Bank, (2) Kongeriket Norges Hypotekbank, (3) the Loan and Discount Commissions and various Public Funds established by the central government, as well as (4) insurance companies.⁴ From *Amtmannsberetninger 1861–1865 (C no. 2)*, p. XLVI, an estimate of first three items for 1865 is available. In millions of kroner these were: (1) Norges Bank 33.6 (2) Kongeriket Norges Hypotekbank 30.1 (3) central government sources 41.7, which can be contrasted with loans from savings banks of 68.2 millions NOK and, from commercial banks, 31.2 millions.

Although bank loans thus may have constituted somewhat less than fifty per cent of the total credit supply in this period, it is likely that this component would account for the greater part of the annual fluctuations in a wider credit aggregate.

7.4 Nominal wages 1726–2006

By weighting the nominal wages by industry with their share of total employment and linking this share to their corresponding wages we then arrive at different aggregates of wage series for the entire period 1726–2006. Some key series of annual wages are presented in Figure 7.7.

FIGURE 7.7 Annual nominal wages in key industries in NOK, 1726–2006. Semi-logarithmic scale



⁴Time series of the first two items are readily available, but finding annual figures for the various central government sources and for insurance companies would meet with problems. From 1899 the data in Skånland (1967) are useful for this purpose.

For the period 1946-2006 these are almost identical to the most recent series from Statistics Norway. For the period 1935-1939 they are also almost identical to other indices calculated at Statistics Norway. For the period 1911-1934 they satisfactorily match tax records from the Inland Revenue.⁵ As for the years prior to 1911, we find a tendency towards somewhat lower nominal wages in the secondary sector than believed hitherto. This, is however due to the fact that our new series have better coverage than previous figures.

Figure 7.7 reveals significant wage differences between industries and sectors. In particular public services were comparatively well off until the World War II. Thereafter, we find a rapid convergence and simultaneous development until present days.

7.5 Deflator

In order to construct real wage series we have to adjust our new nominal wage series for price changes. This procedure is conducted by deflating the nominal wage series by the consumer price index documented in Grytten (2004a, 47–98).

The consumer price index stretches back to 1516. From 1666 it offers annual observations on the consumer price movements till present days. During the 18th century both its validity and reliability increase. From 1819 it includes 29 product items in eight consumption groups. The numbers increase to 47 commodities representing nine consumption groups from 1830 and 55 items representing ten consumption groups from 1850, when the cost of living index (CLI) by Ramstad has been adopted.⁶ From 1901 the CLI index from the Kristiania Statistical Office was adopted and this index was spliced with the Social ministry's CLI during 1916–1919. Statistics Norway thereafter constructed their own CLI from 1919-1959. From then on it was replaced by Statistics Norway's official consumer price index (CPI).⁷

Like most historical CPIs and CLIs our deflator is constructed by a Laspeyres approach, meaning that we have fixed commodity weights during periods. The key sources of price data during the 18th century are accounts by merchants in one of the most important commercial cities in the Nordic countries at the time, i.e. Bergen. Though, some market prices are taken from other locations up and down the country, Bergen still serve as the most important source of price data until 1830. From then on price data collected almost all over the country by request from the central government serve as our most important source. In the 1930s these price data were assembled by the staff of the Wedervang Archive. The archive now serves as one of the richest sources of market prices on consumer goods in 19th century Europe. Both their validity and reliability seem very high. In the first place they do reflect market prices to consumers. Secondly, they were recorded by local civil servants monthly or at least quarterly on the basis of a strict regime set by the central authorities.

⁵Grytten 2000, 22-41.

⁶Ramstad 1982, 158–238.

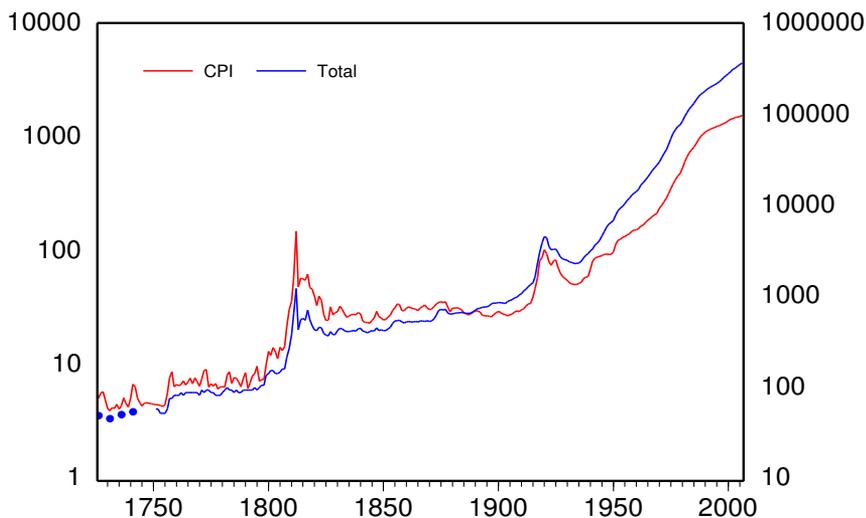
⁷Grytten 2005, 72.

Thirdly, the price quotations and the procedure of collecting the data were both controlled by civil servants in the central administration.⁸

The commodity weights in the consumer price index were decided on the basis of different consumption surveys conducted both for the 19th and the early 20th centuries.⁹ From 1871 the CPI rely solely on the established CLI by Ramstad, from 1901 on the adopted CLI by Statistics Norway, from 1919 on the bureaus own CLI, and finally from 1959 on their own CPI. This implies that the deflator adopted here seems reasonably reliable for the period 1726–1819, fairly reliable for the years 1819–1830 and quite reliable 1830–1919. Thereafter our deflator is very reliable, comprising price observations of up to around 700 items till 1959 and thereafter about a thousand or more items. In sum the latter index comprises 40.000 to 45.000 observations per month.

The consumer price index is plotted along with the annual series of nominal wages for the period 1726–2006 in Figure 7.8.

FIGURE 7.8 Development of CPI and total nominal wages, 1726-2006. Semi-logarithmic scale



Left hand side scale = CPI, where 1950=100.
Right hand side scale = nominal annual wages.

We observe from Figure 7.8 that nominal wages and prices move in the same direction both in the short and in the long run. However, prices seem to fluctuate more than wages. This implies the existence of rigid nominal wages, as they were often set in fixed terms. We can also see that wages started to increase significantly faster than the price level from the 1820s, indicating increasing standard of living and economic growth.

⁸Grytten 2004b, 61–80.

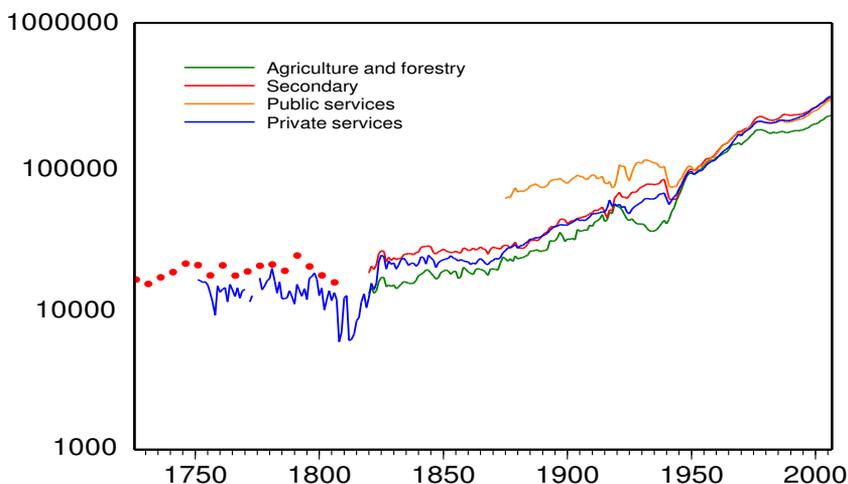
⁹Grytten 2004a, 63–66.

By assessing the different sub-indices we can conclude that the consumer price index reported in Grytten (2004a, 47–98) should serve as a suitable deflator in order to arrive at real wage series for Norway 1726-2006.

7.6 Real wages 1726–2006

Having arrived at new series of Norwegian annual salaries 1726-2006 and presented the new CPI, also constructed as part of the historical monetary statistics project, we are now in a position to conclude with real wage series. This is done by deflating the new nominal series by the mentioned CPI according to equation (4) and (5). In other words we deflate the constructed Paasche and Laspeyres wage series with a Laspeyres deflator. Again we present four series graphically, i.e. real wages for agriculture and forestry, the secondary sector, private services and public services. These are shown in Figure 7.9. For the other 14 series by industry and sub-industry, along with a series for total aggregates, see in the appendixes.

FIGURE 7.9 Real annual wages, 1726-2006, in fixed 2000-NOK. Semi-logarithmic scale



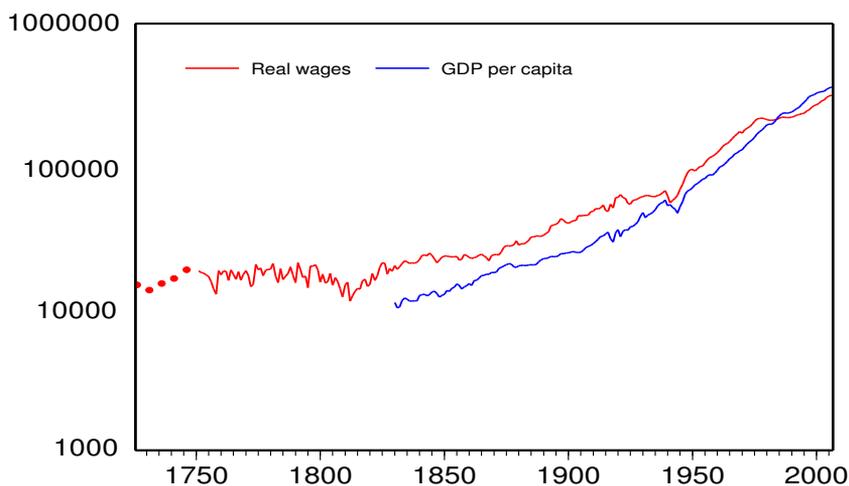
According to Figure 7.9 long-term real wages stayed fairly stable until the 1820s. However, in the short run there were huge fluctuations, mostly due to volatile prices. From the late nineteenth century we see firm evidence of increasing rates of real wage growth. During the 1870s, 1880s and the first half of the 1890s this was very much due to deflation. The growth of real wages between 1905 and 1916 can easily be seen as a consequence of rapid industrialization and economic growth. In the interwar period we see divergence between sectors and industries, with agriculture and forestry as the two dominant losers, due to excess production and severe deflation in product prices of primary

products. After World War II we find rapid and steady real wage growth in all sectors until the mid 1970s. Thereafter the rates of growth dive significantly and differences between sectors start to increase again, with agriculture as the loser. Finally, in the 1990s and till now we find a dramatic increase in real wages for most industries and sectors again.

In Figure 7.10 we compare the development of annual real wages per man-year and GDP per capita. The GDP figures 1830-1865 are taken from the current project and spliced with Statistics Norway's historical national accounts 1865 onwards.¹⁰ As the figure reveals, GDP per capita has grown significantly faster than real wages, revealing that private consumption has become a continuously smaller part of the expenditure side of the GDP. When real wages multiplied with a factor of 16.08 from 1830 till 2006, the per capita GDP volume multiplied with more than twice as much, 32.77. At the same time the private consumption level per capita according to the historical national accounts increased 17.33 times, in line with our measure of real wages.¹¹ The differences between the two can be explained by increasing tax and saving levels.

During the last years, however, real wages have grown faster than the GDP per capita in volume terms. At the same time the implicit GDP deflator has increased significantly faster than the consumer prices. This is also mirrored in a positive shock in Norway's terms of trade during the last years.

FIGURE 7.10 Real annual wages and GDP per capita, 1830-2006, in fixed 2000-NOK. Semi-logarithmic scale

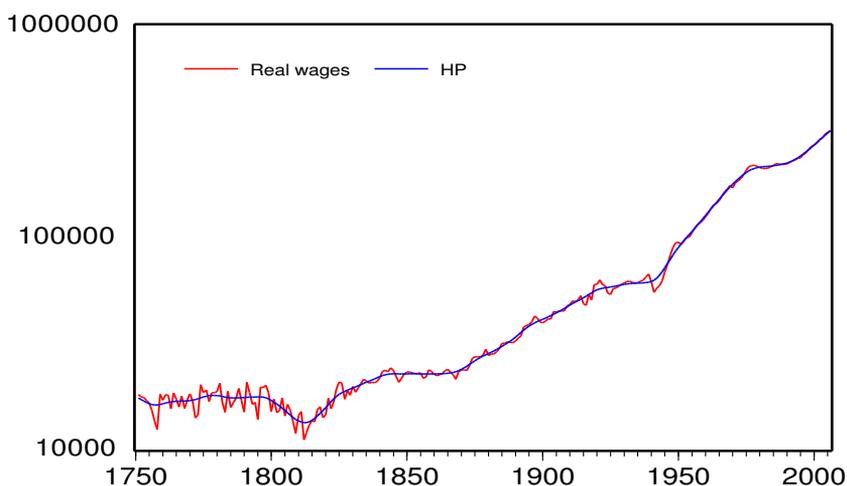


In summary, all our new real wage series in the long run seem to correspond well with volume figures from the historical national accounts. In the short run we do not expect the same degree of uniformity, which is also mirrored in the series.

¹⁰Grytten 2004c, 241-288, NOS 1965, 348-351 and

¹¹Grytten 2004c, 277-280.

FIGURE 7.11 Real wages and HP-trends, 1751-2006, in fixed 2000-NOK. Semi-logarithmic scale



We apply the HP-filter (with $\lambda=100$ on annual data) to separate the long-term trends of the series from the short-term cycles. This enables us to see the trend patterns in our series more easily, cf. Figure 7.11. Interestingly, the aggregated real wage level seems to have remained fairly stable during the 18th century. Thereafter the real wage showed a rapid downturn during the high inflation period from about 1800 to the end of the Napoleonic wars. This was followed by a period of increasing real wages during the long deflation period up till 1842. A deflationary monetary policy was pursued through the 1820s and 1830s in order to bring the new speciedaler back to its par silver value. Redemption to silver parity was reinstated in April 1842.¹²

Thereafter the long-term trend shows fairly stable real wages. However, there were still significant short-term fluctuations during the first industrial wave from the early 1840s until the mid 1870s. Real wages increased substantially during the second wave of industrialization and the international deflation in the 1870s and 1880s. This trend continued until the 1930s, when real wage growth almost ceased until the post World War II period. After this real wages increased considerably until the end of the 1970s, and again gained momentum during the years of lower inflation in the 1990s and early 2000s.

Finally, the annual growth rates of real wages in different industries are reported in Table 7.1. Average growth rates of real wages are calculated for different subperiods applying a first-to-last-year approach. Note that for the years 1945–2006 *total* wages show the highest growth rates. This is again due to the fact that the classification *total* is not the same as average, but also includes employees not reflected in the other industries mentioned here as well as independents. The restructuring of the

¹²Eitrheim and Qvigstad 2005, 1–17.

economy from old to new industries also influences this outcome.

As reported in Table 7.1 the annual growth of total real wages 1726-2006 is calculated to 1.11 per cent. In the long run transport and communication along with private services seem to have been the winners. Public services almost constantly lost ground to all other sectors. However, one has to bear in mind that public services started at a considerable higher level than all other sectors and industries. The decomposition of the public sector has changed substantially between 1870–2007. The employment share of e.g. senior public servants, who originally had relatively high wages, has declined, and at the same time their wages have also declined relative to the wages of other groups of employees in the public services sector.

It is also worth to notice that real wages were at the same level in 1820 as almost a hundred years earlier. This may indicate that the general wealth may have been about the same around 1820 as around 1720. This implies that any economic growth that may have taken place in the eighteenth century was fully reversed during the turbulent two first decades of the eighteenth century. According to Figure 7.11 real wages were reduced between 1751 and 1820. Certainly, they reached a peak in 1751 and were stabilized thereafter. However, the very peak of the eighteenth century was in 1791. The huge fall in real wages seems to have occurred from 1799.

From 1820 to 1940 real wages show a steady rate of growth. In particular, as we have seen, during 1820-1850 due to the recovery from the war-years in the early nineteenth century. Finally, the period after 1945 saw the most rapid growth rates of real wages. In addition, the rates were quite similar, however, with a wage converging tendency between industries.

TABLE 7.1
Growth rates of real wages by industry

	1	2	3	4	5	6
	Agriculture and forestry	Secondary industries	Transport and communication	Private services	Public services	Total
1726-1751		0.95				0.90
1726-1820		0.11				0.00
1751-1820		-0.19	-0.66	-0.66		-0.32
1820-1850	1.23	1.29	2.89	2.65		1.56
1850-1900	1.05	0.83	1.15	1.13	1.01*	1.08
1900-1940	0.62	1.46	1.15	1.06	0.28	1.11
1945-2006	2.15	2.52	2.54	2.51	2.17	2.55
1726-2006		1.06				1.11
1751-2006		1.07	1.18	1.18		1.13
1820-2006	1.57	1.54	1.87	1.87		1.67
1850-2006	1.64	1.59	1.68	1.72		1.70
1875-2006	1.80	1.85	1.90	1.94	1.23	1.89
1900-2006	1.92	1.95	1.93	2.00	1.28	1.99

* 1875-1900

Bibliography

- Eitrheim, Øyvind, Karsten Gerdrup and Jan T. Klovland (2004) "Credit, banking and monetary developments in Norway 1819-2003". Chapter 10 in Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds.) "Historical Monetary Statistics for Norway 1819-2003", Norges Bank Occasional Paper no. 35, 377–407. Norges Bank, Oslo.
- Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds.) 2004, Historical Monetary Statistics for Norway 1819–2003, Occasional Paper no. 35, Oslo: Norges Bank.
- Eitrheim, Øyvind and Jan F. Qvigstad (red.) 2005, Tilbakeblikk på norsk pengehistorie: Historisk-monetær statistikk for Norge, Occasional Paper no. 37, Oslo: Norges Bank.
- Grytten, Ola Honningdal 2004a, "A consumer price index for Norway 1516–2003", Chapter 3 in Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds.) 2004, Historical Monetary Statistics for Norway 1819–2003, Oslo: Norges Bank, 47–98.
- Grytten, Ola Honningdal 2004b, "The gross domestic product for Norway 1830–2003", Chapter 6 in Eitrheim, Øyvind, Jan T. Klovland and Jan F. Qvigstad (eds.) 2004, Historical Monetary Statistics for Norway 1819–2003, Oslo: Norges Bank, 241–288.
- Klovland Jan T. (1989) "A chronology of cycles in real economic activity for Norway, 1867–1914". *Scandinavian Economic History Review* 37, 18–38.
- Klovland Jan T. (2004a) "Bond markets and bond yields in Norway 1820-2003". Chapter 4 in Eitrheim, Øyvind, Jan T. Klovland og Jan F. Qvigstad (eds.) "Historical Monetary Statistics for Norway 1819-2003", Norges Bank Occasional Paper no. 35, 99–180. Norges Bank, Oslo.

Klovland Jan T. (2004b) "Monetary aggregates in Norway 1819-2003". Chapter 5 in Eitrheim, Øyvind, Jan T. Klovland og Jan F. Qvigstad (eds.) "Historical Monetary Statistics for Norway 1819-2003", Norges Bank Occasional Paper no. 35, 181–240. Norges Bank, Oslo.

Matre H.I. (1992) "Norske forretningsbanker 1848-1990: En tilbakeføring av forretningsbankstatistikken". Rapport nr 41, Det nye pengesamfunnet.

Skånland H. (1967) *Det norske kredittmarked siden 1900*. Samfunnsøkonomiske Studier 19. Statistisk Sentralbyrå, Oslo.

7.A Nominal interest rates 1819–2006

TABLE 7.A.1
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1819	8.00			
1820	8.00			
1821	8.00			
1822	8.00	4.00		6.35
1823	7.28	4.00		6.31
1824	7.00	4.00		5.32
1825	6.33	4.00		5.14
1826	6.00	4.00		5.63
1827	6.00	4.00		4.77
1828	6.00	4.00		4.40
1829	6.00	4.00		4.37
1830	6.00	4.00		4.08
1831	6.00	4.00		4.17
1832	6.00	4.00		4.14
1833	6.00	4.00		4.09
1834	6.00	4.00		4.03
1835	6.00	4.00		3.87
1836	6.00	4.00		3.83
1837	6.00	4.00		3.81
1838	6.00	4.00		3.77
1839	6.00	4.00		3.82
1840	6.00	4.00		3.77
1841	6.00	4.00		3.70
1842	6.00	4.00		3.94
1843	5.28	4.00		4.00
1844	5.00	4.00		4.00
1845	5.00	4.00		4.06
1846	5.00	4.00		4.10
1847	5.00	4.00		4.06
1848	5.54	4.00		4.31
1849	6.00	4.00		4.20
1850	5.65	4.00		4.08
1851	4.87	4.00		4.05
1852	4.61	4.00		4.21
1853	4.64	4.00		4.10
1854	4.27	4.00		4.36
1855	4.87	4.00		4.16
1856	5.74	4.00		4.39
1857	6.00	4.42		4.54
1858	5.51	5.33		4.68
1859	5.27	4.42		4.69
1860	5.63	4.50		4.49
1861	5.89	4.92		4.47
1862	5.27	5.00		4.48
1863	5.24	4.79		4.59
1864	6.07	4.50		4.94
1865	4.72	4.29		5.13

TABLE 7.A.1
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1866	5.38	4.17		5.31
1867	5.32	4.58		5.23
1868	5.01	4.00		5.09
1869	4.86	4.00		5.25
1870	4.68	4.00		5.39
1871	3.81	3.50		4.99
1872	3.50	3.00		4.63
1873	4.08	3.33		4.71
1874	4.81	4.00		4.59
1875	5.85	4.71		4.62
1876	5.71	4.92		4.74
1877	6.28	4.79		4.78
1878	6.16	5.00		4.83
1879	4.96	4.58		4.60
1880	4.17	3.67		4.32
1881	3.98	3.50		4.10
1882	4.78	3.96		4.10
1883	4.50	3.50		4.11
1884	4.50	3.50		4.07
1885	4.50	3.50		3.99
1886	4.50	3.50		3.87
1887	3.98	3.08		3.77
1888	3.50	3.00		3.58
1889	3.35	2.54		3.45
1890	3.65	2.96		3.45
1891	4.89	3.88		3.58
1892	5.37	4.33		3.55
1893	5.00	4.00		3.53
1894	4.53	3.38		3.41
1895	3.83	2.83		3.17
1896	4.01	3.00		3.08
1897	4.64	3.63		3.07
1898	4.31	3.29		3.14
1899	5.96	5.00		3.44
1900	6.50	5.38		3.70
1901	5.66	4.63		3.56
1902	4.58	3.58		3.34
1903	5.21	4.21		3.31
1904	4.90	3.75		3.53
1905	4.87	3.33		3.60
1906	5.18	3.67		3.55
1907	5.23	3.63		3.69
1908	5.33	3.79		3.76
1909	4.54	3.50		3.63
1910	4.50	3.50		3.69
1911	4.63	3.63		3.80
1912	5.39	4.38		4.02
1913	5.50	4.50		4.21
1914	5.10	3.79		4.29
1915	5.23	4.17		5.06

TABLE 7.A.1
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1916	5.06	4.04		5.17
1917	5.53	4.54		5.12
1918	6.00	5.00		5.58
1919	5.70	4.67		5.78
1920	6.53	5.58		6.77
1921	6.75	5.50		6.02
1922	5.52	3.96		5.05
1923	5.82	4.33		5.35
1924	6.95	5.13		5.85
1925	5.84	4.00		5.68
1926	5.38	3.83		5.34
1927	4.59	3.08		5.25
1928	5.54	4.00		5.26
1929	5.57	3.92		5.36
1930	4.53	3.25		5.05
1931	4.67	3.33		4.90
1932	4.66	3.21		4.92
1933	3.69	2.67		4.74
1934	3.50	2.50		4.73
1935	3.50	2.50		4.26
1936	3.54	2.54		4.44
1937	4.00	3.00		4.26
1938	3.50	2.50		3.81
1939	3.78	2.63		4.34
1940	3.53	2.33		5.00
1941	3.00	2.00		3.68
1942	3.00	2.00		3.49
1943	3.00	2.00		3.54
1944	3.00	2.00		3.51
1945	3.00	2.00		3.41
1946	2.51	1.50		2.58
1947	2.50	1.50		2.51
1948	2.50	1.50		2.48
1949	2.50	1.50		2.52
1950	2.50	1.50		2.74
1951	2.50	1.50		3.17
1952	2.50	1.50		3.17
1953	2.50	1.50		3.14
1954	2.50	1.50		3.10
1955	3.39	2.05		4.04
1956	3.50	2.14		4.78
1957	3.50	2.16		4.72
1958	3.50	2.15		4.76
1959	3.50	2.15		4.67
1960	3.50	2.19		4.67
1961	3.50	2.27		4.81
1962	3.50	2.39		4.77
1963	3.50	2.44		4.58
1964	3.50	2.49		4.66
1965	4.82	2.59		4.84

TABLE 7.A.1
Nominal interest rates for Norway 1819–2006

Year	Marginal liquidity rate	Average deposit rate	Average loan rate	Average bond yield
1966		2.63	5.61	4.84
1967	4.55	2.75	5.70	4.96
1968	4.88	2.81	5.85	4.98
1969	5.77	3.48	6.42	5.18
1970	6.24	3.84	6.85	5.86
1971	5.08	3.82	7.02	5.93
1972	5.40	3.81	7.15	6.05
1973	6.20	4.03	7.28	6.19
1974	7.52	4.44	7.83	7.22
1975	7.48	4.67	8.36	7.58
1976	8.58	4.86	8.73	7.51
1977	11.44	5.09	8.88	7.62
1978	11.48	6.33	10.58	9.00
1979	10.32	6.87	10.96	9.10
1980	12.29	7.13	11.78	10.80
1981	12.28	7.66	13.05	12.72
1982	14.61	8.13	13.58	13.84
1983	13.57	8.40	13.88	13.20
1984	13.20	8.76	13.70	12.55
1985	13.47	9.01	13.30	12.90
1986	13.73	9.57	14.98	13.14
1987	14.14	11.01	16.45	13.02
1988	14.26	11.06	16.60	12.61
1989	11.52	9.07	14.88	10.81
1990	11.76	8.97	14.26	10.69
1991	10.48	8.66	13.86	9.98
1992	10.75	8.70	13.39	9.69
1993	7.02	5.84	10.61	6.76
1994	5.55	4.03	8.18	7.55
1995	5.48	3.99	7.65	7.37
1996	4.75	3.63	7.01	6.77
1997	3.61	2.71	5.91	5.85
1998	5.45	4.50	7.86	5.43
1999	6.83	4.83	8.12	5.53
2000	6.45	5.06	8.19	6.23
2001	7.09	5.80	8.81	6.26
2002	6.85	5.57	8.45	6.37
2003	4.56	3.22	6.04	4.98
2004	1.87	1.31	4.10	4.30
2005	1.97	1.43	3.93	3.72
2006	2.78	2.14	4.35	4.09

Sources: Norges Bank and Statistics Norway, *Marginal liquidity rate* is from Chapter 1 of this volume, *Average bond yield* is from Klovland (2004a, Chapter 4), *Average deposit rate* 1955 onwards is from Statistics Norway, Historical tables, <http://www.ssb.no/vis/emner/11/01/orbofrent/art-2007-11-30-01.html>, Table 4a. Banks: Average, weighted interest rates on NOK deposits from non-financial enterprises, households and local government, *Average loan rate* 1966 onwards is from Table 4a. Banks: Average, weighted interest rates incl. commissions on utilised NOK loans excl. non-accrual loans to non-financial enterprises, households and local government.

7.B Real interest rates 1820–2006

TABLE 7.B.1
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1820	16.98				-12.22	-8.98
1821	15.58				-17.76	-7.58
1822	14.21	10.21		12.57	20.89	-6.21
1823	12.29	9.02		11.33	-7.86	-5.02
1824	10.85	7.85		9.17	-25.36	-3.85
1825	8.93	6.60		7.74	-11.15	-2.60
1826	7.38	5.38		7.01	0.50	-1.38
1827	6.38	4.38		5.15	31.58	-0.38
1828	5.78	3.78		4.18	-15.15	0.22
1829	5.42	3.42		3.79	4.43	0.58
1830	5.32	3.32		3.40	1.63	0.68
1831	5.44	3.44		3.62	11.99	0.56
1832	5.75	3.75		3.89	-5.25	0.25
1833	6.09	4.09		4.18	-8.84	-0.09
1834	6.36	4.36		4.38	-6.92	-0.36
1835	6.54	4.54		4.41	1.80	-0.54
1836	6.70	4.70		4.53	3.03	-0.70
1837	6.86	4.86		4.67	0.62	-0.86
1838	7.01	5.01		4.78	-0.68	-1.01
1839	7.13	5.13		4.95	4.15	-1.13
1840	7.20	5.20		4.97	-2.33	-1.20
1841	7.14	5.14		4.83	-13.18	-1.14
1842	6.88	4.88		4.82	-2.96	-0.88
1843	5.75	4.47		4.47	-0.10	-0.47
1844	5.00	4.00		4.00	-1.44	0.00
1845	4.52	3.52		3.58	5.48	0.48
1846	4.13	3.13		3.23	5.57	0.87
1847	3.86	2.86		2.92	14.32	1.14
1848	4.23	2.70		3.01	-10.10	1.30
1849	4.50	2.50		2.70	-3.05	1.50
1850	3.89	2.24		2.32	-3.66	1.76
1851	2.80	1.93		1.98	0.58	2.07
1852	2.24	1.64		1.84	5.39	2.36
1853	2.09	1.45		1.55	3.98	2.55
1854	1.70	1.43		1.79	10.02	2.57
1855	2.49	1.61		1.77	5.30	2.39
1856	3.69	1.96		2.34	7.83	2.04
1857	4.41	2.82		2.95	-0.69	1.59
1858	4.35	4.17		3.52	-11.73	1.16
1859	4.43	3.58		3.84	0.10	0.84
1860	5.03	3.89		3.88	4.78	0.61
1861	5.46	4.50		4.05	2.68	0.42
1862	4.99	4.71		4.20	-2.39	0.29
1863	5.01	4.57		4.36	-0.81	0.23

TABLE 7.B.1
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1864	5.83	4.26		4.70	-1.29	0.24
1865	4.39	3.97		4.81	-2.86	0.32
1866	4.94	3.72		4.87	5.11	0.44
1867	4.78	4.04		4.68	3.18	0.55
1868	4.39	3.38		4.47	3.12	0.62
1869	4.18	3.33		4.58	-5.24	0.67
1870	3.92	3.24		4.63	-3.90	0.76
1871	2.97	2.66		4.15	1.00	0.84
1872	2.63	2.13		3.76	5.61	0.87
1873	3.31	2.56		3.94	5.31	0.77
1874	4.28	3.47		4.06	3.19	0.53
1875	5.67	4.53		4.44	1.38	0.18
1876	5.94	5.14		4.97	-1.77	-0.22
1877	6.91	5.41		5.40	1.55	-0.62
1878	7.12	5.96		5.79	-9.98	-0.96
1879	6.12	5.74		5.76	-9.12	-1.16
1880	5.41	4.91		5.56	7.48	-1.24
1881	5.29	4.80		5.40	-0.37	-1.30
1882	6.13	5.31		5.45	1.65	-1.35
1883	5.88	4.88		5.49	-2.08	-1.38
1884	5.87	4.87		5.44	-2.59	-1.37
1885	5.80	4.80		5.29	-6.07	-1.30
1886	5.64	4.64		5.01	-1.82	-1.14
1887	4.93	4.03		4.72	-1.95	-0.95
1888	4.25	3.75		4.33	1.78	-0.75
1889	3.97	3.15		4.06	3.60	-0.61
1890	4.20	3.51		4.00	2.68	-0.56
1891	5.45	4.44		4.14	-0.10	-0.57
1892	5.96	4.93		4.15	-1.84	-0.60
1893	5.60	4.60		4.13	-6.81	-0.60
1894	5.07	3.91		3.95	-0.42	-0.54
1895	4.26	3.26		3.59	-0.85	-0.42
1896	4.30	3.29		3.37	-0.54	-0.29
1897	4.79	3.78		3.22	-1.19	-0.16
1898	4.37	3.35		3.20	4.59	-0.06
1899	5.99	5.03		3.47	3.86	-0.03
1900	6.56	5.44		3.76	3.12	-0.06
1901	5.77	4.74		3.67	-2.63	-0.11
1902	4.68	3.69		3.44	-3.00	-0.10
1903	5.19	4.19		3.29	-1.37	0.02
1904	4.62	3.47		3.25	-2.44	0.28
1905	4.17	2.64		2.91	2.50	0.69
1906	3.94	2.43		2.31	1.05	1.24
1907	3.32	1.72		1.78	4.66	1.91
1908	2.63	1.08		1.05	2.14	2.71
1909	0.87	-0.17		-0.04	-1.13	3.67

TABLE 7.B.1
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1910	-0.30	-1.30		-1.11	3.26	4.80
1911	-1.45	-2.46		-2.29	2.05	6.09
1912	-2.09	-3.10		-3.46	6.19	7.48
1913	-3.39	-4.39		-4.68	3.79	8.89
1914	-5.14	-6.45		-5.94	1.12	10.24
1915	-6.14	-7.20		-6.30	14.44	11.36
1916	-6.97	-7.99		-6.87	19.17	12.03
1917	-6.51	-7.49		-6.92	24.24	12.04
1918	-5.24	-6.24		-5.66	40.49	11.24
1919	-3.93	-4.96		-3.85	6.94	9.63
1920	-0.96	-1.90		-0.72	16.53	7.49
1921	1.70	0.44		0.96	-7.30	5.06
1922	2.84	1.27		2.36	-16.16	2.69
1923	5.23	3.74		4.75	-6.02	0.60
1924	8.14	6.31		7.04	9.62	-1.19
1925	8.54	6.70		8.39	1.75	-2.70
1926	9.25	7.71		9.21	-14.94	-3.87
1927	9.17	7.66		9.84	-10.14	-4.58
1928	10.36	8.83		10.08	-6.77	-4.83
1929	10.22	8.57		10.02	-4.03	-4.65
1930	8.66	7.38		9.18	-3.36	-4.13
1931	8.00	6.66		8.23	-5.22	-3.33
1932	6.96	5.51		7.22	-1.83	-2.30
1933	4.80	3.78		5.85	-0.93	-1.11
1934	3.34	2.34		4.57	0.00	0.16
1935	2.05	1.05		2.80	1.89	1.45
1936	0.85	-0.15		1.75	2.78	2.69
1937	0.19	-0.81		0.45	7.21	3.81
1938	-1.25	-2.25		-0.94	3.36	4.75
1939	-1.70	-2.86		-1.15	0.81	5.48
1940	-2.43	-3.63		-0.96	16.94	5.96
1941	-3.09	-4.09		-2.41	17.24	6.09
1942	-2.90	-3.90		-2.40	5.88	5.90
1943	-2.50	-3.50		-1.97	2.78	5.50
1944	-2.05	-3.05		-1.54	1.08	5.05
1945	-1.63	-2.63		-1.22	1.60	4.63
1946	-1.80	-2.81		-1.72	2.63	4.31
1947	-1.62	-2.62		-1.61	0.51	4.12
1948	-1.59	-2.59		-1.60	-0.51	4.09
1949	-1.68	-2.68		-1.66	0.00	4.18
1950	-1.84	-2.84		-1.61	5.13	4.34
1951	-1.96	-2.96		-1.29	16.10	4.46
1952	-1.94	-2.94		-1.27	8.82	4.44
1953	-1.79	-2.79		-1.16	1.93	4.29
1954	-1.58	-2.58		-0.98	4.55	4.08
1955	-0.45	-1.79		0.20	1.09	3.84

TABLE 7.B.1
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
1956	-0.12	-1.48		1.16	3.58	3.62
1957	0.08	-1.26		1.30	2.77	3.42
1958	0.23	-1.12		1.49	4.71	3.27
1959	0.33	-1.02		1.50	2.57	3.17
1960	0.37	-0.94		1.53	0.44	3.13
1961	0.31	-0.92		1.62	2.59	3.19
1962	0.18	-0.93		1.45	5.04	3.32
1963	-0.01	-1.07		1.07	2.40	3.51
1964	-0.26	-1.27		0.90	5.47	3.76
1965	0.76	-1.47		0.79	4.44	4.06
1966		-1.78	1.21	0.44	3.55	4.41
1967	-0.27	-2.07	0.88	0.14	4.11	4.82
1968	-0.42	-2.49	0.55	-0.31	3.95	5.30
1969	-0.06	-2.36	0.58	-0.66	2.53	5.84
1970	-0.17	-2.57	0.43	-0.56	10.49	6.41
1971	-1.90	-3.16	0.04	-1.05	6.70	6.98
1972	-2.12	-3.71	-0.37	-1.47	6.81	7.52
1973	-1.82	-3.99	-0.74	-1.84	7.84	8.02
1974	-0.95	-4.03	-0.63	-1.24	9.09	8.47
1975	-1.34	-4.16	-0.47	-1.24	11.67	8.83
1976	-0.51	-4.23	-0.36	-1.57	9.33	9.09
1977	2.18	-4.17	-0.37	-1.64	9.22	9.26
1978	2.13	-3.02	1.23	-0.36	8.13	9.35
1979	0.93	-2.52	1.57	-0.29	4.62	9.39
1980	2.92	-2.23	2.41	1.43	11.05	9.37
1981	3.05	-1.58	3.81	3.48	13.43	9.24
1982	5.64	-0.84	4.61	4.87	11.40	8.97
1983	4.99	-0.18	5.30	4.62	8.46	8.58
1984	5.09	0.66	5.60	4.45	6.35	8.10
1985	5.90	1.44	5.73	5.33	5.63	7.57
1986	6.72	2.56	7.97	6.13	7.11	7.01
1987	7.73	4.60	10.03	6.61	8.75	6.41
1988	8.48	5.28	10.82	6.83	6.66	5.78
1989	6.38	3.94	9.74	5.68	4.55	5.13
1990	7.25	4.45	9.75	6.18	4.10	4.51
1991	6.55	4.73	9.92	6.05	3.46	3.93
1992	7.33	5.28	9.97	6.27	2.31	3.42
1993	4.03	2.85	7.62	3.77	2.26	2.99
1994	2.89	1.37	5.53	4.89	1.43	2.66
1995	2.98	1.49	5.15	4.87	2.50	2.50
1996	2.25	1.13	4.51	4.27	1.17	2.50
1997	1.11	0.21	3.41	3.35	2.62	2.50
1998	2.95	2.00	5.36	2.93	2.25	2.50
1999	4.33	2.33	5.62	3.03	2.30	2.50
2000	3.95	2.56	5.69	3.73	3.13	2.50
2001	4.59	3.30	6.31	3.76	3.03	2.50

TABLE 7.B.1
Real interest rates for Norway 1820–2006

Real interest rates are based on a smoothed inflation measure combining a HP(100)-filter between 1820–1995 with the current inflation target 2.5 per cent between 1995–2006.

Year	Real marginal rate	Real deposit rate	Real loans rate	Real bond yield	Inflation rate	Smoothed inflation rate
2002	4.35	3.07	5.95	3.87	1.29	2.50
2003	2.06	0.72	3.54	2.48	2.45	2.50
2004	-0.63	-1.20	1.60	1.80	0.44	2.50
2005	-0.53	-1.08	1.43	1.22	1.59	2.50
2006	0.28	-0.36	1.85	1.59	2.26	2.50

7.C Revised estimates of money holdings and bank loans 1819–1918

TABLE 7.C.1
Revised estimates of money stock components 1819–1918

End-of-year figures in 1000 kroner

Year	Currency held by the public	Savings banks deposits	Commercial banks deposits	M2 stock of money
1819	14090	0	0	14090
1820	15107	0	0	15107
1821	16154	0	0	16154
1822	16244	17	0	16261
1823	16262	123	0	16385
1824	17162	269	0	17430
1825	18507	455	0	18962
1826	18648	701	0	19349
1827	19465	801	0	20266
1828	20036	993	0	21029
1829	20551	1243	0	21794
1830	22140	1531	0	23671
1831	22154	1743	0	23898
1832	21836	2116	0	23952
1833	22587	2481	0	25067
1834	23448	2941	0	26389
1835	23880	3491	0	27371
1836	24643	3882	0	28525
1837	23902	4555	0	28457
1838	22981	5075	0	28056
1839	24791	5727	0	30518
1840	24563	6688	0	31251
1841	24776	7573	0	32349
1842	25620	8784	0	34404
1843	24681	10216	0	34898
1844	25537	11730	0	37267
1845	27176	13547	0	40723
1846	27998	15650	0	43648
1847	27487	17001	0	44488
1848	24550	16043	105	40698
1849	24619	15881	284	40784
1850	25978	16763	354	43095
1851	26650	18774	495	45920
1852	26933	21122	576	48631
1853	33039	25009	587	58635
1854	36481	31265	812	68557
1855	37061	35432	1506	73999
1856	35686	38362	3590	77638
1857	33348	36561	4577	74485
1858	32298	38018	10722	81038
1859	29809	41381	11806	82996
1860	30735	44359	16637	91731
1861	29945	47323	18597	95865
1862	31626	52387	24877	108890

TABLE 7.C.1
Revised estimates of money stock components 1819–1918

End-of-year figures in 1000 kroner

Year	Currency held by the public	Savings banks deposits	Commercial banks deposits	M2 stock of money
1863	30672	59157	27685	117514
1864	29869	64170	24187	118226
1865	32667	69058	33143	134868
1866	31530	72005	28172	131706
1867	32330	75584	33066	140980
1868	29772	77907	33823	141502
1869	30509	78975	38073	147556
1870	31496	82775	40464	154735
1871	36456	88237	52064	176756
1872	40945	95108	58100	194153
1873	48737	110355	63946	223038
1874	47020	126327	68907	242254
1875	38570	129236	60505	228312
1876	40274	135446	69147	244867
1877	36550	138542	66489	241580
1878	32175	137683	67838	237696
1879	32993	134845	71765	239603
1880	37214	139815	83484	260513
1881	37695	144462	88141	270298
1882	38357	152684	99650	290691
1883	40827	159628	101156	301611
1884	38255	167285	102976	308516
1885	36388	169587	103916	309891
1886	38331	170659	101351	310341
1887	37657	170902	105741	314300
1888	43090	176818	109249	329157
1889	46967	188078	119159	354204
1890	46831	195788	121144	363763
1891	44303	198449	116476	359228
1892	42184	202996	125491	370671
1893	43288	209516	129194	381998
1894	43914	219653	138443	402010
1895	48987	227956	152678	429621
1896	49906	237479	155822	443207
1897	57053	254752	182771	494576
1898	60720	274989	207200	542909
1899	59950	291849	221610	573409
1900	62681	310535	259295	632511
1901	61987	326614	286272	674873
1902	61217	339381	283371	683969
1903	60563	354491	292357	707411
1904	59402	370979	299013	729394
1905	64534	380368	302712	747614
1906	67928	413168	340983	822079
1907	71958	440422	373732	886112
1908	72732	463111	392278	928121
1909	76521	488482	428405	993408
1910	83480	518169	449504	1051153
1911	91185	551302	481117	1123604

TABLE 7.C.1
Revised estimates of money stock components 1819–1918

End-of-year figures in 1000 kroner

Year	Currency held by the public	Savings banks deposits	Commercial banks deposits	M2 stock of money
1912	97853	580153	536290	1214296
1913	105906	620051	592212	1318169
1914	130377	651396	630831	1412604
1915	152300	738393	855749	1746442
1916	224300	971842	1442278	2638420
1917	287300	1267866	2203790	3758956
1918	407800	1594746	2720750	4723296

TABLE 7.C.2
New estimates of the number of banks and bank loans 1822–1918

Loans are end-of-year figures in 1000 kroner

Year	Savings banks number	Commercial banks number	Savings banks loans	Commercial banks loans	Total loans
1822	1	0	21	0	21
1823	4	0	134	0	134
1824	4	0	286	0	286
1825	6	0	482	0	482
1826	8	0	727	0	727
1827	8	0	812	0	812
1828	8	0	1046	0	1046
1829	8	0	1296	0	1296
1830	7	0	1575	0	1575
1831	7	0	1831	0	1831
1832	6	0	2238	0	2238
1833	7	0	2602	0	2602
1834	8	0	3056	0	3056
1835	13	0	3642	0	3642
1836	13	0	4077	0	4077
1837	15	0	4765	0	4765
1838	16	0	5303	0	5303
1839	19	0	6020	0	6020
1840	22	0	7108	0	7108
1841	27	0	8026	0	8026
1842	36	0	9293	0	9293
1843	48	0	10560	0	10560
1844	53	0	12199	0	12199
1845	57	0	14031	0	14031
1846	61	0	16384	0	16384
1847	69	0	18110	0	18110
1848	80	1	17355	560	17915
1849	82	2	17250	761	18011
1850	89	2	17827	971	18798
1851	98	2	19870	1240	21110
1852	102	2	22669	1473	24142
1853	108	2	25608	1234	26842
1854	116	2	31207	1497	32704
1855	120	2	36223	2507	38730
1856	126	3	39938	6112	46050
1857	140	4	38626	7019	45645
1858	149	5	40199	13136	53335
1859	163	6	43638	14570	58208
1860	174	6	45934	18838	64771
1861	185	6	49450	25085	74535
1862	195	7	53968	27191	81159
1863	218	7	60169	30423	90592
1864	227	7	65802	28031	93833
1865	241	9	68191	31269	99460
1866	251	9	72794	29780	102574
1867	258	9	75428	34618	110046
1868	263	11	78140	36711	114851
1869	263	12	77146	38957	116103
1870	265	14	80846	41527	122373

TABLE 7.C.2
New estimates of the number of banks and bank loans 1822–1918

Loans are end-of-year figures in 1000 kroner

Year	Savings banks number	Commercial banks number	Savings banks loans	Commercial banks loans	Total loans
1871	270	14	80415	52391	132806
1872	270	14	86376	60152	146528
1873	276	14	100162	65124	165287
1874	281	15	115764	74034	189799
1875	284	18	126046	72352	198398
1876	292	19	133241	79016	212257
1877	299	23	139042	80442	219484
1878	305	23	138831	81911	220742
1879	311	24	134392	81755	216147
1880	313	24	135305	92827	228132
1881	318	25	141544	99426	240970
1882	318	30	145799	107345	253144
1883	326	32	152246	109172	261418
1884	329	33	158822	114198	273020
1885	330	35	162515	116061	278576
1886	337	35	163251	105907	269158
1887	341	42	159285	106406	265691
1888	343	44	158434	113859	272293
1889	347	45	162103	128478	290581
1890	352	47	174627	136401	311028
1891	355	49	185454	138072	323526
1892	363	50	189811	144682	334493
1893	366	51	197027	150173	347200
1894	369	51	204580	157342	361922
1895	375	51	211214	171597	382811
1896	382	55	222404	183901	406305
1897	396	65	233399	218659	452058
1898	404	72	250846	286973	537819
1899	413	83	270009	303802	573811
1900	414	84	282768	352911	635679
1901	423	84	295684	368208	663892
1902	429	83	306672	365959	672631
1903	436	89	323384	373898	697282
1904	441	90	336917	371608	708525
1905	448	90	345537	379361	724898
1906	461	92	363626	405828	769454
1907	478	96	385028	443641	828669
1908	487	99	409547	477268	886815
1909	491	101	433609	503085	936694
1910	502	104	459605	524502	984107
1911	511	108	499239	580029	1079268
1912	523	112	540217	658807	1199024
1913	534	117	578955	727337	1306292
1914	540	120	610880	753029	1363909
1915	542	124	669631	985430	1655061
1916	552	140	806966	1756433	2563399
1917	556	165	980603	2648055	3628658
1918	564	193	1268527	3346218	4614745

7.D Annual real wages 1726-2006 in fixed 2000-NOK

TABLE 7.D.1
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1726			15666		14561			17510
1727								
1728								
1729								
1730								
1731			14583		12942			16953
1732								
1733								
1734								
1735								
1736			16219		13823			19906
1737								
1738								
1739								
1740								
1741			17706		15097			21620
1742								
1743								
1744								
1745								
1746			20358		16399			26154
1747								
1748								
1749								
1750								
1751			19829		15253			26503
1752								
1753								
1754								
1755								
1756			16776		12516			22620
1757								
1758								
1759								
1760								
1761			19763		14512			27664
1762								
1763								
1764								
1765								
1766			16699		13365			21746
1767								
1768								
1769								
1770								
1771			17914		13679			24583

TABLE 7.D.1
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1772								
1773								
1774								
1775								
1776			19592		15362			25865
1777								
1778								
1779								
1780								
1781			20071		15397			27455
1782								
1783								
1784								
1785								
1786			18098		14061			24363
1787								
1788								
1789								
1790								
1791			23187		19237			29027
1792								
1793								
1794								
1795								
1796			19395		15842			24429
1797								
1798								
1799								
1800								
1801			16766		13752			21287
1802								
1803								
1804								
1805								
1806			14971		13199			17628
1807								
1808								
1809								
1810								
1811								
1812								
1813								
1814								
1815								
1816								
1817								
1818								
1819								
1820		12414	17404		15348			22200

TABLE 7.D.1
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1821		13700	19446		16945			25283
1822		12487	18384		16550			22664
1823		12971	19906		17974			24417
1824		15100	23856		20787			31017
1825		16185	25030		21614			33000
1826		16104	24691		21317			32564
1827		13871	20893		18579			26294
1828		14299	22439		19503			29289
1829		13981	21312		18475			27931
1830		14268	22291		19576			28627
1831		13449	21585		19267			26993
1832		13820	22088		19714			27626
1833		14516	22005		19591			27637
1834		15092	23425		20865			29396
1835		14950	23735		21242			29551
1836		14691	23820		20734			31022
1837		14659	23874		20836			30962
1838		14700	23341		20874			29098
1839		15418	24331		21766			30314
1840		16647	24385		21810			30394
1841		16958	26348		23413			33197
1842		17512	26777		23790			33746
1843		18270	26737		23719			33779
1844		18216	26999		24016			33959
1845		17370	26622		23289			34399
1846		16548	24114		21776			29568
1847		15707	23692		21967			27716
1848		16069	24536		22544			29182
1849		17510	25019		23024			29674
1850		17908	25592	21869	23227	11937	26410	30345
1851		18245	24982	19096	23342	11868	27579	30451
1852		17940	24439	19196	22546	11617	27579	29732
1853		17018	24319	19841	22115	11199	27879	29412
1854		17791	24258	20868	22451	10658	26711	28249
1855		17897	24790	22200	22879	10531	31480	28356
1856		15890	24178	20649	22452	11728	28228	28180
1857		16275	24047	21720	23097	12871	27696	26504
1858		19046	26112	22328	26291	13379	30275	28426
1859		18490	25947	22088	25169	12211	30657	29244
1860		17673	25052	21426	24002	12090	28602	28461
1861		17329	25214	21470	23970	11529	29900	28887
1862		16973	26088	22054	25471	11514	31811	29342
1863		18426	25264	22366	23488	11308	29300	28899
1864		18680	25745	22380	24530	12157	30618	29142
1865		18409	26558	22812	25254	12394	31519	30291
1866		18186	25712	21421	23635	12478	29462	30558
1867		17573	25432	21161	23399	11539	29443	30221
1868		16688	23599	20818	21382	9792	25957	27587
1869		18545	25520	22187	23218	10219	28817	29955

TABLE 7.D.1
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1870		18523	26596	22979	24238	11225	29417	31272
1871		18463	26106	22640	23766	11348	28899	30663
1872		18234	25958	23875	23236	12518	26510	29979
1873		20467	25662	24503	22710	13780	27407	29300
1874		22519	27082	28264	23266	14169	28231	30018
1875		21873	27359	27285	24079	12930	29107	30602
1876		21097	27101	26335	24728	13091	29334	29916
1877		21878	26102	26070	23844	12840	28496	28321
1878		20988	27513	26364	25963	14600	31333	29777
1879		22917	28746	26300	27951	16128	34122	31130
1880		21839	26145	24929	25416	15063	31305	27655
1881		22215	26195	25671	25681	15061	31198	27041
1882		22298	25896	26317	25556	14759	30581	25949
1883		22892	26491	27355	26323	15188	31007	26087
1884		23197	27812	29518	27225	15532	31715	27261
1885		24786	29550	30913	29216	17640	33520	28977
1886		24827	29533	31588	29410	17748	34388	28300
1887		25163	29907	31083	30126	17839	36213	28919
1888		25401	29380	31472	30268	17423	36947	27140
1889		24667	30535	32058	30121	17103	36022	29937
1890		24899	32119	33937	30105	17020	35665	32884
1891		25057	33481	36657	31669	17364	38041	33156
1892		25527	34019	38347	31657	17455	38754	33473
1893		29473	36592	41523	32767	18399	38388	37071
1894		29116	37106	42489	32256	18544	39194	38287
1895		29338	36898	40238	32677	19052	39530	38811
1896		30829	38438	44429	32760	19506	39743	40026
1897		33765	41419	45479	35606	19535	44177	44409
1898		31756	41961	45592	35591	20828	42870	45774
1899	30665	29067	41253	47111	34120	21073	41276	44345
1900	31915	30251	38735	44601	31624	19704	38263	41800
1901	31621	29977	39990	45841	33232	19848	39297	42720
1902	31796	30595	40828	46008	34152	20598	40512	43922
1903	31012	29768	40952	46565	34726	21317	41709	43321
1904	36593	35330	42464	48993	35932	21957	42752	44528
1905	36281	34285	42354	49976	35838	22365	41709	43685
1906	37903	34547	43277	50191	36799	22911	44405	45034
1907	37199	35073	43602	50284	36834	23589	45418	45795
1908	37205	34771	44347	49652	37759	26607	45635	47272
1909	39308	37940	45686	50566	38664	27360	46156	49314
1910	39207	37163	46433	49428	41750	27317	48251	49024
1911	42038	39846	48418	50531	41837	28494	48066	53436
1912	42758	40535	48041	49806	41964	28621	47802	52798
1913	43425	41785	49141	53276	43466	29631	48807	51946
1914	46876	44996	50994	55159	46504	31396	49978	52627
1915	41671	40233	46619	50283	43156	28156	40765	47581
1916	43768	41360	42700	46974	39411	25369	34944	43090
1917	51401	46850	48654	52087	45393	30480	46027	49571
1918	48612	45834	47788	48386	45118	28985	38518	49993

TABLE 7.D.1
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0 Primary forestry	1.1 Agriculture and	2.0 Secondary	2.1 Construction and mining	2.2 Manufacturing	2.2.1 Textile	2.2.2 Engineering	2.3 Crafts
1919	56782	53067	58947	60409	55017	37641	57786	61812
1920	53123	51275	61654	62890	61812	42980	67522	60686
1921	51757	51011	64661	64099	66346	45303	67419	63392
1922	50211	48515	59810	62396	59230	40270	58520	58674
1923	47117	44982	60024	61098	58958	40381	58922	60356
1924	42752	41809	58671	57633	57805	39604	57063	60197
1925	41060	40895	61364	57868	62179	43321	64085	62870
1926	42322	42074	64954	61518	65801	45207	63823	66391
1927	40398	39940	64385	61057	62117	42165	56948	68783
1928	39492	38812	65735	62885	64149	44159	60964	69155
1929	39327	38643	68718	64904	66827	46083	63038	73070
1930	39189	38654	71116	66555	69277	48039	65735	75906
1931	38775	38193	72029	68943	69152	47847	64229	76861
1932	36750	36053	74114	67896	71097	49251	66311	81142
1933	35535	34626	73913	68066	71336	49443	66663	80269
1934	35420	34366	73962	69776	71206	49435	66936	79398
1935	35940	34489	73310	70312	69897	48581	65965	78605
1936	37530	35181	73939	70530	69640	48272	65098	80367
1937	38818	36874	74759	72320	70131	48849	66696	80870
1938	41099	39163	78802	74489	74333	51758	70602	85991
1939	43554	41047	79962	77178	74791	52221	71729	86829
1940	46603	38782	69259	69507	63964	45906	63793	73736
1941	43227	41560	58451	56774	56134	39805	55727	61528
1942	49100	47353	57314	60565	53890	39665	57772	58278
1943	51716	50388	57679	60325	53986	42311	57748	59256
1944	58500	56953	57994	59064	54369	43778	58652	60498
1945	63277	61651	65696	66055	62087	48117	65154	68628
1946	68084	68189	73482	81385	64215	50851	73039	76652
1947	77829	75846	81183	90605	71351	57472	80151	83896
1948	85132	83325	87446	97991	76301	59713	86201	90607
1949	88682	88041	93103	101812	79620	62102	88701	99458
1950	88827	88352	94240	100816	80811	63207	89268	101880
1951	90665	86787	91891	99863	80255	64080	90346	97091
1952	92312	89830	93773	103512	82745	66009	91406	97335
1953	93280	93170	98592	106528	86617	69422	95952	104109
1954	95202	94716	101464	109335	87905	69989	97929	108410
1955	102090	101268	106803	113135	92091	74983	100170	115719
1956	106146	103239	112047	115773	96817	79338	106761	123046
1957	112170	108535	111934	118062	99390	80675	108041	119081
1958	111405	109743	114122	121654	100042	79663	109162	121735
1959	113064	108724	117501	122162	104067	83800	113448	126343
1960	120003	114574	123445	124550	109003	87525	119507	135392
1961	126687	116131	129270	129666	113906	92912	121736	142466
1962	127601	119003	136126	137021	118414	96147	125744	151064
1963	121993	122908	141326	144514	122809	100091	130042	155537
1964	128160	123597	143241	145105	124941	102113	132299	158089
1965	133995	129272	146726	151156	128477	107251	138070	159926
1966	141441	138503	154792	160285	135368	114351	147742	168354
1967	141972	141709	161900	167507	141206	120161	154399	176504

TABLE 7.D.1
Annual real wages, 1726-2006, in fixed 2000-NOK

	1.0	1.1	2.0	2.1	2.2	2.2.1	2.2.2	2.3
	Primary forestry	Agriculture and	Secondary	Construction and mining	Manufacturing	Textile	Engineering	Crafts
1968	140541	141018	167099	172103	145217	123228	157893	183116
1969	140224	146035	175130	177757	152396	127156	166930	193382
1970	133506	140413	174123	173745	151163	126818	163616	194449
1971	140132	146330	180002	179927	157816	131567	170510	199463
1972	144847	150568	182922	183791	161353	135501	174491	201251
1973	148012	155255	184500	185933	165477	138337	178628	200249
1974	155758	164234	193922	195663	175654	147732	188467	208817
1975	162221	169431	205656	205884	187819	157566	200338	221121
1976	167966	178375	217360	217130	194814	163579	207249	237231
1977	167328	178841	221333	221474	196927	164006	208739	242600
1978	167908	180122	223623	223881	197610	164271	209849	246223
1979	167388	177326	219496	225113	195865	164547	207594	236664
1980	166258	175171	215882	221566	192955	163584	203201	232391
1981	162838	170333	210948	216228	188647	158922	198664	227162
1982	161371	168951	209346	213504	187286	157348	196875	226051
1983	164697	173057	209109	211605	190628	159720	199117	223720
1984	161519	169880	211908	211103	194836	162646	201828	227349
1985	165753	171438	215287	209642	200312	164753	207691	231919
1986	169764	174466	220819	213932	204037	165817	211165	239808
1987	170313	174389	231005	217771	206386	168031	213790	260819
1988	169742	171188	229910	217450	205500	171091	212673	259057
1989	169821	170940	228110	214639	207168	174280	212976	254852
1990	172098	174053	225639	213599	210742	180299	216240	246198
1991	178144	175290	228088	217182	216109	182626	220493	245386
1992	182307	177329	229421	220133	219680	186001	225430	243749
1993	180600	176190	229231	219795	222135	187534	228831	241338
1994	186770	177866	231098	221019	225781	190612	233264	242050
1995	192231	178382	232566	221876	228639	190235	235761	242683
1996	196662	183199	238303	228745	235492	196125	242827	246736
1997	202175	184407	240848	234489	239569	200094	247741	245943
1998	215325	191352	248096	243090	248591	208803	257071	250793
1999	218693	195841	255773	251407	256853	215743	264107	257556
2000	218421	197117	259157	253776	258775	217148	267364	262855
2001	224923	199349	265159	259606	263966	223401	273506	269674
2002	231167	207836	275661	271427	274683	229603	284069	279165
2003	232547	210773	277406	268904	276687	234192	287252	283350
2004	241477	218866	286417	281638	290617	249014	299425	285730
2005	246394	223197	296115	288879	298089	255169	305647	298911
2006	249911	226345	300437	292949	303745	258017	313243	302223

TABLE 7.D.2
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1726							
1727							
1728							
1729							
1730							
1731							
1732							
1733							
1734							
1735							
1736							
1737							
1738							
1739							
1740							
1741							
1742							
1743							
1744							
1745							
1746							
1747							
1748							
1749							
1750							
1751	15577	14491			15577		
1752	15372	14300			15372		
1753	14929	13888			14929		
1754	15072	14021			15072		
1755	14348	13347			14348		
1756	12645	11762			12645		
1757	10895	10135			10895		
1758	8743	8133			8743		
1759	14067	13085			14067		
1760	12720	11833			12720		
1761	13300	12372			13300		
1762	13686	12731			13686		
1763	10857	10100			10857		
1764	14442	13434			14442		
1765	13241	12317			13241		
1766	11848	11021			11848		
1767	13656	12703			13656		
1768	11555	10749			11555		
1769	12970	12065			12970		
1770	13290	12363			13290		
1771							
1772	10852	10095			10852		
1773	12022	11183			12022		
1774							

TABLE 7.D.2
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1775							
1776	16035	14917			16035		
1777	13224	12302			13224		
1778	14147	13160			14147		
1779	15328	14258			15328		
1780	15843	14738			15843		
1781	18707	17401			18707		
1782	15222	14160			15222		
1783	12516	11643			12516		
1784	15002	13956			15002		
1785	11397	10602			11397		
1786	11465	10665			11465		
1787	11591	10783			11591		
1788	13030	12121			13030		
1789	11889	11059			11889		
1790	10499	9766			10499		
1791	14441	13433			14441		
1792	13093	12180			13093		
1793	11925	11093			11925		
1794	13493	12551			13493		
1795	11246	10462			11246		
1796	15931	14819			15931		
1797	16386	15243			16386		
1798	17363	16152			17363		
1799	15729	14632			15729		
1800	12013	11175			12013		
1801	13577	12630			13577		
1802	9520	8856			9520		
1803	11267	10481			11267		
1804	13022	12114			13022		
1805	11069	10297			11069		
1806	12593	11714			12593		
1807	11204	10423			11204		
1808	5662	5236			5662		
1809	6585	6055			6585		
1810	11576	10582			11576		
1811	12035	10938			12035		
1812	5787	5230			5787		
1813	5885	5288			5885		
1814	6430	5744			6430		
1815	7962	7073			7962		
1816	8409	7429			8409		
1817	10875	9554			10875		
1818	12353	10793			12353		
1819	9856	8517			9856		
1820	11687	10044			11628		
1821	14791	12644			14717		
1822	13340	11342			13206		
1823	14837	12480			14688		

TABLE 7.D.2
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1824	21269	17702			20950		
1825	23552	19399			23199		
1826	23172	18888			22708		
1827	19012	15339			18536		
1828	21817	17425			21162		
1829	20650	16328			20030		
1830	21471	16973			20487	11283	8483
1831	19862	15701			18508	9206	6921
1832	20916	16535			19829	10633	7994
1833	23055	18225			21668	11197	8418
1834	24020	18988			22178	10563	7942
1835	22878	18085			21073	9922	7459
1836	21206	16764			19690	9630	7240
1837	21528	17018			20336	10741	8076
1838	21925	17332			20400	10078	7577
1839	20704	16367			19386	9853	7408
1840	21646	17111			20217	10161	7639
1841	23839	18845			22660	12288	9238
1842	23392	18492			22345	12362	9294
1843	20658	16330			20087	11900	8947
1844	24794	19600			23189	11725	8816
1845	23939	18924			22345	11199	8420
1846	22871	18080			21358	10726	8065
1847	20406	16131			19000	9417	7080
1848	21963	17362			20559	10437	7847
1849	22680	17929			21181	10639	7999
1850	23159	18453	21991	24789	21626	10859	8164
1851	23416	19078	22964	23934	21832	10885	8184
1852	23706	18058	22964	25718	22050	10874	8176
1853	24692	18727	23214	27567	23047	11549	8683
1854	23637	20744	20758	25153	22155	11313	8506
1855	23334	20097	20363	25325	21806	10986	8260
1856	22581	19279	19085	25287	21122	10686	8035
1857	23002	19372	20229	25228	21580	11066	8320
1858	22233	17159	19480	25954	21220	11701	8797
1859	21878	17169	18888	25548	20930	11650	8759
1860	21855	16717	19664	25144	20842	11453	8611
1861	20770	16375	17556	24559	20000	11419	8585
1862	21189	16702	17986	24980	20457	11797	8870
1863	20629	17340	17584	23213	20120	12052	9061
1864	22345	18370	20039	24551	21383	11912	8956
1865	23032	19313	20629	24969	22010	12196	9170
1866	22027	18785	19626	23682	21224	12147	9133
1867	20869	18244	16908	23690	20206	11782	8858
1868	20766	17446	17934	23144	19872	11072	8325
1869	21995	17896	18709	25357	20934	11409	8578
1870	22178	17575	18793	26088	21328	12116	9109
1871	22946	18608	20056	25977	22048	12484	9386
1872	22630	18189	18991	26561	21743	12306	9253

TABLE 7.D.2
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1873	23412	19727	20037	26220	22341	12308	9254
1874	25709	21287	21650	29503	24246	12719	9562
1875	26532	19850	24610	30214	24985	13024	9792
1876	27990	20688	26320	31761	26143	13139	9879
1877	27937	20661	26206	31753	26150	13273	9979
1878	28541	21557	24847	33929	26816	13838	10404
1879	29568	19523	27811	35777	27668	14024	10544
1880	27611	18417	25875	33323	25968	13460	10120
1881	29104	18799	28162	34828	27175	13640	10222
1882	29157	19874	27704	34405	27224	13663	10240
1883	30242	22032	28292	34770	28213	14105	10537
1884	31047	22544	29043	35768	28951	14444	10790
1885	32375	22702	30918	37438	30165	14994	11165
1886	32252	22131	31490	37073	30103	15085	11233
1887	33221	22737	32117	38558	30934	15334	11381
1888	32915	23653	31555	37394	30704	15344	11389
1889	33510	25414	32354	36565	31163	15356	11361
1890	34388	25598	33816	37373	31854	15409	11400
1891	35146	25884	34658	38368	32537	15694	11574
1892	35860	25671	35661	39557	33244	16142	11904
1893	37825	26254	38267	41861	34959	16731	12298
1894	39278	26773	40206	43471	36221	17148	12604
1895	40415	27238	41830	44566	37119	17226	12620
1896	40346	26508	42056	44850	37243	17716	12979
1897	41304	27749	42561	45820	38176	18273	13343
1898	41473	27617	43184	45796	38103	17711	12933
1899	41205	29126	41578	45207	37989	17965	13076
1900	40974	29336	40670	45269	37981	18432	13415
1901	42052	29876	41770	46651	38870	18614	13503
1902	42959	29957	43061	47808	39736	19091	13849
1903	43824	30758	43661	48847	40702	19935	14414
1904	45042	31661	44753	50280	41845	20522	14838
1905	43933	31421	43661	48515	40909	20280	14614
1906	44191	32565	43210	48588	41235	20637	14822
1907	43762	33982	41288	47954	40849	20476	14707
1908	44638	34992	42154	48560	41752	21121	15119
1909	46296	34429	43220	52645	43371	22096	15817
1910	49034	33880	49773	54250	45509	22216	15849
1911	49245	34289	48771	55441	45781	22525	16070
1912	49484	35851	49059	54496	45803	22076	15697
1913	50191	37117	49279	55211	46418	22284	15844
1914	50559	38564	48731	55589	46981	23064	16339
1915	50367	39202	46057	57300	46943	23366	16193
1916	54551	44731	49073	60940	49982	22916	15965
1917	64178	59053	53997	69683	57175	22442	16373
1918	57814	50189	53140	61088	51561	20371	15948
1919	58908	50360	54690	62423	53676	23920	18311
1920	55483	51178	51391	55435	52013	26578	18967
1921	56408	47460	53053	59803	53155	27784	19848

TABLE 7.D.2
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1922	52207	42858	49606	55837	50518	29388	20571
1923	53708	43584	52786	56165	51577	29141	20021
1924	50507	41289	48867	53308	46809	27394	18985
1925	49258	41174	48683	50125	45636	26845	18655
1926	52416	45704	51623	51763	49137	28147	19306
1927	53585	47785	53838	50874	51107	28182	19126
1928	54531	48516	53877	52783	52523	28127	19011
1929	55053	50666	54155	51961	54056	28328	18966
1930	58042	53242	58093	53948	55240	28419	19007
1931	60132	55913	60240	55138	57977	28783	19196
1932	58896	54398	59091	54255	58596	28186	18817
1933	60308	55227	60797	55709	58184	27443	18421
1934	60393	55301	60797	55877	57976	27336	18349
1935	59660	53046	60798	55932	58130	27441	18391
1936	61290	53119	63412	57788	59719	27765	18571
1937	65683	53904	70221	62483	62667	27981	18792
1938	64989	54473	67937	62301	63167	28949	19503
1939	65486	54724	68313	63076	64105	29712	20167
1940	64658	86974	59259	57469	57869	26782	18705
1941	62051	105281	51032	50707	52925	25995	16334
1942	60073	98972	49164	49332	56846	32223	17435
1943	59260	96028	48417	48746	60254	38220	19346
1944	60230	103449	48520	47560	62349	41519	20291
1945	67263	111643	53641	55851	68511	45195	21141
1946	75015	117168	57436	68019	73223	50919	22397
1947	80688	122165	62905	74777	78920	57954	25487
1948	88273	133229	69308	81249	85872	64310	28282
1949	92680	141089	72161	85311	89992	66689	29328
1950	93523	142088	73034	85937	90626	66608	29293
1951	89269	134665	69827	82756	86605	65118	28637
1952	93962	137961	74304	89278	88517	62949	27684
1953	95910	139586	76614	90828	91842	65771	28925
1954	96375	138790	76874	92961	91947	66561	29272
1955	101884	140506	82892	101249	95788	69335	30492
1956	108519	147456	89306	108009	101092	70952	31203
1957	116265	157601	95504	116450	103803	71250	31334
1958	119548	158402	99230	121328	107401	74438	32736
1959	122299	160828	101966	124436	108250	72862	32043
1960	126910	161276	107208	131949	111460	73996	32542
1961	130478	163571	111194	135954	116711	76459	33625
1962	138383	173680	119194	141465	122648	79340	34892
1963	144036	184797	122454	146438	127459	84608	37209
1964	145269	185119	123419	149120	130175	90971	40007
1965	151722	195936	128093	154767	134769	97116	42710
1966	158744	201986	135335	162321	141684	107390	47228
1967	168432	215618	140262	177586	149998	119242	52440
1968	176024	231481	144651	183314	157745	131692	57915
1969	185641	252636	149403	191124	166967	141670	62303
1970	179034	240304	145896	184042	162058	138216	60784

TABLE 7.D.2
Annual real wages, 1726-2006, in fixed 2000-NOK

	3.0 Transport and communications	3.1 Merchant fleet	3.2 Domestic transport	3.3 Communications services	4.0 Private services	4.1 Domestic	4.1.1 Housekeeping
1971	192345	274977	151906	190590	170262	145205	63858
1972	201660	297353	157302	194683	175901	149819	65887
1973	207470	309600	161032	198216	180115	153232	67388
1974	215491	317000	169459	206045	186091	158723	69803
1975	226486	331075	179677	215517	195135	166304	73137
1976	235507	345092	185711	225515	202087	172041	75660
1977	240469	362775	186706	225690	205004	173120	76134
1978	240036	360208	186835	226264	206107	173400	76258
1979	239552	370906	184113	219075	203824	172366	75803
1980	233388	351612	181876	218188	201836	170736	75086
1981	236100	370711	178456	216778	201341	169031	74336
1982	227248	335055	178290	217355	200091	169026	74334
1983	228842	342904	178020	216424	201576	171263	75318
1984	231397	349782	179439	216929	202793	172145	75706
1985	243018	385260	182613	221587	208024	175027	76973
1986	241415	364452	187543	226122	210567	177465	78045
1987	234571	332019	186598	215625	209619	177876	78226
1988	224743	301022	185623	212477	208542	177614	78111
1989	219209	284463	184999	209934	208145	178206	78371
1990	213261	257126	186768	212748	208909	180252	79271
1991	215896	258953	190081	215082	212317	183276	80600
1992	217698	253867	194894	218846	215315	186483	82011
1993	223065	268621	196309	221292	218306	188202	82767
1994	225964	270912	199532	224270	222433	191292	84126
1995	227063	270376	199332	227327	224403	192966	84862
1996	232761	270195	206489	236612	231494	199322	87657
1997	239159	281718	210064	242323	236177	201996	88833
1998	251799	300868	220645	251685	246432	209405	92092
1999	259356	312338	227547	256360	253599	214113	94162
2000	269452	327699	229912	268470	258170	214886	94502
2001	276265	329502	234970	281673	264401	220447	96948
2002	287648	323686	242654	299504	275406	228744	100597
2003	291667	319729	244898	300521	281106	234879	103294
2004	298764	336781	253570	311461	292784	245768	108083
2005	303128	338141	257341	324066	302493	250391	110116
2006	311045	336296	263486	333070	310404	254166	111776

TABLE 7.D.3
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1726				14533
1727				
1728				
1729				
1730				
1731				13334
1732				
1733				
1734				
1735				
1736				14883
1737				
1738				
1739				
1740				
1741				16113
1742				
1743				
1744				
1745				
1746				18624
1747				
1748				
1749				
1750				
1751				18190
1752				17717
1753				17568
1754				17032
1755				16578
1756				15309
1757				13644
1758				12441
1759				18267
1760				17094
1761				18143
1762				18065
1763				15588
1764				18502
1765				17279
1766				15864
1767				17929
1768				15620
1769				17155
1770				18286
1771				16926
1772				14100
1773				14561
1774				20237

TABLE 7.D.3
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1775				18552
1776				19102
1777				16866
1778				18489
1779				18579
1780				18760
1781				20569
1782				16588
1783				15002
1784				18851
1785				15814
1786				16706
1787				17454
1788				19428
1789				17051
1790				15017
1791				20782
1792				18614
1793				16344
1794				16696
1795				13865
1796				19692
1797				19593
1798				20087
1799				18553
1800				15115
1801				17271
1802				14916
1803				15280
1804				17526
1805				14391
1806				16331
1807				15282
1808				13604
1809				11909
1810				14513
1811				15111
1812				11110
1813				12073
1814				13070
1815				13706
1816				13506
1817				15390
1818				15904
1819				14129
1820				14584
1821				17455
1822				15562
1823				16818

TABLE 7.D.3
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1824				19346
1825				20802
1826				20580
1827				17272
1828				18950
1829				18058
1830				19862
1831				18649
1832				19482
1833				20446
1834				21421
1835				21102
1836				20569
1837				20779
1838				20647
1839				20962
1840				21799
1841				23353
1842				23638
1843				23241
1844				24296
1845				23524
1846				22033
1847				20763
1848				21697
1849				22699
1850				23205
1851				23227
1852				22985
1853				22852
1854				22894
1855				23000
1856				21682
1857				21960
1858				23753
1859				23357
1860				22674
1861				22301
1862				22568
1863				22849
1864				23523
1865				23863
1866				23239
1867				22547
1868				21454
1869				23246
1870				23708
1871				23755
1872				23616

TABLE 7.D.3
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1873				24837
1874				26845
1875	58361			27412
1876	59975			27322
1877	59428			27369
1878	64950	64785		27912
1879	69695	69507		29710
1880	64845	64670		27761
1881	66267	66096		28296
1882	65422	65254		28193
1883	66859	66688		28943
1884	68291	68115		29860
1885	72129	71939		31644
1886	72510	72313		31678
1887	74333	74133		32248
1888	72553	72355		32026
1889	70644	70455		31937
1890	69796	69615		32556
1891	70862	70685		33541
1892	72700	72522		34372
1893	77413	77220		37862
1894	79278	79090		38439
1895	79958	79768		38898
1896	79448	80924	102194	40049
1897	81260	82800	104455	42668
1898	78449	79926	100865	41655
1899	76455	78098	97828	39999
1900	75016	76847	95473	39651
1901	77465	79546	98148	40287
1902	81261	84141	101330	41316
1903	82599	85531	102990	41269
1904	85646	89167	105666	44798
1905	83997	87533	103436	44533
1906	83572	87324	102366	44975
1907	80684	84362	98703	44976
1908	79535	83445	96633	45148
1909	83474	86172	104698	47661
1910	86048	89241	106963	48197
1911	85479	88648	106264	50174
1912	80697	83796	100068	49893
1913	81799	84489	102487	50842
1914	83949	87219	103995	53181
1915	75035	78850	90870	48724
1916	74394	78050	88316	47917
1917	77087	80822	88610	53964
1918	69759	72031	80556	50795
1919	71152	74316	87224	60000
1920	82399	86060	101022	60212
1921	101527	106039	124470	63096

TABLE 7.D.3
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1922	98247	102446	120838	59988
1923	99122	103635	121271	59147
1924	84645	88675	103147	54554
1925	77840	81556	94829	53877
1926	89430	93847	108604	57470
1927	98405	103147	119784	57834
1928	104995	110257	127330	58894
1929	105366	111025	126895	60181
1930	103926	109429	125347	61026
1931	109611	115396	132247	62093
1932	109495	115317	132007	62243
1933	108096	113737	130568	61520
1934	105884	111392	127938	61233
1935	104811	110192	126807	61101
1936	104116	109594	125661	62127
1937	98570	102539	121803	62886
1938	96325	99811	119947	65192
1939	98757	99632	129270	67243
1940	83927	85300	110088	61693
1941	72007	75776	91438	55087
1942	69955	76078	88169	57573
1943	71170	80486	87772	59339
1944	71303	78222	91397	62394
1945	78194	85273	100740	68822
1946	81494	85680	108196	74516
1947	88595	92830	117547	82884
1948	95472	99650	126302	90057
1949	99604	103038	131607	94470
1950	98085	103893	130445	95074
1951	91642	95394	121346	92701
1952	95703	101509	122658	96088
1953	99513	102375	127676	99736
1954	98543	102037	124445	100456
1955	101972	105482	128524	105537
1956	107855	115070	145790	111157
1957	109351	117457	148814	115301
1958	114164	120919	151495	117599
1959	114162	124960	153308	120726
1960	121115	128896	155542	125250
1961	126394	128034	159353	130150
1962	135975	137612	170667	137037
1963	140691	142450	175334	142524
1964	143266	145328	176383	144998
1965	147532	148745	181375	149796
1966	154440	157154	189001	156962
1967	162307	167253	198061	164184
1968	166643	170717	200829	169322
1969	171238	174993	205468	176041
1970	165605	168510	195995	171589

TABLE 7.D.3
Annual real wages, 1726-2006, in fixed 2000-NOK

	5.0 Public services	5.1 Public administration	5.2 Education	6.0 Total
1971	174885	177505	206458	180910
1972	180357	180652	211858	185642
1973	184789	184768	215703	190216
1974	190227	188848	224025	197903
1975	198323	196853	232719	208064
1976	205577	206525	238193	216194
1977	206730	206308	239905	218342
1978	205984	204734	238074	219503
1979	202942	202142	233695	216934
1980	200714	200413	228540	214493
1981	198503	199119	222430	211594
1982	199649	199470	221624	211588
1983	200125	198432	220062	212632
1984	201104	200573	220989	215127
1985	203727	203172	223643	218933
1986	207490	206950	227175	223004
1987	207450	209523	224777	222905
1988	202584	204695	222970	221531
1989	202890	202245	226059	221211
1990	203953	202431	227135	222689
1991	206526	205239	226993	226208
1992	209221	209433	230522	229725
1993	210934	212592	231745	232292
1994	214011	218178	234179	236105
1995	215292	219875	234858	237942
1996	222396	226683	241665	245779
1997	226248	232816	244201	250992
1998	235064	243405	252680	261426
1999	241830	252684	258361	269348
2000	245121	258251	263552	273192
2001	249179	261928	270885	279203
2002	261271	275147	283754	290538
2003	268267	280110	293303	294076
2004	278907	292538	303981	306539
2005	285558	300348	310599	313814
2006	289858	306341	314064	319465