GOVERNMENT DEBT MANAGEMENT

NORGES BANK

Quarterly report

2 | 2015
JULY 2015

REPORT FOR
SECOND QUARTER 2015

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Summary

In Q2, five government bond auctions and four Treasury bill auctions were held. All together, NOK 36bn was borrowed in the market.

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Market update

The yield on the 10-year Norwegian government bond NGB 03/2025[1] rose between the end of 2015 Q1 and the end of 2015 Q2 from 1.47 percent to 1.82 percent. The yield on NGB 03/2025 was in the interval 1.37-1.90 percent in this period. Yields on bonds with residual maturities of between five and nine years have also risen, although to a somewhat lesser extent than on the longest bond. Yields on bonds with residual maturities of less than five years have edged down. The Norwegian government bond yield curve is thus steeper than at the end of 2015 Q1 (see Chart 1.4). With the rise in long-term yields, the 10-year government bond yield has reverted to its December 2014 level.

The second quarter of 2015 was characterised by turbulence in international bond markets, with unusually pronounced movements in bond yields. These developments affected Norwegian government bond yields. European government bond yields increased substantially at the beginning of May. Over two days (6 and 7 May), the yield on NGB 03/2025 rose by 22 basis points. Yields moved downwards again through the remainder of the month, both in Norway and internationally. Bond yields rose again for a period at the beginning of June. The last weeks of June reflected the situation in Greece. Initial optimism that a solution would be found between Greece and its creditors led to higher yields on safe-haven European government bonds, which were tracked by Norwegian government bond yields. However, optimism faded in the final days of June and both European and Norwegian yields fell.

The yield on German 10-year government bonds has risen by close to 60 basis points since the end of Q1, while the 2-year yield has remained virtually unchanged. The increase in Norwegian yields in April and May was somewhat smaller compared with European yields and the yield differential against both Germany and Sweden narrowed, although it widened in June (see Chart 1.6). The yield differential against Germany in the 10-year segment (measured as the difference between NGB 03/2025 and Bund 02/2025) was 109 basis points as the end of Q2, compared with 123 basis points at the end of Q1. The differential was in the interval 80-136 basis points in Q2. The average so far in 2015 is 107 basis points. The yield differential between the UK and the US showed little change in Q2.

The spread between government bond yields and swap rates rose substantially in Q2 (see Chart 1.7). At its highest, the spread was minus 63 basis points in the 10-year segment (synthetic Norwegian government bond yield against 10-year swap rate). At the end of Q2, the spread was minus 57 basis points, compared with minus 41 basis points at the end of Q1. The spread between government bond yields and swap rates has been higher this year than in 2014, averaging minus 45 basis points so far this year, compared with an average of minus 29 basis points in 2014.

Government bond auctions

In 2015 Q2, five government bond auctions were held. All the auctions were reopenings of existing bonds. Demand for bonds in

[1] Norwegian government bonds are referred to as «NGB mm/yyyy» where the month and year refer to the maturity date. Norwegian Treasury bills are referred to as «NTB mm/yyyy».

Total volume outstanding at 30 June 2015

Bonds
NOK 321.737bn,
of which NOK 48bn in the government's own stock

Bills
NOK 96bn,
of which NOK 32bn in the government's own stock

Borrowing year-to-date

Bonds
NOK 30bn to the market.
In addition, NOK 8bn to the government's own stock

Bills
NOK 37bn to the market.
In addition, NOK 24bn to the government's own stock

Auctions in 2015 Q2

Bonds
22 April
NGB 03/2025 NOK 3bn

12 May
NGB 05/2019 NOK 4bn

27 May
NGB 05/2021 NOK 3bn

10 June
NGB 03/2025 NOK 2bn

24 June
NGB 05/2019 NOK 2bn

Bills
13 April
NTB 03/2016 NOK 5bn

11 May
NTB 03/2016 NOK 4bn

15 June
NTB 06/2016 NOK 8bn.
In addition, NOK 8bn to the government's own stock

29 June
NTB 06/2016 NOK 5bn

the 5-year segment was particularly high in Q2 and two auctions of NGB 05/2019 and one auction of NGB 05/2021 were held. In addition, this year's new 10-year bond NGB 03/2025 was reopened twice.

The average allotment yield in the auctions was around 3 basis points higher than the ask yield in the secondary market at the time of the auction (yield at 11 a.m. on Oslo Børs), varying between 2 basis points lower than the secondary market ask yield and 9 basis points above the secondary market ask yield. The average for the years 2004-2014 was 5 basis points. The average bid-to-cover ratio was 2.3. The average for the years 2004-2014 was 2.6 (see Chart 2.1).

The auction results in Q2 showed signs of somewhat more variation compared with 2014 and 2015 Q1, although the variations were not particularly large viewed in a 10-year perspective. Demand in two of the auctions (12 May and 10 June) was relatively low, reflecting particularly strong turbulence in international bond markets both in the days preceding the auctions and on the auction days themselves. The second auction in May, however, attracted very solid demand.

A planned issue volume of NOK 14-18 billion in 2015 Q2 had been published. Bonds worth NOK 14 billion were issued to the market. Owing to demand conditions, the issue volume was in the lower portion of the planned interval.

Buyback of NST 471

In the borrowing programme for 2015, a buyback auction had been planned for Q2 (13 April). Notification that this auction had been cancelled was published in the information bulletin for 2015 Q2.

Treasury bill auctions

In 2015 Q2, four Treasury bill auctions were held. The first two auctions were reopenings of NTB 03/2016. In June, a new 12-month bill (NTB 06/2016) was issued, with settlement on the IMM date. This Treasury bill was reopened at the end of June.

On average, the allotment yield in the auctions was 8 basis points higher than the ask yield in the secondary market at the time of the auction (yield at 11 a.m. on Oslo Børs), while the average for the years 2004-2014 was 13 basis points. The average bid-to-cover ratio was 2.3. The average for the years 2004-2014 was 2.6.

A planned issue volume of NOK 20-24 billion in 2015 Q1 had been published. Treasury bills worth NOK 22 billion were issued to the market.

Turnover, government securities

In 2015 Q2, the average total daily turnover of bonds recorded on Oslo Børs[2] amounted to NOK 2 billion. By comparison, average

[2] All turnover of Norwegian government securities where one or both parties are members of Oslo Børs.

Maturities in 2015 Q2

Bonds
15 May
NGB 05/2015 NOK 59.919bn, of which NOK 8bn is the government's own stock

Bills
17 June
NTB 06/2015 NOK 24bn, of which NOK 8bn is the government's own stock

Planned borrowing for 2015

Bonds
NOK 48bn-52bn

Bills
Up to NOK 70bn

Borrowing interval in 2015 Q3

Bonds
NOK 5bn-10bn

Bills
NOK 10bn-14bn

Auction dates in 2015 Q3

Bonds
26 August
9 September

Bills
24 August
14 September

Maturities in 2015 Q3

Bills
16 September
NTB 09/2015 NOK 27bn, of which NOK 8bn is the government's own stock

daily turnover in 2014 was about NOK 1 billion.

Turnover of bonds was somewhat lower in Q2 than in Q1. Turnover was low in the weeks around Easter. At the end of April and in early May, turnover, particularly of the shorter bonds, was high for several weeks (see Chart 3.1). This is probably a result of rebalancing in connection with the maturity of NGB 05/2015 on 15 May. The bonds showing the highest turnover in the first half of Q2 were NGB 05/2015, NGB 05/2017 and NGB 05/2019. After the maturity of NGB 05/2015, NGB 05/2021 and NGB 03/2024 showed the highest turnover. Turnover was low in the last weeks of Q2.

In Q2, the average total daily turnover of Treasury bills recorded on Oslo Børs amounted to approximately NOK 0.6 billion, which is in line with average daily turnover in 2014, but is considerably lower than the average in 2013 (approximately NOK 1.5 billion). This is related to the higher turnover of Treasury bills in the years when the swap arrangement existed. This arrangement was discontinued in June 2014. The two shortest Treasury bills accounted for most of the turnover.

The government has its own stock of government securities for use in repurchase agreements with primary dealers. The repurchase facility amounts to NOK 8 billion per security, divided equally among the primary dealers. Usage of the facility was highest for Treasury bills. Average daily usage was about 20 percent of the facility (see Chart 3.6). Average daily usage for bonds was about 3 percent of the facility (see Chart 3.5).

Ownership composition, government securities

At the end of 2015 Q2, approximately 62 percent of Norwegian government bonds were owned by foreign investors (see Chart 4.1), a somewhat higher percentage than at the end of Q1. Banks reduced their share from 15 percent at the end of Q1 to 11 percent at the end of Q2. The share held by other counterparties showed little change in Q2. NOK 8 billion of each bond is in the government's own stock, for use in repurchase agreements with the primary dealers. The government's own stock is included in the share held by the government sector (central government and social security funds).

The volume of bonds outstanding was reduced by close to NOK 46 billion in Q2 as a result of the maturity of NGB 05/2015. Holdings of Norwegian government bonds have decreased in all sectors (see Chart 4.3). Banks' holdings have decreased most, by NOK 18 billion. Foreign investors have reduced their holdings by NOK 12 billion, a relatively small amount compared with the total volume owned by foreign investors. Foreign investors owned large holdings of NGB 05/2015 at the beginning of the year, approximately 67 percent of the outstanding volume. They reduced their holdings in the course of the year and owned 39 percent of the outstanding volume at maturity. Norwegian banks' holdings of NGB 05/2015 have increased through the year, from 11 percent at the beginning of the year to 38 percent at maturity. Foreign investors have increased their holdings of other bonds, particularly NGB 05/2019 and NGB 05/2021. As a result, foreign investors' share of Norwegian government bonds increased at maturity, while the total share held by Norwegian banks fell.

Foreign investors own 20 percent of Norwegian Treasury bills.

Large Norwegian owners of Treasury bills are life insurance companies, pension funds and banks, holding 21 percent each. NOK 8 billion of each Treasury bill is in the government's own stock, for use in repurchase agreements with primary dealers. The government's own stock is included in the share held by the government sector (central government and social security funds).

Interest rate swaps

No new interest rate swaps were entered into in 2015 Q2. Nine agreements with a total volume of NOK 3 650 million matured.

Interest rate risk

At the end of 2015 Q2, the portfolio of Treasury bills and government bonds had an average time to refixing[3] of 4.36 years. At the same date, the portfolio of interest rate swaps had an average time to refixing of 2.93 years. This reduced the average time to refixing of the debt portfolio as a whole (government debt including interest rate swaps) to 3.66 years (see Chart 6.2). The average time to refixing for the debt portfolio is 0.41 years longer than at the end of Q1, primarily because NGB 05/2015 reached maturity on 15 May. The Ministry of Finance has set a minimum average time to refixing of 2.5 years.

The average time to refixing summarises the entire maturity profile of the debt portfolio in a single number and does not contain information about the absolute size or the spread of the government debt portfolio's interest rate exposure across the yield curve. Very different portfolios may have the same average time to refixing.

Chart 7.3 shows the maturity structure of the government's portfolio of Treasury bills and government bonds. As the chart shows, the government's interest rate exposure is relatively well spread across maturities out to 10 years.

Refinancing risk

According to the mandate issued by the Ministry of Finance, the borrowing strategy shall be formulated so that less than 25 percent of government bonds outstanding will mature each year. Chart 7.1 shows future redemptions as a percentage of the nominal volume of government bonds outstanding at the end of 2015 Q2. As shown in the chart, just over 20 percent of the volume of government bonds outstanding will mature in 2017, 2019 and 2021. No government bonds will reach maturity in 2016.

Various indicators may be used as quantitative measures of refinancing risk. Government Debt Management looks at maturity profile, short-term refinancing volume and average time to refixing. The individual indicators should not be viewed in isolation. Chart 7.4 shows developments in refinancing volume over time and shows that short-term refinancing volume has been stable over the past year. Redemptions and coupon payments are well spread out over the coming ten years, and the average time to refixing has been stable in recent years.

[3] See definitions.

Credit risk

At the end of 2015 Q2, the government's portfolio of interest rate swaps comprised 320 interest rate swaps with total principal of NOK 112.2 billion. Interest rate swaps entered into with counterparties with a credit rating of A- or lower accounted for 7 percent of the total principal at the end of 2015 Q2 (Chart 8.2).

Credit exposure is limited because counterparties must post cash collateral if the market value of interest rate swaps entered into is positive in the government's favour. The threshold for when collateral must be posted is gradually lowered as the credit rating declines. Collateral is calculated twice a month.

While 36 percent of the market value in the government's favour involved swaps entered into with counterparties with a credit rating of A- or lower at the end of Q1, this share was 8 percent at the end of Q2 (see Chart 8.2). This share has decreased because counterparties' credit ratings have improved.

At the end of 2015 Q2, the government's portfolio of interest rate swaps had a total market value of NOK 10.6 billion in the government's favour. Posted collateral reduced credit exposure to NOK 0.7 billion. Movements since the turn of the year are shown in Chart 8.1.

The government has entered into framework agreements with a total of 18 counterparties. At the end of 2015 Q2, the government had active interest rate swaps with 13 of these counterparties. Entering into interest rate swaps with several counterparties spreads credit exposure. At the end of Q2, three counterparties accounted for 80 percent of the total principal. However, credit exposure to these counterparties was only 21 percent of total credit exposure.

Government debt

Debt outstanding at 30 June 2015

	ISIN	Ticker code	First issue	Maturity	Coupon	Volume outstanding NOK millions	Of which government's own stock
Bonds							
NGB 05/2017	NO 0010313356	NST 472	19 May 2006	19 May 2017	4.25	65 737	8 000
NGB 05/2019	NO 0010429913	NST 473	22 May 2008	22 May 2019	4.50	65 000	8 000
NGB 05/2021	NO 0010572878	NST 474	25 May 2010	25 May 2021	3.75	71 000	8 000
NGB 05/2023	NO 0010646813	NST 475	24 May 2012	24 May 2023	2.00	50 000	8 000
NGB 03/2024	NO 0010705536	NST 476	14 Mar 2014	14 Mar 2024	3.00	45 000	8 000
NGB 03/2025	NO 0010732555	NST 477	13 Mar 2015	13 Mar 2025	1.75	23 000	8 000
Total						**321 737**	**48 000**
Bills							
NTB 09/2015	NO 0010719958	NST 28	17 Sep 2014	16 Sep 2015	0	27 000	8 000
NTB 12/2015	NO 0010727688	NST 29	17 Dec 2014	16 Dec 2015	0	23 000	8 000
NTB 03/2016	NO 0010732787	NST 30	18 Mar 2015	16 Mar 2016	0	25 000	8 000
NTB 06/2016	NO 0010740327	NST 31	17 Jun 2015	15 Jun 2016	0	21 000*	8 000
Total						**96 000**	**32 000**
Bonds and bills in total						**417 737**	**80 000**

* Including the Treasury bill auction in NTB 06/2016 of NOK 5bn held 29 June with settlement date 1 July.

Auctions in Q2

Auction date		Volume allotted to the market (NOK millons)	Total bid volume (NOK millions)	Effective Yield	Price	Bid-To-Cover ratio	Diff. secondary market ask yield[1] (basis points)
Government bonds							
22 Apr 2015	NGB 03/2025	3 000	7 861	1.40	103.20	2.62	0
12 May 2015	NGB 05/2019	4 000	5 466	1.13	113.18	1.37	9
27 May 2015	NGB 05/2021	3 000	9 330	1.23	114.48	3.11	-2
10 Jun 2015	NGB 03/2025	2 000	3 411	1.86	99.01	1.71	8
24 Jun 2015	NGB 05/2019	2 000	5 670	1.00	113.34	2.84	2
	Total:	14 000			Average in 2015 Q2:	2.33	3
Treasury bills							
13 Apr 2015	NTB 03/2016	5 000	14 640	0.89	99.1900	2.93	5
11 May 2015	NTB 03/2016	4 000	9 290	0.89	99.2510	2.32	2
15 Jun 2015	NTB 06/2016	8 000	17 553	0.86	99.1500	2.19	-
29 Jun 2015	NTB 06/2016	5 000	8 779	0.95	99.1019	1.76	16
	Total:	22 000			Average in 2015 Q2:	2.30	8

[1] The secondary market ask yield at the time of the auction is the yield on Oslo Børs at 11 a.m.

Buybacks of NGB 05/2015 in Q2

Auction date	Ticker code	Buyback volume (NOK millions)	Highest accepted price	Lowest accepted yield	Weighted average yield
No buybacks of NGB 05/2015 were undertaken in 2015 Q2.					

Interest rate swaps entered into in Q2

Trade no.	Counterparty	Start	Maturity	Volume
No new interest rate swaps were entered into in 2015 Q2.				

1. Market update

Chart 1.1 Government debt outstanding
End of year for 2004 – 2014. End of Q2 for 2015.
In billions of NOK

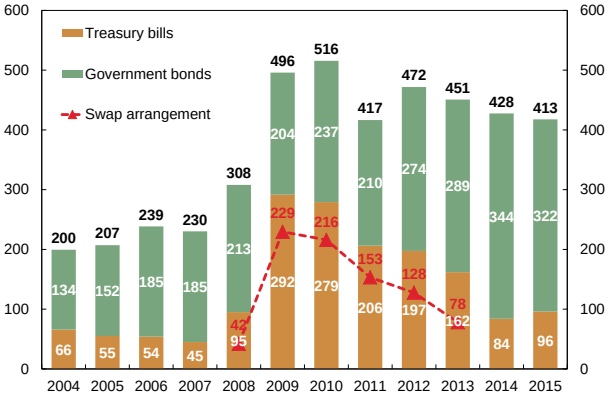


Chart 1.2 Market issue volume of government bonds
Actual volume for 2004 – 2014. Planned volume for 2015. In billions of NOK and number of auctions

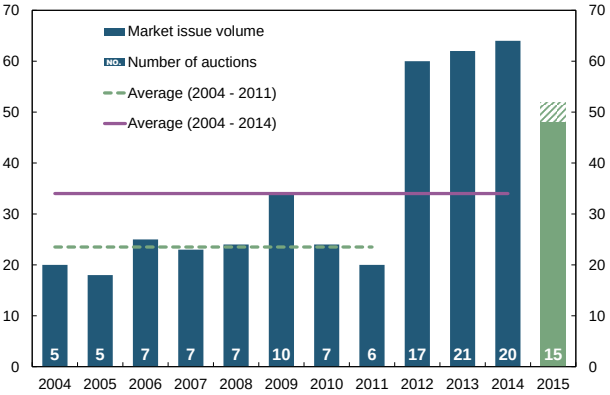


Chart 1.3 Norwegian synthetic 3-, 5- and 10-year government bond yields
10-day moving average.
2 January 2005 – 30 June 2015. Percent

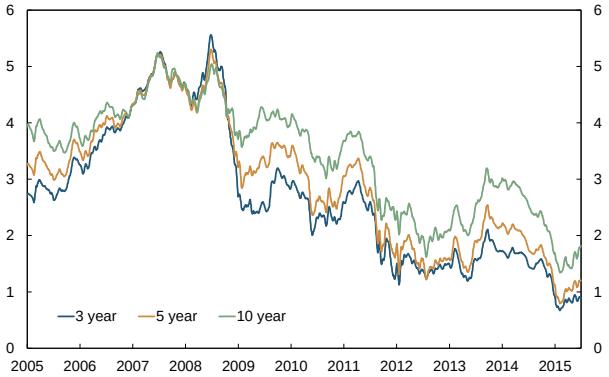


Chart 1.4: The Norwegian government bond yield curve
Synthetic government bond yield in percent (left-hand scale). Change in basis points (right-hand scale)

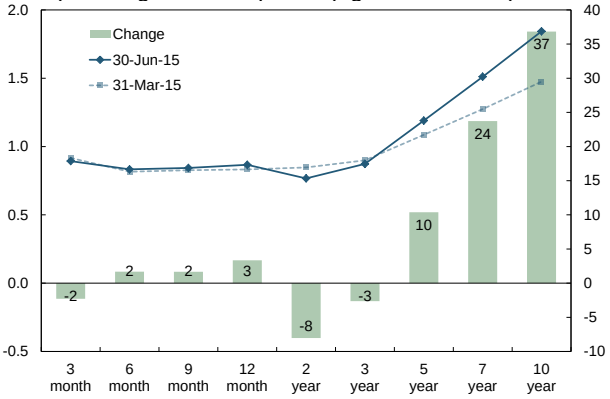


Chart 1.5 Yield on Norwegian government bonds
2 January 2015 – 30 June 2015. Percent

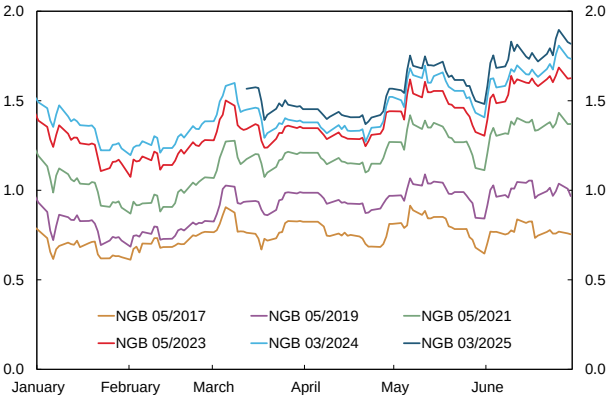


Chart 1.6 Yield spread between Norway and selected countries
10-year government bond yields. 2 January 2015 – 30 June 2015. Basis points

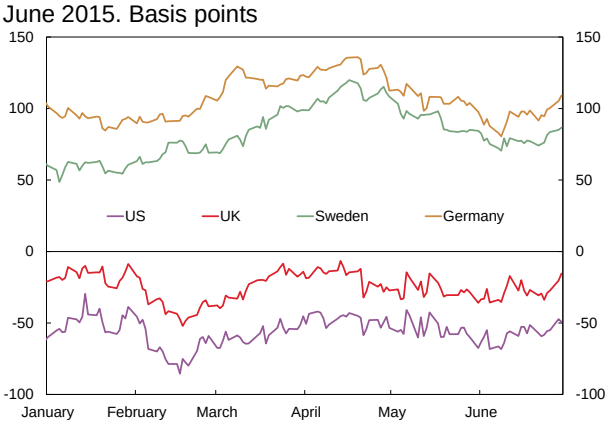


Chart 1.7 Spread between government bond yield and swap rate
Government bond yield minus swap rate. Synthetic bond yield. 2 January 2015 – 30 June 2015. Basis points

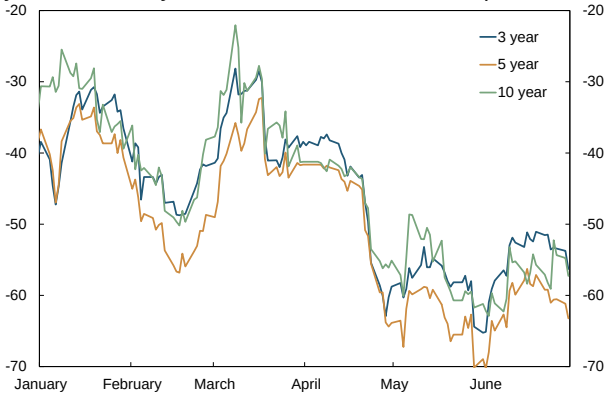
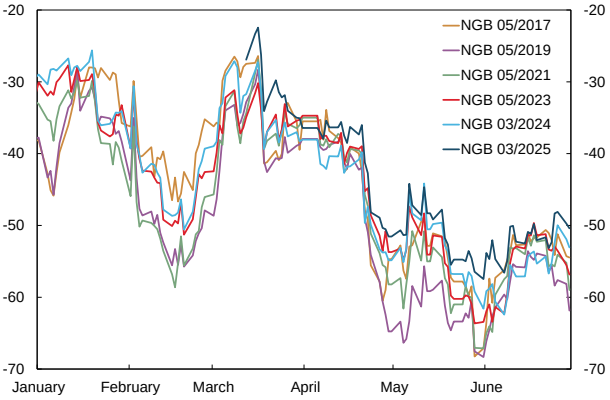


Chart 1.8 Asset swap spread for government bonds
2 January 2015 – 30 June 2015. Basis points



2. Auctions

Chart 2.1 Bid-to-cover ratio in bond auctions
Average and sample space for 2004 – 2014 and year-to-date in 2015

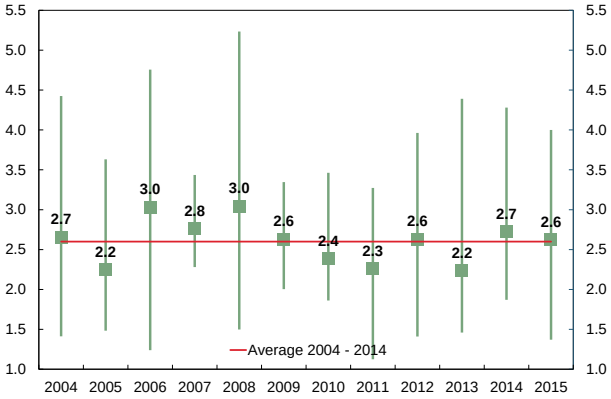
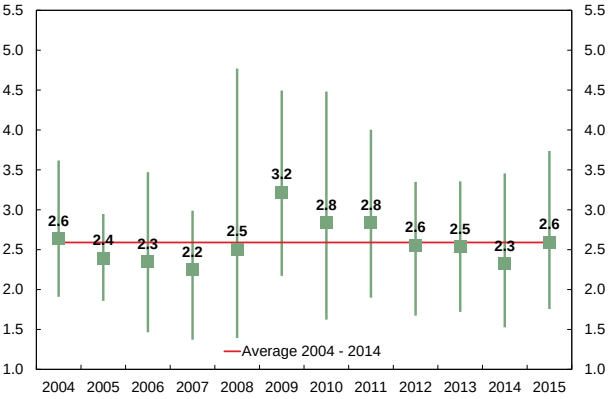


Chart 2.2 Bid-to-cover ratio in bill auctions
Average and sample space for 2004 – 2014 and year-to-date in 2015



3. Turnover

Chart 3.1 Quarterly turnover of bonds
Oslo Børs. By bond. In billions of NOK

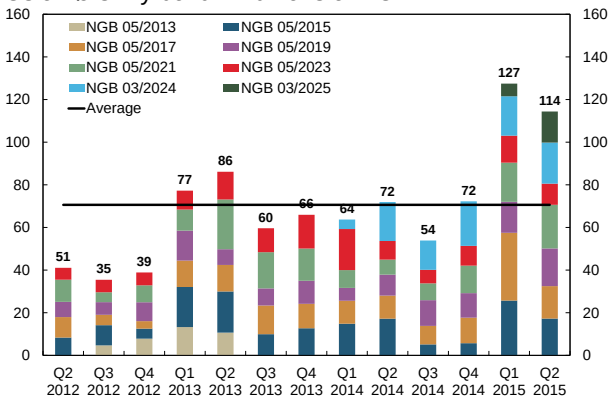


Chart 3.2 Quarterly turnover of Treasury bills
Oslo Børs. By bill. In billions of NOK

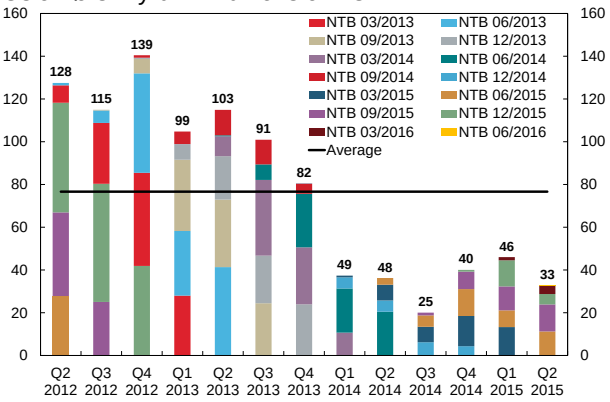


Chart 3.3 Gross turnover by region
Government bonds. Reported by the primary dealers. By bonds with remaining maturity below and above 5 years. January 2013 – March 2015. In billions of NOK

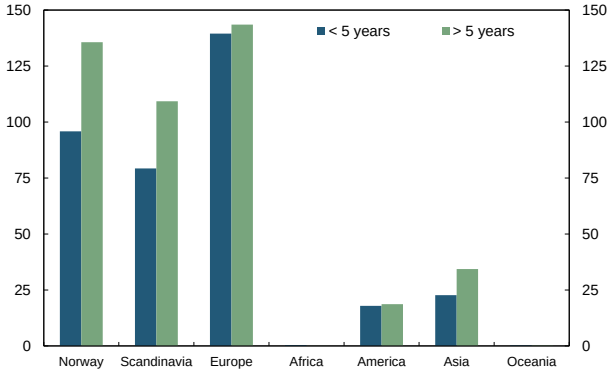


Chart 3.4 Gross turnover by counterparty
Government bonds. Reported by the primary dealers. By bonds with remaining maturity below and above 5 years. January 2013 – March 2015. In billions of NOK

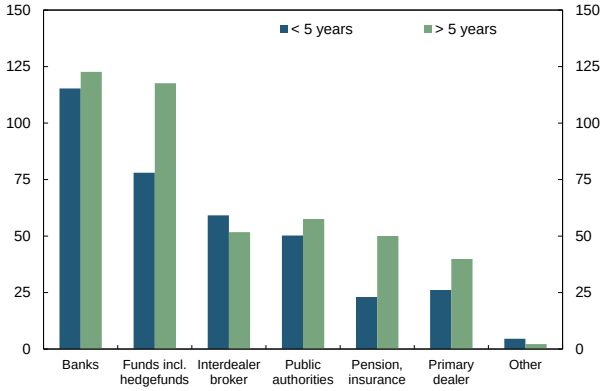
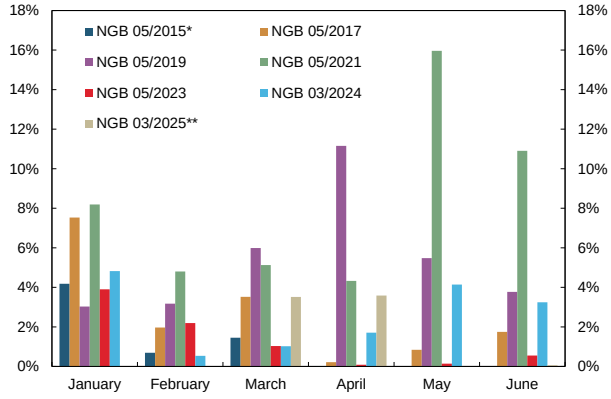
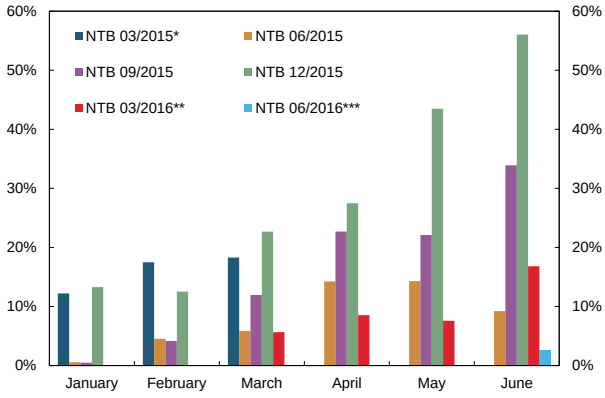


Chart 3.5 Repurchase agreements with Norges Bank
Government bonds. Average usage of the limit of NOK 8bn in each security, in percent. Year to date in 2015



Bonds marked by an asterisk have not been available for repurchase at all times in the period.
* NGB 05/2015 matured on 15 May.
** NGB 03/2025 was first issued on 13 March (settlement date).

Chart 3.6 Repurchase agreements with Norges Bank
Treasury bills. Average usage of the limit of NOK 8bn in each security, in percent. Year to date in 2015



Bills marked by an asterisk have not been available for repurchase at all times in the period.
* NTB 03/2015 matured on 18 March.
** NTB 03/2016 was first issued on 18 March (settlement date).
*** NTB 06/2016 was first issued on 17 June (settlement date).

4. Ownership composition

Chart 4.1 Ownership composition for bonds
At the beginning of December for 2006 – 2014. At 29 June 2015

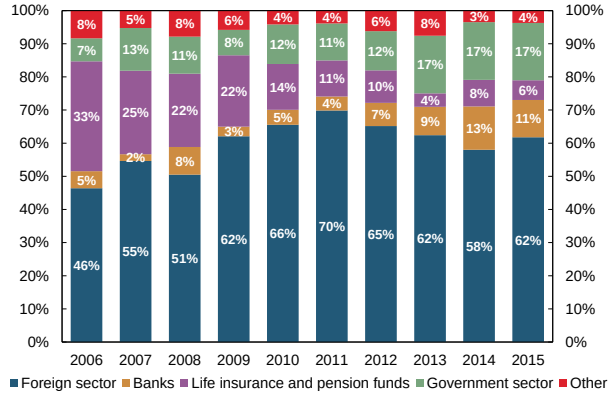


Chart 4.2 Ownership composition for Treasury bills
At the beginning of December for 2007 – 2014. At 29 June 2015

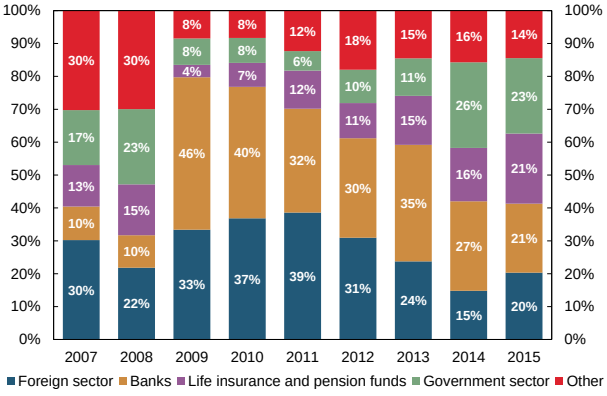


Chart 4.3 Changes in ownership composition for bonds
30 March 2015 – 29 June 2015. Hatched area shows change in government's own stock. In billions of NOK

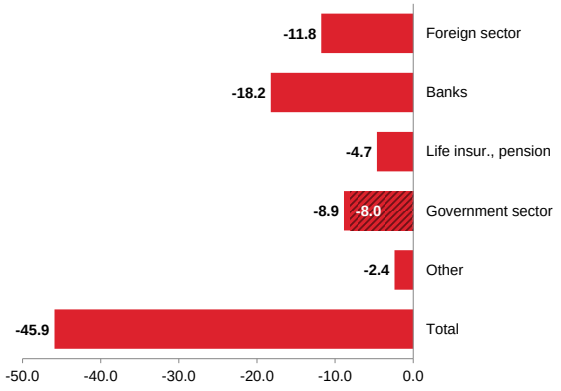


Chart 4.4 Changes in ownership composition for Treasury bills
30 March 2015 – 29 June 2015. In billions of NOK

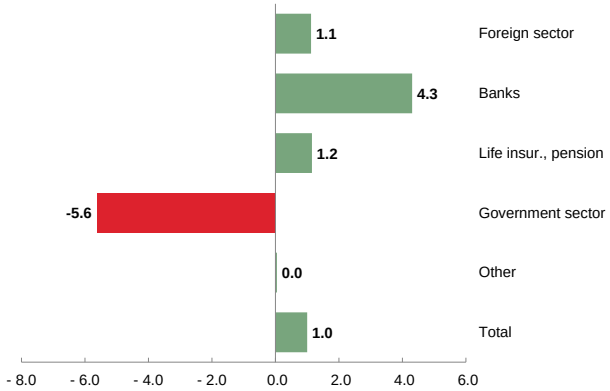
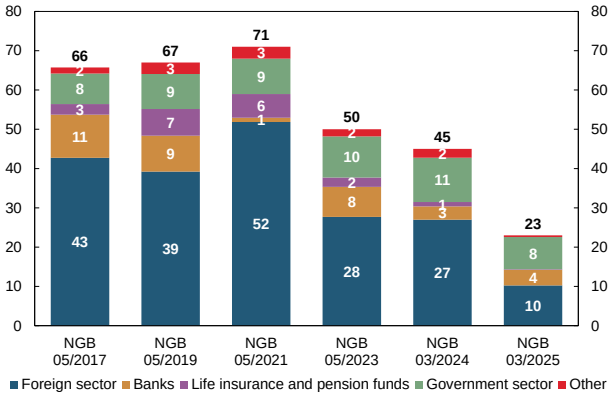


Chart 4.5 Ownership composition for bonds by bond
Excluding government's own stock. At 29 June 2015. In billions of NOK



5. Interest rate swaps

Chart 5.1 Volume and number of interest rate swaps
2005 – 2015. In billions of NOK

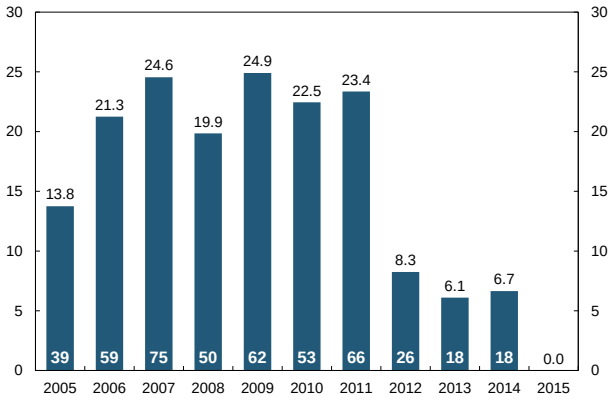
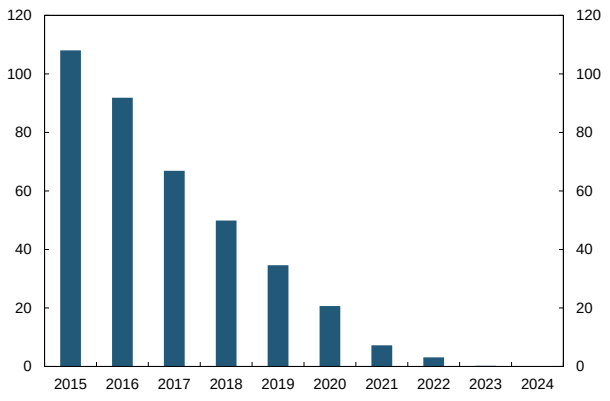


Chart 5.2 Pricipal outstanding at year-end for interest rate swaps
At 30 June 2015. In billions of NOK



6. Interest rate risk[4]

Chart 6.1 Average term to maturity[5]
Debt portfolio. Quarterly figures 2004 – 2014. Daily figures from 2015

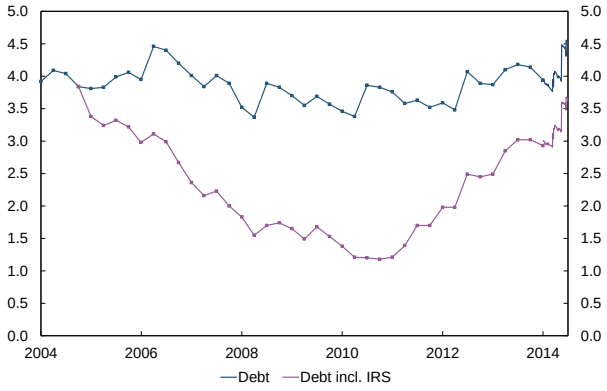


Chart 6.2 Average time to refixing[6]
Debt portfolio

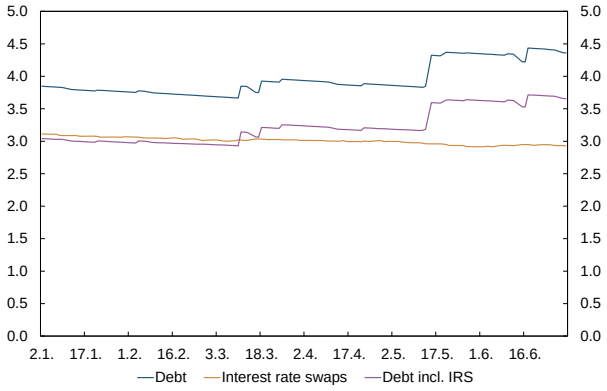


Chart 6.3 Modified duration
Debt portfolio. Quarterly figures, excl. government's own stock, 2004 – 2014. Daily figures from 2015.

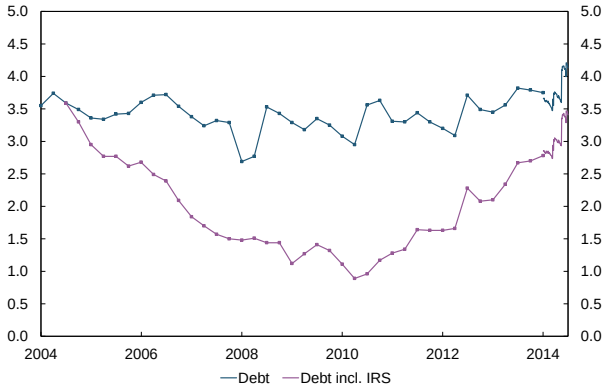
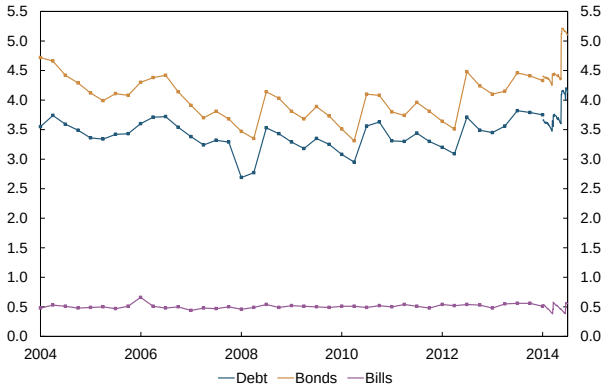


Chart 6.4: Modified duration
Government securities. Quarterly figures, excl. government's own stock, 2004 – 2014. Daily figures from 2015.



7. Refinancing risk[4]

Chart 7.1 Maturity profile
Notional amount due per year as a percentage of total outstanding volume at 30 June 2015, govt. bonds.

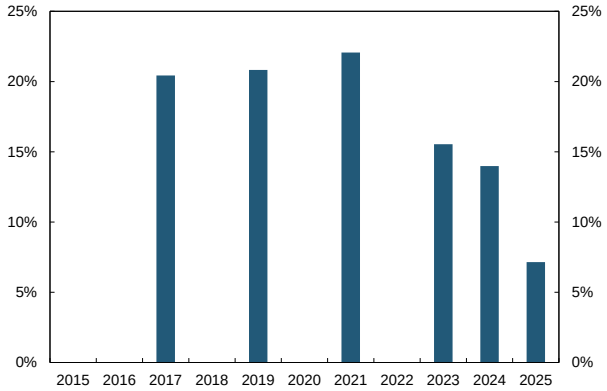
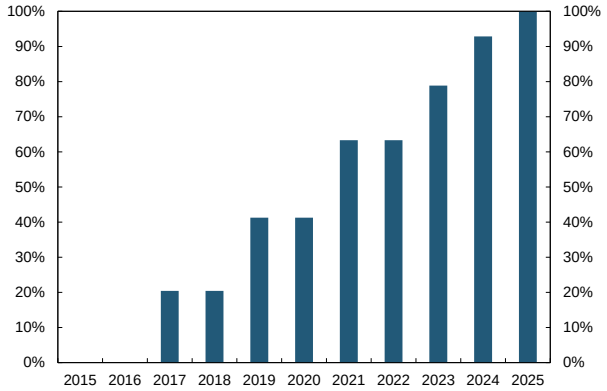


Chart 7.2 Maturity profile
Accumulated notional amount as a percentage of total outstanding volume at 30 June 2015, govt. bonds.



[4] The charts do not include planned borrowing. Unless otherwise noted, the government's own stock is included in the charts. The volume of Treasury bills in the swap arrangement (November 2008 – June 2014) is not included.
[5] Time to maturity of principal. For more information, see definitions.
[6] Duration with zero yield. For more information, see definitions.

Chart 7.3 Maturity profile
Principal and coupon due per year.
At 30 June 2015. In billions of NOK

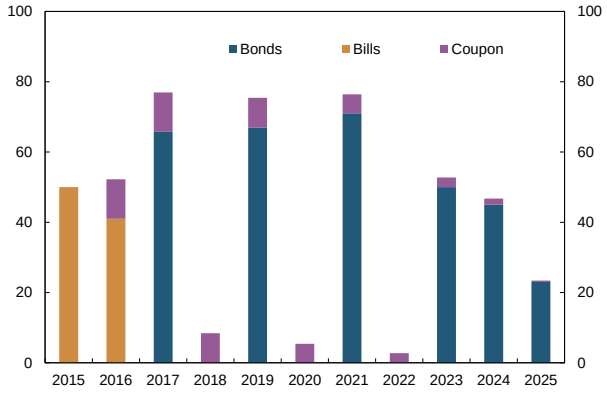
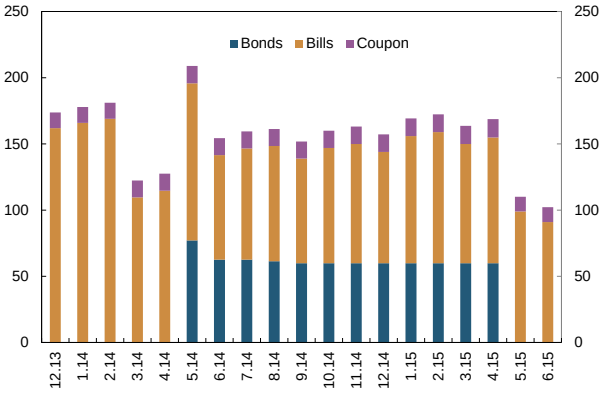


Chart 7.4 Short-term refinancing volume
12-month rolling window. In billions of NOK



8. Credit risk interest rate swaps[7]

Chart 8.1 Credit exposure
In billions of NOK

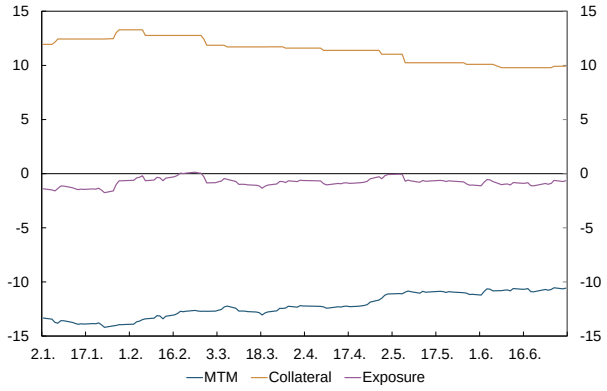


Chart 8.2 Principal, credit exposure and market value interest rate swaps
Percentage of total volume at 30 June 2015, by rating

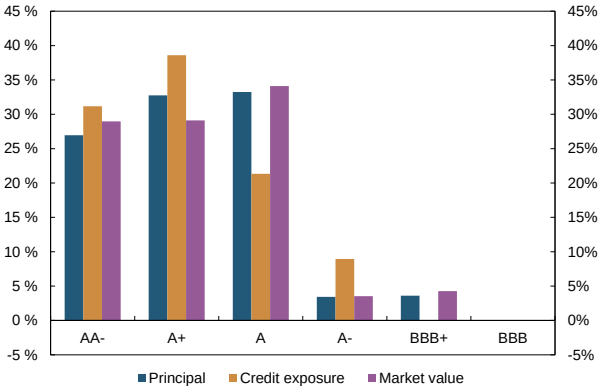


Chart 8.3 Rating
Number of counterparties at 30 June 2015

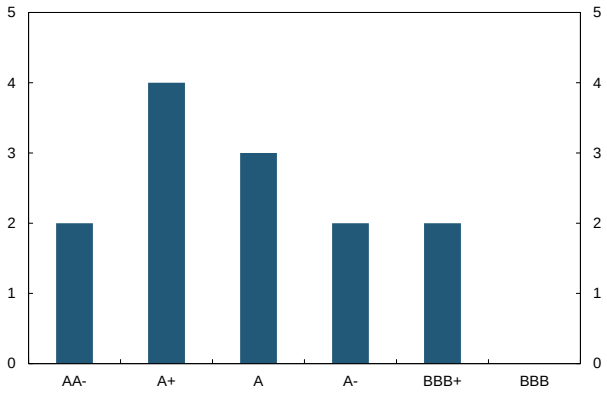
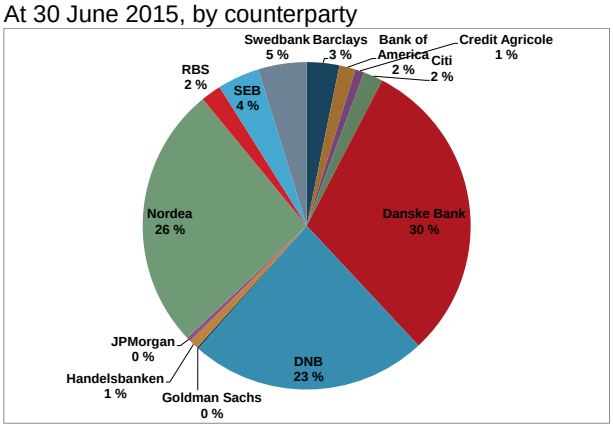


Chart 8.4 Principal interest rate swaps
At 30 June 2015, by counterparty



[7] The charts do not include planned borrowing.

Mandate

On 2 October 2014, the Ministry of Finance laid down a mandate for the management of government debt. Under the mandate, Norges Bank shall issue government debt and enter into financial contracts as part of its management of government debt in the name of the Ministry of Finance. The objective of management is to meet the government's borrowing requirement at the lowest possible cost, taking into account the government's interest rate risk and that there should be a liquid yield curve for government securities with a maturity of up to ten years. Each year, the Ministry shall set an upper limit for gross borrowing and a minimum average time to refixing. Within these limits, Norges Bank shall set an annual borrowing programme broken down into bills and bonds with a calendar for debt issues. The Bank shall lay down principles for measuring and managing counterparty exposure and operational risk. Norges Bank shall regularly submit to the Ministry of Finance analyses of profitability and risk relating to government debt management and assessments of the attainment of objectives. Both the analyses and the assessment shall be published. The mandate entered into force on 1 January 2015.

Limits for 2015 laid down by the Ministry of Finance

	Description	Limit	Actual at 30 June 2015	Mandate
Long-term borrowing	Maximum issue volume for new long-term borrowing (government bonds).	NOK 100bn	NOK 38bn	Section 3-2
Short-term borrowing	Volume for maximum short-term market debt outstanding (Treasury bills).	NOK 125bn	NOK 96bn	Section 3-2
Average time to refixing	Minimum average time to refixing for government debt including interest rate swaps.	> 2.5 years	3.66	Section 3-2
Government's account	Minimum level of the government's account at Norges Bank.	NOK 35bn	The level has been higher than the minimum throughout Q2	Section 2-2 (3)

Mandate for the management of government debt

	Description	Limit	Actual at 30 June 2015	Mandate
Refinancing risk	The borrowing strategy shall be formulated so that no more than 25% of government bonds outstanding will mature each year.	< 25%	Fulfilled	Section 3-4
Interest rate swaps	The outstanding volume of interest rate swaps shall not exceed the volume of government bonds, including the government's own stock of government bonds.	< 100%	34.9 %	Section 3-5

Primary dealers of Norwegian government securities

Brokerage firm	OSE ID	Contact person	Telephone
Both government bonds and Treasury bills			
Danske Bank	DDB	Leif Inge Christensen	+ 47 22 86 13 18
DNB	DNM	Terje Monsen	+ 47 24 16 90 59
Nordea	ND	Lars Even Klepsland (bonds) Pål Martinsen (bills)	+ 47 22 48 77 33 + 47 22 48 78 90
Skandinaviska Enskilda Banken	SEB	Michael Kofoed	+ 47 22 82 72 63

Risk

The primary objective of management of the debt portfolio is to meet the government's borrowing requirement, while taking into account the risk to which the government is exposed.

Interest rate risk

Interest rate risk is the risk of loss or gain owing to changes in market yields. The issuance of long-term fixed income securities results in known future nominal interest payments in the period ahead. However, in the event of a fall in the yield, the government will have locked in a higher rate than the prevailing market yield.

The government employs a cash-basis budgeting and accounting system and therefore attaches less weight to changes in market values owing to changes in yields. The government uses average time to refixing as a measure of interest rate risk.[8]

Over time, interest rate risk will be affected by a number of strategic decisions, including the issuance and buyback strategy. By using interest rate swaps, the portfolio's average time to refixing can be changed independently of the issuance and buyback strategy.

Refinancing risk

Refinancing risk is the risk that new debt will have to be issued on less favourable terms than existing debt or that it will not be possible to issue new debt when existing debt matures. The latter instance is regarded as highly improbable for the Norwegian government. Refinancing risk is closely related to interest rate risk.

Refinancing risk can be limited by spreading the maturity profile of long-term debt along the yield curve to limit the share of total debt maturing at the same time. The mandate issued by the Ministry of Finance states that the borrowing strategy shall be formulated so that no more than 25 percent of government bonds outstanding will mature each year.

Refinancing risk may be reduced further by meeting the financing requirement in sufficient time, ensuring a broad investor base and having sufficient contingency liquidity. Buybacks of securities smooth the repayment profile and can thereby also be used to reduce refinancing risk.

As quantitative measures of refinancing risk, the Section for Government Debt Management has used three indicators: maturity profile, short-term refinancing volume and average time to refixing. The individual indicators should not be seen in isolation. For example, a portfolio consisting of Treasury bills and government bonds may have a relatively high average time to refixing, but at the same time an unacceptably high short-term refinancing risk.

Credit risk

Credit risk is the risk of losses if a counterparty does not meet its payment obligations.

The government enters into interest rate swaps to reduce the average time to refixing in the government's debt portfolio. An interest rate swap with a market value in the government's favour exposes the government to the counterparty's payment capacity. This risk is limited by the use of collateral agreements (standardised ISDA/CSA agreements). There is no credit risk associated with the principal in an interest rate swap.

The government only enters into unilateral collateral agreements. This means that the counterparty must post collateral when the interest rate swap has a positive value over a certain threshold. When the interest rate swap has a positive value for the counterparty, the government does not post collateral. On the contract date, counterparties must have a satisfactory credit rating from one of the major credit rating agencies. The threshold value for posting collateral rises with the counterparty's credit rating.

The credit exposure to a single counterparty is the total market value in the government's favour of all interest rate swaps with a single counterparty (netting), less the counterparty's posted collateral. The government calculates and exchanges collateral twice a month. In the period between collateral posting dates, counterparty exposure may increase beyond the threshold value. Credit risk therefore dependent on fluctuations in the yield, the residual maturity of the agreements and the counterparty's payment capacity.

Liquidity risk

The government must have a certain liquidity reserve to enable it to meet its payment obligations at all times. Norges Bank orients government borrowing in the market towards ensuring that at all times the government has a given minimum level in its group account with the central bank. Norges Bank may not extend credit to the government through purchases of government securities in the primary market.

Operational risk

Operational risk is defined as the risk of economic loss or of loss of reputation as a consequence of failures in internal processes, human error or system failure or of other loss due to external circumstances.

Managing operational risk involves uncovering risk factors that may result in losses and estimating the probability and consequences of possible adverse incidents.

[8] See definitions.

Definitions

Asset-swap spread
The difference between the effective yield on a government bond and a bond with the same maturity and coupon equal to the floating money market rate.

Average term to maturity
The average term to maturity is defined as the time until maturity of the principal of Treasury bills, bonds and the fixed leg of interest rate swaps, while time to refixing is used for the floating leg of interest rate swaps. Notional value/principal is used for weighting. Neither the amount of the coupons, market values or yield level affects the calculation.

Average time to refixing
The average time to refixing is equal to the duration given an effective yield of zero. This is analogous to the calculation of average term to maturity, but the coupons are included in the calculation. The market value given an effective yield of zero is used for weighting. In other words, all cash flows are weighted by their notional values. Neither the current market value nor yield level affects the calculation.

Basis point
A basis point is one hundredth of a percentage point (0.01 percentage point). Also known as “bips” (bps).

Bid-to-cover ratio
Bid volume divided by allotment volume.

Coupon
The annual fixed interest rate on a bond.

Credit risk
Credit risk is the risk of loss if a counterparty fails to meet its payment obligations.

Debt portfolio
The total amount of debt outstanding. In the case of government debt, the debt portfolio comprises the sum of all debt instruments outstanding (Treasury bills and government bonds) and financial contracts entered into (interest rate swaps).

Duration (Macaulay duration)
The weighted average time until repayment of a debt instrument calculated on the basis of the present value of future cash flows. Duration is never longer than the time to maturity, and in the case of a debt instrument with coupon payments, it will be shorter. For zero-coupon bonds, duration is equal to the time to maturity. Duration is also a measure of the sensitivity of the price of the instrument to changes in yields.

Government bond
Debt instrument with an original maturity of over one year, with payment of a fixed coupon each year. Norwegian government bonds are issued in NOK. Borrowing in the form of long-term government debt takes place through the issuance of new bonds and reopenings of existing bonds. Also referred to simply as a “bond”.

Government’s own stock
The government holds its own stock of government bonds and Treasury bills. These are used in repurchase agreements with primary dealers to ensure that the primary dealers are able to deliver bonds and bills to their customers.

IMM dates
Commonly used maturity dates for standardised money market products (IMM stands for International Money Market). IMM dates are the third Wednesday of March, June, September and December.

Interest rate risk
Interest rate risk is the risk of loss or gain owing to changes in market yields.

Interest rate swap
Agreement between two parties to exchange interest payments associated with an agreed principal for an agreed period. Such agreements make it possible to separate the choice of fixed versus floating rate from the choice of time to maturity. Under the agreement, one party ordinarily receives an interest rate agreed in advance (fixed rate) over the entire term to maturity of the principal, while the other party receives the prevailing market rate (floating rate).

Interpolated yield / synthetic yield
An estimated yield derived from weighting several observed yields. For example, an interpolated five-year yield may be found by weighting the yields on two known securities, one with a maturity shorter than five years and one with a maturity longer than five years.

Liquidity risk
Liquidity risk is the risk of being unable to meet financial obligations on the agreed date.

Maturity profile
The maturity profile provides a picture of the size of the payment obligations (redemptions and coupon payments) the government faces per calendar year over the coming 10 years, given the debt outstanding at that date.

Modified duration (interest rate sensitivity)
Calculated on the basis of duration and expresses price sensitivity to changes in yields. The longer the modified duration, the more the portfolio's value will fluctuate owing to changes in yields.

Operational risk
Operational risk is defined as the risk of economic loss or of loss of reputation as a consequence of failures in internal processes, human error or system failure or of other loss due to external circumstances.

Primary dealer
Bank/brokerage firm that has entered into an agreement with Norges Bank to quote firm prices for Norwegian government securities on Oslo Børs. Primary dealers have the sole right and obligation to participate in auctions of government securities. Separate primary dealer agreements are entered into for the bond and Treasury bill markets and for one year at a time.

Principal
The original amount of a claim, i.e. amount without interest and costs.

Refinancing risk
Refinancing risk is the risk that new debt will have to be issued on less favourable terms than existing debt or that it will not be possible to issue new debt when existing debt matures.

Repurchase agreement
The sale of a security together with an agreement for the seller to buy back the security at a later date at an agreed price. Also called a repo agreement.

Short-term refinancing volume
The short-term refinancing volume is the sum of redemptions of existing government bonds and Treasury bills and coupon payments on bonds over the next 12 months. The indicator expresses the size of the payments that the government will face over the coming year. With an assumption of an unchanged nominal size of the debt, the sum of bonds and bills indicates the amount to be refinanced at a new interest rate. If interest rate levels increase by one percentage point, the government's costs in isolation will increase by 1 percent of this amount over the next 12 months.

Spread
The difference between e.g. bid and offer prices or between bid yield and ask yield.

Swap
Agreement between two parties to exchange future cash flows. For example, one party can pay the other interest at a floating rate, while receiving interest payments at a fixed rate. See also interest rate swap.

Swap spread
Difference between the swap rate and the yield on a government security with the same maturity or duration.

Synthetic yield
See interpolated yield.

Treasury bill
Debt instrument with a maturity of up to one year that is issued as a zero-coupon security. Norwegian Treasury bills are issued in NOK with settlement on IMM dates in March, June, September and December. Bills mature on the IMM dates in the same month the following year. Between IMM dates, existing Treasury bills are reopened. Also referred to simply as a "bill".

Figures and calculations

Prices and yields from Oslo Børs
The prices used are the last traded prices if the last traded price is within the spread (at market close). If the last traded price is outside the spread (at market close) the point in the spread is chosen that is nearest the last traded price (best bid or offer price depending on which side of the spread the last traded price was). If there were no trades in the course of the trading day, the mid price (at market close) is used.

Synthetic yield
The synthetic yield is calculated by weighting two government bonds with remaining time to maturity of differing lengths (linear interpolation). If no longer-dated security is available, the yield is calculated by using the two nearest bonds with shorter maturity and continuing the trend out to the desired maturity (extrapolated yield).