

Evaluation of the projections for 2008

Norges Bank's forecasts for economic developments for the next few quarters form an important part of the basis for monetary policy. Evaluation of the projections can enhance our insight into the functioning of the economy and contribute to the development of our analytical tools.

In this box, Norges Bank's projections for 2008 published in *Monetary Policy Report 3/07* are evaluated.¹ The short-term projections are based on an overall assessment of current information and projections from several types of models.

Norges Bank has developed a new system (SAM) for averaging short-term forecasts for inflation and mainland GDP provided by different

models.² SAM has been used in forecasting since mid-2008.

Sharp turnaround in the economy

In *Monetary Policy Report 3/07*, Norges Bank estimated that capacity utilisation had reached a peak and that it would gradually decline towards a normal level in the period to end-2010. Consumer price inflation adjusted for tax changes and excluding energy products (CPI-ATE) was projected to increase gradually to around 2½% in 2010. Inflation was expected to be 1¾% and growth in mainland GDP was expected to be 2¾% in 2008. The key policy rate was projected to be somewhat above 5% in the period 2008-2011.

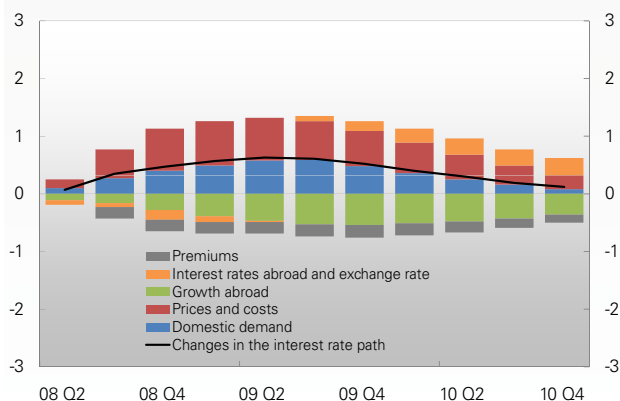
The rise in consumer prices and activity in the mainland economy was sharper than projected in the period towards the end of 2007 and up to summer 2008. The interest rate path was therefore raised in *Monetary Policy Report 1/08* and *2/08* (see Chart 1). In addition, the key policy rate at the end of the first half of last year was somewhat higher than projected in *Monetary Policy Report 3/07*.

The global economy entered a sharp downturn last autumn. The outlook for the Norwegian economy deteriorated, and there were prospects that inflation would fall more rapidly than previously projected. As a result, the key policy rate was reduced by one percentage point in October and by 1.75 percentage points at the monetary policy meeting on 17 December. The interest rate path was lowered

1 See also the article "Evaluation of Norges Bank's projections for 2008", to be published in *Economic Bulletin* 1/09.

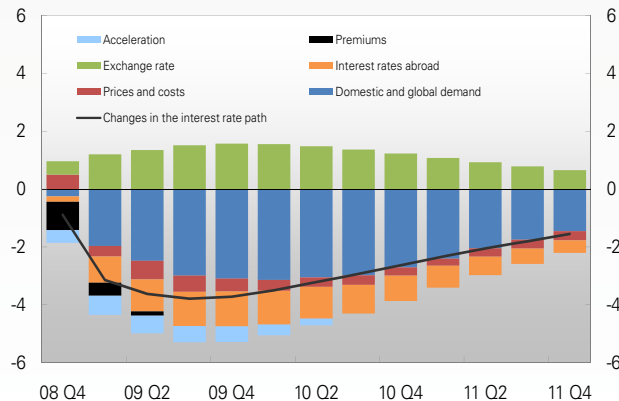
2 See box "SAM – System of models for short-term forecasting" in MPR 2/08.

Chart 1 Factors behind changes in the interest rate path from MPR 3/07 to MPR 2/08 (first half of 2008). Percentage points. 2008 Q2 – 2010 Q4



Source: Norges Bank

Chart 2 Factors behind changes in the interest rate path from MPR 2/08 to monetary policy meeting in December 2008 (second half of 2008). Percentage points. 2008 Q4 – 2011 Q4



Source: Norges Bank

substantially in both *Monetary Policy Report 3/08* and in new projections presented at the December monetary policy meeting (see Chart 2).³

Inflation higher than projected

In 2008, CPI inflation and CPI inflation adjusted for tax changes and excluding energy products (CPI-ATE) were higher than projected in *Monetary Policy Report 3/07* (see Table 1 and Charts 3 and 4). Inflation projections for 2008 from other forecasters were also too low (see Charts 5 and 6).⁴

CPI-ATE inflation rose more than projected up to last summer. Wage

growth was approximately as expected, but lower-than-projected productivity growth resulted in stronger-than-projected growth in unit labour costs. Higher demand towards the end of 2007 and in early 2008 may have made it easier for enterprises to pass on higher costs to customers. In addition, external price impulses were stronger than expected, and the krone somewhat weaker towards the end of 2007 and the beginning of 2008 than assumed in *Monetary Policy Report 3/07*. CPI inflation rose more than projected through summer and autumn last year. Energy prices had increased to an unexpected extent. Inflation slowed towards the end of 2008. Household demand was subdued through autumn, leading to higher-than-normal activity in the Christmas sales. Oil prices also fell sharply.

Lower growth and capacity utilisation

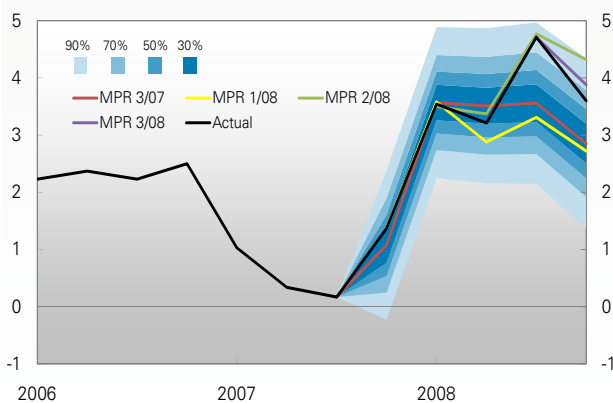
Preliminary national accounts figures show that growth in mainland GDP from 2007 to 2008 was approximately as projected in *Monetary Policy Report 3/07*, but that developments through the year had differed from our assumptions. In addition, economic growth picked up more than expected towards the end of 2007, bringing capacity utilisation up to a higher level at the beginning of 2008 than projected (see Chart 7). In the period to autumn last year, it appeared that the Norwegian economy would experience a soft landing.

The situation changed dramatically through autumn. When financial market turbulence developed into a financial crisis in September last year, banks raised their lending rates as a result of higher money market risk premiums. At the same

3 See boxes in last year's monetary policy reports and the background document "New interest rate projections" from the monetary policy meeting on 17 December for a more detailed account of the changes in the interest rate path in 2008.

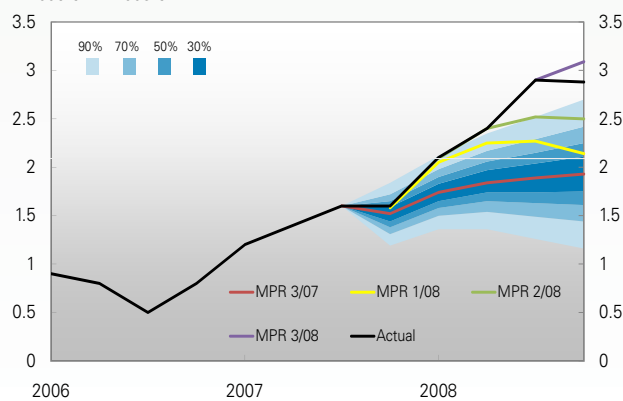
4 Forecasters: Ministry of Finance, Statistics Norway, DnB NOR, Nordea, Handelsbanken, Danske Bank, Skandinaviska Enskilda Banken and the Confederation of Norwegian Enterprises.

Chart 3 CPI. Projections from various reports and actual figures. Fan chart from MPR 3/07. Four-quarter growth. Per cent. 2006 Q1 – 2008 Q4



Sources: Statistics Norway and Norges Bank

Chart 4 CPI-ATE¹⁾. Projections from various reports and actual figures. Fan chart from MPR 3/07. Four-quarter growth. Per cent. 2006 Q1 – 2008 Q4



1) CPI adjusted for tax changes and excluding energy products. Sources: Statistics Norway and Norges Bank

time, banks became more reluctant to provide loans for consumption and investment. Equity prices and prices for oil and other commodities fell markedly. GDP among Norway's trading partners fell by over 1% in 2008 Q4, a far weaker development than projected.

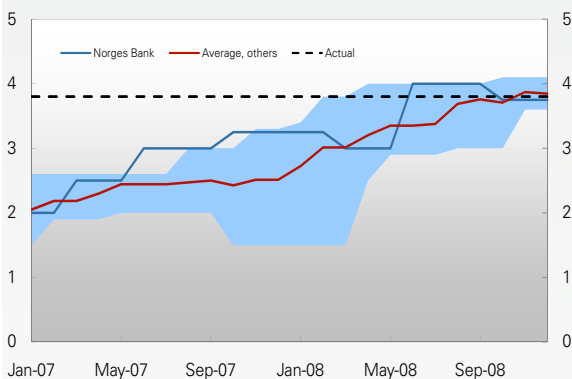
For 2008 as a whole, growth in private consumption and in private

gross mainland investment was appreciably lower than projected in *Monetary Policy Report 3/07*. On balance, export growth was as projected, but stronger than expected in the first half of the year and weaker than expected towards the end of the year. Growth in petroleum investment was approximately as expected, while general government consumption was

higher than assumed. Capacity utilisation was lower than expected at end-2008 (see Chart 7).

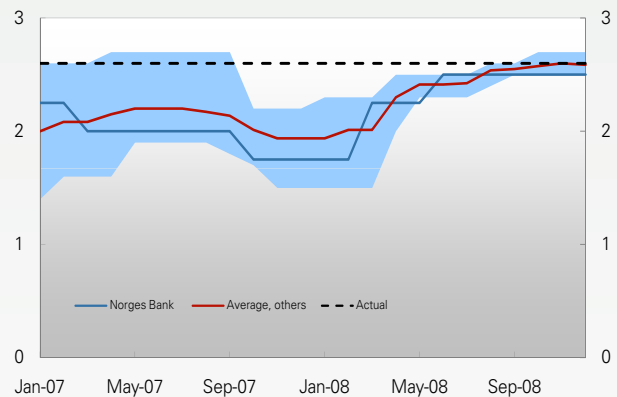
Norges Bank's projections for mainland GDP growth from 2007 to 2008 were generally as accurate as the average projection from other forecasters (see Chart 8).

Chart 5 CPI. Projections of annual growth in 2008 at different times.¹⁾ Per cent. January 2007 – December 2008



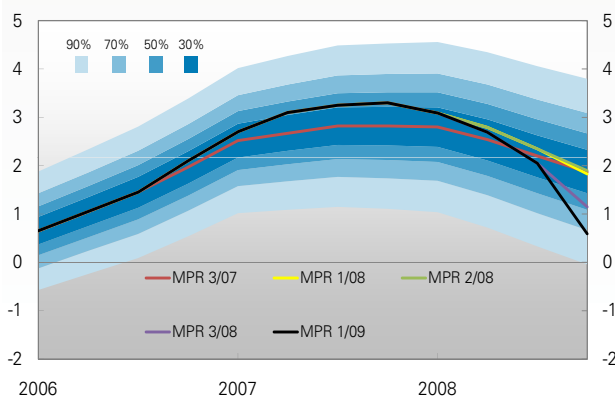
1) Highest and lowest projections from other forecasters are shown by the blue band. The red line shows the average of other forecasters' projections. Sources: Norges Bank and reports from the other forecasters

Chart 6 CPI-ATE¹⁾. Projections of annual growth in 2008 at different times.²⁾ Per cent. January 2007 – December 2008



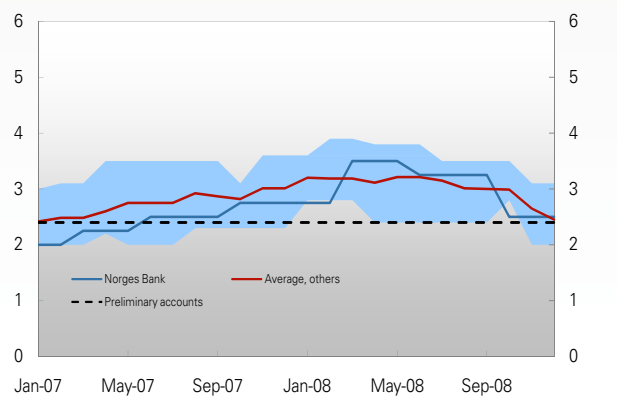
1) CPI adjusted for tax changes and excluding energy products. 2) Highest and lowest projections from other forecasters are shown by the blue band. The red line shows the average of other forecasters' projections. Sources: Norges Bank and reports from the other forecasters

Chart 7 The output gap. Projections in the baseline scenario in MPR 3/07 with fan chart and projections from other reports. Per cent. 2006 Q1 – 2008 Q4



Source: Norges Bank

Chart 8 Mainland GDP. Projections of annual growth in 2008 at different times.¹⁾ Per cent. January 2007 – December 2008



1) Highest and lowest projections from other forecasters are shown by the blue band. The red line shows the average of other forecasters' projections. Sources: Norges Bank and reports from the other forecasters

Table 1 Projections and assumptions for main economic aggregates for 2008. From *Monetary Policy Report 3/07* to *Monetary Policy Report 3/08*. Percentage change from 2007 unless otherwise stated

| | MPR 3/07 | MPR 1/08 | MPR 2/08 | MPR 3/08 | Prelim. accounts |
|---|----------|----------|----------|----------|------------------|
| CPI | 3¼ | 3 | 4 | 3¾ | 3.8 |
| CPI-ATE | 1¾ | 2¼ | 2½ | 2½ | 2.6 |
| Annual wage growth | 5¾ | 6 | 6 | 6 | 6 |
| GDP | 3¾ | 3 | 2¾ | 2 | 2.0 |
| GDP, mainland Norway | 2¾ | 3½ | 3¼ | 2½ | 2.4 |
| Output gap, mainland Norway (level) ¹⁾ | 2¼ | 2½ | 2½ | 2¼ | 2 |
| Employment | 1¼ | 2¼ | 2¾ | 2¾ | 3.2 |
| Labour force, LFS | 1¼ | 2¼ | 2¾ | 2¾ | 3.4 |
| LFS unemployment (rate) | 2½ | 2½ | 2½ | 2½ | 2.6 |
| Mainland demand | 3¼ | 3¼ | 3¼ | 2¼ | 2.1 |
| - Private consumption | 3½ | 3½ | 2¾ | 1½ | 1.5 |
| - Public consumption | 2¾ | 2¾ | 3¼ | 3¾ | 3.7 |
| - Fixed investment in mainland Norway | 3¼ | 5¼ | 4¾ | 2¼ | 1.9 |
| Petroleum investment | 7½ | 7½ | 7½ | 7½ | 7.1 |
| Traditional exports | 4 | 5 | 5 | 5½ | 4.3 |
| Imports | 4¾ | 5¼ | 5¼ | 4 | 4.2 |
| Key policy rate (level) | 5¼ | 5½ | 5½ | 5¼ | 5.3 |
| Import-weighted exchange rate (I-44) (level) | 88¼ | 87 | 87½ | 90.2 | 90.8 |
| GDP, trading partners | 2½ | 2 | 2¼ | 1¾ | 0.9 |
| External price impulses ^{1),2)} | -¼ | 0 | ½ | ¾ | ½ |
| Oil price, USD per barrel (level) | 84 | 101 | 122 | 100 | 97 |

1) Norges Bank's estimates.

2) Indicator of external price impulses to imported consumer goods measured in foreign currency.

Sources: Statistics Norway and Norges Bank