Monetary policy in turbulent times

Governor Øystein Olsen
CME, 20 September 2012
GDP growth
10-year moving average of annual GDP growth\(^1\). Percent

1) IMF projections for 2012-2017

Source: Statistics Norway and IMF WEO April
Yields on 10-year government bonds

Source: Thomson Reuters
## Central bank balance sheets – stylised

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign exchange reserves</td>
<td>Deposits from banks (central bank reserves)</td>
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<tr>
<td>Lending to banks/ traditional supply of liquidity</td>
<td></td>
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Central bank balance sheets – government bond purchases

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<td>Government bond purchases</td>
<td></td>
</tr>
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Central bank balance sheets – private sector bond purchases

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<td></td>
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Central bank balance sheets – foreign exchange purchases

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<td>Lending to banks/traditional supply</td>
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</table>
Central bank balance sheets

Sources: Thomson Reuters and Norges Bank

1) Sum of assets excluding Government Pension Fund Global investments. Break due to new method of calculation as from December 2011
Corporate borrowing rates\textsuperscript{1)}

Percent

\begin{figure}
\centering
\includegraphics[width=\textwidth]{chart.png}
\end{figure}

\textsuperscript{1)} Up to EUR 1m, maturity between 1 and 5 years.

Source: ECB
TARGET2 balances
In billions of EUR

Source: Institute of Empirical Research
GDP growth
10-year moving average of annual GDP growth\(^1\). Percent

1) IMF projections for advanced and emerging economies

Sources: Statistics Norway, Norges Bank and IMF WEO April 2012
Criteria for an appropriate interest rate path

1. The inflation target is achieved

2. The inflation targeting regime is flexible

3. Monetary policy is robust

“Loss function”:

\[ L_t = (\pi_t - \pi^*)^2 + \lambda (y_t - y^*_t)^2 + \gamma (i_t - i_{t-1})^2 + \tau (i_t - i^*_t)^2 \]
Key policy rate
Percent. 2008 Q1 – 2015 Q4

Source: Norges Bank
Household debt burden\(^1\)) and interest burden\(^2\))

Percent. 1988 Q1 – 2015 Q4


2) Interest expenses after tax as a percentage of disposable income adjusted for estimated reinvested dividends for 2000–2005 and redemption/reduction of equity capital for 2006–2015 plus interest expenses

Sources: Statistics Norway and Norges Bank
Household financial wealth* by debt burden

Debt burden below 100 percent **
Debt burden between 100 and 500 percent
Debt burden above 500 percent

Source: Norges Bank and Statistics Norway

* From tax assessments, excluding insurance reserves
** Including households with no debt and/or no income
High population growth and low residential construction rate

Yearly figures

Difference between number of housing completions and increase in households (left-hand scale)

Population growth (right-hand scale)

1) Projections for 2012

Source: Statistics Norway
Liquidity and EUR/NOK exchange rate
2 January 2002 – 5 October 2011

Source: Thomson Reuters and Norges Bank
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