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# Economic commentaries

## The Norwegian market for government securities and covered bonds in view of new liquidity buffer requirements for banks

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## Introduction

In this commentary we look more closely at Norwegian banks' investment alternatives for meeting proposed new international liquidity buffer requirements<sup>2</sup>. The Basel Committee's final recommendations for liquidity standards are expected during December 2010. For the time being, Norwegian krone-denominated investment alternatives appear to be Norwegian government securities and possibly covered bonds<sup>3</sup>. The liquidity standards will boost banks' demand for government securities and perhaps also for covered bonds. It is unclear whether Norwegian covered bonds qualify for inclusion in the liquidity buffer. However, the volume of issued Norwegian government securities and covered bonds is, to a large degree, associated with the swap arrangement, where the government and banks have swapped Treasury bills for covered bonds for an agreed period<sup>4</sup>. The expiry of the swap arrangement is likely to affect both the size and ownership composition of the government securities and covered bond market.

## New liquidity buffer requirements

Norwegian banks' problems in autumn 2008 were caused by access to market funding drying up, while banks did not hold sufficient liquid assets to continue operating without new funding. Norges Bank had to supply large quantities of liquidity to the banks. Ordinary market

mechanisms are weakened when the central bank becomes the most important source of liquidity.

Banks' liquidity management was not robust when money and capital markets seized up. Dependence on short-term foreign funding made banks vulnerable to a reduced supply of foreign funding. Many of the assets banks held as liquidity buffers became illiquid. Reasons include excessive confidence that there would always be markets for private bonds, and the absence of quantitative international requirements for banks' liquidity buffers. The Basel Committee has proposed introducing quantitative minimum liquidity buffer and net stable funding requirements for banks. The recommendation is for banks to be able to survive a 30-day stress scenario of substantial deposit withdrawals, without a supply of fresh market funding or fresh liquidity from the central bank.

Included in the Basel Committee liquidity buffer are government securities, central bank deposits and other assets that are highly liquid even in periods of market stress. Up to 40% of the liquidity buffer may comprise other highly liquid assets. One requirement is that the securities are traded in a large and active market. It remains to be seen whether any Norwegian private fixed-income instruments can meet the proposed requirements. Norwegian banks were not authorised to issue covered bonds through mortgage companies until June 2007. During the financial crisis the volume of outstanding covered bonds grew rapidly because the banks could utilise such paper to obtain funding through the swap arrangement. Establishing market maker arrangements that set the bid/offer spread for trades of defined volumes may contribute to making the Norwegian covered bond market more liquid. This can improve the prospects of Norwegian covered bonds meeting the requirements for inclusion in the liquidity buffer. Internationally, major bond issues tend to have many market makers.

In consultative statements to the Basel Committee and the European Commission, Norges Bank and Finanstilsynet

1 The views in this commentary are the author's own and are not necessarily an expression of the views of Norges Bank. Thanks to Sindre Weme, Per Atle Aronsen, Ketil Rakkestad and Bjørn Bakke (Norges Bank) for their helpful comments.

2 See the Basel Committee's proposed liquidity requirements from December 2009 (<http://www.bis.org/publ/bcbs165.htm>) and July 2010 (<http://www.bis.org/press/p100726/annex.pdf>). The Basel Committee is the central forum for formulating new banking regulations. Policy clarifications take place at G20 meetings. In addition, each jurisdiction works on specific formulations of new rules. The European Commission adopts the rules for EU member states, and the EEA Agreement obliges Norway to comply with these rules.

3 Covered bonds in Norway are issued by mortgage companies and give investors preference rights to a collateral pool that so far has primarily consisted of residential mortgages. For a detailed description of OMF covered bonds, see Bakke, Rakkestad and Dahl: "Norwegian covered bonds – a rapidly growing market," Norges Bank Economic Bulletin 2010.

4 See Norges Bank's outline of the terms and conditions of the swap arrangement in Circular 8/26 from May 2009: [http://www.norges-bank.no/templates/article\\_74078.aspx](http://www.norges-bank.no/templates/article_74078.aspx)

(Financial Supervisory Authority of Norway) noted that the Norwegian government securities market is too small for meeting the liquidity requirements utilising government securities alone<sup>5</sup>. The Basel Committee has signalled its intention to consider alternatives for countries with small government securities markets. Although how to define a “small government securities market” is yet to be decided, an upper limit could be set for the government securities market’s share of GDP, for example. As Norway has a low volume of outstanding government paper, there is reason to believe that the special rules will be important for Norwegian banks. Even so, banks will have to expect to make considerable adjustments to improve the liquidity in their balance sheets.

In July 2010 the Basel Committee softened the previously announced liquidity buffer and net stable financing requirements. Norges Bank has performed a stress test of Norwegian banks’ liquidity buffers based on the Basel Committee’s revised definition of qualifying liquid assets (See Chart 1). Even though more Norwegian banks meet the liquidity buffer requirements under the relaxed criteria, many banks still do not meet these requirements.

## The Norwegian government securities market

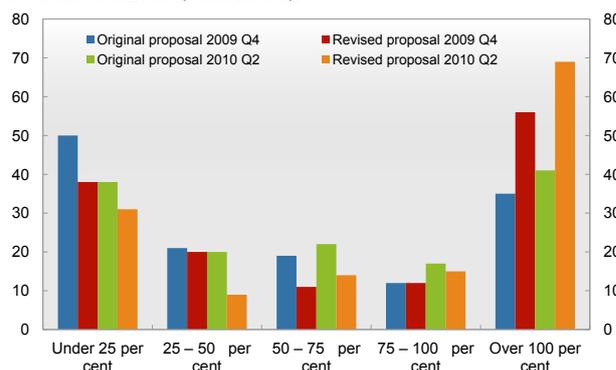
### The effect of the swap arrangement on the Norwegian government securities market

The Norwegian government securities market is relatively small. In 2010 the market for government paper is equivalent to around 24% of GDP in Norway (see Chart 2). The Norwegian government securities market grew sharply as a consequence of the swap arrangement. The market for government securities and covered bonds accounts for over half of the Norwegian bond market as of October 2010. If outstanding Treasury bills from the swap arrangement are excluded, the government securities market in Norway is equivalent to approximately 14% of GDP. In the US and the UK, the government securities markets are equivalent to 63% and 75% of GDP, respectively.

At the end of October 2010, the outstanding volume of government bonds and Treasury bills in Norway was NOK 234bn and 292bn, respectively (see Chart 3). Around NOK 230bn in Treasury bills were utilised in the swap arrangement. This represents nearly 80% of the total outstanding volume of Treasury bills at the end of October 2010. Approximately a third of the Treasury bills from the swap arrangement mature next year (see Chart 4). If we disregard

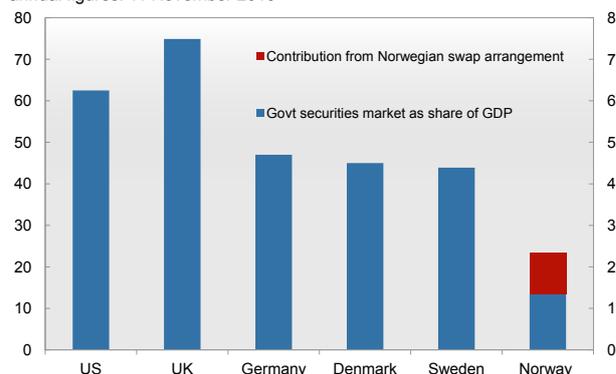
5 See Norges Bank’s “Response to the European Commission’s consultation on further possible changes to the capital requirements directive (‘CRD IV’)” from 16 April 2010 ([http://www.norges-bank.no/templates/article\\_76700.aspx](http://www.norges-bank.no/templates/article_76700.aspx)).

Chart 1 Banks<sup>1)</sup> liquid assets as a percentage of required liquid assets. Number of banks. As at 2009 Q4 and 2010 Q2



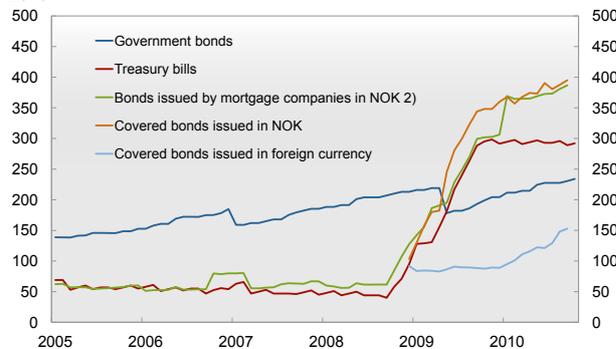
1) All banks excluding branches of foreign banks in Norway  
Source: Norges Bank

Chart 2 Government securities market as a share of GDP. Per cent. Daily and annual figures. 11 November 2010<sup>1)</sup>



1) Outstanding government securities as at 11 November 2010 and total GDP as at 2009  
Sources: Bloomberg and IMF

Chart 3 Outstanding government securities and bonds issued by mortgage companies. In billions of NOK. Monthly figures. January 2005 – September 2010<sup>1)</sup>



1) Figures for government bonds and Treasury bills up to October 2010  
2) Virtually all bonds issued by mortgage companies after 1 June 2007 are covered bonds  
Sources: Statistics Norway and Norges Bank

Chart 4 Maturity profile for the swap arrangement and for longer-term F-loans. In billions of NOK. Quarterly figures. 2010 Q4 – 2014 Q3



Source: Norges Bank

the swap arrangement, Treasury bill issues in Norway have been at a stable, low level in recent years (see Chart 5).

The phasing-out of the swap arrangement will result in a decline in Norwegian banks' holdings of Treasury bills. Norwegian banks will thus have fewer government securities available for their liquidity buffer. This will make it more of a challenge for banks to maintain their holdings of liquid assets. In an already small government securities market, the expiry of the swap arrangement will increase Norwegian banks' need to have covered bonds approved for inclusion in their liquidity buffer and for alternatives for countries with small government securities markets.

## The Norwegian covered bond market

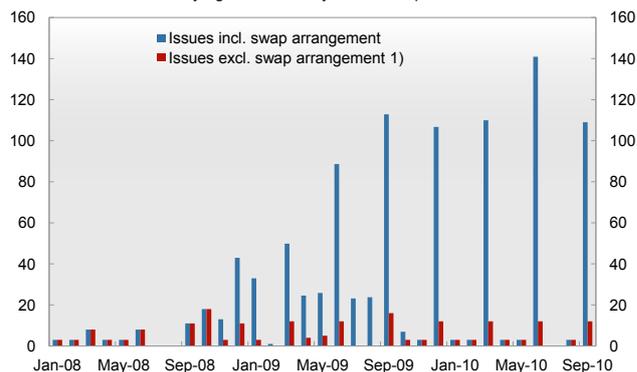
### The Norwegian covered bond market and the swap arrangement

The Norwegian market for covered bonds is new and small compared with similar markets in other European countries<sup>6</sup> (see Chart 6). In Norway the covered bond market was equivalent to 19% of overall GDP in 2009, while markets in Denmark and Sweden were equivalent to 144% and 46%, respectively. Covered bonds have a long history in Denmark, and the Danish covered bond market is among the largest in Europe. Despite their relatively recent appearance in Norway, covered bonds have already become an important funding source for Norwegian financial groups.

In September 2010, Norwegian mortgage companies had NOK 395bn in outstanding covered bonds (see Chart 3). The outstanding volume of covered bonds denominated in Norwegian kroner and foreign currency was NOK 548bn in September 2010. Most covered bonds denominated in Norwegian kroner are listed on Oslo Børs (Oslo Stock Exchange). Under Norges Bank's collateral requirements, covered bonds must be listed in order to be accepted as collateral<sup>7</sup>.

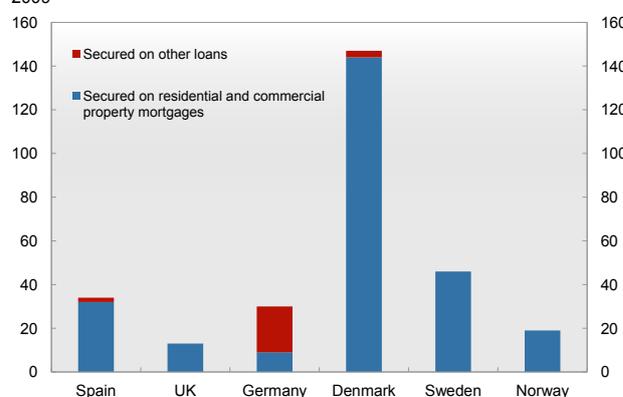
The outstanding volume of covered bonds increased sharply in autumn 2008 due to the swap arrangement. Under the swap arrangement, the government received

Chart 5 Issues of Norwegian Treasury bills incl. and excl. swap arrangement. In billions of NOK. Monthly figures. January 2008 – September 2010



1) Both new issues and rollovers in swap arrangement are excluded  
Sources: Statistics Norway and Norges Bank

Chart 6 Covered bond market as a share of GDP. Per cent. Annual figures. 2009



Sources: European Covered Bond Council and Eurostat

covered bonds in the amount of NOK 239bn<sup>8</sup>, which were issued by Norwegian mortgage companies. When the swap arrangement expires, mortgage companies will have to replace this with covered bond funding from the market. The result may be a more liquid Norwegian krone covered bond market. However, a large portion of covered bonds is expected to be refinanced in foreign markets and thus in foreign currency.

A large volume of loans maturing at the same time makes banks vulnerable to market performance on the maturity date. Banks therefore need to seek new funding in sufficient time before the swap arrangement expires. In a letter to the Ministry of Finance, Norges Bank recommended that banks participating in the swap arrangement be offered early redemption<sup>9</sup>. This may contribute to a more

6 Covered bonds issued by companies in other jurisdictions resemble Norwegian covered bonds. In this commentary, the generic term covered bonds is used for foreign as well as Norwegian covered bonds. For a detailed description of covered bonds, see the European Covered Bond Council website:

<http://ecbc.hypo.org/Content/default.asp?PageID=456>

7 See Guidelines for pledging securities and fund units as collateral for loans in Norges Bank, Circular No. 6/23 November 2010:

[http://www.norges-bank.no/templates/article\\_77716.aspx](http://www.norges-bank.no/templates/article_77716.aspx)

8 In November 2010, the outstanding volume of covered bonds from the swap arrangement is NOK 233bn. Amounts are stated in nominal terms before haircut under the terms of the swap arrangement.

9 See Proposition No. 1, Supplement 4 (2010-2011) to the Storting: <http://www.regjeringen.no/nb/dep/fin/dok/regpubl/prop/2010-2011/prop-1-s-tilllegg-4-2010-2011.html?id=622829>

gradual phasing-out of the swap arrangement and help to even out banks' borrowing.

A large covered bond market can provide mortgage companies, which are owned by banks, with less expensive funding. As covered bonds give investors preference rights to a pool of collateral, they can be issued on better terms than unsecured bonds or loans. Investors do not require a return on an investment in covered bonds that is as high as an investment in ordinary bank bonds (see Chart 7).

### Regulatory changes will affect demand for covered bonds

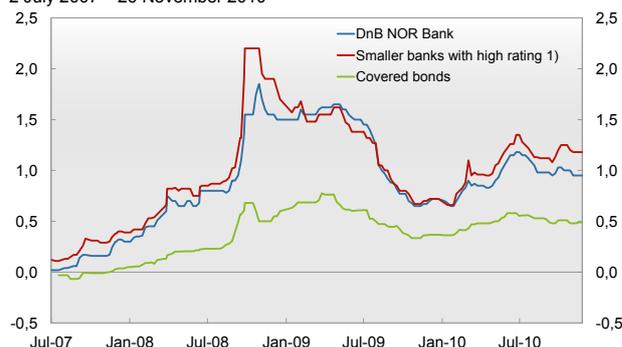
The Basel Committee's proposed regulatory changes will likely lead to higher demand for covered bonds from banks and other financial institutions. Covered bonds already have a lower risk weighting under the capital adequacy rules and higher investment limits in insurance company and securities fund regulations than traditional bank bonds. This will boost demand for covered bonds. Covered bonds are also a feasible substitute for government securities as a benchmark instrument. Such a substitute may be especially relevant for countries with small government securities markets. From 15 February 2012, bank bonds will not be eligible as collateral under Norges Bank's collateral requirements<sup>10</sup>. At the same time, like most other central banks, Norges Bank will accept covered bonds as collateral for loans. This may also serve to increase demand for covered bonds.

The new Solvency II rules for insurance companies to be introduced from 2013 in EU and EEA countries also provide incentives for increasing investment in covered bonds. Under current rules, insurance companies' liabilities in many countries are valued on the basis of a fixed discount rate set by the government. Assets are measured at market value or at amortised cost<sup>11</sup>. As both assets and liabilities will be measured at market value under the new regulations, the value of liabilities will fluctuate more than it does currently. Investing in fixed-rate long bonds will increase the duration of assets, enabling insurance companies to ensure adequate correlation between the interest rate sensitivity of assets and liabilities. Under the new rules, government bonds and covered bonds, which have long maturities and low credit risk, will be attractive investments for life insurance companies.

<sup>10</sup> See Norges Bank's letter of 22 October 2009: "Circulation for comment regarding amendments to the Guidelines for pledging securities as collateral for loans from Norges Bank" ([http://www.norges-bank.no/templates/article\\_75654.aspx](http://www.norges-bank.no/templates/article_75654.aspx)).

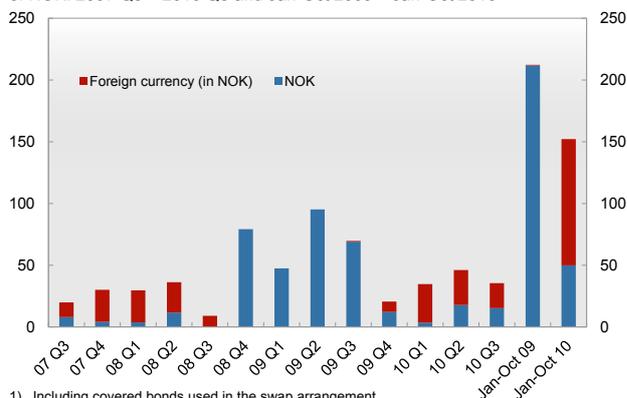
<sup>11</sup> Amortised cost is an accounting term for where a financial asset is measured as the present value of expected future cash flows over its remaining useful life, discounted by the asset's effective interest rate. The book value is adjusted if the enterprise changes its estimates of future cash flows.

Chart 7 Indicative risk premiums on 5-year Norwegian bank bonds and covered bonds. Spreads against swap rates. Percentage points. Weekly figures. 2 July 2007 – 26 November 2010



1) Banks with total assets of between NOK 5bn and 15bn and rated A by DnB NOR Markets  
Source: DnB NOR Markets

Chart 8 Issues of covered bonds<sup>1)</sup>, Norwegian mortgage companies. In billions of NOK. 2007 Q3 – 2010 Q3 and Jan-Oct 2009 – Jan-Oct 2010



1) Including covered bonds used in the swap arrangement  
Sources: Stamdata, Bloomberg and Norges Bank

So far this year, Norwegian mortgage companies have issued a higher proportion of their covered bonds in foreign currency than in 2008 or 2009 (see Chart 8). In 2009, mortgage company covered bonds denominated in Norwegian kroner were primarily issued under the swap arrangement. To cover capital outflow in Norwegian kroner, Norwegian krone liquidity buffer requirements have been proposed. This may make it less attractive to hold securities denominated in foreign currency.

## Owner composition of the Norwegian government securities and covered bond market

### Who owns Norwegian government securities and covered bonds?

Covered bonds have low credit risk and a somewhat higher current rate of return than similarly rated government bonds. This has helped to make covered bonds a suitable investment for a broad range of investors, such as banks, insurance companies, pension funds and various other funds. As covered bonds are often issued with longer maturities than ordinary bank bonds, their rollover frequency is lower.

Owing to the swap arrangement, the central government and social security administration account for approximately 60% of all investments in covered bonds issued by Norwegian mortgage companies (see Chart 9)<sup>12</sup>. Life insurance companies and private sector pension funds account for around 9% of investments in covered bonds. The new Solvency II rules may increase this holding going forward.

On account of the swap arrangement, banks hold 39% of Treasury bills (see Chart 10). By comparison, banks own 4% of Norwegian government bonds (see Chart 11). Banks' holdings of liquid assets are very important for enabling banks to meet the Basel Committee's liquidity buffer requirement. The Treasury bills the banks acquired through the swap arrangement resulted in a sharp rise in their holdings of liquid assets in 2009 (see Chart 12). Banks have sold Treasury bills through 2010, and at the end of September 2010 they owned approximately 60% of the Treasury bills they had acquired.

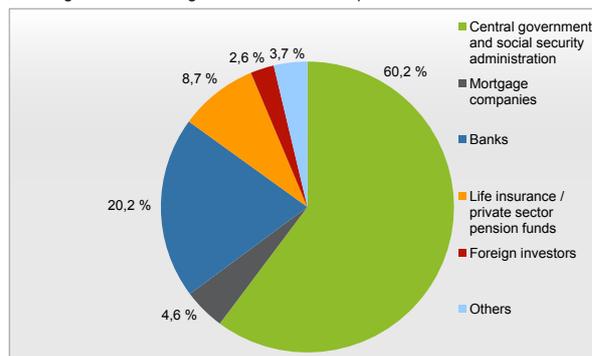
Foreign investors hold 37% and 66%, respectively, of Norwegian Treasury bills and government bonds (see Charts 10 and 11). Foreign investors' holdings of Norwegian government bonds have increased by 20 percentage points from January 2007 to October 2010. Norwegian government securities are regarded as a safe investment, which is reflected by low Norwegian government bond yields. Foreign investors own approximately 3% of all covered bonds registered in VPS, the Norwegian central securities depository (see Chart 9). The explanation is that covered bond issues in foreign currency are not registered in VPS. Of Norwegian mortgage companies' total issues denominated in Norwegian kroner and foreign currency year-to-date in 2010, foreign currency issues account for 67% (see Chart 8). There is reason to believe that portions of the foreign currency covered bonds may be held by Norwegian investors. Going forward, the combination of low risk and higher returns than government bonds may increase interest in covered bonds also among Norwegian investors.

### The importance of the ownership structure for the liquidity of government securities and covered bonds in the secondary market

A large proportion of issued government securities are held to maturity and not traded in the secondary market. Foreign investors' holdings of government bonds and

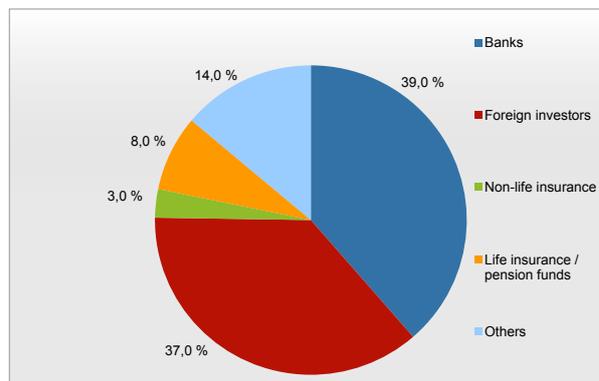
<sup>12</sup> In VPS statistics, the central government is registered as the owner of covered bonds from the swap arrangement. However, for accounting purposes banks continue to recognise covered bonds from the swap arrangement on their balance sheets, since they retain both the risk from and return on the covered bonds (cf. IAS 39.20). The offsetting entry in the bank's accounts is central government loans.

Chart 9 Owner composition for covered bonds<sup>1)</sup> denominated in NOK. Percentage of outstanding volume. As at 30 September 2010



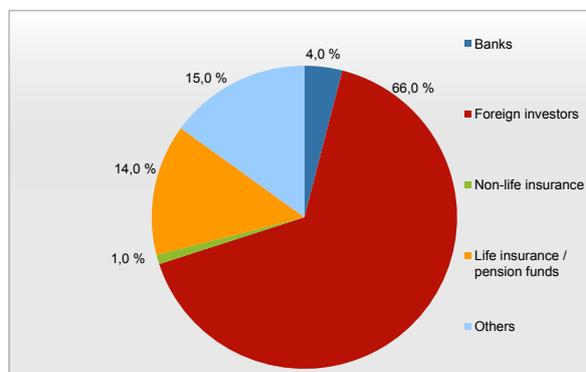
<sup>1)</sup> Chart shows owner composition for bonds issued by mortgage companies. Outstanding volume in bonds other than covered bonds is negligible  
Sources: Norwegian central securities depository and DnB NOR Markets

Chart 10 Owner composition for Norwegian Treasury bills. Percentage of outstanding volume. As at 31 October 2010



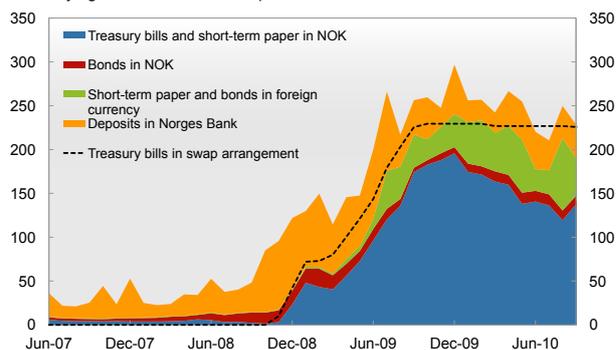
Source: Norwegian central securities depository

Chart 11 Owner composition for Norwegian government bonds. Percentage of outstanding volume. As at 31 October 2010



Source: Norwegian central securities depository

Chart 12 Norwegian banks<sup>1)</sup> deposits in Norges Bank and holdings of government and government-guaranteed short-term paper. In billions of NOK. Monthly figures. June 2007 – September 2010



<sup>1)</sup> All banks excluding branches of foreign banks in Norway  
Source: Norges Bank

Treasury bills are largely assumed to be investments held to maturity. The supply of government securities and liquidity in the market are reduced when investors hold government securities to maturity. Banks' holdings of both government securities and covered bonds are generally traded in the secondary market. Insurance companies' and pension funds' holdings are traded to some extent, but again, a large percentage of investments are held to maturity. When the swap arrangement expires in the coming years, more covered bonds will be traded in the secondary market.

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- Proposition No. 11 (2006-2007) to the Odelsting: Bill to amend Act No. 39 of 10 June 1988 relating to insurance activities etc. Recommendation from the Ministry of Finance of 1 December 2006
- Regulation No. 550 of 25 May 2007, om kredittforetak som utsteder obligasjoner med fortrinnsrett i en sikkerhetsmasse bestående av offentlige lån, utlån med pant i bolig eller annen fast eiendom [relating to mortgage companies that issue OMF covered bonds in a collateral pool consisting of loans to public sector entities, residential mortgages or other property mortgages].