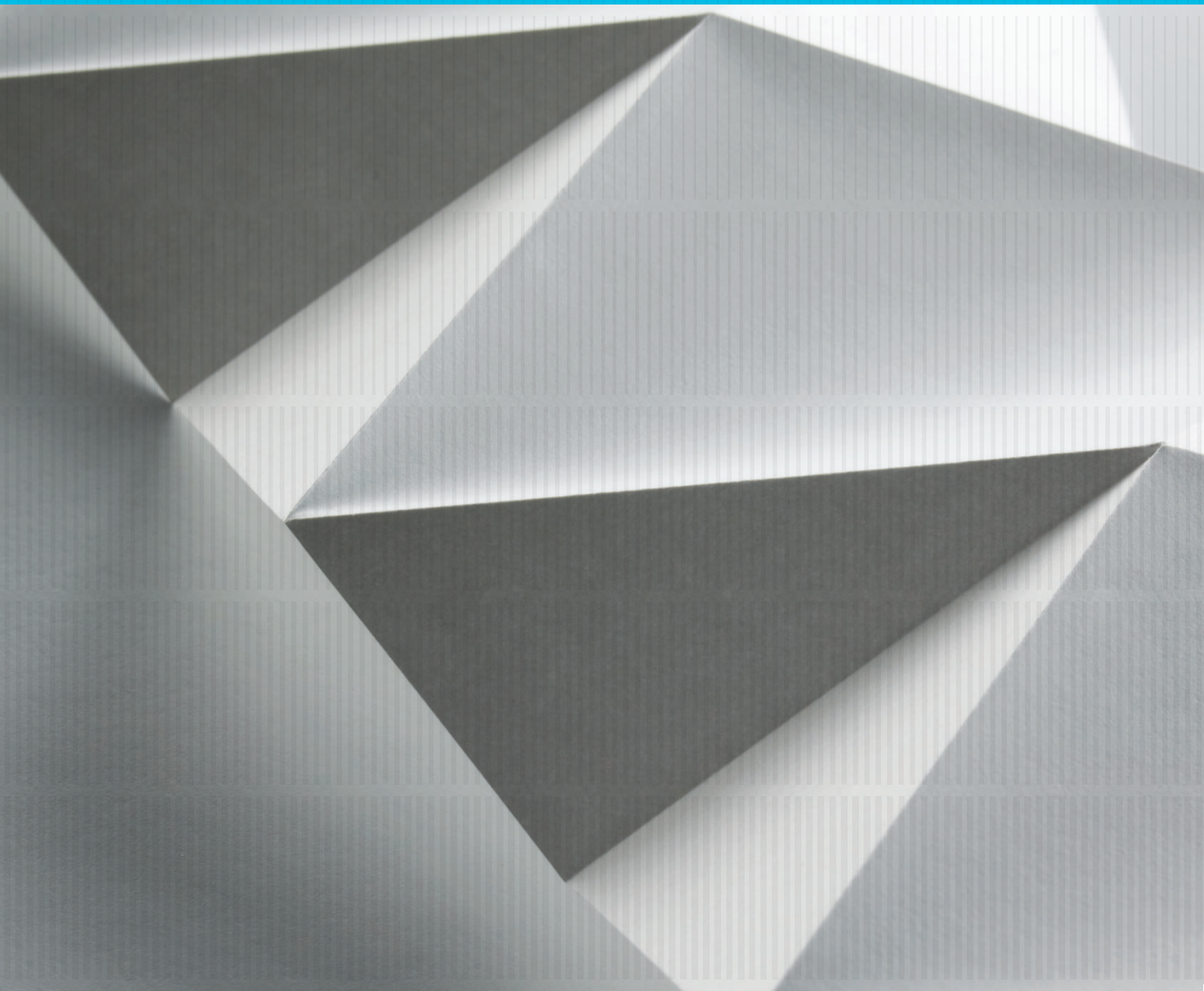
FINANSTILSYNET
THE FINANCIAL SUPERVISORY
AUTHORITY OF NORWAY

RISK OUTLOOK 2011

THE FINANCIAL MARKET IN NORWAY

The report gives an account of the situation in financial institutions in light of economic and market developments, and assesses trends that may give rise to stability problems in the Norwegian financial system.



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Unless otherwise stated, Finanstilsynet is the source of charts and tables.
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Summary and assessments

Economic trends and markets

The world economic recovery continues, although growth slowed somewhat through 2010 due to a slight deceleration among industrialised countries. Somewhat lower overall growth is expected in the next two years. The two-track global economy continues with very high growth rates in the emerging countries, particularly in Asia, with China and India to the fore, while growth impulses in the industrialised world are moderate. This is particularly true of the debt-burdened euro countries and Japan, whereas prospects for the US and several northern European countries are far brighter. Most industrial countries have yet to regain the production levels in effect prior to the onset of the financial crisis in 2008. In the wake of the crisis unemployment rose steeply in several western countries, and the upswing has so far brought little increase in employment.

Several uncertainties attend the path of the international economy. A substantial risk factor is the budget deficits in several euro countries, along with an uncertain growth outlook in the US given the federal government's impending need to retrench. In many other countries too, the burden of public debt cannot be sustained in the long term. Although most countries have taken tightening action, forecasts point to a further increase in public debt in 2011. While further tightening of public budgets could jeopardise the economic upturn, the sizeable public deficits in some European countries make rapid consolidation of central government finances imperative.

Another substantial risk factor is commodity prices, with the price of oil, metals and not least food products having risen sharply in the past half-year. In the case of oil, the steep price increase is related to the turbulence in North Africa and the Middle East. Continued high commodity prices will dampen growth among importing countries causing a significant deterioration in their terms of trade. Higher commodity prices will concurrently translate into higher inflation in general which may prompt monetary policy tightening and lower growth.

Norway emerged relatively favourably from the financial crisis, saw an insignificant fall in GDP and is one of few industrial countries where production in the mainland (non-oil) economy is now back above its pre-crisis level. A contributory factor is the impetus Norway's commodity-based export structure received from high growth in emerging countries. Another is the support measures initiated by the authorities along with an expansionary monetary and fiscal policy. A robust, well regulated financial sector also played its part in curbing the negative effects of the international financial crisis. These factors combined enabled Norwegian banks to largely maintain their lending.

GDP growth in mainland (non-oil) Norway is expected to pick up from 2.2 per cent in 2010 to around 3.5 per cent in each of the following three years. This is one percentage point higher than estimated

trend growth over the last 30 years. Although the economy is now in a cyclical upturn, capacity utilisation remains relatively weak. The upturn is expected to be broad-based, with lasting low interest rates and increased activity levels spurring higher investments in mainland firms, the public sector and households alike. This is likely to be accompanied by continued high growth in private consumption and somewhat higher exports. The economic downturn brought increased unemployment as from the start of 2008, but the increase has proven very modest by international standards. Forecasts point to a decline in unemployment ahead as the recovery gains a firm footing.

After the decline in house prices in 2008, growth in prices of existing homes picked up rapidly and remains high. Low interest rates, low unemployment and a limited offering of new homes have lifted prices of Norwegian housing back to their pre-crisis level. Housing investments fell sharply up to the end of 2009. Despite increasing over the course of 2010, investment levels remain far below the peak seen in 2007. Both housing investments and house prices are expected to grow in the next few years due to the economic upturn and continued relatively low lending rates. House prices represent a significant uncertainty in the Norwegian economy in view of the unprecedented debt burden concurrent with household debt levels that are still growing more quickly than incomes.

The market for commercial properties was on a positive trend in 2010. Office selling prices rose in the second half-year and the fall in rental prices came to a halt. Market actors anticipate a further rise in selling prices, while rental prices are expected to remain stable. The uncertainties relate chiefly to international developments, interest rates and domestic demand.

During the financial crisis extreme turbulence was seen in securities markets with plunging share prices and declining interest rates. Stock market returns were again positive in 2010. The relatively low return in European markets reflects the substantial economic problems in the region while the high return in the Norwegian, and above all the US, market suggests rising expectations of future economic growth.

Interest rates in the money market are low, partly reflecting very low key policy rates in many countries, but also reflecting lower risk premiums after the very high levels seen during the international financial crisis in autumn 2008. Interest rates in the government bond market are also low. At the end of 2010 the rate on Norwegian 10-year government bonds was below 4 per cent, while corresponding German and US rates were even lower. Government bond rates vary widely in the euro area, with heavily indebted countries paying a high price for their funding. At the end of February 2011 it cost almost 10 per cent of nominal value per year over a five-year period to insure against a Greek sovereign debt default, while insuring German government bonds cost 0.4 per cent per year.

Uncertainty with regard to securities markets is very high: there is a risk that share prices will fall and that risk premiums in the fixed income market will rise. This is rooted in much uncertainty with regard to the real economy and international financial markets ahead. Norwegian markets for shares, bonds and money market instruments are heavily influenced by international developments: a negative international stock market picture is generally replicated in Norway. Price changes are however on average larger in Norway, due largely to its less diversified industrial structure. Low interest rates

abroad foster low rates in Norway, and the same applies to risk premiums on non-government securities and in the money market.

Profitability and financial strength

Norwegian banks achieved good results in 2010. A halving of loan losses was the main contributor alongside substantial one-off revenues recorded in the course of the year. Banks' underlying earnings in the form of net interest revenues, on the other hand, are under pressure from higher funding costs and intense competition for borrowers and depositors. Hence, viewed in relation to banks' total assets, the year's profit performance was below the average for the decade preceding the financial crisis in 2008. Over time loan losses have accounted for the bulk of fluctuations in bank's performances. Banks' success in keeping a tighter rein on losses in this cyclical downturn is due not only to favourable macroeconomic conditions, but also to good credit practices. Banks further strengthened their financial position in 2010 through retained profits and stock issues.

Norwegian life insurers and pension funds combined saw improved performances in 2010, thanks in part to the stock market recovery. Although their equity exposure is higher than in 2008 they retain a large bond portfolio, and the low interest rate level therefore poses a major challenge. Over time pension funds can point to higher returns than life companies due mainly to their higher equity exposure. Although buffer capital rose in 2010, life insurers must ensure a level ahead that provides sufficient flexibility in asset management. Solvency II will require greater accumulation of buffer capital.

Risk factors

Banks encounter risks specific to the individual bank and risks due to developments in the economy and markets. The financial market structure also affects banks' risk through for example the level of competition. At the same time banks have a major influence on the economy through their lending activity. This was clearly illustrated during the international financial crisis when a number of banks reduced their lending in such a way that the economies of many countries suffered. In good times lending growth may become excessive, creating bubbles in the economy.

Credit risk. 80 per cent of the total assets of Norwegian banks and finance and mortgage companies are loans, making credit risk clearly the most important risk factor for banks. After declining in 2009, credit growth in 2010 reached about 6 per cent. While growth in home mortgage loans has been relatively stable after the financial turbulence, growth in lending to firms has varied widely.

In 2010 firms could point to improved profitability and return on equity, and have improved their debt servicing capacity through moderate growth in debt. However, the downside risk is substantial due to international uncertainty, particularly for firms with a high proportion of exports to traditional markets in Europe. Developments in commercial property and shipping are particularly significant for banks' aggregate credit risk.

Norwegian banks have little direct exposure to debt-burdened euro countries, but increased turbulence will bring higher risk premiums in the bond market and increased funding costs for Norwegian banks. A further deterioration in these countries could also result in lower earnings for Norwegian firms. Finanstilsynet's survey of banks' counterparty risk shows that despite some large individual exposures, concentration risk related to common counterparties appears to be relatively limited.

Households' debt growth has exceeded wage growth for many years, and overall indebtedness is now more than twice the size of overall disposable income. This is high, both in a historical context and compared with other countries. Since most home mortgage loans carry floating interest, higher interest rates will be immediately reflected in household consumption. Calculations by Statistics Norway in collaboration with Finanstilsynet show household finances to be highly sensitive to interest rate changes. Close to 20 per cent of households will face a high interest burden upon normalisation of the interest rate. Although the home loan survey of autumn 2010 shows a decline in loans with a high loan-to-value ratio, especially for younger home buyers, the proportion of loans with a high loan-to-value ratio remains high.

Losses on home mortgage loans have been very low historically speaking. However, the indirect effects of a sharp fall in prices in the housing market may be substantial. A reduction in household consumption as a result of reduced housing wealth and reduced confidence in the economic situation impairs corporate earnings and debt-servicing capacity and increases banks' credit risk and losses on loans to the corporate sector. This is particularly true of loans to commercial property.

Liquidity risk. The financial crisis in autumn 2008 clearly demonstrated the significance of liquidity risk. In recent years Norwegian banks have increased their proportion of long-term funding both directly and by issuing covered bonds through residential mortgage companies. Partly as a result of changes in the rules governing provision of security at Norges Bank, demand for covered bonds is expected to increase relative to bank bonds. Consequently a larger proportion of banks' market funding ahead will be through residential mortgage companies. Customer deposits rose by 7 per cent in 2010 and this, together with the transfer of loan portfolios to residential mortgage companies, means that banks' deposit-to-loan ratio (parent bank) is rising to its highest level since 1996. The Norwegian deposit guarantee scheme promotes stable customer deposits. Since Norwegian credit institutions fund their operations largely in foreign markets, this sector is vulnerable to international financial turbulence. More money market certificates and bonds are now issued in foreign currency than in Norwegian kroner. Banks' market financing is substantially more expensive than prior to the financial turbulence. The interest rate differential between Norwegian bank bonds and government bonds is lower than during the crisis, but still higher than prior to the crisis.

Market risk. Given their large holdings of equities and fixed income instruments, life insurers are particularly exposed to market risk. The equity component in life insurers' collective portfolios was substantially reduced in 2008, but thereafter increased to 17 per cent by the end of 2010. Much of the equity exposure is to the international market. About half of the collective portfolios are invested in bonds. Although exposure to the debt-burdened euro countries is limited, general uncertainty heightens market risk. The annual interest guarantee on defined benefit pension agreements is an incentive for life insurers to maintain low portfolio risk, which may impair the opportunities for excess return over

time. Under-fulfilment of the interest guarantee must be covered by the insurer's equity capital should its buffer capital not suffice.

Solvency II and new conduct of business rules. The new European solvency framework for insurers, Solvency II, is to be introduced as from 2013. At the end of 2010 several Norwegian life insurers were out of line with the forthcoming requirements. Finanstilsynet has recommended a number of adjustments to the conduct of business rules in light of the transition to the new solvency framework. The changes are likely to encourage higher buffers and greater leeway for long-term asset management by merging fluctuation reserves and supplementary provisions. A further recommendation is to permit the voluntary conversion of paid-up policies with guaranteed interest to unit-linked pension capital certificates.

Operational risk. Operational risk is the risk of loss resulting from inadequate or failed internal processes or systems. This is a broad area covering money laundering and insurance fraud et al. In recent years risk arising in ICT and payment systems in particular has been actualised by identity theft, leaks of credit card data and skimming. Growing recourse to outsourcing to providers inside and outside Norway augments the risk.

The financial crisis, regulation and costs to society

The international financial crisis in autumn 2008 hit the global economy with the deepest downturn since the 1930s. Several factors explain why a global financial crisis arose and why the real economic effects were so grave. The crisis uncovered a number of shortcomings in the regulation and supervision of the financial sector, prompting a wide-ranging international effort to improve and harmonise regulation and supervision. In future stricter requirements will be imposed on financial institutions' capital adequacy, and liquidity will be subject to qualitative and quantitative requirements. The new rules are to be introduced in steps in the period 2013-2019. Another proposal is to introduce a minimum requirement on equity capital (leverage), defined as the ratio of institutions' equity capital to a specified measure of exposure. This requirement will limit leverage in the banking system. It is due to be finalised in 2017 and will become effective in 2018. Further, with a view to damping the impact of economic and financial shocks, a capital conservation buffer able to absorb losses is proposed along with a countercyclical buffer to be activated in periods of strong credit growth. Banks holding inadequate common equity tier 1 capital will face restrictions on dividend policy, bonus payments and share buybacks.

Norwegian banks are already largely in compliance with the new minimum capital requirements because Norway has imposed stricter regulation and supervisory practice in this area and because banks have strengthened their equity capital positions. However, many banks need to strengthen their Tier 1 capital further in order to meet new requirements on buffers beyond the statutory minimum. Quantitative liquidity requirements have yet to be finalised.

The financial system is tightly interwoven. Financial problems in the banking sector can spread rapidly to other parts of the economy. Contagion effects in this sector are more serious than in traditional

goods and services producing industries. Banks are subject to capital requirements, liquidity requirements, deposit guarantee schemes and other regulation since economic crises and failing confidence could lead to financial sector collapse, reduced economic growth and strong increase in unemployment.

Financial crises exact a heavy economic cost. Consequently even a relatively small reduction in the probability of a crisis produces an expected gain that more than compensates for the costs incurred on stricter regulation. A number of empirical studies suggest that a gradual phase-in of stricter capital and liquidity requirements curbs the cost of stricter regulation. This approach enables banks to increase their equity capital through retained profits and gives them time to adjust to stricter liquidity requirements so that loan volumes and growth are not overly impacted. Higher capital requirements and quantitative requirements on banks' liquidity lessen the probability of financial crises, and also diminish economic oscillations. This is beneficial to risk-averse investors and could contribute, ceteris paribus, to lower risk premiums and increased investment. New capital and liquidity requirements will nevertheless heighten costs, some of which must be shouldered by banks' customers.

The structure of financial and securities markets

Savers' risk of losing money – be they households, non-financial firms or the public administration – depends on the size of their exposure to various financial assets and the risk attending the respective asset classes (financial claims). Since a substantial share of their financial wealth is tied up in insurance technical reserves and bank deposits, households have substantial direct exposure to banks and life insurers. However, their investments in quoted shares are insignificant, and they are little exposed to stock market volatility. Firms are more exposed to the securities markets than are households. Their shareholding is high, but exposures are concentrated on the unlisted market. The public sector's financial assets are largely reflected in the activity of the Government Pension Fund – Global. The Fund has a long investment horizon and is well positioned to bear the risk attending investments in the global financial markets.

More than half of households' gross domestic debt is to banks, while about a third is debt to mortgage companies, which are mainly owned by banks. Debt to mortgage companies has risen steeply in recent years, mainly due to banks' transfer of loan portfolios to mortgage companies. Non-financial firms obtain most of their funding from banks, and their funding structure is less diversified than previously. Another important funding source for non-financial firms is the stock market. Non-financial firms' funding and activity levels are therefore vulnerable to turbulence in securities markets and the banking sector alike. The foreign component of aggregate gross debt varies widely, above all in periods of crisis.

In recent years the banking sector in the EU and in Norway has grown relative to GDP, and individual institutions' relative size has also increased. The European credit market has undergone consolidation, and credit institutions were fewer in number at the end of 2009 than in 2001. In consequence of concentration, banking sector crises can inflict greater damage on the real economy than previously and the economy is more vulnerable to developments at individual institutions. Market concentration

in Europe at the end of 2009 was at about the same level as in the years prior to the financial crisis. Market concentration in Norway is higher than the EU average, but somewhat lower than in other Nordic countries based on the market share of the five largest actors. High market concentration can impair competition.

Life insurers and pension funds are highly important investors in the international arena. In Norway too, this sector is an important capital markets actor. Relative to GDP, however, Norwegian insurers' investment portfolios are far smaller than is the case in other Nordic countries and significantly below the EU average. An important reason for this is Norway's social security system in which the state has responsibility for a sizeable share of future pension payments.

The total assets of the seven largest financial conglomerates / groupings of financial institutions account for about two-thirds of aggregate total assets in Norway's financial market. DnB NOR operates in all areas of financial services provision and is the country's largest financial conglomerate. Foreign actors have accumulated substantial market shares in Norway, and the six largest Nordic financial groups operate here. Market structure has been little affected by the financial crisis, and few major changes have taken place in recent years. Of greatest significance is a new body of rules for savings banks and the establishment of residential mortgage companies. The major Nordic financial groupings have established operations in all Nordic countries. Several also have a substantial presence in the Baltics and other eastern European states.

Given the complex infrastructure of European securities markets, it is difficult to establish a well-functioning, common European securities market. The costs of cross-border clearing and settlement are high. The financial crisis in autumn 2008 brought to governments' attention a need for measures able to reduce risk to market actors, increase confidence in the market and improve surveillance. One initiative involves the introduction of a new body of rules for clearing houses, mandatory clearing of OTC derivatives and a reporting obligation in respect of such derivatives. New rules are expected to enter into force by the end of 2012. The EU is also working on a legal framework for securities registers and on harmonising aspects of the securities settlement process. Target 2 Securities (T2S) is a project driven by the European Central Bank (ECB) for the purpose of establishing a competitive pan-European securities market.T2S is a technical platform for cross-border and domestic securities settlement involving central bank funds. The Norwegian Central Securities Depository (VPS) which operates the central Norwegian securities settlement process has, together with 30 European central securities depositories, signed an agreement of intent with the ECB to put T2S into use. In 2010 Oslo Børs also established mandatory use of a central counterparty for settlement of equity instruments.

The establishment of multilateral trading facilities (MTFs) has led to increased fragmentation of securities trading, lower liquidity at the individual marketplace and may impair market monitoring. This, in combination with the general market downturn, has brought a substantial fall in trading volumes in equity instruments at established European stock exchanges of late. Transaction numbers at Oslo Børs, on the other hand, have risen strongly for several years, partly due to the spread of internet broking and the emergence of algorithmic trading. Trading in dark pools has grown substantially. Dark pools enable institutional investors to trade large volumes of shares without affecting the market price, and make for less transparent markets.

Consumer protection

Finanstilsynet is concerned with consumer issues, and consumer protection is an integral part of its supervisory remit. Institutions are expected to provide comprehensible and adequate information on all types of financial products. According to a wide-ranging survey of banks' sales of financial instruments in autumn 2010, savings products are now generally uncomplicated and remuneration is product-neutral. However, banks would do well to market low-cost mutual funds (index funds) with greater vigour. Debt financing of structured products has ceased due to tightening of the rules early in 2008.

The guidelines on home mortgage lending introduced by Finanstilsynet in 2010 are grounded not simply in interests of financial stability, but also in a need to protect vulnerable borrowers. Curbing borrowings in relation to property value and borrowers' income lessens the likelihood of housing bubbles and protects the individual consumer against taking out excessive mortgages.

Banks and finance companies both offer consumer loans. According to a survey by Finanstilsynet, little in the way of consumer loans goes to younger borrowers, and institutions providing such loans subject borrowers to stringent credit assessments. Between 40 and 90 per cent of loan applications are refused. Consumer lending in Norway is on a small scale, accounting for a mere 2 per cent of households' aggregate borrowing. Finanstilsynet has also surveyed practices at the four largest debt collection agencies. According to this survey, only 16 per cent of debt recovery cases refer to consumer loans. This type of debt recovery has declined in the younger age groups, compared with a steady increase among the over-30s.

Assessment of the prospects for financial stability

Considerable uncertainty attends the further trend in the international economy. Forecasts point to moderate growth in the world economy, but the trend could prove significantly weaker. Uncertainty is particularly marked in the case of several European countries where fiscal policy stimulatory measures and tax revenue shortfalls have led to an unsustainable public debt situation, and Greece and Ireland have been compelled to seek EU and IMF assistance. Should more countries encounter similar problems there is a risk that the euro collaboration will be unable to continue in its present form, thereby sparking substantial turbulence in financial markets. Revolutions and unrest in Northern Africa and the Middle East add to the uncertainty with regard to the international economy ahead. The oil price has risen sharply of late and may put a damper on growth in importing countries.

Thus far Norway has been hit far more mildly by the economic reverberations of the international financial crisis than have other industrialised countries. The cyclical trough is behind us and forecasts indicate that growth will pick up ahead. The upturn appears to be broad-based and there is concern that the Norwegian economy may be at risk of overheating. The high oil price provides substantially higher revenues for Norway, and, if the fiscal spending rule is followed the economy will receive a vigorous stimulus. At the same time international turbulence and increased uncertainty among market actors is causing sizeable movements in securities markets, in Norway as elsewhere.

Of Norwegian institutions, life insurers are directly affected by declining markets. Increased uncertainty is prompting equity divestments with ensuing decline in value and flight to presumptively safer securities such as government bonds from selected countries, thereby pushing down interest rates. Although insurers see a short-term gain on their bond portfolios, a persistent low interest rate scenario creates problems in honouring long-term obligations. The introduction of a new solvency framework, Solvency II, will pose a major challenge to several insurers. Stress tests show that under current Norwegian conduct of business rules some insurers face substantial challenges associated with the capital requirements under Solvency II.

Norwegian banks managed well through the financial crisis. If the business climate and markets develop as expected, prospects for the banks are relatively favourable. However much uncertainty prevails, above all in the international arena. Experience from the international financial crisis showed that when international money markets dry up, Norwegian banks face funding problems. Through 2010 banks had ample access to favourably priced foreign funding. This could change rapidly if an uncertain situation were to arise with regard to Norwegian banks. Banks' long-term funding has increased, which in isolation reduces the liquidity risk in the Norwegian banking system. The market for covered bonds is becoming a steadily more important funding source. A large portion of the covered bonds issued in connection with the 'swap' arrangement matures as from 2011. It is not clear whether the market has the depth needed when large volumes are to be refinanced at the same time. The Ministry of Finance has opened the way for early redemption of the 'swap' arrangement.

A weaker trend in the international or Norwegian economy could in time increase banks' credit risk. A cyclically sensitive industry with a major bearing on banks' risk is commercial property. The prospects for commercial property are heavily affected by unemployment and the interest rate. The current trend in the international economy suggests that key policy rates will be kept low for a while yet. However, long lasting low interest rates could contribute to risk accumulation in the household sector. In recent years households' finances have been marked by a growing debt burden, little debt repayment and high loan-to-value ratios on home mortgage loans. These factors have heightened vulnerability in the event of an economic setback, which Finanstilsynet has warned against. Recent years' developments have been driven in part by optimism among households and expectations of further rises in house prices, as a result of which both indebtedness and house prices have now risen to a very high level. When interest rates sooner or later normalise, or if the Norwegian economy suffers a setback, a change of sentiment could spark a marked fall in house prices and substantial retrenchment among households. Falling consumption would produce negative secondary effects to the rest of the economy, with commercial property particularly affected. Rising commodity prices and inflation could prompt international interest-rate hikes at an earlier stage than previously assumed, possibly also spurring more rapid rate increases in Norway.

The international financial crisis uncovered a number of shortcomings in the regulation of the financial sector. Substantial changes have been recommended to avert new crises. Stricter requirements on capital adequacy will be imposed on financial institutions in the future, and institutions' liquidity will be subject to qualitative and quantitative requirements. Norwegian banks are already largely in compliance with the new tier 1 capital requirements. The additional requirement of capital buffers could however call for banks to strengthen their equity capital position further in order to avoid

restrictions on dividend payouts and to maintain a reasonable margin in relation to the requirements. Hence banks must in the years ahead expect to have to continue to devote a substantial portion of their profits to strengthening their equity capital. The issue of the pace of implementation of the new capital requirements should be discussed in a Nordic context.

Wide-ranging qualitative requirements for liquidity risk management have already been introduced, and quantitative liquidity requirements are planned. The latest impact study to assess the effects of international liquidity measures shows that Norwegian banks still face challenges with regard to the new liquidity requirements. Funding maturity needs to be increased and banks need to focus on enhancing the quality of their liquidity holdings. Finanstilsynet is introducing a regime requiring banks to report liquidity positions in conformity with the new liquidity indicators. Based on this reporting and the final design of EU rules, Finanstilsynet will consider early introduction of quantitative liquidity requirements. Opportunities for Nordic harmonisation will also be in focus.

The rapid growth in house prices and household debt entails the risk of a bubble. Such a bubble may burst if households' capacity and will to demand dwellings at high prices is threatened either by economic disturbances that impair employment or if interest rates rise to a level substantially higher than many assumed when taking out their mortgage. In the interest of limiting the risk of a house price bubble building up and bursting, it is important not to wait too long before the gradual normalisation of interest rates signalled by Norges Bank is put into effect. The guidelines for ensuring good home mortgage lending practices need to be followed up with pro-active inspection activity and possibly stricter regulation.

The question of a countercyclical capital buffer to curb excessive lending growth with a basis in a new international body of rules can only be considered from 2013 onwards. Further bolstering of banks' equity capital in 2011 and 2012 must as previously build on the dialogue between the banks and at Finanstilsynet with a basis in Pillar 2 of the Basel II framework which empowers Finanstilsynet to impose on the banks capital requirements above the statutory minimum.

1. Economic trends and markets

The real economy plays a significant role in banks' credit risk, whereas securities markets have a key bearing on risk facing insurers. As a small, open and commodity-producing economy, Norway is affected by the international economy in general and by developments in important commodity markets in particular. Loans to households make up a large portion of banks' loan portfolio, and credit risk rests on the trend in employment, the housing market and interest rates. Corporate portfolio risk is greatly affected by developments in markets for commercial property and shipping. Norwegian banks have little direct exposure to stock markets, and a sharp correction in this market therefore has limited direct effect on banks' earnings and financial position. For Norwegian life insurers and pension funds the situation is different: a stock market plunge poses a major challenge for these institutions, and the current low interest rates bear heavily on life insurers' ability to honour their annual interest guarantee.

Economic trends

The upturn in the world economy continues, although growth slowed somewhat over the course of 2010 due to a slight deceleration in the industrialised countries. Overall somewhat lower growth is expected in the next two years (table 1.1). The two-track global economy continues with very high growth rates in the emerging countries, in particular Asia – led by China and India – while growth impulses in the industrialised countries are moderate. Most industrial countries have yet to reach the production levels in effect prior to the onset of the financial crisis in 2008 (chart 1.1). Commodity prices have risen sharply in the past half-year, fuelling inflationary pressures. In the wake of the financial crisis unemployment rose substantially in several Western countries, and the upswing has thus far not led to any increase in employment. The public debt situation in many countries gives cause for concern about developments ahead.

Table 1.1 Key macroeconomic variables. Forecasts for 2011 and 2012

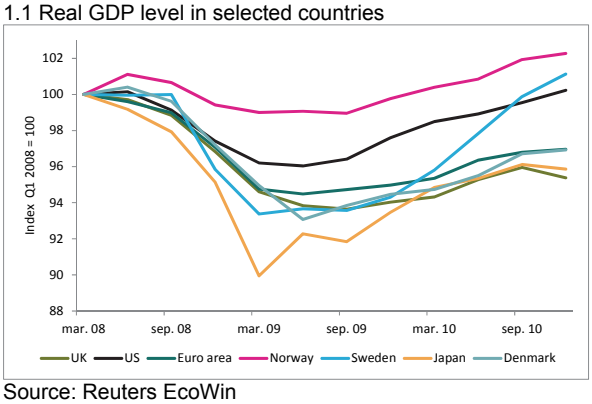
	World			Emerging economies			Industrial countries		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
GDP	5.0	4.4	4.5	7.1	6.5	6.5	3.0	2.5	2.5
Inflation				6.3	6.0	4.8	1.5	1.6	1.6

Source: IMF WEO Update, January 2011

Growth in the US economy slowed through the summer and autumn of 2010. For the year as a whole production grew by 2.8 per cent, in line with the long-term trend over the past 30 years. Forecasts indicate a slight increase in growth in the next two years (table 1.2). The labour market remains weak, despite some signs of improvement. This is damping growth in private consumption, while the continuation of tax reliefs and extension of the unemployment benefit period, adopted at the end of

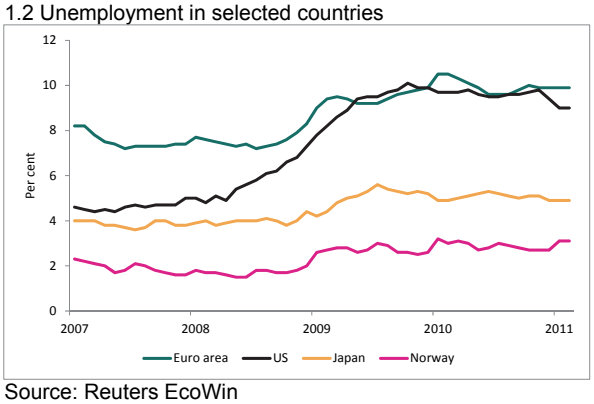
2010, are expected to have an expansionary effect. Concurrently the already large public deficit is growing, which has to be rectified. Tightening action in the public sector will dampen growth, probably from 2012 onwards. The trend in the housing market is very uncertain. House prices have again fallen in the past half-year with the termination of the stimulatory packages initiated after the financial crisis. Monetary policy remains expansionary due to the low key policy interest rate and high liquidity supply. Despite some increase of late, inflation remains low, and the key rate is expected to remain low until the economic recovery has taken hold.

1.1 Real GDP level in selected countries



Source: Reuters EcoWin

1.2 Unemployment in selected countries



Source: Reuters EcoWin

In the euro area growth slowed in the autumn of 2010, but with wide variations between countries. The export-driven German economy continued its upturn, while the debt-burdened countries in the peripheral zone were on a far weaker trend. Production in the euro area remains below its pre-crisis level (chart 1.1). Unemployment has been high in the past two years and measured 9.9 per cent of the labour force in January 2011. Due to rising food and commodity prices, inflation is climbing and has so far in 2011 remained above the European Central Bank target. This could pull in the direction of a somewhat higher key rate ahead despite the weak trend in many euro countries. Of EU countries outside the euro zone, Sweden in particular showed high growth in the second half of 2010, while production in the UK fell by 0.5 per cent in the fourth quarter, partly as a result of bad weather. After a period of sharply falling production in the Baltics, GDP expanded in 2010 – albeit from low levels.

Table 1.2: Key macroeconomic variables. Forecasts for 2011 and 2012

	USA			Euro area			China		
	2010	2011	2012	2010	2011	2012	2010	2011	2012
GDP	2.8	3.2	3.3	1.7	1.6	1.7	10.3	9.7	9.7
Inflation	1.6	1.9	1.9	1.6	2.0	1.8	3.1	3.3	3.0
Unemployment	9.6	9.1	8.4	10.0	9.9	9.6	-	-	-

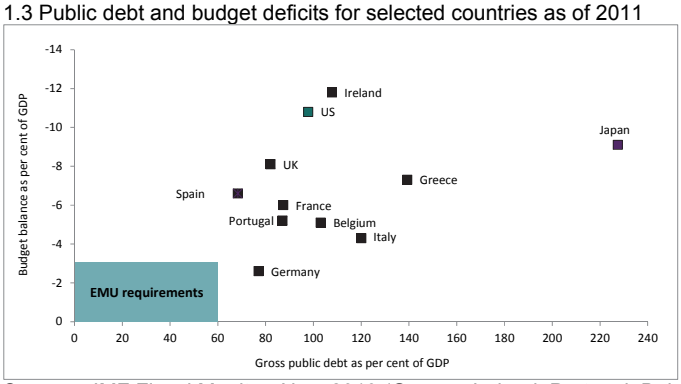
Sources: Consensus Forecasts, February 2011 and OECD, Economic Outlook no. 88, November 2010 (China)

China has been the largest driving force behind the international economic recovery, with a 10.3 per cent increase in GDP in 2010. The Chinese government responded to the economic decline in the aftermath of the financial crisis with a substantial supply of credit and massive public investment, which helped to maintain growth at a very high level. It has however brought imbalances in the Chinese economy. The new five-year plan for 2011-2015 outlines a gradual shift in the growth model from investments, manufacturing and exports to domestic consumption and the service sector. Prices in the Chinese property market have risen steeply in recent years, and there has been concern over bubble

formations, prompting measures to prevent speculative activities. Rapid lending growth and increased inflation due to higher food and commodity prices have caused the central bank to raise its key policy rate and raise the reserve requirement on banks. Although GDP expansion is expected to moderate somewhat ahead due to the tightening measures, it will remain on a very high level (table 1.2).

Uncertainties attend the trend in the international economy ahead. The budget deficits in several euro countries have kindled substantial turmoil in securities markets and impaired growth prospects. But in many other countries too, wide-ranging stimulatory packages initiated by the authorities in response to the financial crisis, combined with budget deficits over time, have given rise to public debt burdens which cannot be sustained in the long-term. The situation is serious for many industrial countries (chart 1.3). Although most countries have taken tightening action, forecasts point to a further increase in public indebtedness in 2011.

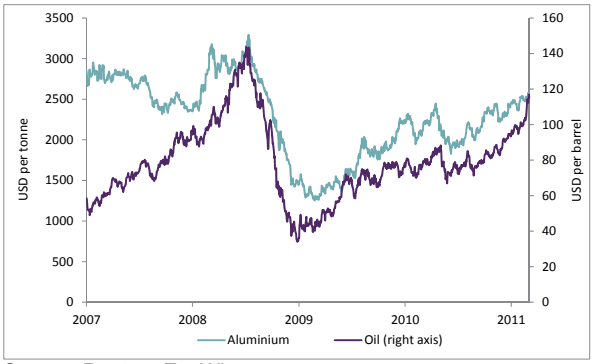
1.3 Public debt and budget deficits for selected countries as of 2011



Sources: IMF Fiscal Monitor, Nov. 2010 (Greece, Ireland, Portugal, Belgium) and Update Fiscal Monitor, Jan. 2011

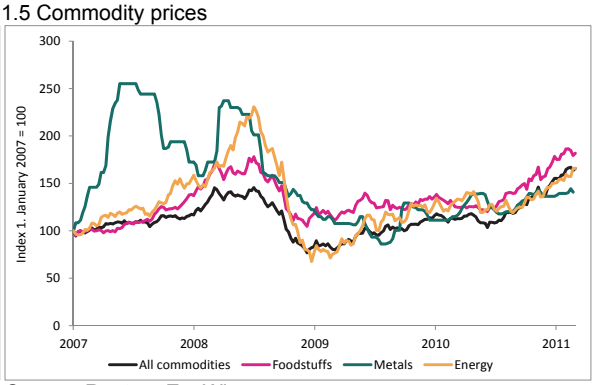
Tightening public budgets without stifling the recovery is a difficult balancing act for governments. However some European countries' public deficits are so large that rapid consolidation of government finances is a dire necessity. Greece and Ireland, which have begun tightening action, showed GDP contraction through 2010.

1.4 Price of oil and aluminium



Source: Reuters EcoWin

1.5 Commodity prices



Source: Reuters EcoWin

A further substantial risk factor is the recent steep increase in commodity prices (charts 1.4 and 1.5). The revolutions and turbulence in North Africa and the Middle East are heightening economic uncertainty. At the start of March 2010 the oil price was in excess of USD 115 per barrel; such a high level will dampen growth in the major oil-importing countries. Commodity importers' terms of trade

with other countries are deteriorating significantly. Moreover, food prices have risen by about 50 per cent in the past half-year, impacting heavily on developments in emerging economies. In countries where the bulk of consumers' disposable income is spent on food, the price increase is driving up general inflation. This could prompt monetary policy tightening and slower growth in countries that are key to maintaining the international economic recovery. Further, the possibility of increasing social unrest cannot be disregarded.

The Norwegian economy emerged relatively favourably from the reverberations of the financial crisis. GDP contraction was slight and, in contrast to most industrialised countries, mainland (non-oil) production is now back above its pre-crisis level (chart 1.1). This is inter alia thanks to Norway's commodity-based export structure which drew benefit from high growth in emerging countries. Moreover, the government pursued an expansionary monetary and fiscal policy and initiated a range of measures. Very limited exposure to and low losses on structured products at Norwegian banks also curbed the negative consequences of the international financial crisis.

The upswing in international trade from mid-2009 onwards was positive for Norwegian shipping. At the same time shipping companies, shipyards and banks have collaborated on securing the cancellation of new shipbuilding orders or pushing back delivery dates, thereby dampening the supply of new tonnage in the market. Ahead, world trade is expected to pick up further, which will increase demand for shipping services. Order books for new ships are still ample, however, and substantial deliveries of new ships could make for a volatile shipping market ahead.

The effect of the sizeable public spending cuts which many industrial countries are compelled to carry out in the near future adds to the uncertainty with regard to the Norwegian economy. If low international growth proves long lasting and is accompanied by increasing protectionism, demand for Norwegian goods will diminish. The trade-weighted Norwegian krone has appreciated by about 4.5 per cent in the past three months, and a persistently strong currency will inhibit exports.

Growth in the Norwegian economy picked up appreciably in autumn 2010, driven principally by household demand for goods, services and dwellings. Investment in the mainland (non-oil) economy concurrently rose and the marked decline in industrial investment came to a halt. According to preliminary national accounts data, Mainland Norway's GDP rose by 2.2 per cent in 2010. A slower pace of petroleum production meant that aggregate GDP grew by a mere 0.4 per cent in the period.

Mainland Norway’s GDP is expected to pick up as from the current year (table 1.3) to well above the long-term trend growth of 2.6 per cent over the past 30 years. Household consumption is assumed to be the main contributor to an upturn which Statistics Norway expects to be broad based. The cyclical upswing will produce increased investment ahead. Exports will also grow, but at a slower rate up to 2013 due to the sluggish international economy. Despite relatively high growth, production in the mainland economy remains below the trend estimate, and the economy is not expected to exit the slump until 2013. Compared with Statistics Norway, Norges Bank’s forecasts posit lower growth in Mainland Norway’s GDP in both 2012 and 2013, mainly due to a lower increase expected in private consumption.

The downturn brought growing unemployment as from the start of 2008, but the increase has been very modest by international standards. Through 2010 unemployment stabilised at just over 3.5 per

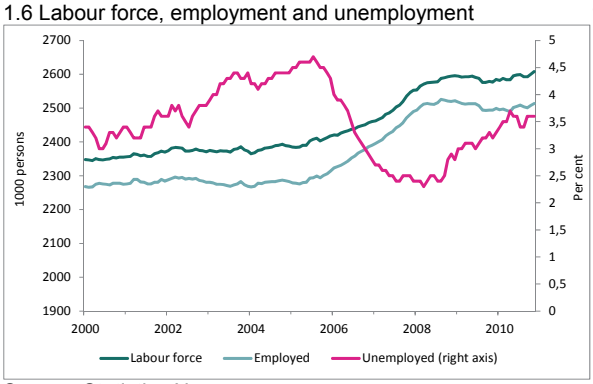
cent in spite of a slight increase in employment, as shown in chart 1.6. This is because the labour force has grown, in particular as a result of increased net immigration in the second half of 2010. The labour market appears to be improving with demand for labour having risen in recent months, particularly in the private sector. Some weaknesses none the less remain. There are more involuntary part-time employees than previously, and long-term unemployment was stable through 2010. Statistics Norway's forecasts suggest that unemployment will subside as the economic recovery takes hold (table 1.3).

Table 1.3 Key macroeconomic variables for the Norwegian economy. Forecasts 2011-2013. Percentage change for previous year unless otherwise stated.

	2010	2011	2012	2013	2014
Private consumption	3.6	3.7	4.0	4.5	3.4
Public consumption	2.2	2.3	2.7	2.5	2.8
Gross investment, Mainland Norway	-4.4	6.8	9.0	8.4	5.5
Exports - traditional goods	5.0	3.6	1.9	3.1	4.7
GDP	0.4	2.1	2.9	2.5	2.4
GDP Mainland Norway	2.2	3.3	3.8	3.6	3.2
Unemployment LFS[1]	3.6	3.6	3.2	2.9	2.6
Annual pay	3.6	3.6	4.1	4.6	5.8
Consumer price index (CPI)	2.5	1.8	1.5	2.2	2.6
CPI-ATE[2]	1.4	1.5	1.7	2.0	2.5
Money market rate[1]	2.5	2.8	3.8	4.8	5.8
Crude oil price in NOK[1,3]	484	529	516	560	609
1 Level 2 CPI adjusted for taxes and exc. energy products 3 Average spot price, Brent Blend					

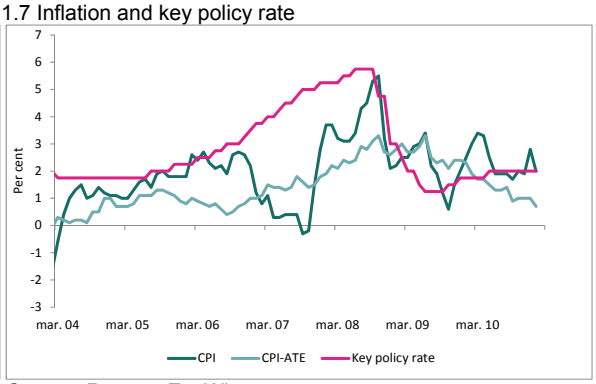
Source: Statistics Norway, Economic Survey 1/2011

1.6 Labour force, employment and unemployment



Source: Statistics Norway

1.7 Inflation and key policy rate



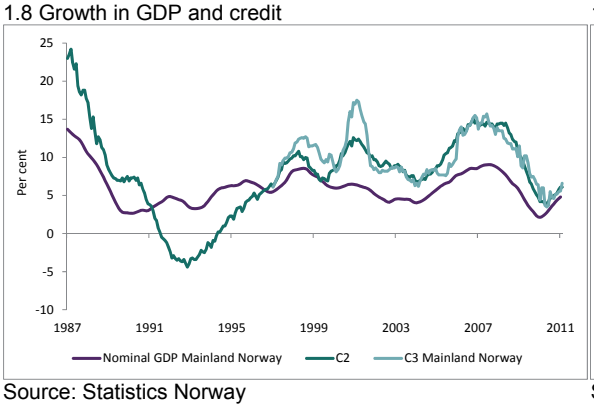
Source: Reuters EcoWin

Pro-active use was made of monetary and fiscal policy to counter the effects of the financial crisis, but the policy stance is now being gradually tightened in step with growing activity levels in the Norwegian economy. Norges Bank has raised its key rate three times since October 2009 and has signalled further increases in 2011. Persistent low interest rates in the major Western economies as a result of moderate growth combined with necessary tightening of fiscal policy nonetheless suggests that the key rate will remain low for a while yet. A relatively strong krone exchange rate and low core inflation pull in the same direction. The national budget for 2011 points to a slight tightening of fiscal policy.

Domestic credit growth (C2) on a 12-month basis fell sharply through the economic downturn in 2008-2009 (chart 1.8), due largely to a substantial fall in lending to the corporate sector (chart 1.9). Over the course of 2010 credit growth gradually picked up, driven mainly by corporates, whose borrowings rose in the second half of 2010 after five months of decline. 12-month growth in credit to households also

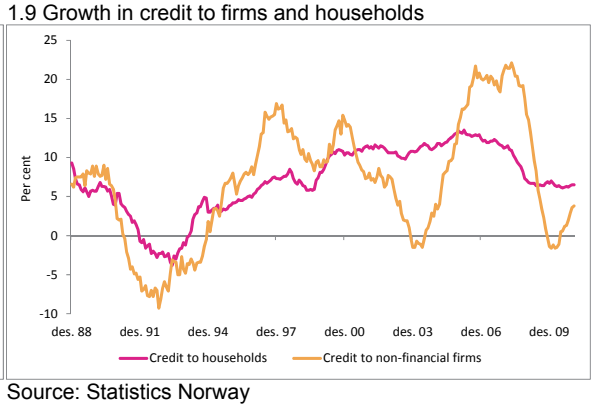
slowed in the wake of the financial crisis, but a slightly quicker increase in growth was seen in 2010, to 6.5 per cent at the end of January 2011 (chart 1.9). Growth in overall credit (C3) has also increased in recent months as a result of increased borrowings by firms in the mainland economy and the oil sector, which largely obtain their loan capital abroad.

1.8 Growth in GDP and credit



Source: Statistics Norway

1.9 Growth in credit to firms and households



Source: Statistics Norway

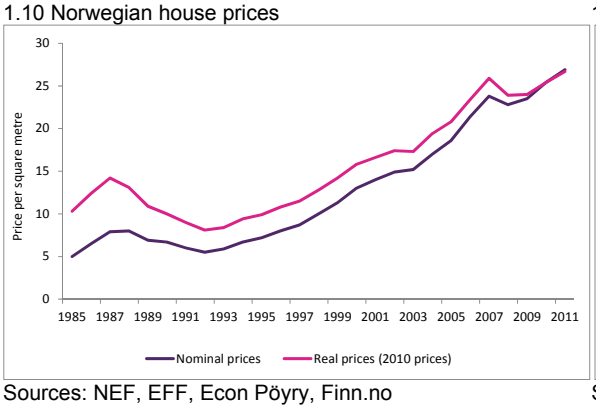
Property markets

The Norwegian housing market took a different path in the wake of the international financial crisis than housing markets in many other countries. After the stagnation seen in markets in Norway and elsewhere in autumn 2008 and the first half of 2009, the trend in Norway reversed. Weak confidence in the future, high unemployment and problematic government finances are still affecting the housing market in many other countries. The price fall in 2010 was largest in Ireland, and house prices also fell in Spain, Greece and Russia. In the Baltics the housing market remains weak, although the trend varied across these countries in 2010. In the US a large volume of defaulted home mortgage loans, extensive forced sales and a large surplus offering of dwellings combined with a fragile labour market fuel expectations of a continued sluggish trend in house prices. In Sweden growth in house prices is high and the Swedish FSA, like its Norwegian counterpart, has drawn up guidelines to reduce loan-to-value ratios for new home mortgage loans.

In Norway prices of existing dwellings are rising rapidly: in February 2011 prices were 9.2 per cent higher than in the same month of 2010. Prices were 11.9 per cent higher than at the previous peak in August 2007, compared with an inflation-adjusted figure 1.6 per cent lower. Low interest rates and floating home mortgage rates combined with a mild Norwegian cyclical downturn have lifted Norwegian house prices back to their pre-financial-crisis levels.

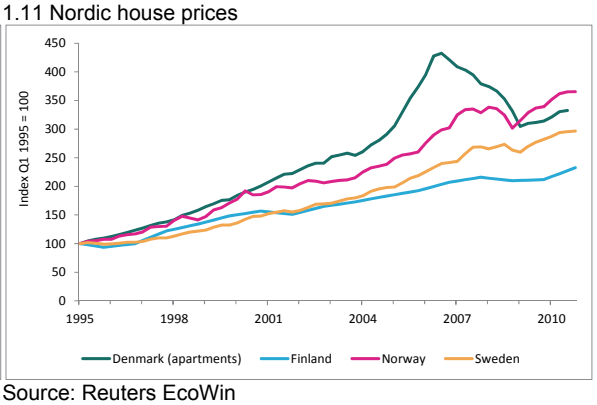
Price growth was strongest in the apartment segment in 2010. The housing market shows substantial regional differences. It took on average 33 days to sell a dwelling in February 2011, five days less than one year back. The pace of sales also shows regional differences. Compared with prior to the financial crisis there now seem to be wider differences in the housing market, with attractive properties selling rapidly at high prices while less attractive dwellings are more difficult to sell.

1.10 Norwegian house prices



Sources: NEF, EFF, Econ Pöyry, Finn.no

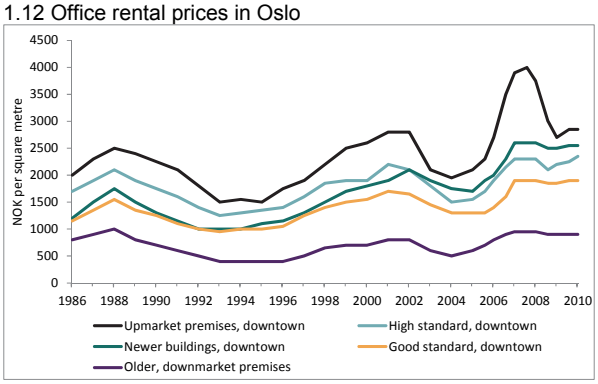
1.11 Nordic house prices



Source: Reuters EcoWin

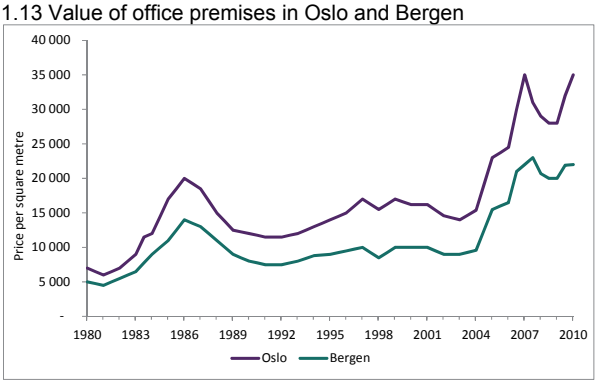
In February 2011 about 9,300 dwellings were registered for sale at Finn.no compared with almost 21,900 in the peak month November 2008. Sales of existing homes picked up as from the end of 2009, and the number of registered sales of real property increased by 7 per cent from the fourth quarter of 2009 to the fourth quarter of 2010. The number of existing homes put on the market remains low. This, combined with the low number of building starts during the financial crisis and the consequent small number of completed dwellings, has led to marked tightness on the supply side. Housing investments fell by 35 per cent in the 2.5 years to the trough in the fourth quarter of 2009. In 2010 housing investments fell by 3.5 per cent but are now in the process of picking up. Statistics Norway expects investment growth of 5 to 8 per cent per year from 2011 to 2014. The level of housing investments will in 2014 nonetheless hover around 5 per cent below the level seen in the peak year 2007.

1.12 Office rental prices in Oslo



Source: Dagens Næringsliv

1.13 Value of office premises in Oslo and Bergen



Source: OPAK

The commercial property market was on a positive trend in 2010. Profitability among listed commercial property companies picked up, chiefly because property values that were previously written down have now been revised up. Office selling prices have risen in the past half-year, while rental prices have levelled off. Ahead, market participants expect a further rise in selling prices and stable rental prices. Uncertainty in the commercial property market thus relates to international developments, interest rates and domestic demand.

Securities markets

Developments in Norwegian markets for shares, bonds and money market instruments are closely tied up with developments in the international arena. Price changes are on average larger in the Norwegian stock market. Moreover, there is a clear tendency for the trend in stock markets and markets for non-government bonds to converge very closely in periods of great uncertainty: share prices often fall at the same time as risk premiums in the bond market rise. Uncertainty about the securities markets ahead is very high, fuelled by the considerable doubts regarding the trend in the real economy ahead, especially internationally.

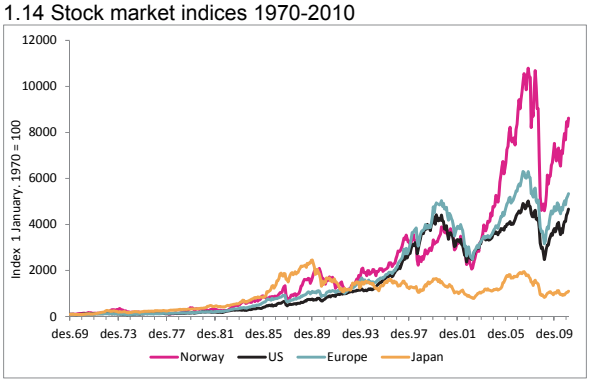
Interest rates are likely to remain low ahead despite increased inflationary risks. Turbulent markets and failing confidence in the future could however prompt marked increases in risk premiums in money and bond markets. If financing costs for non-financial firms rise markedly, it may prove difficult to fund new business and refinance existing activities. If banks' funding costs rise, borrowing rates may do the same. Experience shows that when it becomes difficult to fund activity in debt capital markets, there are also major problems in raising new equity.

Stock markets

Return in the Norwegian stock market measured by the MSCI index was about 12.5 per cent, in the US 15.5 per cent and in Europe 7.5 per cent in 2010. In the first two months of 2011 return was 1.8, 5.8 and 4.2 per cent respectively. The relatively speaking low return in the European markets reflects the substantial economic problems in the region. High returns in the US market indicate an upswing in expectations for the US economy. International stock markets are highly risky (chart 1.14 showing the trend in market value of various share indices from 1970 to the end of February 2011. In several cases prices have risen to levels which are difficult to explain in terms of economic fundamentals, and the ensuing price falls have been very substantial. In Norway the index peaked in October 2007. In the course of a few months the stock market dropped by about 57 per cent before bottoming out in March 2009. The market then rose by 87 per cent, but is still about 20 per cent below the peak seen prior to the crisis. The recovery has been strongest in the US market, which stood 7 per cent below the pre-crisis peak at the end of February 2011. The Japanese stock market shows how risky the market can be even where the investment horizon is very long (table 1.4). The Japanese share index peaked in December 1989. The annual geometric return for the past 20 years is -2 per cent.

It is difficult to judge the correctness of stock market prices at a given point in time since they reflect companies' expected future earnings and investors' hurdle rate. Too high prices may be attributable to investors' excessive belief in future economic growth or investors' inadequate hurdle rates in relation to investment risk. The overall value of the stock market should reflect companies' future earnings, the risk associated with investments in the stock market and investors' risk tolerance. Unless, for example, a technological shift takes place that permanently changes companies' earnings (the economy's capacity for growth), the economy's underlying uncertainty or investors' risk aversion, the ratio of companies' overall market value to their overall earnings would be expected to vary around a level. In the current situation it is difficult to judge whether stock markets are too highly priced.

1.14 Stock market indices 1970-2010



Source: Reuters EcoWin

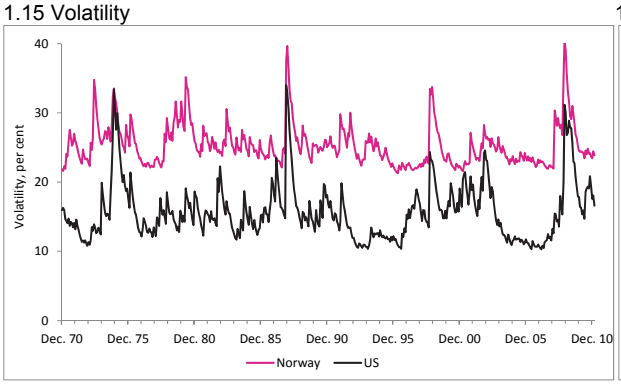
Table 1.4 Annual geometric return

Annual geometric return	Norway	USA	Europe	Japan
1970 -2010	11,43	9,78	10,14	6,00
Last 20 years	8,86	8,97	8,53	-2,08
Last 10 years	8,84	2,66	1,99	-1,40
Last 5 years	3,06	3,03	1,40	-8,77
Last 3 years	-1,44	2,38	0,07	-9,24
Last 1 year	27,33	22,83	15,54	8,28
Year to date	1,80	5,83	4,15	5,76

Sources: Reuters EcoWin, Finanstilsynet

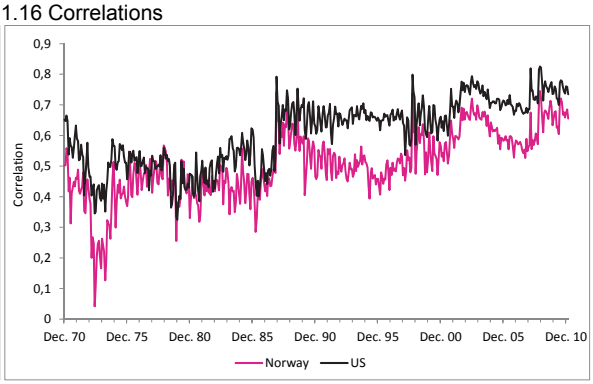
The Norwegian market's volatility is very high, and significantly higher than for instance that of the US stock market; see chart 1.15 showing the standard deviation of returns in the two markets based on monthly data. Volatility on Oslo Børs averages about 25 per cent on an annual basis, and in periods of crisis the risk is significantly higher. Hence it is relatively normal for the market in the course of a year to rise or fall by as much as 25 per cent. Risk in the Norwegian market is now back to the average for the historical period after a marked increase in uncertainty during the financial crisis. Volatility in the US market averages about 15 per cent.

1.15 Volatility



Sources: Reuters EcoWin, Finanstilsynet

1.16 Correlations



Sources: Reuters EcoWin, Finanstilsynet

International stock markets are tightly interwoven. Information flows freely across national borders and is normally available to the markets simultaneously. Chart 1.16 shows the trend in correlations between return in the Norwegian market and in, respectively, the US and the European markets. There has been a general increase in the correlation between returns in the various national stock markets, suggesting greater market integration. This can probably be explained in terms of increased trading and increased real and financial investments across national borders. There is a tendency, especially in crisis periods, for correlation to increase. This was the case during the stock market crunch in 1987, during the dot-com crisis at the start of the millennium and during the latest financial crisis.

Because correlation is higher in times of crisis than in normal periods, diversification gains associated with global share portfolios are smallest when they are most needed. When this possibility is reduced, the global financial system's vulnerability increases and international stock market crunches rapidly feed through to the Norwegian market. Moreover, bubbles building up in the international arena will

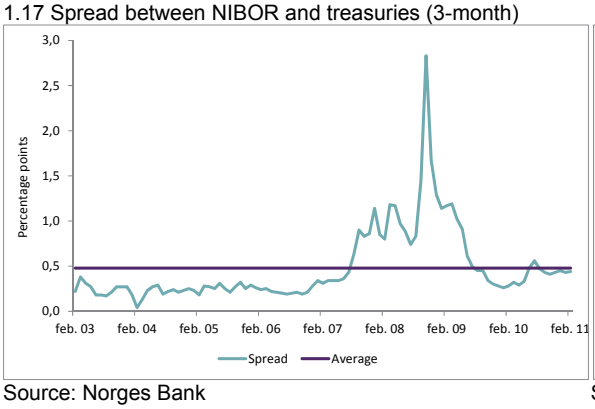
normally spread to the Norwegian market. The quickening rate of spread poses an increased challenge to economic management in general and to financial stability in Norway.

Money and bond markets

Interest rates in the money market show the cost of raising short-term loans (< 1 year) for states, firms and financial institutions. A significant share of bank lending carries floating interest, and the level and variation of money market rates therefore has a relatively large bearing on household and corporate funding costs.

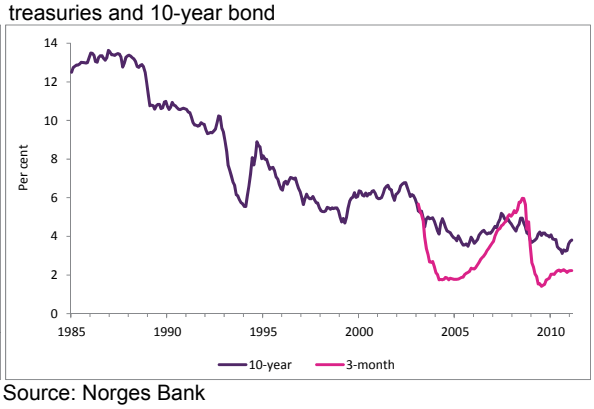
The average effective interest rate on three-month Norwegian treasury bills was 2.2 per cent in February 2011, which is about the same as in the second half of 2010 (chart 1.18). The figure for three-month NIBOR was 2.7 per cent, the same as in the second half of 2010. Interest rates in the money market are currently very low, and the increase in 2010 was relatively limited. The spread between three-month NIBOR and three-month government rates in February 2011 was about 0.45 percentage point, almost 0.2 percentage points higher than one year ago.

1.17 Spread between NIBOR and treasuries (3-month)



Source: Norges Bank

1.18 Norwegian interest rates – 3-month treasuries and 10-year bond



Source: Norges Bank

The spread can in normal times be used as a measure of the credit risk associated with loans to banks (price of risk). In time of crisis it shows the price of both credit and liquidity risk. The three-month spread has largely normalised after increasing sharply in autumn 2008, but was in February 2011 still about twice as high as the average for the period prior to the financial crisis.

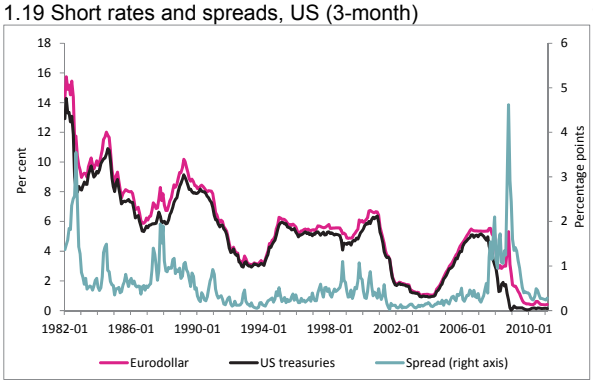
Interest rates in the bond market show the cost of raising loans with a maturity above one year for states, firms and financial institutions. The average effective yield on 10-year government bonds in February 2011 was about 3.8 per cent, which is about the same as one year ago (chart 1.18). The figure for five-year bonds was 3.2 per cent.

While interest rate levels and changes in the level of various interest rates vary somewhat from country to country, the trends for developed economies are broadly the same. In response to the financial crisis central banks' key rates were sharply reduced at the same time as the markets were supplied with liquidity. Money market rates internationally are now very low. The three-month US treasury bill rate was 0.13 per cent at the end of February 2011, while the three-month Eurodollar rate was 0.4 per cent. The change from the previous year was negligible. The difference between the rate for Eurodollar deposits and US Treasuries (TED spread) is a much used indicator of the trend in liquidity and risk in the US money market. Chart 1.19 shows that it peaked at 4.6 percentage points in October 2008, which

underscores the gravity of the crisis and the substantial liquidity problems that arose after confidence in the market disappeared. At the end of February 2011 the spread was 0.28 percentage point, which is about half of the average for the period prior to the financial crisis (1982 to summer 2007).

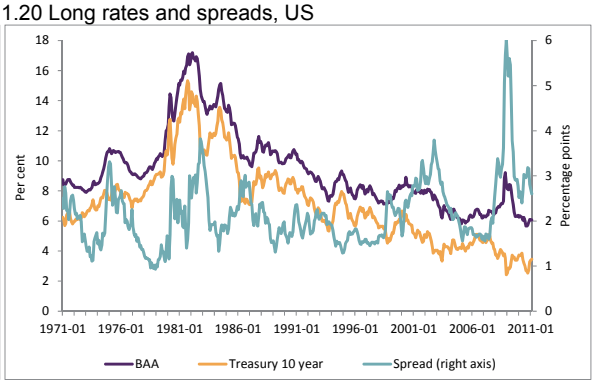
Government bond rates have fallen since 1982, and the 10-year rate reached its hitherto lowest level of 2.4 per cent in December 2008 (chart 1.20). By the end of February 2011 it had risen to 3.5 per cent. Chart 1.20 also shows the interest rate on US corporate bonds with a credit rating of BAA and the spread between the two interest rates. During the financial crisis in 2007-2008 the spread was at its highest at 6 percentage points. Thereafter it fell substantially to its present level of 2.6 percentage points, but is still 0.4 percentage points higher than the average for the period 1971-2007.

1.19 Short rates and spreads, US (3-month)



Source: Federal Reserve

1.20 Long rates and spreads, US

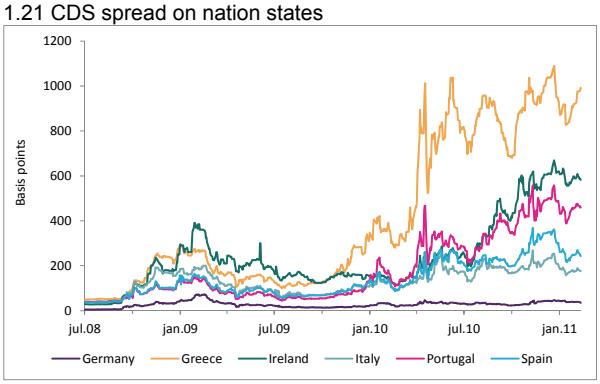


Source: Federal Reserve

CDS prices and risk associated with government debt

The price of credit default swaps (CDS) shows the cost to an investor of insuring against loss on a bond due to the issuer's inability to honour his obligations under the bond contract. Such prices are thus a measure of the credit risk associated with the bonds. Chart 1.21 shows the trend in CDS prices associated with bonds issued by a selection of EU countries. At end-February 2011 it cost almost 10 per cent of nominal value per year over a five-year period to insure against default by the Greek state, while insuring German government bonds cost 0.4 per cent per year. For the remaining countries the price ranges from 1.8 to 5.9 per cent. The current high prices reflect the substantial uncertainty affecting government finances in many countries. In comparison, insuring against default on Norwegian government bonds cost 0.2 per cent.

1.21 CDS spread on nation states



Source: Reuters EcoWin

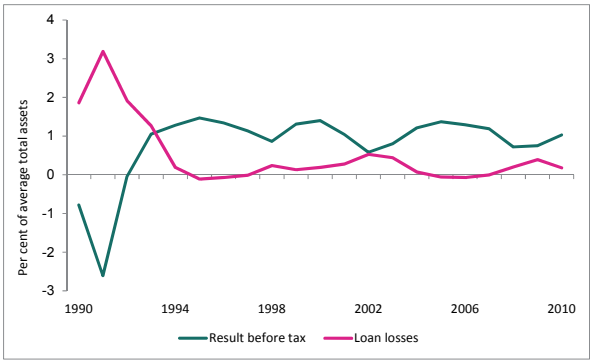
2. Profitability and financial soundness

Financial institutions' profitability and financial soundness are greatly affected by economic conditions and market trends, and should be evaluated in conjunction with the themes discussed in Chapter 1. The present chapter summarises results reported in 2010 by banks, life insurers and pension funds. The results of finance companies, mortgage companies, non-life insurers, investment firms and fund management companies along with the largest Nordic financial conglomerates are also covered in brief.

Banks

Norwegian banks were far less affected by the financial crisis than banks elsewhere in Europe. Although profits for 2008 were markedly lower than in previous years, the sector as a whole achieved positive return on equity, and no Norwegian-owned bank had to close its doors as a result of the crisis. Loan losses rose in 2009, but high securities earnings resulted in an improved aggregate profit performance compared with 2008. In 2010 loan losses declined, bringing a further improvement in earnings (chart 2.1).

2.1 Loan losses and result before tax

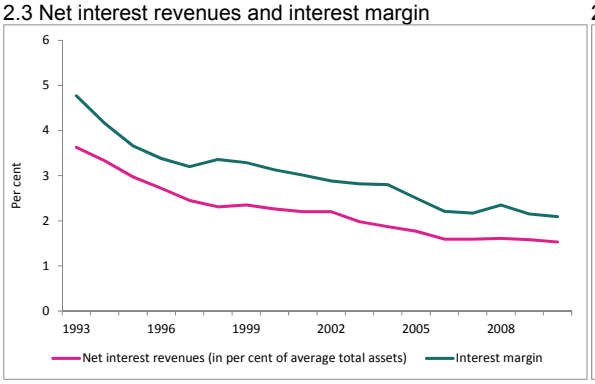


2.2 Return on equity after tax

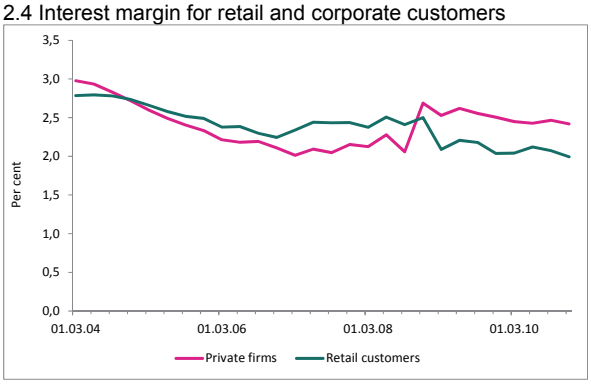
Bank groups recorded an aggregate pre-tax profit of NOK 36bn in 2010, an increase of 42 per cent over the 2009 figure. Return on equity rose from 9 per cent to 13 per cent (chart 2.2). The main reason is a halving of loan losses – from more than NOK 13bn in 2009 to NOK 6bn in 2010. Sizeable one-time effects connected with the merger of the Danish PBS and Nordito (owner of BBS and Teller) and changes in the contractual early retirement scheme also made a positive contribution to this result. Only two Norwegian banks, one of which was a recent start-up, ended 2010 in a deficit position.

Banks' aggregate profit measures 1.03 per cent of average total assets (ATA). This is below the average for the 10 years up to the international financial crisis (1.12 per cent of ATA), part of the explanation being that banks' underlying earnings are still under pressure. Banks' most important revenue source is net interest revenues which in 2010 accounted for 67 per cent of their total revenues. Net interest revenues as a share of average total assets were already at a low level in 2009 and continued to fall in 2010 (chart 2.3). Surveys carried out in other Nordic countries show a similar trend.

2.3 Net interest revenues and interest margin

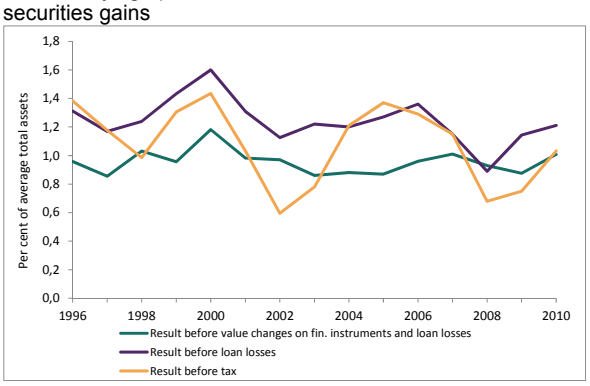


2.4 Interest margin for retail and corporate customers

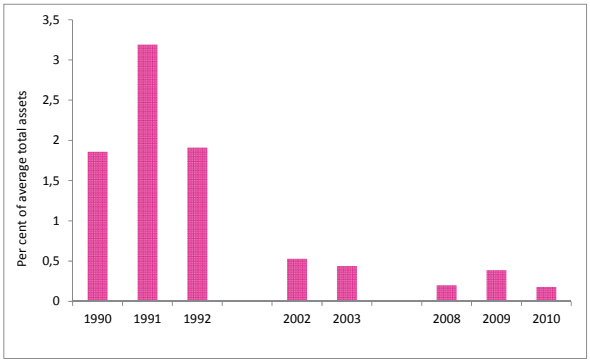


Banks have increased their long-term funding in the last two years, which in isolation raises funding costs and lowers the net interest margin. The intense competition among the banks for depositors and mortgage customers is squeezing margins and lowering banks' earnings on deposits and lending (chart 2.4). This is in line with developments in the rest of Europe. In autumn 2008, on the other hand, interest margins on loans to corporates rose due to higher pricing of credit risk. In contrast to the interest margin on home mortgage loans, the margin on lending to corporates is still higher than prior to the financial crisis.

2.5 Underlying operations: result before losses and securities gains



2.6 Loan losses

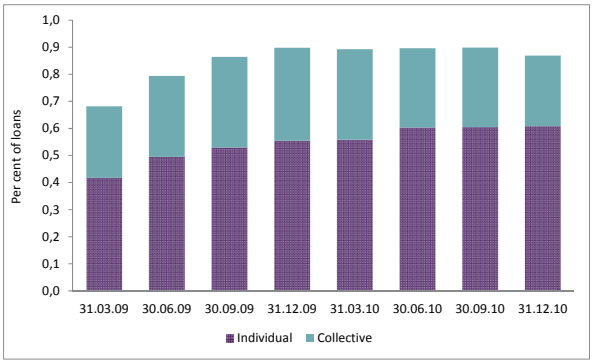


The variation in banks' profit performances over the last 20 years is largely due to fluctuating securities revenues and loan losses (charts 2.1 and 2.5). After the financial crisis in 2008 loan losses were expected to exceed the average loss level since 1990 of 0.55 per cent of total assets, but the outturn proved far better. Losses for Norwegian banks in per cent of average total assets during the banking crisis in 1990-92 were more than 10 times as high as in 2009 (chart 2.6). Loss figures in the recent financial turbulence were also far lower than during the downturn in the early 2000s. The modest loan

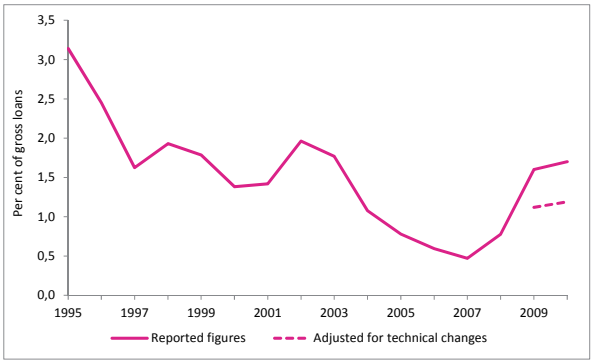
losses are partly explained by macroeconomic conditions, which in Norway's case were excellent ahead of the latest downturn. Banks had also improved their credit practices and risk management in general, and were little exposed to complex fixed income products, in contrast to banks in many other countries which incurred far larger losses on such exposures.

Total impairment write-downs on gross lending have been stable since autumn 2009, accounting for 0.9 per cent of outstanding loans at the end of 2010 (chart 2.7). Collectively assessed write-downs, on the other hand, fell by 18 per cent in 2010 due to improved prospects for the future, and because loss risk in the remaining portfolio after individual assessment is falling. Non-performing loans measure 1.7 per cent of total loans (chart 2.8). This is marginally higher than one year previously. Of the increase in non-performance for 2009 and 2010 compared with previous years, about one-third is ascribable to the fact that as from 2009 banks are reporting defaults as from 30 days past due compared with the previous 90 days.

2.7 Individually and collectively assessed impairment write-downs



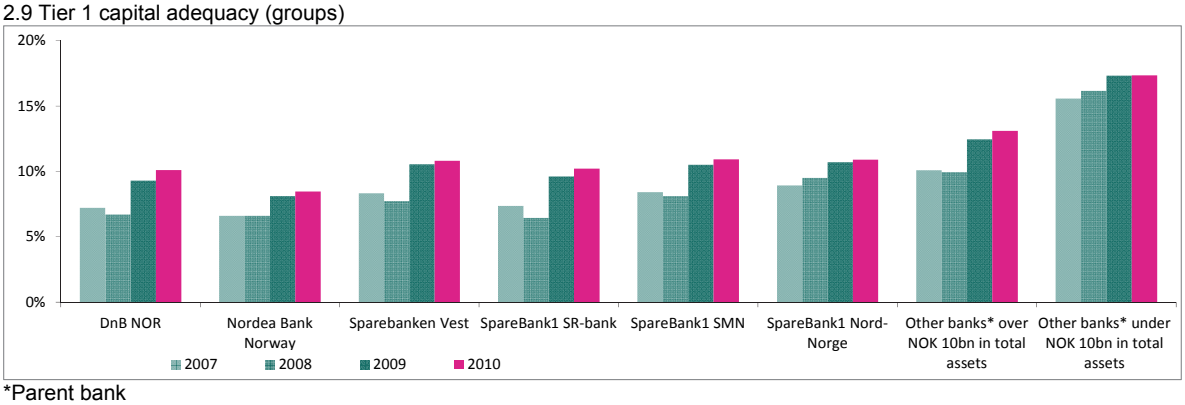
2.8 Default



Financial position

Norwegian banks strengthened their financial position in 2010 (chart 2.9). Overall tier 1 capital adequacy for all Norwegian banks (parent bank) was 11.4 per cent at year-end. Total capital adequacy was 13.8 per cent compared with 13 per cent in 2009. All Norwegian banks met the capital requirement of 8 per cent.

2.9 Tier 1 capital adequacy (groups)



*Parent bank

The international financial crisis showed the significance of high equity ratios at banks. Uncertainty regarding the international economy and forthcoming requirements on banks' capital prompted a

number of Norwegian banks to retain a significant share of their 2010 profits to further strengthen equity capital positions. In spring 2010 SpareBank 1 Midt-Norge and Sparebanken Vest issued hybrid equity and equity capital certificates, partly with a view to redeeming the capital injection from the Norwegian State Finance Fund. Of the Finance Fund's total of NOK 50bn earmarked for strengthening Norwegian banks' equity capital positions, NOK 4bn was utilised. Only NOK 2bn distributed on 24 mid-size and small banks remains outstanding.

Basel II permits financial institutions to use internal models to calculate minimum capital charges for credit risk (IRB). The use of such models requires approval from the supervisory authorities and is conditional on stringent risk management requirements being met. The IRB approach is used primarily by large financial groups and banking alliances with the competence and resources needed to develop and utilise such models. During the elaboration of the Basel II framework it was decided to allow IRB-compliant banks a slight reduction in the minimum requirements. Such a reduction could motivate banks to accept the costs of qualifying and would also be justified in light of expected improvements in these banks' risk management. After the introduction of Basel II the reductions have been larger than indicated by previous quantitative impact studies (QIS). The effect is particularly large in the Nordic region due to its history of somewhat lower loss levels and higher proportion of home mortgage loans. Today the reductions are of limited significance owing to the transitional floors which prevent the minimum requirement for IRB banks from falling below 80 per cent of the minimum requirement under Basel I. The intention is to limit any reduction in the minimum capital requirements resulting from the introduction of IRB. The transitional rules will apply initially to the end of 2011, due to widely differing changes to the capital requirement levels across many countries.

The Nordic countries differ in the level of capital requirements consequent on IRB. For their part, Norwegian banks incur a smaller reduction in the capital requirement upon transition to IRB than their counterparts in Sweden and Denmark, particularly in respect of lending to corporates. Numerous factors entail differences, including differences in the proportion of banks' portfolios that are covered by IRB. There are also differences in actual risk weighting which may arise from differences in industry structure, portfolio quality, economic conditions and model characteristics, and possibly also differences in supervisory practices and interpretation of the legislation. Under the transitional rules such differences are currently of little significance. In their absence the effects would have been larger. Where differences are due to differing supervisory practices or interpretation of the legislation, competition among banks is likely to be affected. European supervisory authorities are considering extending the floor requirement beyond 2011. For that reason the Nordic countries' supervisory authorities are collaborating on IRB analysis and calibration to avoid competitive distortions without thereby weakening institutions' financial positions.

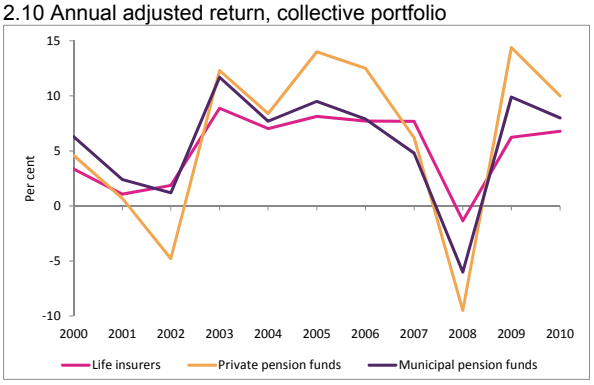
Life insurance companies and pension funds

A large portion of Norwegian life insurers' and pension funds' assets is invested in shares and fixed-income instruments. Their results are therefore immediately affected by price changes in securities markets. The stock market recovery in 2009 and 2010 brought an improvement in life insurers' and pension funds' performances. In 2010 life insurers recorded an adjusted return on capital of 6.8 per cent compared with 6.3 per cent in 2009. This was almost back to the levels seen in 2003-2007 (chart

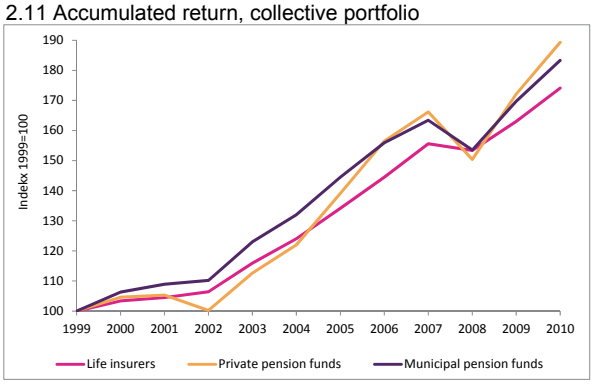
2.10). Pension funds' adjusted return on capital subsided from 13.3 per cent in 2009 to 9.4 per cent in 2010 in step with the diminishing strength of the stock exchange recovery. The considerable difference in return between life insurers and pension funds (charts 2.10 and 2.11) is largely explained by life insurers' reduction of their equity exposure prior to and during the financial crisis in contrast to pension funds which retained their equity component to a greater degree. Moreover life insurers' return on their sizeable bond portfolio has been limited by the very low interest rates seen since autumn 2008. By the end of 2010 life insurers had raised their equity component back to 19 per cent compared with a figure of more than 33 per cent for pension funds.

Life insurers' profit before allocation to policyholders and tax was NOK 13bn in 2010 compared with NOK 10bn in 2009. For pension funds the figure was NOK 5.5bn in 2010 compared with NOK 5.8bn the previous year.

2.10 Annual adjusted return, collective portfolio

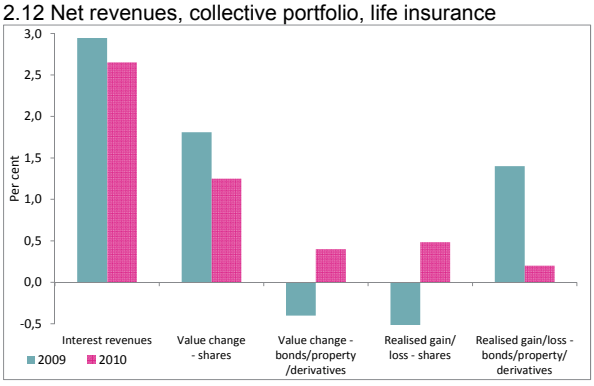


2.11 Accumulated return, collective portfolio

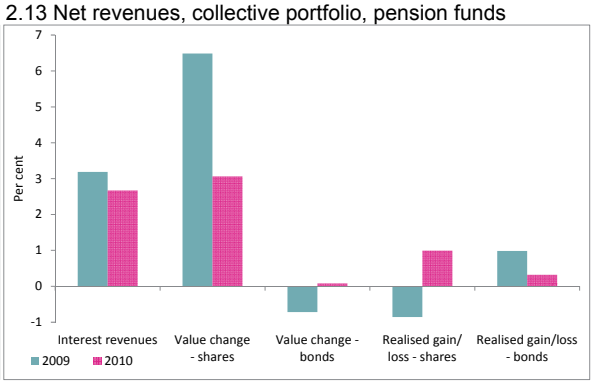


Investment revenues vary widely, giving rise to large fluctuations in the results of life insurers and pension funds (charts 2.12 and 2.13). The overall increase in value (realised and unrealised) of these companies' financial assets came to NOK 58bn in 2010 compared with NOK 55bn in 2009. Realised gains on derivatives, in particular for life insurers, were very high in 2009 (chart 2.12). The figure was far lower in 2010, bringing a fall in total realised gain from 2009 to 2010. Interest revenues – which are an important and, over time, stable source of revenue for life insurers and pension funds alike – were NOK 26.5bn in 2010 having changed little from the preceding year.

2.12 Net revenues, collective portfolio, life insurance



2.13 Net revenues, collective portfolio, pension funds

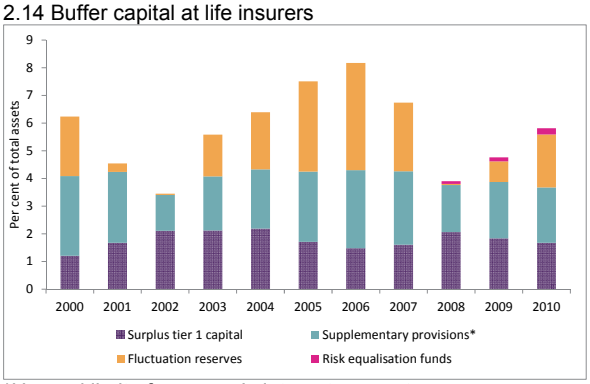


Financial soundness

Life insurers' and pension funds' asset management is greatly influenced by the buffer capital available to the companies at any time. Buffer capital is capital over and above statutory solvency and prudential requirements and provides a cushion against any losses incurred by the companies. High levels of buffer capital give companies greater leeway in asset management, an opportunity to take higher risk and potential for increased return in the long term. Good return on investment contributes to higher buffer capital through profits and fluctuation reserves.

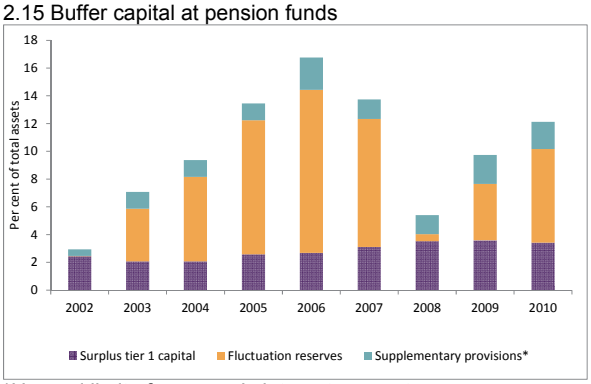
At the end of 2010 life insurers' buffer capital totalled NOK 50bn, equivalent to 6 per cent of total assets (chart 2.14). This is an increase of NOK 13bn since the end of 2009. The main contributor was fluctuation reserves.

2.14 Buffer capital at life insurers



*Upward limit of one year's interest guarantee

2.15 Buffer capital at pension funds



*Upward limit of one year's interest guarantee

At the end of 2010 pension funds' buffer capital totalled NOK 22bn, equivalent to 12 per cent of total assets (chart 2.15). Over the year buffer capital increased by NOK 6bn. Despite substantial increases in the past year or two, life insurers' and pension funds' buffer capital remains lower than prior to the financial turbulence. See Chapter 3 for a closer assessment of buffer capital in relation to the new requirements under Solvency II.

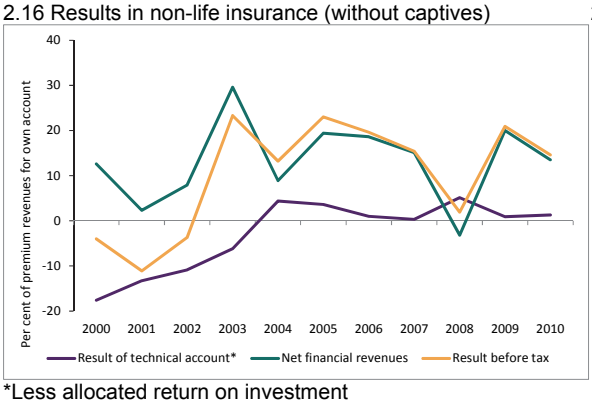
Other financial institutions

Norway's 26 **mortgage companies** offer in the main mortgage loans to finance commercial business and house purchases. Mortgage companies' pre-tax profit, excluding Eksportfinans, was NOK 5.2bn, NOK 1bn higher than in 2009. The increase in overall profit is largely due to gains on financial assets. In terms of average total assets, net interest revenues dropped substantially. Aggregate total assets rose in 2010 by more than NOK 260bn, equivalent to 31 per cent. The bulk of the growth was in the 16 residential mortgage companies established to expand the supply of market funding for bank groups and to participate in the central bank's 'swap' arrangement. Issuance of covered bonds (OMF) by residential mortgage companies has become an important funding tool for banks. Total lending by residential mortgage companies came to NOK 678bn, and by the end of 2010 these companies had issued covered bonds worth NOK 562bn.

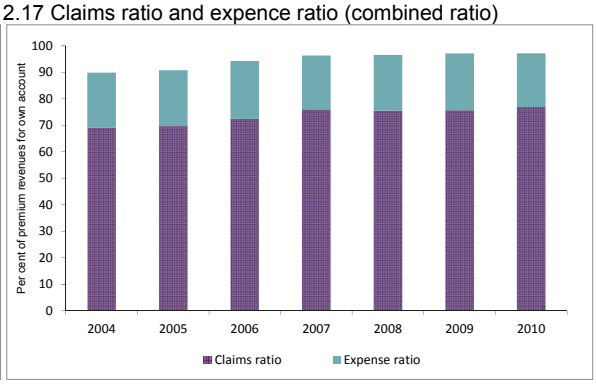
Finance companies offer various forms of special purpose financing to corporate and retail customers with the emphasis on leasing, factoring, car financing and consumer financing. Norwegian finance companies overall reported a pre-tax profit of NOK 1.8bn in 2010, slightly higher than the previous year, essentially because of lower losses. Return on equity was about 15 per cent. Non-performing loans measured 5.4 per cent of gross loans, a substantially higher level than for the banks. This is partly because several of the largest finance companies are engaged in pure consumer financing without collateral. Growth in lending in 2010 was moderate. See Chapter 4 for more about consumer lending.

The market for **non-life insurance** is dominated by companies with a broad product range, but also includes a considerable number of niche companies. Non-life insurers (excluding captives) recorded a profit of NOK 4.0bn on ordinary operations in 2010, compared with NOK 5.0bn in 2009. High compensation payments after an unusually cold winter are offset by a lower cost ratio resulting in a stable result for insurance business. Hence the decline in profit is due to a fall in insurers' revenues from financial investments (chart 2.16). Non-life insurers are in general less exposed to equities than life insurers, and benefited little from the stock market recovery. Moreover, the low level of interest rates provided modest return on the companies' large holding of bonds and other securities with a fixed return.

2.16 Results in non-life insurance (without captives)



2.17 Claims ratio and expence ratio (combined ratio)



*Less allocated return on investment

Although the establishment of a number of new entrants has intensified competition in the non-life market in recent years, premium revenues have risen in step with costs providing a stable combined ratio (chart 2.17). Established non-life insurers have worked to lower the cost ratio (insurance-related operating expenses as a ratio of premium revenues), for example through greater automation and use of the internet as a marketing channel. However, the cost ratio for the industry as a whole does not show the same fall since new companies incur start-up costs and employ a higher cost ratio in the establishment phase. Variations in total pre-tax profit are largely driven by fluctuations in financial revenues.

There were 153 Norwegian **investment firms** at the end of 2010, of which 32 were banks. Banks' revenues from investment services largely derive from trading in debt and foreign-exchange instruments. Compared with 2009, revenues were down NOK 1.4bn to NOK 6.2bn. Operating revenues of non-bank investment firms rose by NOK 0.9bn to NOK 7.7bn in the same period. Their revenues are largely related to stock issuance and advisory activity along with broking of equity and debt instruments, in addition to active management of portfolios on behalf of insurance companies,

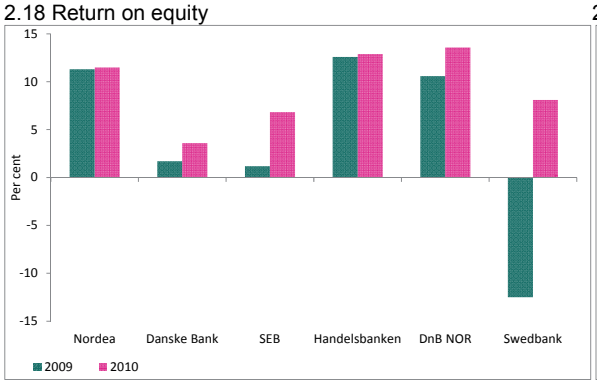
pension funds and private firms. The overall operating profit of non-bank investment firms was NOK 1.8bn in 2010, NOK 0.8bn higher than in 2009. Revenues from investment advisory services for both banks and non-banks totalled NOK 1.5bn, an increase of NOK 0.4bn over 2009.

There were 28 Norwegian **fund management companies** at the end of 2010, 16 of which were also licensed to provide active management services. Securities funds are collective investment schemes and independent legal entities providing good consumer protection. Management companies' revenues largely consist of fees for managing securities funds. Their aggregate operating profit was NOK 1.1bn in 2010, on a par with the previous year. Capital under active management totalled NOK 321bn at the end of 2010, compared with NOK 307bn one year previously. A large proportion of these assets are managed on behalf of large financial institutions and other institutional investors. Total assets at securities funds rose in the same period by NOK 84bn to NOK 491bn, due partly to the upturn in securities markets and partly to net subscription of NOK 34bn in Norwegian-registered securities funds in 2010.

Nordic financial conglomerates

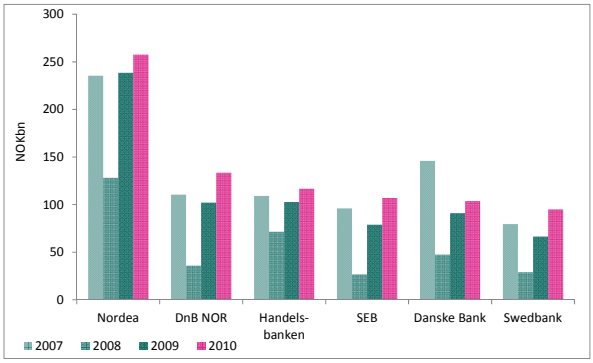
The six largest bank-dominated Nordic financial conglomerates all operate in Norway. The financial crisis led to widespread loan losses for these conglomerates in Denmark and the Baltics in 2009, which affected their profit performances. Losses were reduced in the course of 2010, and all conglomerates could point to improved profit before tax and return on equity (chart 2.18). The market value of the major Nordic banks dropped sharply during the financial crisis (chart 2.19). DnB NOR was among those to show the largest fall, but, like the Swedish conglomerates, DnB NOR was valued higher at the end of 2010 than prior to the financial crisis. The market value of Danske Bank, on the other hand, is still far lower than in 2007.

2.18 Return on equity



Sources: Quarterly reports

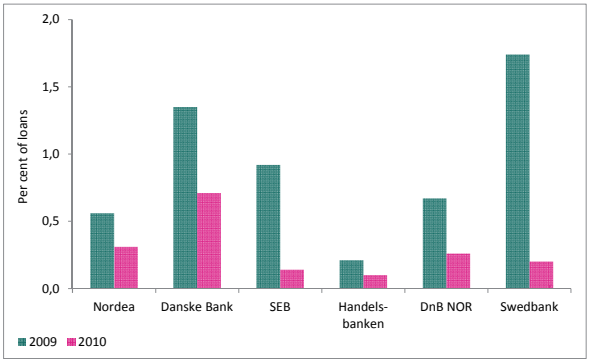
2.19 Market value



Sources: Companies' websites and Nordic stock exch.

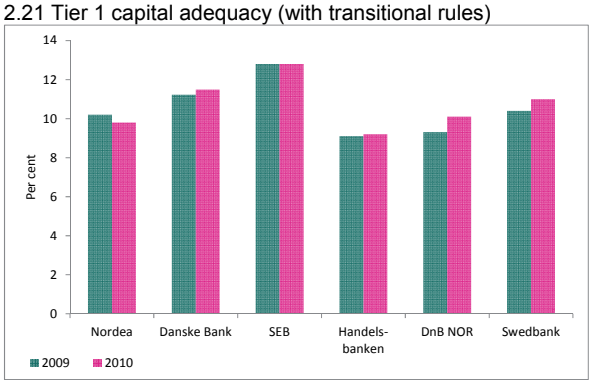
In 2009 loan losses were particularly high for conglomerates that were heavily exposed in the Baltics. Danske Bank also incurred substantial losses in Denmark and Ireland. 2010 saw a marked reduction in loan losses both domestically and in the Baltics (chart 2.20). Of DnB NOR's overall loan impairment write-downs of NOK 3bn in 2010, 60 per cent related to DnB NORD of which losses in the Baltics accounted for 68 per cent. In 2009 DnB NORD's losses alone accounted for NOK 3.9bn.

2.20 Loan losses



Sources: Quarterly reports

2.21 Tier 1 capital adequacy (with transitional rules)



Sources: Quarterly reports

Good results and retained profits enabled four of the six largest Nordic financial conglomerates to improve their tier 1 capital adequacy in 2010 (chart 2.21). Of the largest Nordic financial conglomerates, Danske Bank recorded the poorest performance in 2010. This, after poor results in 2008 and 2009, weakened its tier 1 capital position, and an infusion of government hybrid capital was needed as from May 2009 to maintain the bank's capital adequacy. The counterparty survey described in Chapter 4 shows that Danske Bank is an important financial counterparty for Norwegian banks.

Apart from Iceland, Denmark is the Nordic country to have faced the greatest challenges in the banking sector in the wake of the financial crisis. Several Danish banks have been placed under public administration. Amagerbanken, Denmark's eighth largest bank in terms of deposits, failed in February 2011, due principally to heavy losses on property loans. A number of investors, including several Norwegian life insurers and fixed-income funds, incurred some loss as a result of the failure. Deposits over and above the guarantee amount were also lost. As a consequence, international rating agencies have downgraded five Danish banks. Thus far there have been no significant indirect consequences for Norwegian banks through the funding markets.

3. Risk factors

The financial sector is an important part of a country's infrastructure. If one or more large financial institutions cease operations, there will be substantial knock-on effects to other areas of the economy. Hence a close watch is kept on factors with a bearing on institutions' stability. For Norwegian banks the largest risk element relates to loan losses, although liquidity risk has come more into focus since autumn 2008. Life insurers and pension funds are particularly exposed to market risk.

Banks and credit risk

Credit risk is the risk faced by a bank or other credit institution that a claim or loan, or parts of such, will not be repaid. The total assets of banks, including residential mortgage companies, consist on average of close to 80 per cent loans. Credit risk is the chief risk facing Norwegian banks and other credit institutions. The trend in credit risk is of great significance for profitability and financial strength.

Credit growth

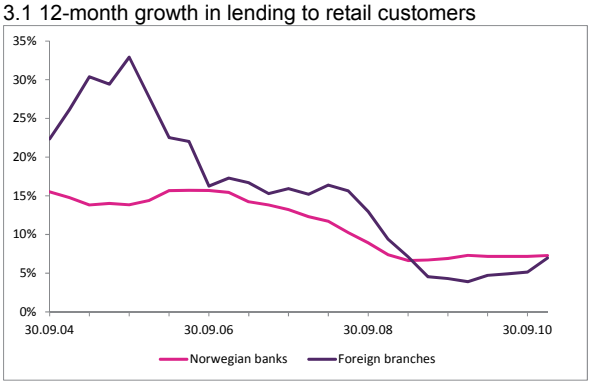
Banks, including residential mortgage companies, account for the bulk of lending to retail customers and firms in Norway, and thus have a central position in the Norwegian financial system. Lending to the retail market accounted for an average of 52 per cent of banks' loan portfolio at the end of 2010. Lending to firms accounted for 34 per cent, while 14 per cent was lending to the public sector.

Bank lending growth picked up in autumn 2010 after declining sharply through 2009 and into the first half of 2010. Corporate borrowing is the chief factor influencing credit growth, and in the course of 2010 firms' demand for loans rose in step with improved economic conditions. The annual rate of growth in Norwegian banks' lending to domestic firms was 3 per cent at the end of 2010 compared with a fall of 6 per cent one year back. Lending by Norwegian banks to foreign firms has grown more quickly than to domestic firms, reversing from -19 per cent in 2009 to 14 per cent in 2010 on an annual basis. However, lending growth is affected by exchange rate movements. Corporate borrowing abroad made up 25 per cent of the overall business sector portfolio of Norwegian banks at the end of 2010. This does not include lending through subsidiaries abroad. Growth in lending to retail customers has been relatively stable in recent years, supported by low interest rates, increased consumer confidence and rising house prices. At the end of 2010 the annual rate of growth in lending to retail customers from banks (including residential mortgage companies) was 7 per cent (chart 3.1).

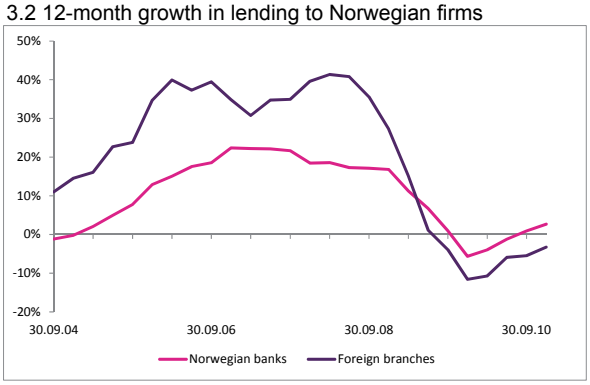
Banks from the other Nordic countries were very expansionary in Norway prior to the financial turbulence, spurring keen competition in the credit market. During the financial turbulence foreign branches reduced their supply of credit to Norwegian customers to a larger degree than Norwegian-

owned banks. Although the improved macroeconomic situation has prompted foreign branches to resume their activity in the Norwegian market, growth in their lending to Norwegian firms remains slower than that of Norwegian banks (chart 3.2).

3.1 12-month growth in lending to retail customers



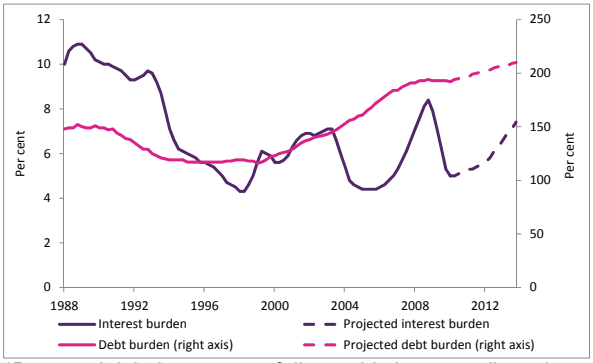
3.2 12-month growth in lending to Norwegian firms



Household sector

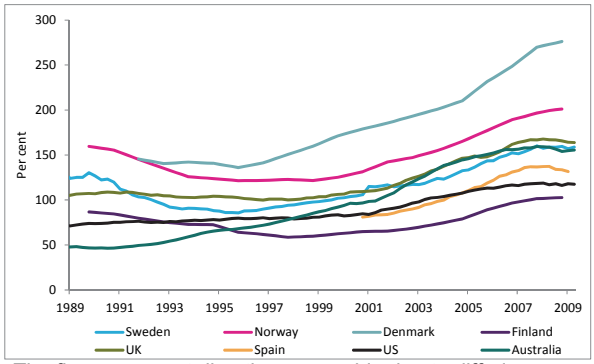
Households' debt burden, already at an unprecedented level, is expected to rise further in the years ahead (chart 3.3). It is also very high compared with other countries (chart 3.4). Thanks to low interest rates, however, households' interest burden remains low, easing the sector's debt servicing. Households' vulnerability is none the less increased by the high and rising debt burden. Experience from autumn 2008 showed that some households are particularly vulnerable to rising interest rates, a vulnerability which kicks in even at normal interest rate levels (see Chapter 4 for further discussion of households' interest burden). Households can assure more stable interest expenses by opting for a fixed interest rate, but few have done so as yet. About 7 per cent of household borrowing has an interest lock-in above one year, and less than 1 per cent has a lock-in above five years. Increased use of home equity credit lines has reduced debt repayment.

3.3 Households' debt and interest burden*



*Borrowed debt in per cent of disposable income adjusted for estimated reinvested share dividends Sources: Statistics Norway and Norges Bank

3.4 International debt burden

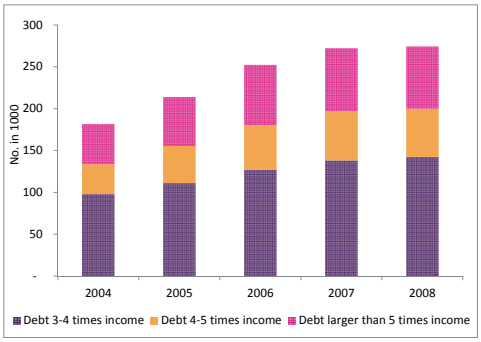


The figures are not directly comparable due to differing definitions and institutional arrangements.Sources: BIS, national central banks and Thomson Reuters

The debt burden and debt servicing capacity are unevenly distributed across the household sector. Recent years have seen a clear increase in the number of households with overall debt in excess of three times income (chart 3.5). The youngest households in particular have a high proportion of debt in relation to income (chart 3.6). This group generally borrows heavily to finance their first house purchase at a time in life when income is lowest. In its new guidelines for home mortgage loans,

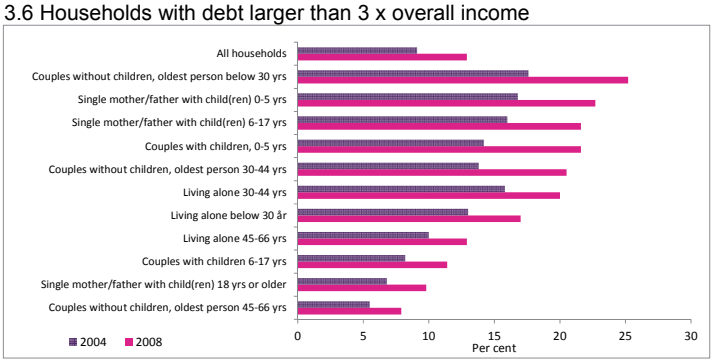
Finanstilsynet recommends that in cases where an interest rate hike would leave the customer with a liquidity deficit, he/she should either not be granted, or be advised not to take out, a mortgage. A further recommendation is that mortgage debt should not exceed three times income.

3.5 Households with debt larger than 3 x overall income



Source: Statistics Norway

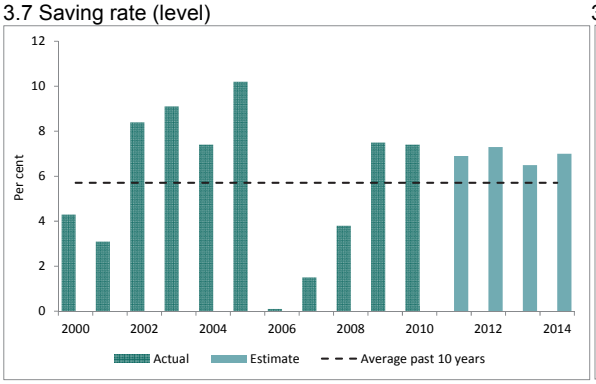
3.6 Households with debt larger than 3 x overall income



Source: Statistics Norway

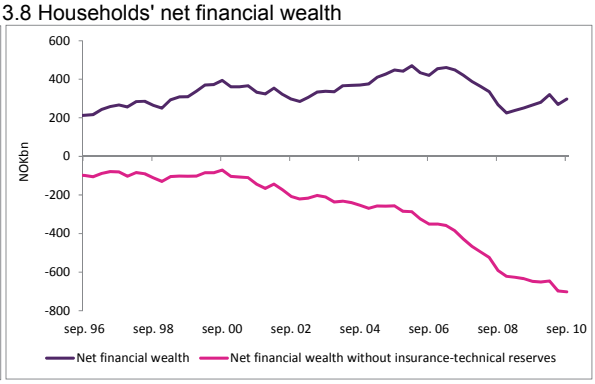
About 90 per cent of the bank sector's loans to households are secured on dwellings. Banks' credit risk is therefore closely tied up with the trend in the housing market. Since the house price fall in autumn 2008, prices have risen markedly. The loan-to-value ratio on new bank home mortgage loans has concurrently been high for several years. In its new guidelines for home mortgage loans, Finanstilsynet recommends that a mortgage should normally not exceed 90 per cent of property value. The guidelines are intended to curb the number of loans with a high loan-to-value ratio, thereby reducing credit risk in banks' home loan portfolios. Finanstilsynet has kept an eye on banks' compliance with the guidelines, for example by means of the home loan survey in autumn 2010. According to the survey the volume of loans with a loan-to-value ratio above 90 per cent has declined somewhat compared with previous years, although the proportion remains high (see Chapter 4 for further discussion of the home loan survey).

3.7 Saving rate (level)



Source: Statistics Norway

3.8 Households' net financial wealth



Source: Statistics Norway

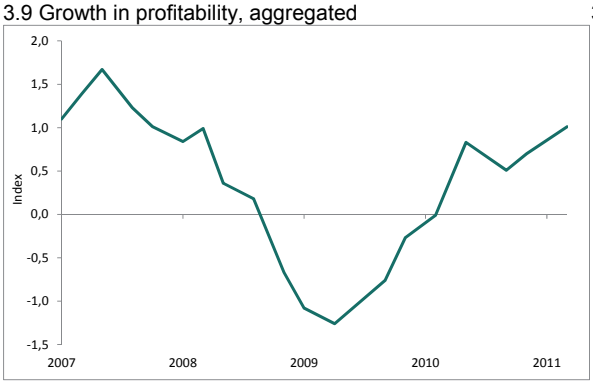
Household saving picked up substantially in the second half of 2008, remaining high thereafter (chart 3.7). The rise in saving was prompted by increased uncertainty about the economy combined with a high debt burden. Ahead Statistics Norway expects a slight decline in the saving rate in as much as house price growth and an improved economic outlook for the future reduce the need for financial consolidation among households. Household saving is none the less expected to be substantially higher than in the years preceding the financial crisis.

The positive trend in securities markets, in combination with higher net financial investments, strengthened households' financial position through 2009 and 2010 (chart 3.8). Even so, net financial wealth is far lower than in the period prior to the international financial crisis. In the short term households in a positive net financial asset position will be at less risk of defaulting on their loans since they can draw on accumulated funds. However, the bulk of the growth in net financial wealth is ascribable to higher insurance-technical reserves, essentially pension rights. These are illiquid assets which are not to be regarded as a financial buffer. Increased saving has thus done little to improve households' capacity to service their debt. Indeed households' net financial wealth is negative when insurance-technical reserves are disregarded. Moreover, financial wealth is unevenly distributed. Households' overall financial position is none the less considered sound.

Corporate sector

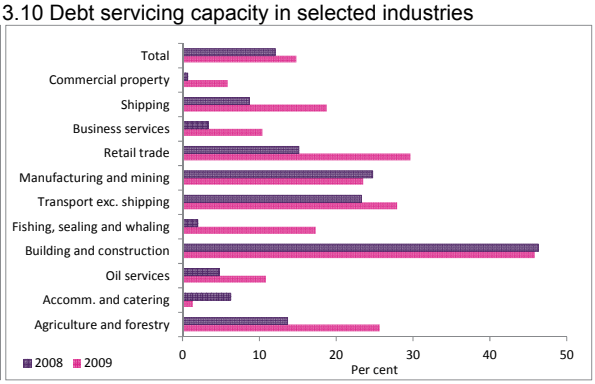
Activity levels in the Norwegian economy are now picking up at a moderate pace. The number of corporate failures is declining, and the financial position of the sector as a whole is regarded as sound. Moderate wage growth, quickening productivity growth and increased demand together with continued low interest rates are likely to improve firms' profitability in the period ahead. Concurrently investment activity in mainland (non-oil) firms has begun to pick up, spurring demand from corporate borrowers. While improved growth prospects for the Norwegian economy imply no increase in overall credit risk, the downside risk is substantial. Uncertainty about the direction of the international economy is appreciable, and the knock-on effects of an international setback for Norway's business sector would be sizeable.

3.9 Growth in profitability, aggregated



The index runs from -5 to +5, where -5 indicates a large fall and +5 sharp growth. Sources: Norges Bank's regional network

3.10 Debt servicing capacity in selected industries

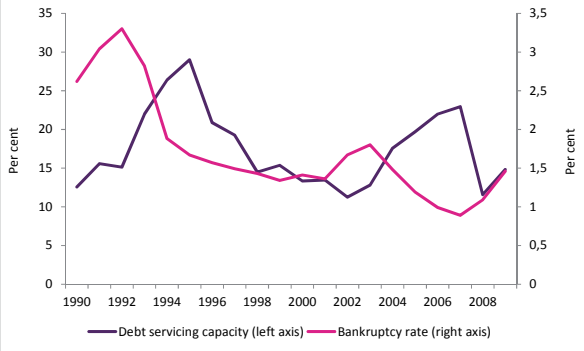


The industries are ranked by share of total debt. Sources: Norges Bank and Finanstilsynet

Corporate profitability weakened significantly in 2007 and 2008, followed by a turnaround in 2009 (chart 3.9). In 2010 Norwegian firms' profitability showed a further improvement, and listed firms' operating margins and return on capital rose. Profitability in the sector is expected to be maintained ahead, although a two-track situation cannot be ruled out: firms in the sheltered sector or exporting mainly to emerging countries have far better prospects than firms with high exports to traditional markets in Europe. Profitability in the commercial property and shipping segments is highly important for Norwegian banks since lending to these segments accounts for more than half of banks' total lending to the corporate sector. (See Chapter 1 on commercial property and shipping).

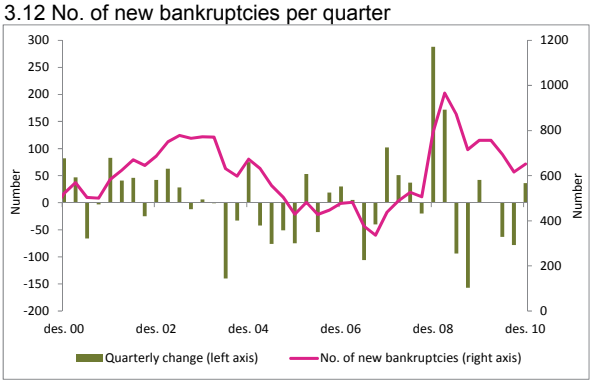
Improved results and falling debt levels strengthened firms' debt servicing capacity in 2009. However, there are differences from sector to sector (chart 3.10). The positive trend in profitability, together with low credit growth, probably improved firms' debt servicing capacity (pre-tax profit in per cent of bank and bond debt) further in 2010. Since, historically speaking, changes in the bankruptcy rate have lagged changes in debt servicing capacity (chart 3.11), the marked decline in the number of bankruptcies in 2010 supports the impression that firms' debt servicing capacity is improving. (chart 3.12).

3.11 Firms' debt servicing capacity and bankruptcy rate



Public administration and oil and gas extraction are not included in the selection. Source: Norges Bank

3.12 No. of new bankruptcies per quarter



Source: Statistics Norway

Finanstilsynet uses Norges Bank's SEBRA model to analyse credit risk in the corporate market. The model is confined to Norwegian limited companies and computes future probability of default with a basis in the latest issued annual accounts [1]. Despite falling GDP during the financial crisis, Norwegian firms' sound profit caused estimated probability of default to fall from 2.05 per cent in 2008 to 1.46 per cent in 2009. Using SEBRA, Finanstilsynet has conducted calculations for the period to 2013 based on the same two scenarios as the stress test of IRB banks (see Chapter 4). According to the calculations, average probability of default is set to rise to 2.00 per cent in 2013 in the baseline scenario, the main contributors being the assumptions of rising interest rates, and hence a heavier interest burden. In the stress scenario the probability of default is put at 2.49 per cent. The minor difference in probability of default in the two scenarios relates to the moderate fall in GDP incorporated in the stress scenario. Furthermore, lower interest rates and lower growth in corporate debt are assumed in the stress scenario than in the baseline scenario. This lowers financial costs, thereby dampening the probability of default.

Borrowers abroad

Norwegian banks lend to firms abroad through their Norwegian-based operations, and also through branches and subsidiaries. During the financial turbulence Norwegian and other Nordic banks alike incurred losses above all on exposures in the Baltics, Denmark and Ireland, and in 2008 and 2009 substantial impairment write-downs were made on exposures in these countries. Loan portfolios have been cut back and, together with improved economic prospects for the Baltics and Denmark, credit risk associated with the remaining exposures is on this basis judged to be lower than one year ago.

[1] The Capital Directive sets specific requirements for banks' definition of default, normally non-payment for more than 90 days. The SEBRA database lacks default data and uses a statistical model to estimate probabilities of default based on bankruptcy data.

A survey conducted by Finanstilsynet in spring 2010 showed that Norwegian banks have negligible direct exposure to debt-burdened countries in southern Europe and Ireland. According to the Bank for International Settlements (BIS), in June 2010 European banks' overall exposure to Greece, Portugal, Spain, Italy and Ireland was about USD 1,800bn, which is a substantial sum in relation to the banks' equity capital. Defaults in these countries could have far-reaching consequences for some banks in Europe. There would also be indirect impacts on Norwegian banks through turbulence in international capital markets.

Banks and liquidity risk

Liquidity risk is an entity's risk of inability to honour its obligations as and when they fall due. It is particularly high in the case of banking since banks transform deposits and short-term funding into long-term loans. In normal periods customer deposits are a stable source of funding, and money market loans and bond debt are rolled over as they fall due. In crisis periods, however, it is difficult to borrow in the money and bond markets even at an interest rate containing a substantial liquidity and credit risk premium. This was clearly demonstrated in autumn 2008. Much of the stock of bank deposits is protected by the deposit guarantee scheme and proved to be a stable source of funding during the financial turbulence. Unprotected bank deposits, on the other hand, may be exposed to traditional bank runs.

Banks' funding structure

Banks' funding consists mainly of deposits from customers and borrowings on money and securities markets. Banks' access to, and the price of, funding in the market depends in the first instance on their earnings and financial strength. Size and a recognised rating are also particularly important for access to foreign financing.

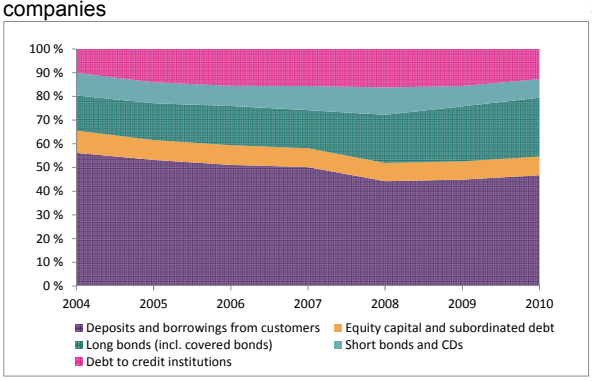
Customer deposits make up 47 per cent of banks' total assets, while bond and short-term paper debt accounts for 19 per cent. For banks and associated residential/commercial mortgage companies as a whole the significance of market funding has risen over time (chart 3.13). Most market funding is done by the large banks, and it is chiefly the largest banks that fund their operations in foreign currency. Smaller Norwegian banks have little or no foreign funding. The large Norwegian banks, on the other hand, are an important source of credit for other Norwegian banks.

The proportion of long-term bond funding (for banks and residential mortgage companies as a whole) rose particularly from 2008 onwards when the government 'swap' arrangement was introduced. Since then the market for covered bonds has continued to grow and has become an important source for long-term funding. Changes in the rules governing provision of security at Norges Bank also make the market for covered bonds more attractive. In the period to February 2012 bank bonds are being phased out as security for borrowings from Norges Bank, whereas covered bonds are still eligible. When residential mortgage companies are disregarded, the significance of the bond market for banks has fallen.

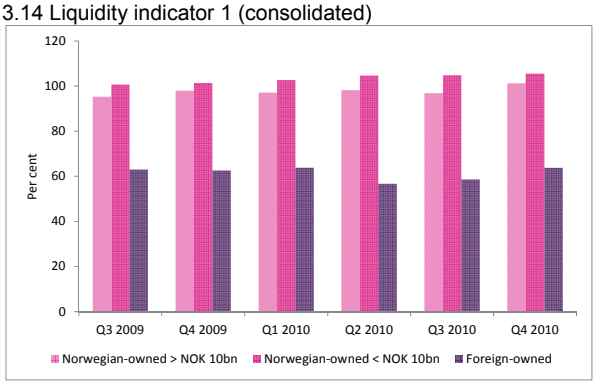
Liquidity indicator 1 in chart 3.14 shows the relationship between illiquid assets and long-term funding with a maturity of one year. At the end of 2010, liquidity indicator 1 stood at 95 per cent for bank

groups. In recent years the indicator has risen for Norwegian-owned banks, indicating that banks' funding is now on a longer-term footing than prior to the financial turbulence. Foreign-owned subsidiaries are largely financed by their parent banks and their long-term funding is therefore far lower than in the case of Norwegian-owned banks. Finanstilsynet's liquidity indicator 1 has some features in common with the international liquidity indicator Net Stable Funding Ratio (NSFR), which will be introduced as a quantitative liquidity requirement in the Capital Requirements Directive (CRD IV).

3.13 Funding of banks and covered-bond-issuing mortgage companies

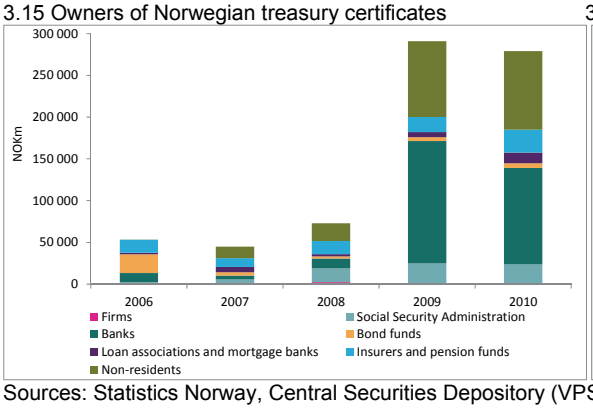


3.14 Liquidity indicator 1 (consolidated)

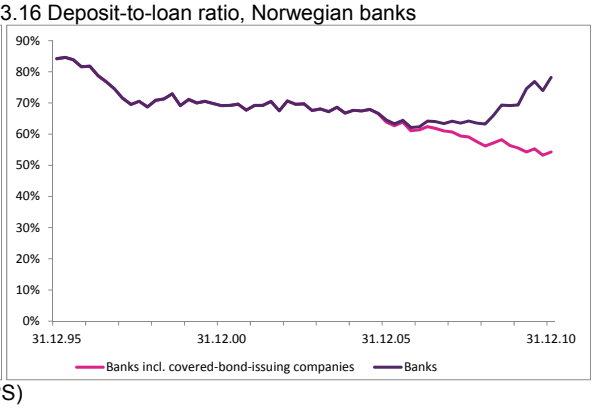


Banks' holding of Norwegian government securities has been low for some time, and at end-2010 accounted for about 5 per cent of outstanding government bonds. Because of the 'swap' arrangement, however, banks hold about 42 per cent of issued treasury certificates, and the total volume of such certificates has by the same token multiplied several times since 2008 (chart 3.15). When the 'swap' arrangement is phased out, Norwegian banks will probably have to increase their holding of government securities through the ordinary market in order to meet the required liquidity coverage ratio (LCR) also being introduced as part of CRD IV. Because the Norwegian state has a large liquidity surplus and issues few bonds and certificates, the Norwegian government securities market is small. This can create difficulties for banks wishing to increase their liquidity holdings. Alternative solutions for countries with small government paper markets are under discussion by the Basel Committee.

3.15 Owners of Norwegian treasury certificates



3.16 Deposit-to-loan ratio, Norwegian banks



Sources: Statistics Norway, Central Securities Depository (VPS)

Banks' deposit-to-loan ratio (customer deposits in relation to gross loans to customers) has risen considerably in recent years and was 76 per cent at the end of 2010 (chart 3.16). Previously small

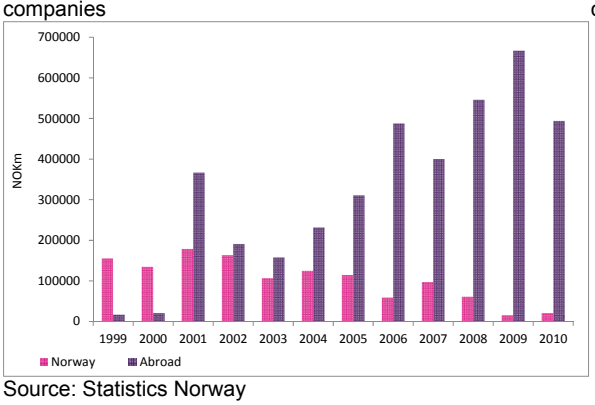
banks have had higher deposit-to-loan ratios than large banks, but at parent-bank level the difference has narrowed since larger banks have transferred large loan portfolios to residential mortgage companies. Banks benefit greatly by using residential mortgage companies to secure long, stable funding through issues of covered bonds which attract great interest internationally and are favourably priced in the market.

Norwegian banks have higher deposit-to-loan ratios than other European banks. The smallest banks in particular are dependent on customer deposits as a funding source due to limited access to market funding. The deposit guarantee scheme of the Norwegian Banks' Guarantee Fund covers up to NOK 2m per depositor and currently includes 56 per cent of total deposits. While the deposit guarantee system in Europe has been revised this year, there is reason to believe that Norway can retain its scheme.

Primary markets for money market instruments and bonds

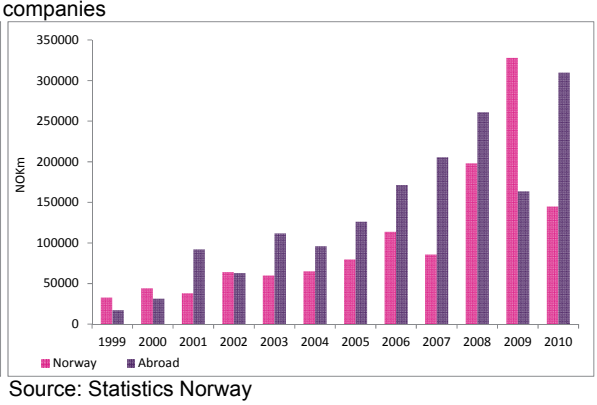
The domestic money market has lost significance for banks and mortgage companies (chart 3.17), while borrowing in the equivalent markets abroad has risen strongly. Institutions' exposure to foreign sources of funding has thus increased, making them more vulnerable to international financial unrest.

3.17 CDs issued by Norwegian banks and mortgage companies



Source: Statistics Norway

3.18 Bonds issued by Norwegian banks and mortgage companies

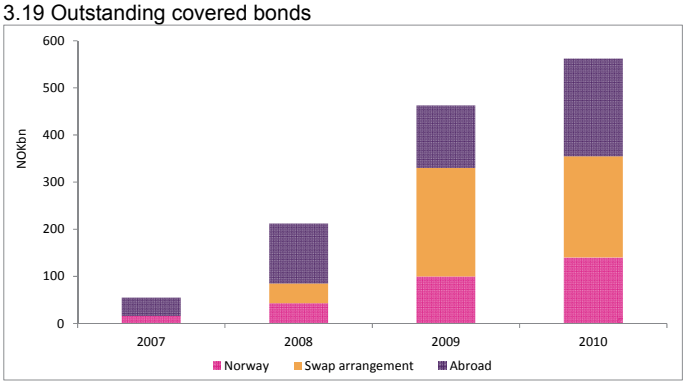


Source: Statistics Norway

Banks and mortgage companies are dominant actors in the primary market for bonds in Norway. They also issue substantial amounts abroad (chart 3.18), increasing the liquidity risk associated with foreign bond markets. Issues abroad fell sharply during the financial crisis. Banks' issue volume in Norway also fell, whereas the overall domestic issue volume was very high due to mortgage companies' substantial issues of covered bonds that were exchanged for government securities under the stimulatory package launched in response to the financial crisis. In 2010 banks and mortgage companies again issued more bonds abroad than in Norway. The banks still enjoy ample access to funding in the Norwegian bond market, but there are limits to the size of issues this market can absorb.

By the end of 2010 covered bonds worth about NOK 560bn had been issued, of which covered bonds totalling NOK 215bn are still tied up in the 'swap' arrangement (chart 3.19). The market apart from the 'swap' arrangement has consequently absorbed covered bonds worth about NOK 345bn. About 55 per cent of covered bonds outside the 'swap' arrangement have been issued abroad. In 2010 this market segment accounted for about 60 per cent of all covered bond issues, whereas in 2009 covered bond issues denominated in foreign currency were negligible.

3.19 Outstanding covered bonds



Bonds issued by banks in the Norwegian market during the financial crisis had shorter-than-normal maturities, but this changed as from 2009. New bonds issued in Norway now have longer maturities than was usual earlier, putting funding on a more long-term and robust footing.

Market interest rates/price of banks' funding in the market

Alongside the general interest rate level, banks' borrowing rates are influenced by the credit and liquidity risk on CDs and bank bonds and by investors' risk aversion. It is difficult in practice to separate the risk elements credit and liquidity from one another.

The coupon rate on new bonds issued in Norway rose substantially during the financial crisis (chart 3.20). The spread against government bonds is still significantly higher than prior to the crisis. It is not unlikely that spreads in future will remain on a higher level than prior to the financial crisis, and thus possibly better reflect the risk in the banking system. The difference in risk margin between banks with differing ratings and size may also be larger ahead than historically. It is important that banks' bondholders have an awareness of the risk associated with lending to banks.

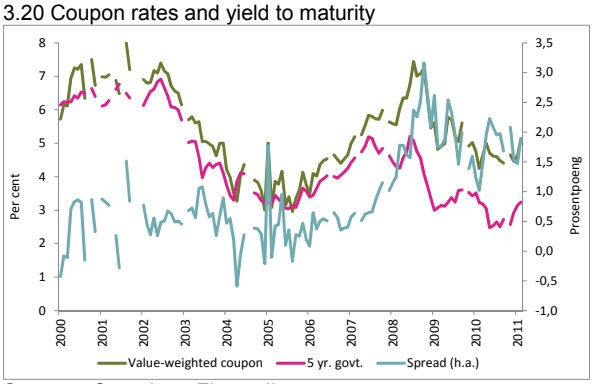
Risk mark-ups in the bond market rose substantially in June 2010 due to the turbulence in Europe and the government debt situation in Greece (chart 3.21). It was costlier for banks to obtain funding in the bond market at the end of 2010 than at the start of the year. This applied both to short and long maturities. The price of five-year bonds for small banks rose by about 50 bp to about 150 bp over NIBOR at the end of 2010, whereas corresponding prices for the largest banks rose from about 70 to 100 bp over NIBOR. Mark-ups on covered bonds also rose somewhat through the year but to a far lesser degree than in the case of bank bonds. At year-end the price of five-year covered bonds was just over 50 bp higher than NIBOR, compared with around 40 bp above NIBOR at the end of 2009. This demonstrates that banks benefit considerably by utilising residential mortgage companies for long-term financing purposes. Investors consider Norwegian and Swedish banks' financial situation to be sound. The banks are regarded as well capitalised and their loss risk as negligible. Thus far in 2011 spreads have increased somewhat in the case of longer term bonds and covered bonds, while prices in the market for short-term liquidity have changed little.

It is, as expected, costlier for banks to obtain long-term than short-term funding in the bond market. This difference is now greater than previously, and in isolation encourages short-term financing.

Small banks generally have to pay a higher mark-up in the bond market than do large banks. While this weakens small banks' margins relative to their larger counterparts, the small banks have a higher

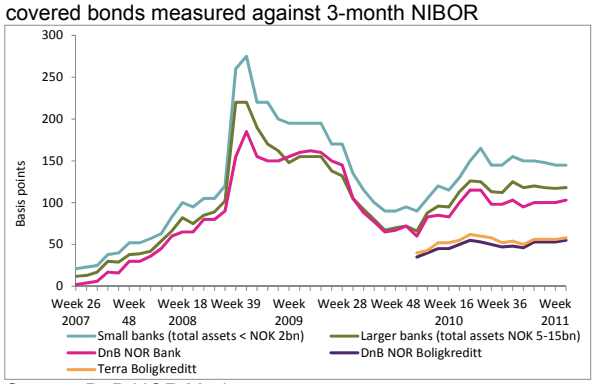
deposit-to-loan ratio and are not subject to hurdle rates to the same degree. A reason for the different mark-ups applied to large and small banks may be that the market considers failure of the largest banks to be unlikely.

3.20 Coupon rates and yield to maturity



Sources: Stamdata, Finanstilsynet

3.21 Indicative prices of 5-year bank bonds and covered bonds measured against 3-month NIBOR

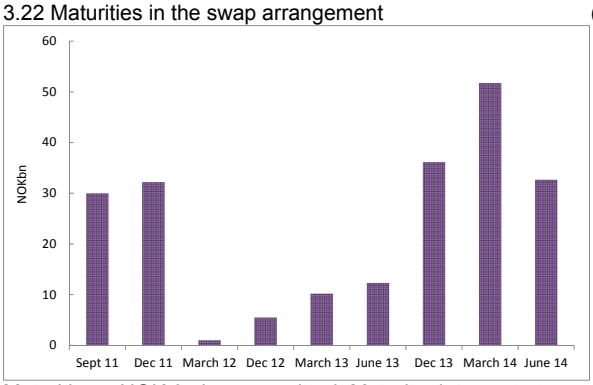


Source: DnB NOR Markets

Maturity structure

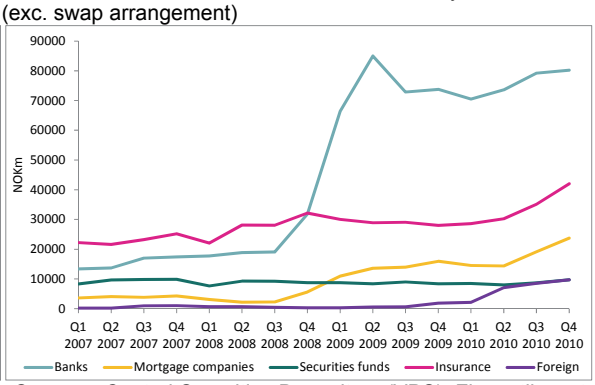
In 2011 banks (exc. residential mortgage companies) have NOK 508bn maturing in the form of issued securities and loans from credit institutions. These maturities are mainly foreign funding. Securities debt and loans from credit institutions maturing after 2011 totalled NOK 450bn at the end of 2010, the bulk of which is debt to Norwegian lenders. Through the financial crisis there was a decline in the average maturity of securities debt. Since 2009 residual maturity has risen, although it is still somewhat lower than prior to the crisis.

3.22 Maturities in the swap arrangement



Maturities < NOK 0.5bn are omitted. Maturity dates not at regular intervals. Sources: Norges Bank, Finanstilsynet

3.23 Owners of covered bonds issued in Norway (exc. swap arrangement)



Sources: Central Securities Depository (VPS), Finanstilsynet

Bank bonds account for about 25 per cent of market funding maturing in 2011, and for about two-thirds after 2011. The future refinancing needed to replace maturing bonds somewhat exceeds the average issue volume after the international financial crisis. Even with stable market conditions and steady interest in bonds from Norwegian banks, a portion of the bond debt may, given today's issue volume, have to be refinanced through issues of covered bonds by the banks' residential/commercial mortgage companies. The effect of phasing out bank bonds as permitted collateral for loans from Norges Bank is highly uncertain. The change will in isolation reduce demand for bonds issued directly

by banks. If large volumes of bank bonds are to be refinanced at the same time, the market may prove to lack sufficient depth.

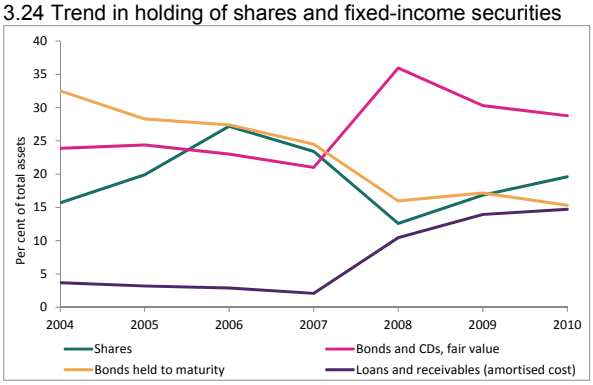
Under the 'swap' arrangement, banks received government securities worth NOK 230bn in exchange for covered bonds from the banks' residential mortgage companies. Only a marginal share of the 'swap' arrangement has fallen due. The large maturities fall due mainly from autumn 2011 onwards and are unevenly distributed (chart 3.22). Banks will then need to redeem the government securities, and will be returned the covered bonds they put in guarantee. Unless the banks have sufficient liquidity and desire to retain covered bonds in their own balance sheets, they will have to be sold in the market. This could lead to an offering of Norwegian-issued covered bonds more than double today's level. While the introduction of Solvency II for insurers and changes to the rules for provision of security at Norges Bank could both increase demand for covered bonds, much uncertainty still attaches to how the market for covered bonds will function when the 'swap' arrangement matures and large holdings of covered bonds are made available in the secondary market. The Ministry of Finance has opened the way for early redemption of the 'swap' arrangement so as to reduce the risk of pressure on liquidity in these periods and to allow banks greater flexibility in relation to redemption.

Life insurance and market risk

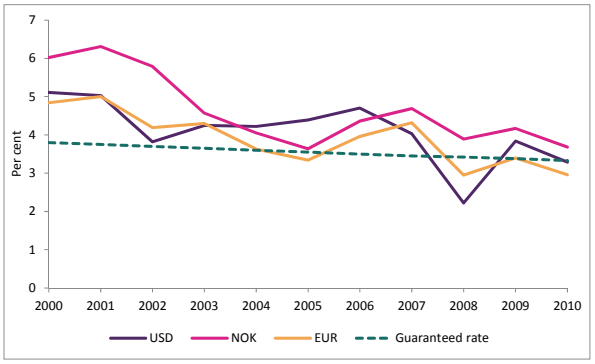
Life insurers are exposed to market risk through large holdings of equities and fixed income securities. The risk level depends both on the proportions involved and composition of the securities holding, as well as price fluctuations and market liquidity.

Life insurers reduced their holding of shares as from the second half of 2007 to very low levels at the end of 2008 when the equity component accounted for a mere 10 per cent of the collective portfolio. The collective portfolio makes up on average just over 80 per cent of total assets. In 2009 the stock market once again reversed, and purchases and value increases gradually raised the equity component to 17 per cent by the end of 2010. This is none the less far below the equity components seen in 2006 (chart 3.24). Foreign shares made up about 74 per cent of the aggregate shareholding at the end of 2010. Hence risk also attaches to the trend in international stock markets. About 25 per cent of the shareholding comprises shares not quoted on a stock exchange, such as private equity.

3.24 Trend in holding of shares and fixed-income securities



3.25 Trend in long interest rates and the guaranteed rate



Funds freed up as a result of heavy divestment in 2008 were used to purchase bonds. Bonds recognised at fair value made up 27 per cent of the collective portfolio at end-2010, of which government and government-guaranteed bonds accounted for 55 per cent, while bonds held to maturity made up 19 per cent. Direct exposure to the PIIGS countries is modest, but the general uncertainty in securities markets nonetheless heightens market risk. A high proportion of fixed income securities secures stable interest revenues but at the same time increases vulnerability to interest rate movements. The risk associated with the interest rate trend is dual. In the short term, lower rates entail a positive trend in the value of interest-bearing securities. In the longer term, they pose a challenge in relation to the guaranteed annual return to policyholders (chart 3.25), and also make it more difficult for insurers to build up capital buffers.

Since 2007 life insurers have greatly increased their investments in loans and receivables at amortised cost, which made up 18 per cent of the collective portfolio at the end of 2010. Property investments accounted for 15 per cent of the collective portfolio, and the trend in property values has a potentially large significance for life insurers' performances. In 2010 Finanstilsynet examined three life insurers' valuation of investment property. See Finanstilsynet's annual report for an account of the survey findings.

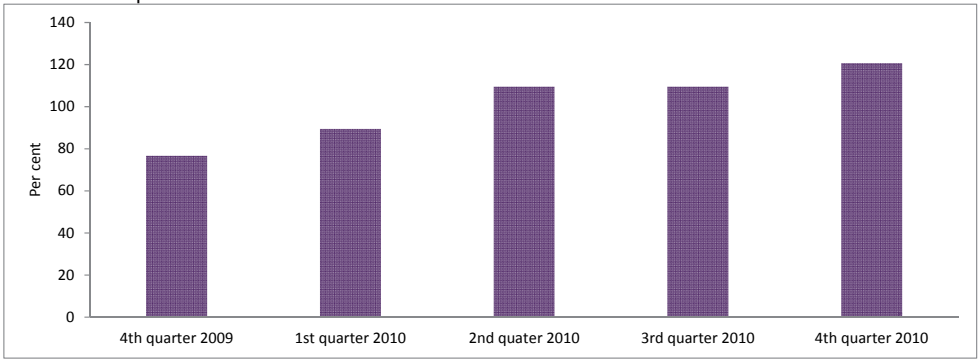
Life insurers must adapt their assets to their assumed liabilities. Under a large volume of insurance contracts (defined benefit arrangements), Norwegian life insurers have a commitment in the form of a guaranteed rate of return averaging about 3.3 per cent which is allocated to policyholders with final effect each year. Insurers have an incentive to maintain low portfolio risk in order to avoid burdening equity capital. This may encourage short-term asset management and a preponderance of short-term, highly liquid investments. In addition, the equity component may well prove lower than optimal in the long-term given the expected excess return for investors in the equity market.

Stress testing of life insurers' financial strength

The new European solvency framework for insurers, Solvency II, is due to take effect in 2013. Solvency II poses one of the greatest challenges to insurers in forthcoming years due to major changes in requirements on asset management and financial strength. Finanstilsynet introduced quarterly stress testing in 2008 to analyse the impact of the coming rules. The stress tests are closely aligned to the new solvency regime, but with some simplifications, and are regularly amended in step with revisions of Solvency II. The testing is designed to measure the companies' overall risk against their buffer capital, i.e. their buffer capital utilisation. Buffer capital utilisation above 100 per cent indicates that the solvency capital requirement under Solvency II is not being met. At the end of 2010 several companies had a buffer capital utilisation above 100 per cent in the stress test. Overall, life insurers saw some increase in their buffer capital utilisation in 2010. The capital charge for market risk in particular has risen as a result of an increased equity component and more stringent calibration. See Chapter 2 for a closer account of the trend in buffer capital.

Several insurers will under the present product rules face major challenges in connection with the capital requirements under Solvency II. This is particularly true of insurers with a significant proportion of paid-up policies in their portfolio since profit elements cannot be covered through future premiums.

3.26 Buffer capital utilisation at life insurers



QIS5 – quantitative impact studies under Solvency II

Several rounds of quantitative impact studies have been held at the European level with a view to clarifying issues related to methods to calculate and calibrate the requirements of Solvency II,. The fifth and presumptively last round (QIS5) was carried out in autumn 2010. The ten life insurers and 39 non-life insurers that participated cover almost 100 per cent of the Norwegian market (exc. branches).

For life insurers QIS5 shows a considerable tightening of the capital requirements compared with today's solvency margin requirement. Under QIS5 overall capital meets 104 per cent of the solvency capital requirement at the end of 2009, while meeting 236 per cent of the requirement under the current framework. This is because the solvency requirement rises sharply under QIS5, while eligible capital shows only a moderate rise. Although allowance must be made for changes to the rules and calibration after QIS5, Solvency II looks to be demanding for many Norwegian life insurers. Adjustments to the product rules may dampen the effect of the introduction of Solvency II, for example by facilitating and encouraging increased buffer capital.

For non-life insurers, overall capital covers 196 per cent of the solvency capital requirement at the end of 2009, compared with 660 per cent under the present rules. The sharp increase in the capital requirement for these insurers is partly compensated for by an increase in available capital, but overfulfilment is nonetheless lower. Capital has increased because parts of today's contingency provisions are reclassified to capital under Solvency II. Many non-life insurers have applied simplifications beyond those permitted by the legislation, and the tax effects of changes in the provisioning rules are uncertain. Even so, the results show that most Norwegian non-life insurers will be able to meet the new solvency requirements by a satisfactory margin.

Changes proposed in the conduct of business rules for life insurers

The introduction of Solvency II has brought into focus the issue of conduct of business rules for life insurance and pensions, particularly in relation to the formulation of the annual interest rate guarantee. Calculation of capital requirements under Solvency II brings the risk associated with a one-year time horizon considerably more into focus than the present capital requirement. Moreover, the solvency requirements are substantially tightened. These changes could intensify the short-term focus of insurers' asset management. Their management strategy in recent years indicates little capacity to hold risky investments with higher expected return over time. The need to minimise risk to own capital is reflected inter alia in dynamic risk management, where insurers divest when stock markets fall, and are unable to reinvest fully until the indexes have risen appreciably.

Proposals from several quarters call for conduct of business rules to be adjusted in light of Solvency II so as to give a greater incentive and opportunity for long-term management adapted to the time horizon of pension liabilities. Finanstilsynet has considered the issue and forwarded proposed changes in the conduct of business rules to the Ministry of Finance in March 2011.

After considering a range of adjustments, Finanstilsynet recommended changes in the legislation governing the build-up and use of buffer funds. The existing rules require insurers to maintain various buffer funds with approximately the same function but with differing rules governing their build-up and application and also transfer values. Finanstilsynet recommends combining supplementary provisions and fluctuation reserves in a new, expanded buffer fund so as to simplify the legislation and strengthen insurers' risk-absorbing capacity. The fund would be available to cover negative return. Insurers will be required to allocate excess return to the buffer fund until the fund reaches a given level. Once the fund exceeds a further, higher, level, assets would be transferred to the policyholder with final effect. The buffer fund should be customer-specific and accompany the customer in its entirety upon transfer. The proposal may encourage higher buffers better able to absorb short-term fluctuations, thereby providing greater leeway for long-term asset management. This will benefit policyholders in the form of higher expected return. Finanstilsynet also believes that an opportunity should be given to increase provisions for buffer capital in the years up to the introduction of Solvency II by widening the scope for individual step-up of supplementary provisions from as early as 2011.

After an overall evaluation Finanstilsynet decided not to recommend an end guarantee, or reversible allocations, whereby expected future excess return can also be employed to cover loss. Introducing an end guarantee raises issues both in relation to policyholders' right of transfer and in relation to the constitutional protection of established rights. Under Solvency II it will not be possible to be under-capitalised based on expectations that average future return will exceed the market rate in effect. A return shortfall will be immediately reflected in the solvency calculations. Any buffer based on expected future return will be eliminated if the level of long rates falls to a level approaching the guaranteed rate. Hence the buffer will no longer be available in a situation where plunging stock markets are combined with a significant fall in long rates, as was the case in autumn 2008.

Finanstilsynet also recommends allowing policyholders to voluntarily convert paid up policies and prior individual products to unit-linked pension rights certificates. This could help to reduce insurers' market risk while at the same time affording pension policyholders greater flexibility.

Insurance risk at life insurers

Insurance risk has its origin in unpredictable variations in the ratio between claims payments and other insurance-related costs on the one hand and premium revenues on the other. The most important cause of insurance risk is events that cause the timing and size of payments to turn out differently from what was expected.

Changes in life expectancy (mortality trend) are fairly stable in life insurance, but can represent a substantial insurance risk in the longer term. As a result of increased longevity in the population, new, "long life" tariffs were introduced to reflect reduced mortality in 2008. A number of life insurers

concurrently stepped up insurance technical provisions connected with collective pension agreements. They are now engaged in a similar process of increasing technical provisions for individual pension agreements. A continuing increase in longevity will prompt a need to further strengthen insurance technical provisions over time. Even fairly modest changes in life expectancy call for a substantial increase of technical provisions. Under the new international solvency rules, reduced mortality rates are also expected to affect insurers' need for solvency capital to meet the requirements resulting from reduced mortality.

Operational risk

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes or systems, human error or external events. Operational failure is often a contributory factor to losses that would otherwise be classified under credit risk or market risk.

The Basel II framework introduced operational risk as part of the measurement base for banks' capital requirements in 2007. Banks can choose between three different approaches: the Basic Indicator Approach, the Standardised Approach and the Advanced Measurement Approach (AMA, based on their own and external data).

No Norwegian bank has so far applied to use the AMA approach. In 2010 the Basel Committee carried out extensive surveys to chart the degree to which capital requirements reflect banks' actual exposure and losses connected to operational risk. These analyses may in the long term lead to rule changes to enable better differentiation of the capital requirement by actual risk, and could also give banks stronger incentives to opt for AMA approaches to measuring operational risk.

In 2010 thematic inspections of compliance with a new Money Laundering Act were carried out at 10 financial institutions. Most of the institutions in the sample had failed to take sufficient action to secure compliance with new provisions in the Act. This applies in particular to provisions on extended due diligence with regard to new customers and a requirement for risk-based assessment of the customer base. See also the relevant report on Finanstilsynet's website.

In insurance, operational risk surfaces in various forms of fraud. The insurance industry considers fraud to be on a more organised footing than previously in some insurance areas.

In 2010 no individual events of an operational nature in the securities area led to sizeable losses at infrastructural institutions. A new trading system was introduced at Oslo Børs, and Oslo Clearing is now the clearing house for equity instruments quoted on Oslo Børs and Oslo Axess. This also heralded major changes in the central securities settlement process at the central securities depository, Verdipapirsentralen ASA. In Finanstilsynet's view the institutions have handled the risk inherent in these projects satisfactorily. The markets for financial instruments are developing in the direction of 24-hour trading, with the result that clearing houses have less time for calculation and quality control. To counter increased operational risk, steps will need to be taken to compensate for the increased time pressures.

Operational risk in the ICT and payment services area

A number of banks and financial institutions in Norway have outsourced all or parts of their ICT operations to providers in and outside Norway. Outsourcing is often to countries that may represent high risk. When ICT functions are moved out of Norway, compliance with the applicable rules is a basic necessity, but further risk assessments must be carried out before a decision to outsource is taken.

Increased concentration on a small number of providers and centralisation of ICT operations in Nordic financial conglomerates give rise to adverse concentration risk unless effective risk-mitigating steps are taken. This applies both to technical modules and communication entities, and in the use of the same type of application solution across many financial institutions. Such concentration can similarly heighten the challenge associated with maintaining an effective back-up capability. Use of new technology can represent a high risk in already complex ICT operations. Identity theft is a growing problem. A significant cause is leaks from databases outside Norway, but also misuse of various types of public registers in Norway. Leaks of credit card data are often used to produce fake cards, and efforts to arrive at effective countermeasures have been initiated. In 2010 more than 40 Norwegian ATMs were subject to skimming, i.e. illegal capture of the content of cardholders' magnetic stripe. Steps have been taken to stop use of the technology involved. Traces of attacks via the internet on internet banks in Norway have also been detected, although no customers have been defrauded thus far. Attacks on a large scale are in evidence in many countries, underscoring the need to keep a close watch on the internet banking area.

4. Special analyses of risk factors

Finanstilsynet has for several years charted risk developments in the financial sector by means of surveys providing a valuable supplement to the analyses of regularly reported data. This chapter reviews some important surveys and analyses carried out in 2010, mainly with regard to themes of significance for the trend in bank's credit risk. Surveys of importance from a consumer perspective were also carried out in 2010.

Macroeconomic stress test of large Norwegian banks

Finanstilsynet has asked the seven Norwegian banks with permission to use internal models to compute capital charges for credit risk (IRB approach) to conduct stress tests for their banking conglomerates[2] based on a set of common assumptions. Two macroeconomic scenarios underlie the stress tests, a baseline scenario based on that set out in Norges Bank's Monetary Policy Report 3/10 and a stress scenario[3]. The baseline scenario shows the expected development of the economy, while the stress scenario represents a negative divergence from that expectation (table 4.1).

Table 4.1 Central parameters in the scenarios

		Baseline scenario				Stress scenario			
	NOK bn	Percentage change from previous year							
	2009	2010	2011	2012	2013	2010	2011	2012	2013
Real economy									
Mainland Norway GDP	1 845	1.8	3.0	3.0	2.8	1.3	-0.2	1.7	2.3
Mainland Norway Exports	418	2.0	2.8	2.8	3.0	2.0	0.0	0,0	2.0
Registered unemployment (% of labour force)		3.0	2.8	2.5	2.5	3.0	3.0	3.4	3.5
Prices									
3-month money market rate, NIBOR (level)		2.5	2.7	3.6	4.4	2.9	2.5	2.0	2.0
Oil price, Brent Blend, USD p/b (level)		78.6	85.0	88.1	88.1	63.5	50.0	50.0	50.0
House prices		7.8	4.7	4.0	3.7	5.9	-10	-4.1	2.4
Commercial property prices		7.8	4.7	4.0	3.7	5.9	-10	-4.1	2.4
Credit									
Credit to households (C2)		6.7	6.9	6.8	6.4	6.3	3.7	2.6	2.3
Credit to non-financial firms (C3 Mainland Norway)		2.4	4.6	5.9	5.9	2.2	-1.5	0.0	0.4

Sources: Statistics Norway and Norges Bank

The stress scenario posits a moderate fall in GDP in the current year and thereafter a flat trend in production. Unemployment is projected to rise slightly from today's level. A sharp fall in property prices is assumed in 2011 and 2012. Concurrently the interest rate declines by about one percentage

[2] DnB NORD is included at 100 per cent in the period.
[3] Norges Bank's stress test analyses of parent banks based on the same macro scenarios are published in Financial Stability 2/10.

point. The stress scenario thus omits several uncertain factors mentioned in Chapter 1, in particular connected with the international economy.

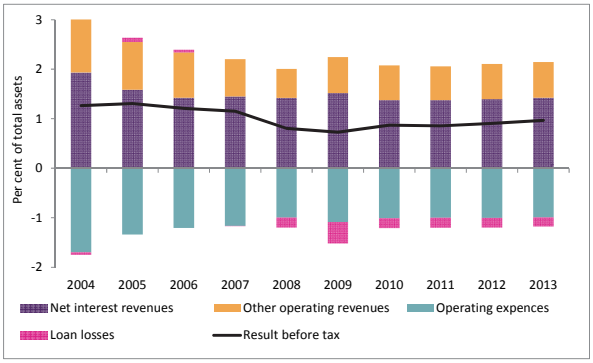
The banks were asked to take a basis in the mid-2010 income statement and balance sheet and to report the development up to the end of 2013. In the interest of comparability a set of common assumptions were applied, for example barring bank managements from taking steps to change developments and requiring lending to grow as specified. However, the banks were able to independently evaluate their net lending margin and were free to select methodologies for loss estimates and for transforming the macro scenario into inputs to IRB models. This is essentially a stress test of the banks' credit portfolios, not of their liquidity. The most important outcome of the stress test is an increase in loan losses, which are markedly higher than in the baseline scenario. Moreover, interest revenues are somewhat lower in the stress test.

While not directly comparable, the stress test shares some features with the test conducted by CEBS (now EBA) for European banks in 2010. For example, the decline in trading partners' production is of the same order of magnitude as that employed by CEBS for the euro countries. The European Banking Authority has initiated a stress test for a large portion of the European banking market based on macroeconomic scenarios prepared by the European Central Bank; results for the participating banks are due to be published in summer 2011. DnB NOR Bank is participating in the pan-European stress test for the first time.

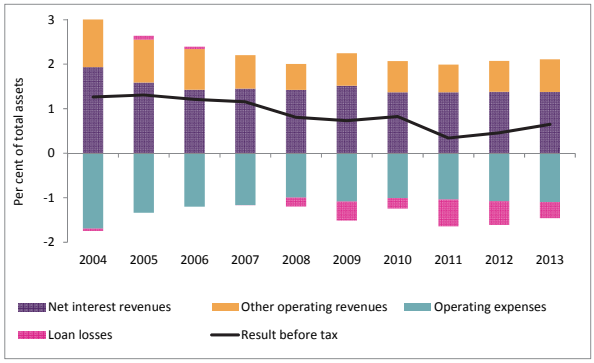
Banks' results

In the baseline scenario banks' results improve in the projection period (chart 4.1). The profit growth is due mainly to somewhat higher net interest revenues and continued low losses. Pre-tax profit measures about 1.0 per cent of total assets in the period 2010 to 2013, somewhat lower than the average for 2005 to 2009. In the stress scenario the increase in loan losses markedly weakens banks' performance in 2011. However, pre-tax profit remains positive (see chart 4.2). (Some banks show one year of negative profit.) In the years 2012 and 2013 performances improve in keeping with falling loan losses. Pre-tax profit in the stress scenario corresponds to about 0.6 per cent of total assets in the period 2010-2013.

4.1 Result before tax. Baseline scenario



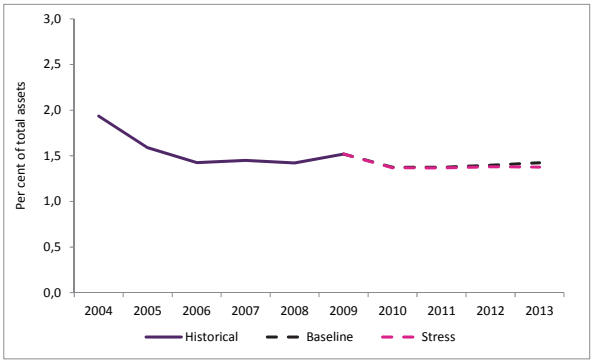
4.2 Result before tax. Stress scenario



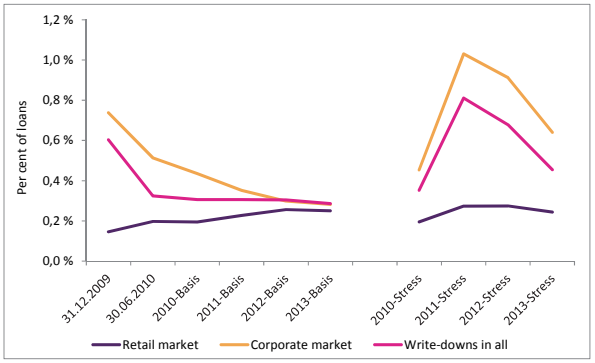
Banks' net interest revenues have been under pressure in recent years due to keen competition for lenders and depositors and high costs of long-term funding. Banks have employed different assumptions with respect to interest margin: in the baseline scenario some increase is expected in net interest revenues in relation to total assets in each of the three years ahead compared with the level in 2010 (chart 4.3). This may be an optimistic assumption in view of the long-term falling trend in

evidence in the years up to 2010. In the stress scenario, on the other hand, the decline in net interest revenues continues as a result of lower growth in deposits and lending, and higher funding costs.

4.3 Net interest revenues



4.4 Loan losses in the baseline and stress scenarios



Banks' losses on loans to retail customers have been low historically speaking, as reflected in the aggregate losses in the projection period. The stress scenario posits an increase in unemployment which, together with a moderate income growth and low interest rates, means that households' debt servicing capacity is maintained. This keeps average losses on retail customer loans below 0.3 per cent (DnB NORD's level is appreciably higher than in the Norwegian market) of the aggregate loan volume, which is marginally higher than in the baseline scenario.

Losses on loans to corporates are significantly higher in the stress test than in the baseline scenario. This is particularly true for 2011 and 2012 (chart 4.4). For the last year of the projection period the macro assumptions entail some recovery in the domestic economy and higher exports. Accordingly in the stress test the banks expect lower losses on corporate loans in 2012 and 2013 than in 2011. Average annual losses on corporate loans for the period 2011-2013 measure 0.8 per cent of loans, which is not particularly high historically speaking.

In the stress scenario, total losses for all banks come to about 0.6 per cent of loans, which is close to twice the losses in the baseline scenario. Annual loss peaks at 0.8 per cent in 2011. By way of comparison, losses for all Norwegian banks in 2002-2003 were in the region of 0.6-0.7 per cent, whereas annual losses during the banking crisis at the start of the 1990s were in excess of 4 per cent.

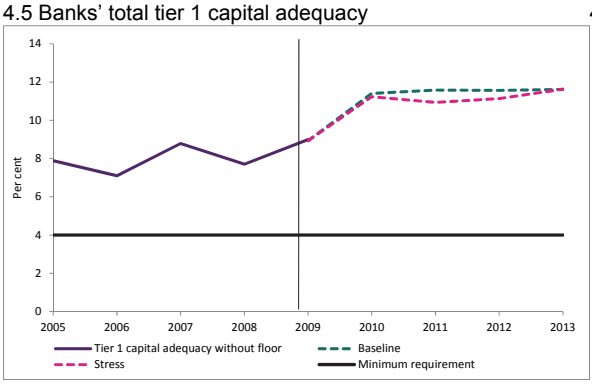
Banks' tier 1 capital adequacy

Profit growth means that all the banks meet the minimum requirements as to tier 1 capital adequacy throughout the stress period. Tier 1 capital adequacy is fairly stable in both scenarios after 2010 (chart 4.5). The increase in 2010 is due mainly to changes in the calculation method since new large portfolios are reported in accordance with the AMA approach.

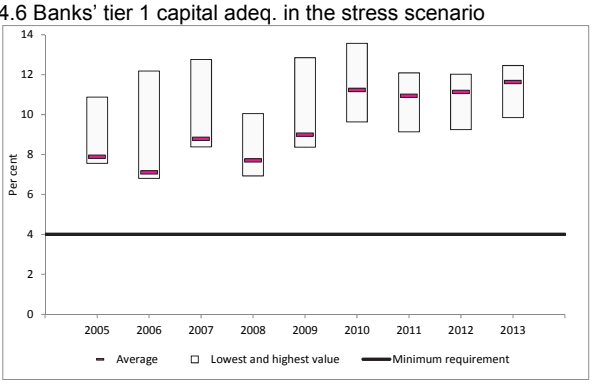
At the end of the period tier 1 capital adequacy in the stress scenario is close to the baseline scenario level. This is partly because banks' calculations largely show profit in the stress scenario, as in the baseline scenario. Further, lower growth in gross lending in the stress scenario means that accumulated tier 1 capital is set in relation to relatively speaking lower risk-weighted assets. Chart 4.6 shows the variation in banks' level of tier 1 capital adequacy. There is considerable variation between individual banks, but all banks are well above the applicable minimum requirement for tier 1 capital adequacy in the stress scenario as in the baseline scenario.

Such stress testing has shortcomings. For example, the macro stress scenarios are based on models and parametrisation that break down in crisis situations. Banks' post-loss performances are often positive in the stress scenario so that losses have no effect on equity. In addition, reduced lending growth limits the effects on tier 1 capital adequacy. Finanstilsynet's guidelines for banks' stress testing related to their ICAAP process assume that stress scenarios will be based on negative profits combined with difficulties in raising equity capital.

4.5 Banks' total tier 1 capital adequacy



4.6 Banks' tier 1 capital adeq. in the stress scenario

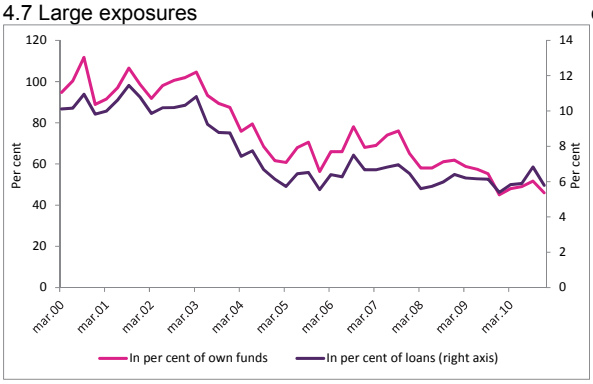


Figures for 2007 onwards are based on pure Basel II (ie without floor)

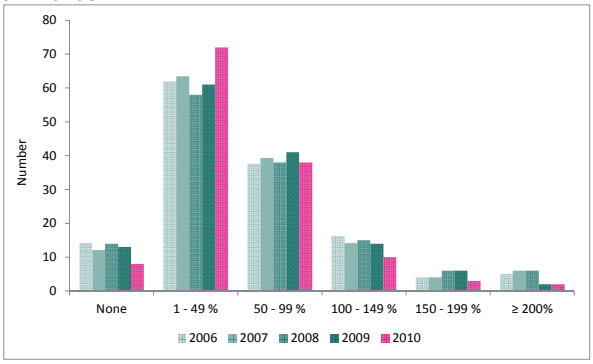
Concentration risk (large exposures)

Unexpected events mean that an institution is unable to fully guard against financial difficulties among its customers and counterparties. It is therefore important to limit the damaging impact this can have on institutions by setting a maximum limit for counterparty exposure, as is the intention of the body of rules governing major exposures. A large exposure is defined as representing 10 per cent or more of own funds prior to risk weighting. No single exposure may constitute more than 25 per cent of an institution's net own funds.

4.7 Large exposures



4.8 No. of banks by large exposures' share of own funds



Banks' large exposures have decreased considerably over the past 10 years as a share of overall capital and loans alike (chart 4.7). Most banks have a relatively small volume of large exposures (chart 4.8). At the end of 2010, only 15 of 133 banks had large exposures which after weighting exceeded the bank's own funds.

Corporate customers account for the bulk of the banks' portfolio of large exposures after weighting (table 4.2). About 82 per cent of Norwegian banks' large exposures after weighting are to corporates. This is particularly true of loans to commercial property, manufacturing and the transport sector.

Table 4.2 Banks' volume of large exposures as of 31.12.2010. Risk weighted

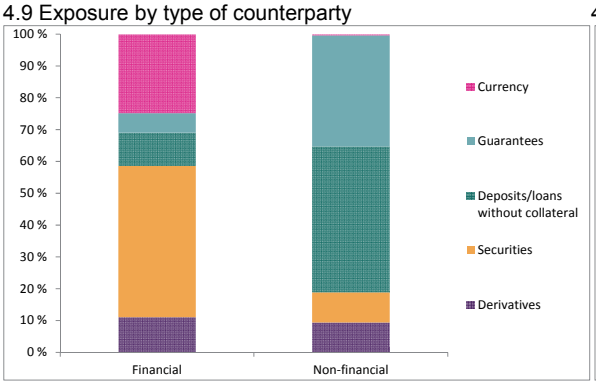
Sector	Risk-weighted volume (NOK m)	Share of total	Share of own funds
Public administration (sectors 110, 510 and 550)	564	0,5 %	0.2 %
Financial institutions (sectors 150-499)	12 530	10.9 %	5.0 %
Corporate customers (sectors 610-790, 890)	93 351	81.5 %	37.2 %
Retail customers (sector 810)	949	0.8 %	0.4 %
Foreign (sector 900)	7 205	6.3 %	2.9 %
- of which foreign corporate customers (sector 980)	7 038		2.8 %
Total	114 599	100.0 %	45.7 %

Effective as of 1 January 2011, the Ministry of Finance issued new regulations for large exposures to reflect changes to the CRD II Directive (2009/11/EC). The regulations incorporate adjustments to the scope of application, risk weightings and the maximum limit for overall exposures to another financial institution or investment firm, and the general overall limit for major exposures has been removed.

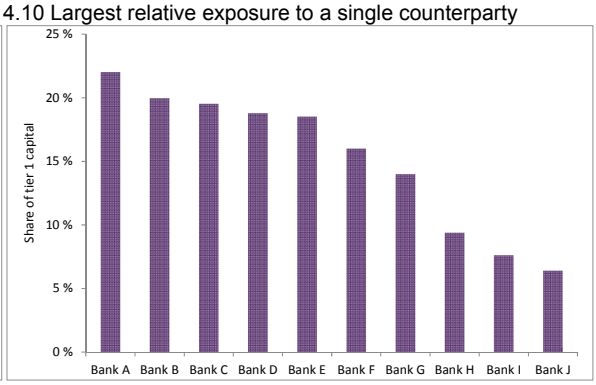
Banks' counterparty exposures

Finanstilsynet conducts twice yearly surveys of the largest counterparty exposures at a selection of Norwegian banks. The aim is to ascertain the size of the banks' unprotected exposure to their largest counterparties. The composition of exposures and the level of concentration on certain counterparties are of particular interest. A large proportion of the banks' largest counterparty exposures are of a short-term nature.

4.9 Exposure by type of counterparty



4.10 Largest relative exposure to a single counterparty



Ten of the largest banks are included in the selection, each of which reports its 10 largest financial and non-financial counterparties. A distinction is drawn between exposure to derivatives with a positive market value, securities, uncollateralised deposits/loans, guarantees and unutilised credit lines and uncollateralised foreign exchange settlements. The latest reporting was dated 30 September 2010. Since large portions of exposures are short-term, the picture may change significantly from one reporting date to the next.

At the latest reporting the largest exposures to financial counterparties totalled about NOK 62bn for all banks combined in the selection, while the largest exposures to non-financial firms totalled NOK 58bn. Generally speaking, exposure to financial counterparties refers to securities and foreign currency whereas uncollateralised deposits/loans and guarantees/unutilised credit lines are the largest items for non-financial counterparties. For eight banks the largest counterparty was a financial actor. The largest individual exposure measured 22 per cent of the tier 1 capital of the bank concerned. Six of the ten banks had individual exposures above 15 per cent of tier 1 capital. One of the banks would not have met the tier 1 capital requirement if its largest counterparty had failed.

Despite some large exposures, concentration risk related to common counterparties must be regarded as relatively low. There were 54 different counterparties in the sample of 100 reported financial counterparties. Of the 54 counterparties, 39 are Nordic, and no bank has financial institutions in debt-stricken Euro countries among its 10 largest counterparties. The largest common counterparty accounted for a total of just 8.6 per cent of total reported exposure in the financial sector.

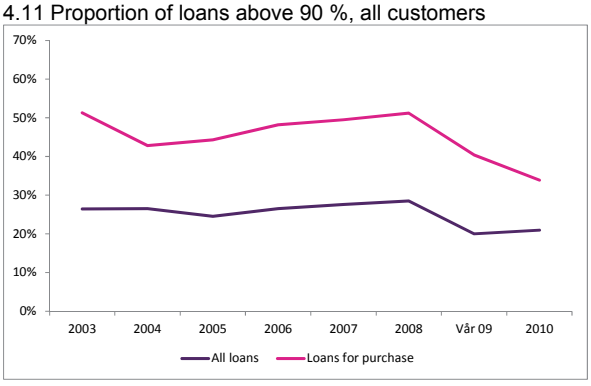
The banks reported few common counterparties in the category non-financial firms. Only two companies, both with substantial Norwegian state ownership, are a counterparty to more than two banks, and no bank has firms in debt-stricken Euro countries among its 10 largest counterparties. The largest corporate counterparty accounted for 6.7 per cent of the selected banks' largest exposures to the non-financial sector.

Home mortgage loans

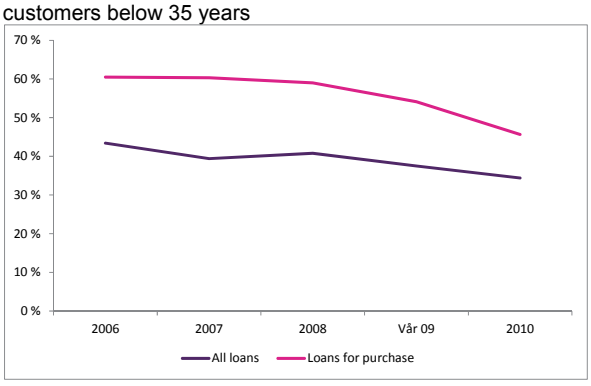
Repayment loans

Finanstilsynet has since 1994 examined banks' practice in regard to loans secured on dwellings. The surveys have been addressed to a selection of banks with broadly the largest share of the market for this type of loan. The banks participating in the autumn 2010 survey accounted for about 85 per cent of total home mortgage loans from banks, and reported quantitative and qualitative information on a number of mortgages disbursed after 1 September 2010.

4.11 Proportion of loans above 90 %, all customers



4.12 Proportion of loans above 90 %, customers below 35 years



In March 2010 Finanstilsynet issued a circular with guidelines for prudent home mortgage lending recommending that mortgages should as a rule not exceed 90 per cent of the property's market value

(75 per cent for home equity credit lines). The survey of mortgage lending practices in autumn 2010 was modified in this light, and a reporting interval with a loan-to-value ratio of 90-100 per cent was included. This interval was also included in earlier surveys, but not the autumn 2009 survey. Of reported repayment loans, 21 per cent had a loan-to-value ratio higher than 90 per cent of property value, a reduction of almost 8 percentage points compared with the Home Loan Survey of autumn 2008. The proportion of loans in excess of property value was 9 per cent, the same as one year previously but 4 percentage points lower than in 2008.

Looking at house purchase loans in isolation, the change in the proportion of loans with a high loan-to-value ratio becomes even clearer. In the period 2004 to 2008 this proportion rose each year. In the past two years, however, the proportion of home loans (for purchase) in excess of 90 per cent of property value has fallen by 17 percentage points to 34 per cent. For loans in excess of property value the decline was 8 percentage points to 16 per cent. The proportion of loans for house purchase where the loan was higher than property value peaked at 30 per cent in 2006 and has fallen in the past five surveys.

The survey showed that in the case of younger borrowers a large proportion of loans for house purchase had a high loan-to-value ratio. For under-35s buying a dwelling, the proportion of loans in excess of 90 per cent of property value fell from 59 per cent in autumn 2008 to 46 per cent in autumn 2010.

The volume of fixed-interest mortgages was again very low in the autumn 2010 survey, accounting for less than 3 per cent of all loans. In the banks' calculation of customers' liquidity surplus, a mark-up has to be added to the current interest rate. This mark-up varies between banks, but is generally between 4 and 5 percentage points. Average agreed maturity for new home mortgages rose markedly from 2009 to 2010 to reach a high level in historical terms. Every sixth mortgage was granted on an interest-only basis, a somewhat higher proportion than the previous year.

A simplified survey of home loan practices at 20 smaller banks showed a somewhat larger volume of loans with a high loan-to-value ratio than in the case of the larger banks.

The results of the home loan survey indicate that Finanstilsynet's new guidelines have had some effect. The volume of loans with a loan-to-value ratio above 90 per cent has declined somewhat compared with previous years. There has concurrently been an increase in the volume of additional collateral for loans with a high loan-to-value ratio. For loans in excess of property value, additional security was furnished for 63 per cent: 8 percentage points higher than one year previously and 11 percentage points higher than in autumn 2008. If loans above 90 per cent of property value are included, the proportion of loans with additional collateral was 42 per cent, an increase from 35 per cent in autumn 2008. If it is premised that all cases where additional collateral was posted lead to the loan falling below 90 per cent of property value (including additional collateral), the proportion of loans with a loan-to-value ratio above 90 per cent falls further, to about 10 per cent. This is still a high proportion. However, the loans in the survey were disbursed at the beginning of September 2010, and the loan process generally extends several months back in time, particularly in the case of loans for new housing. This may explain why the changes compared with the previous year's survey are not larger. Banks have taken a while to adapt their in-house practices to Finanstilsynet's guidelines, and there may also be lag effects in the practical implementation of the guidelines.

Through thematic inspections at banks in 2011 and a new home loan survey, Finanstilsynet will check whether the guidelines are having sufficient impact on banks' mortgage lending practices. If not, stricter regulation will need to be considered, as actualised by the recommendations presented by the Commission on the Financial Crisis in January 2011.

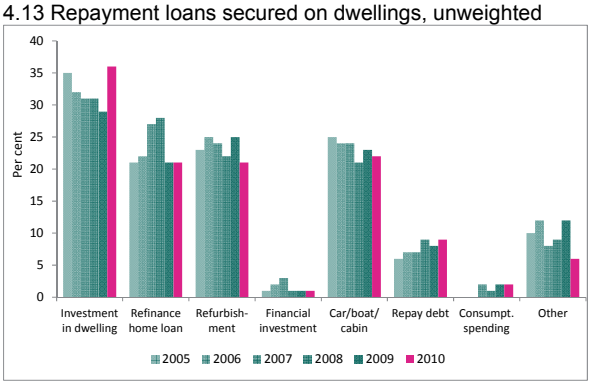
Home equity credit lines

For home equity credit lines secured on a dwelling, Finanstilsynet recommends a maximum loan-to-value ratio of 75 per cent. The survey showed that a total of 89 per cent of the reported home equity credit lines (ceiling granted) were within a 75 per cent loan-to-value ratio. The 75 per cent limit was previously not a part of the reporting, and a direct comparison with previous years is for that reason not possible. Recent years' growth in home equity credit lines has reduced repayment of overall home mortgage loans.

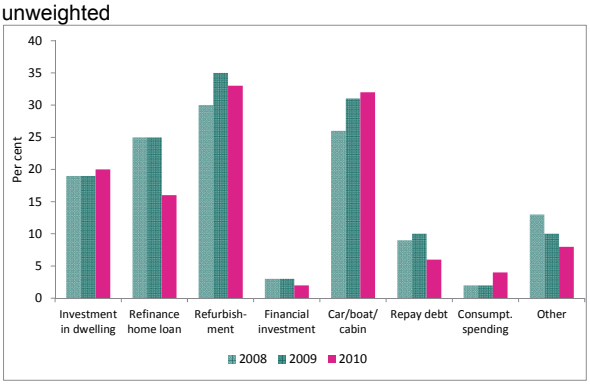
Purpose of borrowing

Since 2004 TNS Gallup has, on Finanstilsynet's behalf, conducted a survey among a sample of borrowers who have taken out a mortgage secured on a dwelling over the past year. The main purpose of the 2010 survey was to gain a better overview of the purpose to which the loan is put. The survey draws a distinction between repayment loans and home equity credit lines secured on a dwelling. Borrowers were also asked how large an interest rate increase was allowed for when the mortgage was taken out.

4.13 Repayment loans secured on dwellings, unweighted



4.14 Home equity credit lines secured on dwellings, unweighted



A majority of borrowers who participated in the survey of repayment loans used the loan to buy or build a house or for home refurbishment. This proportion shows an increase in the past year, coinciding with the banks' reporting of loan purposes in the home loan survey. The proportion of borrowers using the loan for refurbishment or to purchase a car, boat or recreational property declined somewhat in 2010. The survey of home equity credit lines shows that a majority of borrowers use the loan for refurbishment or to purchase a car, boat or recreational property. The proportion borrowers opting for home equity credit lines in order to refinance their mortgage or to refurbish has fallen since 2009. The results of the surveys show that repayment loans are used to a greater degree than home equity credit lines to invest in the borrower's own dwelling, whereas a larger proportion of home equity credit lines are used to purchase other goods. The respondents were able to report more than one purpose per loan.

Just over 70 per cent of borrowers report making allowance for higher interest rates when taking out their mortgage, while the remainder did not make such allowance. About 35 per cent of borrowers made allowance for an interest rate increase of 3 to 4 percentage points, whereas about 20 per cent report making allowance for an interest rate increase of 5 to 6 percentage points

Households' interest burden

Since autumn 2003, on commission from Finanstilsynet, Statistics Norway has provided model projections of households' debt and interest burden. The model starts out from volume figures for 2008 taken from the tax assessment statistics. The assumptions underlying the projections are based on historical data as of the third quarter 2010, where available, while the forecasts for wage growth and bank lending rates are taken from Economic Survey (Statistics Norway, September 2010). The tax programme in the model comprises 2011 rules and, as a purely technical assumption, this is continued for 2012 such that the parameters in 2011 are wage- or price-adjusted for 2012. Moderate growth is expected in the Norwegian economy up until 2012. Credit growth is accordingly assumed to continue at around the current level of just over 6.5 per cent through the projection period, i.e. the same figure as assumed in the baseline scenario for the stress test of the largest banks in autumn 2010. (See page 46). The interest rate is expected to increase to 4.6 per cent in 2012. Whereas households are in a relatively favourable financial position overall, some groups are more vulnerable to interest rate changes than others. Households are classified in three main groups on the basis of interest burden (defined as interest rate expenses divided by disposable income). Based on the distribution of debt, income and wealth in 2008, the model projects the number of households falling within each of the three groups in 2010 and 2012, as well as each group's share of total household debt (table 4.3).

Table 4.3 No. of households and share of total debt by interest burden

	2008		2010		2012, interest rate 4.6%		2012, interest rate up 2 percentage points	
Interest burden:	No. (thou-sands)	Per cent of total debt	No. (thou-sands)	Per cent of total debt	No. (thou-sands)	Per cent of total debt	No. (thou-sands)	Per cent of total debt
0.1 – 19.9%	1 339	48	1 607	78	1 554	69	1 319	45
20 – 30%	256	27	84	12	143	18	275	28
Over 30%	144	23	37	8	61	12	165	25

Sources: Statistics Norway and Finanstilsynet

In the wake of the financial crisis the key policy rate was lowered sharply. Since October 2009 it has been raised on three occasions, to 2 per cent, while the lending rate to households remains at a very low level. This is reflected in the projections which show that in 2010 just over 120,000 households had an interest burden above 20 per cent, compared with 400,000 in 2008. Given the economic contraction in the large industrialised countries, lending rates are expected to remain relatively low in the calculation period. Since debt continues to rise more quickly than incomes, there will nonetheless be a clear rise in the number of persons with an interest burden in excess of 20 per cent in 2012.

However, should interest rates rise more rapidly the most vulnerable groups will be heavily impacted. In the stress test the interest rate is posited to rise by 2 percentage points, to 6.6 per cent, by the end of 2012. This matches the level in 2008 and implies a normalisation of the lending rate. At this interest

rate the number of households with a high interest burden will more than double. 440,000 households will have an interest burden above 20 per cent and just over a third will exceed 30 per cent. These groups will account for 53 per cent of total household debt. According to the calculations, groups with the heaviest debt burden have the smallest cushion in the form of financial assets.

Consumer loans and the debt collection trend

A substantial share of loans for consumption is probably secured on dwellings. In addition, both banks and finance companies offer pure consumer loans which are generally unsecured. As in previous years, Finanstilsynet conducted in 2010 a survey of a sample of companies engaged in consumer finance (table 4.4). The sample comprises 15 companies: six finance companies and nine banks. Consumer loans include card-based loans and other consumer loans without collateral. These companies offer a variety of products, including credit cards with varying credit ceilings and unsecured loans ranging from NOK 10,000 to NOK 350,000. The effective interest rate on these loans is consistently high and varies widely depending on loan size and repayment period. These loans are subject to stringent credit assessment, and 40-90 per cent of applications are refused.

Table 4.4 Consumer loans at a selection of companies

	2005	2006	2007	2008	2009	2010
Consumer loans (NOKm)	26 276	31 057	36 925	43 352	43 936	45 236
Growth in % (12-month)	15.1	18.2	18.9	17.4	1.4	3.0
Book losses (NOKm)	382	253	339	953	1 371	1 233
Losses in % of consumer loans (annualised)	1.5	0.8	0.9	2.2	3.1	2.7
Net interest in % of average total assets (annualised)	11.6	11.2	9.8	8.8	11.8	12.2
Result of ordinary operations in % of average total assets (annualised)	7.6	7.6	5.5	3.3	5.4	6.0
Gross defaults, 90 days, in % of consumer loans	5.5	4.9	5.0	6.5	6.1	5.7
Gross defaults, 30 days, in % of consumer loans						9.7

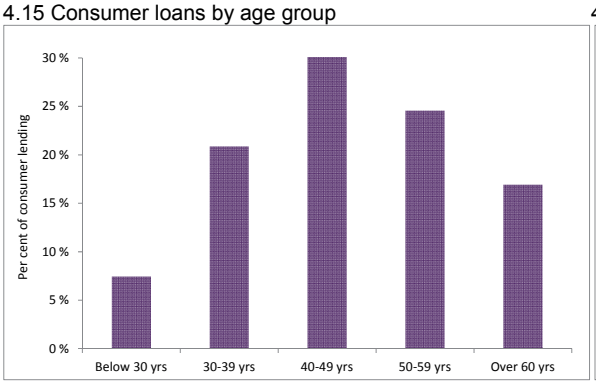
The volume of consumer loans in Norway is relatively small, making up about 2 per cent of households' overall borrowing at the end of 2010. Lending growth stagnated in 2009 and was moderate through 2010. A sharp rise in losses was seen in 2009, but losses moderated in 2010. Book losses and defaults on consumer loans are clearly higher than for banks and finance companies in general. Interest margins and profits are higher than for ordinary lending.

Supplementary data for 2010 from the largest companies in the sample show that only a small proportion of consumer loans go to younger borrowers (chart 4.15). At year-end under-30s accounted for 7.4 per cent of these loans, under-20s for a mere 0.1 per cent. Defaults in relation to outstandings were highest among younger borrowers and declined with rising age (chart 4.16).

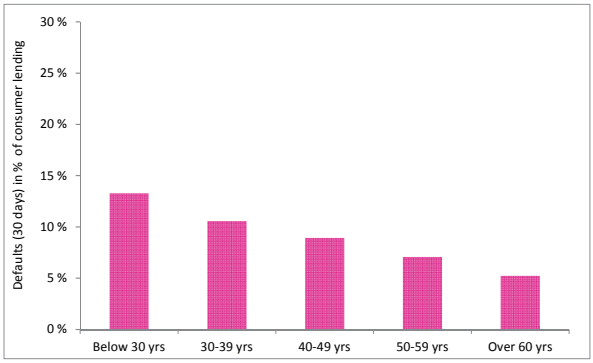
A strong increase has been seen in the number of debt collection cases in recent years. There are several reasons, including tighter procedures in business and industry as a result of which claims are referred for recovery at an earlier stage, often without prior reminders. In addition, businesses

outsource debt collection to a far greater degree than previously. As a result defaults are now reported to Finanstilsynet as part of the debt collection agencies' reporting obligation whereas previously debts were recovered by the creditor firms themselves and were unreported. A gradual shift from recovery of own claims to recovery via debt collection agencies is seen in the increase in debt collection cases in Finanstilsynet's debt collection statistics. Hence the registered increase in debt collection cases does not necessarily reflect an actual increase. While the number of debt collection cases is rising, a strong increase in concluded cases is also in evidence. Moreover, payment often takes place early in the recovery process, indicating unwillingness rather than an inability to pay.

4.15 Consumer loans by age group

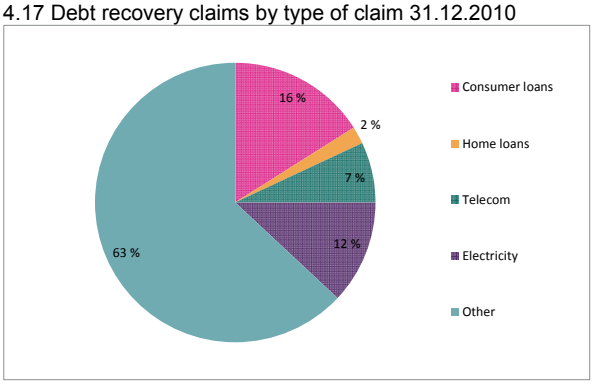


4.16 Defaults

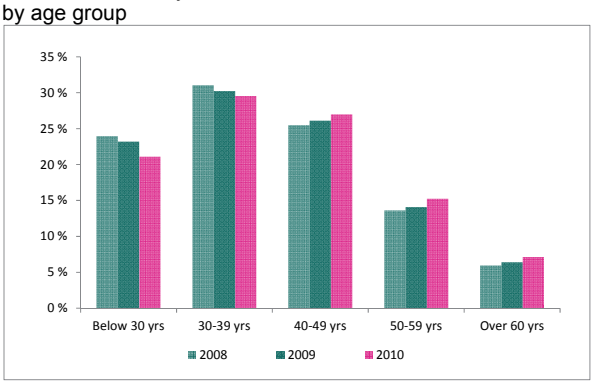


In February 2011 Finanstilsynet polled four of the largest debt collection agencies to gain a better overview of the distribution of debt recovery cases across claims and age groups. The agencies surveyed have an overall market share of just under 40 per cent. At the end of 2010, 16 per cent of debt recovery cases involved consumer loans. This share has been relatively stable over the past three years. The group "other" rose from 59 per cent in 2008 to 63 per cent in 2010. This group includes a large number of claims related to mail order sales, parking fines and road toll. Based on debt collection claims related to consumer loans distributed on age groups, the largest decline refers to the under-30s, while a steady increase is seen in the oldest age groups.

4.17 Debt recovery claims by type of claim 31.12.2010



4.18 Debt recovery claims, consumer loans, by age group



Loans against financial instruments

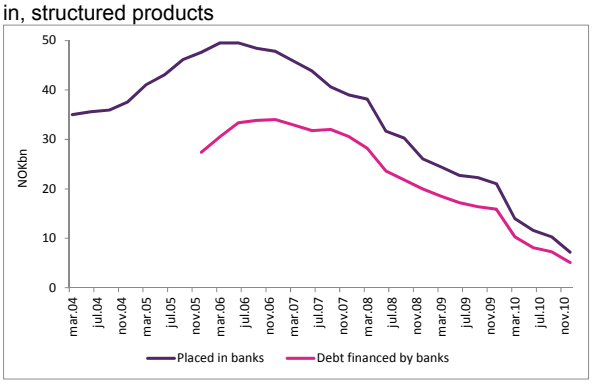
Since 1997 Finanstilsynet has conducted annual surveys of the volume of, and banks' treatment of, loans backed by financial instruments. These are defined as loans where financial instruments make up more than 50 per cent of the overall security for the loan. Six banks, accounting for some 85 per cent of loans backed by securities in 2009, participated in the year's survey. A distinction is drawn between commercial credits, with a term up to one year, and other loans, with a term above one year.

Table 4.5 Credits backed by financial instruments, 4th qtr 2010

	Commercial credits backed by financial instruments				Other loans backed by financial instruments				Total loans backed by financial instruments			
	Volume NOKbn		Share of gross loans		Volume NOKbn		Share of gross loans		Volume NOKbn		Share of gross loans	
	Q3 09	Q3 10	Q3 09	Q3 10	Q3 09	Q3 10	Q3 09	Q3 10	Q3 09	Q3 10	Q3 09	Q3 10
3 most exposed	9.7	4.7	23.8 %	14.3 %	3.8	0.9	9.3 %	2.8 %	13.6	5.6	33.0 %	17.1 %
Total	21.4	16.5	1.7 %	1.4 %	15.0	11.2	1.1 %	1.0 %	36.4	27.8	2.9 %	2.4 %

The volume of loans backed by financial instruments, traditionally low in Norway, rose substantially in the period 2004 - 2008 from a relatively low level. As of the fourth quarter 2010 the selected banks had such loans totalling NOK 27.8bn compared with NOK 36.4bn in the third quarter 2009. The reduction was substantial both for commercial credits and other loans secured on securities. In terms of loan volume, the reduction was most marked in the category 'commercial credits'. This is due to a marked decline in the volume of loans backed by structured products approaching maturity. Banks' losses on loans against financial instruments in the period between 2009 and 2010 were small. The number of forced sales rose from 136 to 236 in the period, but the exposures were small, totalling about NOK 24m.

4.19 Volume of placements in, and banks' lending for investment in, structured products



Much of banks' loans against securities in the past five years have been secured by structured products. About NOK 7bn was invested in structured products in Norwegian banks at the end of 2010, about NOK 15bn less than in the previous year. A large portion of products of this type were previously debt financed. Tighter rules on the sale of structured products as from February 2008 brought a complete halt to lending for investment in this type of product. Norwegian banks' loan volume peaked at NOK 34bn at the end of 2006, falling to NOK 5bn by the end of 2010, a decline of about NOK 10bn since the end of 2009. Only three banks now have an appreciable volume of this type of loan, and they

account for about 90 per cent of the loans outstanding. However, these loans make up relatively small shares of banks' overall lending. In the absence of significant new subscription for debt financed investments in structured products, the loan volume will fall further in the near future.

Banks' sale of financial instruments

Since the passage of a new Securities Trading Act in 2007 Finanstilsynet has systematically prioritised supervision of the advisory services segment. Finanstilsynet conducted a wide-ranging survey of 29 banks' sales of financial instruments in 2009 and the first half of 2010. The survey forms part of Finanstilsynet's ordinary supervision of banks and investment firms the purpose of which is to ensure that investors and borrowers are afforded good information and advice when they invest, borrow or purchase insurance and pension products.

The survey showed several positive developments for the industry. The main impression is that the offering of savings products sold is uncomplicated. The exception was one bank, which had sold warrants to some customers. At seven of the eight banks where Finanstilsynet conducted on-site inspections, advisers' remuneration was product-neutral, in other words the adviser's remuneration was not dependent on the type of products sold. The banks have not recommended direct debt financing of savings products in the period concerned.

The survey showed that banks still have room to improve in some areas. In Finanstilsynet's view banks do too little to sell low-cost index funds. Many savers would benefit by having index funds or bond funds as part of their portfolio. The survey illustrates the conflict of interests between banks' desire for a high deposit-to-loan ratio – making for cheap financing and a favourable means of meeting liquidity requirements – and any need customers have for fixed income products in their portfolio. The survey also showed that banks still have some way to go before they, as an industry, are in a position to document good advisory services. The main impression gained was that banks are unable to document a rationale for their product offerings to customers.

5. The financial crisis, regulation and economic costs

Financial instability and crises in the financial system inflict heavy costs on society and are an important reason why banks are regulated through requirements on capital adequacy and liquidity. This type of regulation reduces the probability of crises arising in the financial system and helps to mitigate the consequences of crises when they occur and to dampen fluctuations in the economy. Capital and liquidity requirements may inhibit lending growth and spur higher lending rates in a transitional phase to stricter requirements which in turn can result in somewhat slower economic growth. This is the main cost of capital and liquidity regulation.

The causes of the crisis in brief

The international financial crisis in autumn 2008 led to the world economy being hit by the severest downturn since the 1930s. Several factors explain why a global financial crisis arose and why the ensuing real economic impacts were so serious. Substantial deficiencies have been brought to light in the regulation and supervision of the financial industry in many countries, along with shortcomings in many financial institutions' risk management, business models and conduct of business rules.

Additionally, large macroeconomic imbalances had arisen in a period of rapid global growth. Several Asian countries, in particular China, ran huge trading surpluses and invested heavily in shares, bonds and real estate in western countries. The trade balance, particularly in the US but also in the UK and some euro countries, was markedly negative. The flow of capital from savings-surplus countries to savings-deficit countries flushed the markets with liquidity and lowered risk premiums in the US and other western countries. This took place in a period of very low interest rates. Concurrently the quality of financial institutions' credit assessments deteriorated, above all in the US, fuelling a credit-driven bubble in the housing market.

The years prior to the financial crisis also saw vigorous growth in loan securitisation, often backed by residential mortgage loans. The growth was particularly strong in the unregulated segments of the market. Securitisation undermined market transparency. Due to the complexity, responsibilities were blurred and valuation of instruments was difficult, making the volume and distribution of losses highly uncertain. Much of the credit risk remained in the financial sector. In many cases financial institutions chose to hold on to such bonds and in other cases either implicitly or explicitly guaranteed them. As a result, when the bubble burst in the US, the losses spread across the global financial markets on an unexpectedly large scale. In the course of summer and autumn of 2008 the turbulence hit the stock

markets. Share values more than halved in several countries in the period to February 2009, exacerbating the scale of the crisis.

Various types of special purpose entities, loan brokers, investment banks, money market funds, hedge funds and venture funds were not, or only limitedly, subject to supervision and regulation. Growth in this part of the financial sector was large, and the finance sector's overall leverage rose substantially. A substantial part of the funding was short-term and market-based, and liquidity risk was therefore high. The supervisory regime was less comprehensive than in the case of traditional banking, and there was little focus on prudential supervision. Investment banks and hedge funds/venture funds etc had strong direct and indirect links with traditional financial institutions and securities and property markets.

More complex instruments and the emergence of large international financial conglomerates reduced transparency, making it difficult to pinpoint risk in the financial system and to identify channels of transmission of financial instability. Various supervisory bodies were responsible for different parts of the financial system in central countries. Coordination should have been better organised. Several countries focused on institutional supervision at the expense of monitoring overall system risk. It is also pointed out that capital requirements in the regulated part of the financial sector in general have been too low and that the procyclicality of both accounting and capital requirement rules may have intensified the fluctuations.

The fact that Norway was hit less hard by the international financial crisis than many other countries is related to factors in the economy and business and industry, in the financial system and to regulation and supervision. A general collapse of confidence meant that for a while Norwegian financial institutions had major problems refinancing loans in the money and capital markets. Government measures secured banks' funding in this period. Norwegian institutions' financial position was never under threat, however, and no Norwegian bank had to close its doors. Improved credit practices meant that losses were lower than might be expected after a financial crisis and economic downturn.

New regulation to reduce the probability of new crises

Prior to the crisis many economists, central banks and supervisory authorities assumed that markets were efficient, actors rational, and that regulation should largely reflects this. The market failure caused by the crisis prompted a substantial re-evaluation of perceptions of market actors' rationality and has increased understanding of the need for regulation. In the future stricter requirements will be imposed on financial institutions' capital adequacy, bringing it more into line with risks faced and the costs inflicted on society by financial crises. There will be stricter requirements on capital's loss absorbing capacity. Further activities will be included in the calculation of risk-weighted assets, and the minimum requirement on own funds will be raised.

In order to dampen the impact of economic and financial shocks, two different capital buffers are recommended: a capital conservation buffer to cover losses and ensure that capital does not fall below the minimum required in periods of sharp downturn and a countercyclical buffer to protect banks against heavy losses after periods of strong credit growth. Banks operating with insufficient common equity tier 1 capital will see restrictions on their dividend policy, bonus payments and share buybacks.

The countercyclical buffer is envisaged as a supplement to the conservation buffer, and will be effective in periods when the ratio of overall credit to GDP exceeds the trend ratio. This aspect of the regime is still under preparation. According to an international impact study covering 91 of the world's largest banks[4], these banks would in aggregate need NOK 165bn in common equity tier 1 capital if the new minimum requirements on own funds were effective at the turn of 2010, and a further EUR 400bn to meet the conservation buffer requirement. A similar European study shows that 50 of the largest banks in Europe[5] need EUR 50bn to meet the minimum requirement and a further EUR 200bn in conservation buffer capital. By way of comparison, these groups of banks posted earnings of EUR 209bn and EUR 84bn respectively in 2009. The requirements are to be introduced stepwise in the period 2013-2019.

The work on capital conservation and countercyclical buffers should be viewed in conjunction with the work under way on the accounting rules, which have been in focus since early in the crisis. Application of the market value principle brought hefty fluctuation and falling bank asset values. The question was raised of whether this was consistent with rational and prudent valuation of institutions' assets. The International Accounting Standards Boards (IASB) has initiated several projects to consider changes in the International Financial Reporting Standards (IFRS) as regards accounting for financial instruments, especially loans.

Wide-ranging qualitative requirements in relation to liquidity risk management have already been introduced, and are to be followed by quantitative liquidity requirements. The Liquidity Coverage Ratio (LCR) requirement is designed to ensure that institutions have sufficient liquid funds of high quality to withstand a stress period lasting one month, while the Net Stable Funding Ratio (NSFR) will ensure that institutions have a stable underlying funding structure. These indicators will be reviewed by the authorities for a period and revised before the final requirements are made applicable in 2015 (LCR) and 2018 (NSFR).

The Basel Committee recommends tightening the capital requirements on counterparty exposures connected to derivatives, repurchase agreements and other funding activities linked to securities. This, combined with the tighter requirements on securitisation in general and re-securitisation in particular and on market risk measured using internal models (VaR models) proposed earlier, will entail substantially tighter capital requirements for major internationally active banks.

The Committee also proposes minimum requirements on the unweighted assets ratio (leverage ratio), defined as the ratio between institutions' equity capital and a measure of exposure, which alongside total assets includes off-balance sheet items. This requirement is envisaged as a supplement to the risk-based requirements, able to curb the build-up of leverage in the banking system. International impact studies indicate that three out of five major European banks would be in breach of the proposed 3 per cent unweighted assets ratio if this had been in effect at the turn of 2010. The requirement will be evaluated and revised before going into effect.

The financial crisis revealed a need to establish guidelines for remuneration and remuneration structures at financial institutions and investment firms. Documentation is available showing that

[4] The study covers the major European economies along with Australia, Canada, India, Japan, China, Saudi Arabia, Singapore, United Kingdom, South Africa, South Korea and the USA. A large bank is defined here as tier 1 capital above EUR 3bn.
[5] Swiss banks are not covered by the European study, but included in the international study.

remuneration to senior staff and some employees or groups of employees with tasks of material significance for firms' risk profile has in many cases been structured in such a way as to incentivise excess risk taking. There is a consensus among supervisory authorities and central banks that substantial risk taking, driven by adversely designed incentive systems, was an important cause of the crisis. This prompted remuneration and bonus rules that would promote financial stability and not promote short-term earnings and long-term high risk.

The Financial Stability Board (FSB) has the chief responsibility for drawing up proposals designed to prevent moral hazard among systemically important banks[6]. In June 2010 the FSB issued a preliminary report containing six general principles which were reworked into concrete recommendations ahead of the G20 meeting in November 2010. Common international requirements are planned, but the rules will also make room for adjustments to national circumstances. In August 2010 the Basel Committee circulated for comment a proposal allowing all hybrid capital and subordinated loan capital to be written down/converted if the authorities consider this necessary to assure an adequate financial basis for continued operation. Work is also ongoing on the issue of how contingent capital could become eligible for inclusion in capital buffers and to cover possible additional requirements for systemically important banks.

The EU supervisory structure for financial markets was changed as from 1 January 2011. The former European supervisory committees were replaced by three independent supervisory authorities: the European Banking Authority, the European Insurance and Occupational Pensions Authority and the European Securities Markets Authority. These are empowered to adopt common binding supervisory standards, intermediate between national supervisors and impose binding decisions on national supervisors and financial institutions. Supervisory groups are established for all cross-border financial institutions, but the main responsibility for day-to-day supervision will remain with the national supervisors. A European Systemic Risk Board (ESRB) has been established with responsibility for macroeconomic monitoring of systemic risk. Finanstilsynet will participate regularly as observer in the three ESAs, while participation on an ad hoc basis may be relevant as regards the ESRB.

Economic consequences of crises and change in the regulatory regime

The economic consequences of a crisis in the financial system are very substantial. The financial system is tightly interwoven. Financial problems in the banking sector can spread rapidly to other areas of the economy. These contagion effects are more serious than in the case of traditional goods and services producing firms. Banks are subject to capital requirements, liquidity requirements, deposit guarantee schemes and other regulation since economic crises and failure of confidence can lead to a collapse of the financial sector, reduced economic growth and steep increase in unemployment.

[6] The risk that a systemically important bank will take excessive risk because the management expects the authorities to bail out the bank in a crisis situation.

Economic benefit of higher capital requirements

Higher capital requirements reduce the probability of crises in the financial system. The economic cost of crises can be measured as the reduction in a country's gross domestic product. It is difficult to estimate costs of crises in the long term. The greatest fear is that the increase in unemployment in the short term will take hold in the long term and that investment levels in the business sector will be lower in the long term as a result of the crisis. In addition to this comes the personal burden accompanying unemployment, and the risk of increased social unrest. These factors are difficult to assign a value to. The economic benefit expected from higher capital requirements can be calculated as the product of the reduction in gross domestic product that results from crises and the reduced likelihood of a crisis that results from higher capital requirements.

Costs also accompany regulation and these must be subtracted from the economic advantage of regulation in order to arrive at the economic benefit. Some costs are connected to financial institutions' need for adjustments and changes in ICT systems, new competence, re-organisations and reporting etc. How large a portion of these costs are met by banks' customers through lower deposit rates and higher lending rates depends inter alia on the strength of competition between banks.

There are no sectors where the equity-assets ratio is as low as in the banking sector. Representatives of the industry have argued that higher capital requirements lead to higher capital costs so that fewer loans and other products are profitable. This is usually justified in terms of equity capital being "costlier" than debt. According to the industry this has (at least) two effects. First, the price of loans and other products that require capital coverage will rise because it becomes costlier to finance these products. Second, lending growth and growth in "capital-intensive" products will subside. There is much disagreement on the validity and relevance of this reasoning. Many financial theorists believe that higher capital requirements do not lead to higher average capital costs in the banking industry. Others are of the view that any increase is ascribable to lower value of the tax benefit associated with debt financing and lower value of implicit guarantees from the authorities. A third group argues that higher capital requirements will essentially affect loan volumes and interest rates in a transitional phrase pending banks' adjustment to the new requirements. The connection between capital cost and capital structure is discussed in further detail below.

Empirical surveys

[Sources given at chapter-end]

It is difficult to quantify the connections between higher capital requirements, reduced crisis probability and economic consequences of crises. Historical data show that financial crises have been very costly, causing a strong decline in gross domestic product and long-term effects bringing a lasting reduction in output. The International Monetary Fund (IMF) has estimated that production after a crisis is about 10 per cent lower than trend for as long as 7 years after the start of the crisis.

A study (Hogarth and Saporta) puts accumulated production loss in connection with 17 banking crises in the post-war period at about 20 per cent of GDP. Various surveys distinguish between transitory and permanent effects of crises. Crises in the financial system normally lead to economic setback and the fall in GDP may be substantial, but in many cases GDP regains trend level after a while without the economy suffering lasting damage. The Hogarth and Saporta study argues that Japan in the 1990s may have suffered lasting damage, adding significantly to the cost of the crisis and the ensuing economic setback.

The Bank of England's (BoE) financial stability report from June 2010 estimates the net benefit of higher capital levels in the banking sector. The calculations posit inter alia that banks replace debt with equity capital and that banks' asset composition is not affected. The increase in capital brings an increase in banks' funding costs since it is assumed that the hurdle rate on capital (10 per cent) is higher than on debt (5 per cent) and that neither rate changes even if capital adequacy improves. It is further assumed that the increase in banks' funding costs is covered through an increased interest margin. In this example an increase of 1 percentage point in capital adequacy increases the interest margin by about 7 basis points (0.07 per cent). At the next stage the increase in bank lending rates is tied in with firms' investment demand. The lasting downturn in GDP (level) is estimated at 0.1 per cent, giving a current value of 4 per cent of GDP for the United Kingdom (2008). It is emphasised that the effect would have been smaller had it been assumed that a high equity to assets ratio reduced hurdle rates in stock and loan markets. In order to calculate the economic benefit attached to higher capital requirements the Bank starts out from the IMF's estimate of production loss. When the probability of a crisis is reduced by 1 percentage point with both a lasting and a transitory effect on GDP, the current value is estimated at 55 per cent of GDP. With just a transitory effect, the current value is put at 20 per cent of GDP.

In its model the Bank of England also ties together capital requirements, the probability of crisis, and the severity of the crisis. The results indicate that a relatively small increase in the capital requirement beyond a statutory minimum substantially lessens the probability of a systemic crisis, and that a relatively small reduction in crisis probability, as a result of higher capital requirements, yields benefits far in excess of the costs. Where a given level of capital adequacy is reached (13 per cent), the benefit accompanying a further increase is heavily reduced.

A survey based on US data (Kashyap, Stein, Hanson) analyses the effect of higher capital requirements on bank lending rates and discusses the consequence of an increase in interest margins on lending growth. A distinction is drawn between phase-in effects and the long-term impact. In the short term it is argued that banks will choose not to cover a higher capital requirement by way of stock issues, preferring a combination of higher capital adequacy through retained profits and restrictions on lending growth. External capital is assumed to be "costly" because stock issues signal that a bank's market value is overstated and therefore reduce value for existing shareholders (pecking order theory). The authors argue that this effect, which is empirically well-documented, will not have a lasting effect on lending growth, but calls for a relatively long phase-in period. Although major methodological problems are involved in documenting that higher capital requirements lead to reduced lending growth, the authors argue that a review of the literature indicates that such a correlation exists in the short term. Their assessments of the long-term effects are based on the Modigliani/Miller theory, and the idea that equity is more "costly" than debt is justified in terms of the favourable tax treatment of debt and banks' "production" of liquid funds.

The calculations show that even such a sizeable increase in the capital requirement as 10 percentage points only leads to an increase in lending rates of between 25 and 45 basis points. It is intimated that an increase in lending rates will be of limited significance for overall lending growth. This is because firms have alternative funding sources and because competition between banks is unlikely to lead to borrowers having to bear the entire increase in banks' funding cost. It is also documented that empirically there has not been a clear statistical correlation between the size of interest margins and

capital adequacy and that capital adequacy was significantly higher in the 1800s. Relatively low capital adequacy is a post-war phenomenon. The article underscores the risk that small increases in bank lending rates will encourage further growth of the shadow banking system.

In 2010 the Bank for International Settlements published two reports that discussed possible consequences of introducing new, stricter capital and liquidity requirements. The first report assessed the effect of stricter requirements in a transitional phase, while the second considered the long-term effects. Both reports underscore and closely discuss the uncertainty inherent in this type of calculation. The point of departure is that it is costlier to fund loans with equity capital than with deposits and money market financing. This could, according to the authors, cause banks to raise their lending rates and tighten their lending growth, which could in turn constrain economic growth in the short and medium term. In the long term, risk attached to funding banks is assumed to be reduced so that the impact on banks' funding costs is weakened and the loan volume picks up again.

The first BIS report only considers costs related to stricter capital and liquidity requirements. The calculations are in two stages. First the effect of stricter capital requirements on interest margins and lending volume is estimated, thereafter the effect of higher lending rates and reduced lending growth on consumption, investments and other macroeconomic variables. The calculations show the impact of higher capital requirements to be limited. A 1 per cent increase in capital adequacy leads to a reduction of 0.04 percentage points in the annual GDP growth rate over a four-year period as a result of a slight increase in interest margins and a slight reduction in lending. The impact of stricter liquidity requirements is also moderate. The report argues that the aggregate cost of higher capital and liquidity requirements will almost certainly be lower than the sum of the impacts separately. Several factors that will dampen the impacts of the requirements are highlighted. Higher capital levels in the banking sector will most probably lead both to lower borrowing rates and required return on equity because banking will be less risky. Banks' adjustment will probably change in the wake of the new requirements through greater efficiency and changes made to business models to improve earnings. The existence of alternative funding sources for non-financial firms means that banks probably cannot pass the entire cost increase onto customers and curbs the reduction in loan volume.

The second BIS report examines the long-term consequences of stricter requirements. It also quantifies the benefits of stricter regulation. Three different effects are discussed: 1) reduced probability of crisis, 2) a smaller reduction in GDP given the onset of a crisis and 3) reduced volatility in the economy. Only the first effect is included in the calculation. Based on historical data, the average annual probability of a banking crisis is put at 4-5 per cent, corresponding to a crisis every 20 or 25 years. The report underscores the difficulty of estimating the reduction in crisis probability as a result of higher capital and liquidity requirements. The model calculations show that this probability is substantial, and greater when the capital requirement rises from 7 to 8 per cent than when it rises from 10 to 11 per cent.

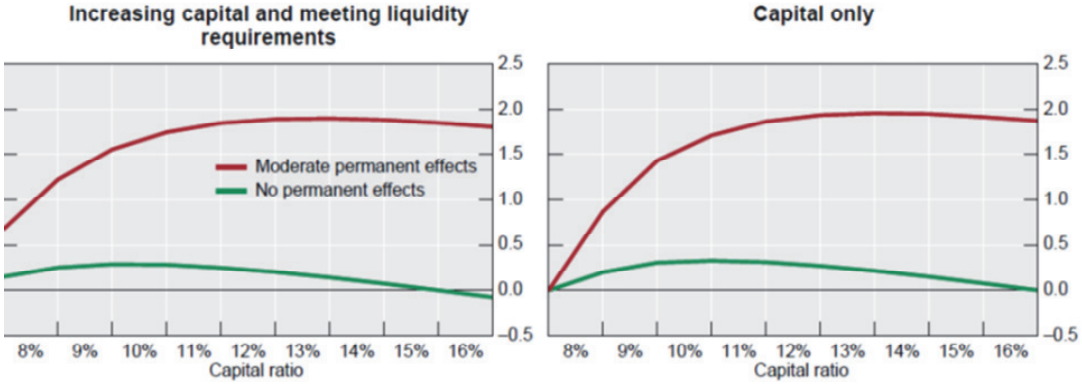
The cumulative discounted production loss given the onset of the crisis is put at about 60 per cent of GDP when the crisis has a permanent impact on the production level and at 20 per cent when the crisis has only a temporary impact. The costs associated with higher requirements are calculated as a reduction in GDP consequent upon higher interest margins and reduced lending growth. In these calculations too, higher capital requirements are posited to lead to higher average funding costs since

equity capital is assumed to be more expensive than debt capital. The calculations are based on the assumption of a hurdle rate of 15 per cent on equity and an average cost of 5 per cent on debt. On these assumptions an increase of 1 percentage point in the capital requirement leads to an increase of 0.13 percentage points (13 bps) in interest margins. If the hurdle rate on equity is lowered to 10 per cent, which is consistent with several empirical studies, interest margins rise by 0.07 per cent (7 bps). The figures below show the net benefits of stricter regulation measured as change in the long term in annual GDP relative to the GDP trend from the period prior to introduction of new regulation.

Summary graph

Long-run expected annual net economic benefits of increases in capital and liquidity

Net benefits (vertical axis) are measured by the percentage impact on the level of output



The capital ratio is defined as TCE over RWA. The origin corresponds to the pre-reform steady state, approximated by historical averages for total capital ratios (7%) and the average probability of banking crises. Net benefits are measured by the difference between expected benefits and expected costs. Expected benefits equal the reduction in the probability of crises times the corresponding output losses. The red and green lines refer to different estimates of net benefits, assuming that the effects of crises on output are permanent but moderate (which also corresponds to the median estimate across all comparable studies) or only transitory.

Source: BIS, August 2010

Four sets of calculations are done where a distinction is drawn between the impact of liquidity and capital requirements altogether, the impact of capital requirements alone, between a scenario in which a crisis leads to a permanent, but moderate, reduction in production and a scenario in which the impact of the crisis has gone after a given number of years. The study concludes that there are major economic benefits associated with stricter capital and liquidity requirements and concludes that there is ample room for the introduction of stricter requirements.

Connection between capital cost and capital structure

Several of the surveys of the economic impacts of higher capital requirements assume that banks' average funding cost increases because the hurdle rate on equity is higher than on debt. In the calculations of the net benefit this represents the cost of stricter regulation. Table 5.1 illustrates this type of calculation. It is assumed that banks have an average funding cost of 5 per cent and that the hurdle rate on equity is 10 and 15 per cent respectively. The capital requirement varies from 8 to 15 per cent of total assets, and risk weighting of assets is disregarded. Given a capital requirement of 8 per cent, the weighted cost of capital is estimated at 5.4 and 5.8 per cent for equity hurdle rates of 10 and

15 per cent respectively. If the capital requirement is raised to 15 per cent, the weighted cost of capital rises to 5.75 and 6.50 per cent respectively. Any tax benefit associated with debt financing is disregarded in the calculations.

A hurdle rate of 15 per cent is high. Based on stock market data for the last 110 years, the annual risk premium in the stock market is put at between 5 and 7 per cent depending on the country and method of calculation. This is far higher than theoretical models for pricing in the stock market indicate. It is not unusual to take a basis in far lower risk premiums on shares.

Table 5.1 Capital requirements, weighted cost of capital and lending rates

	Weighted cost of capital		Increased lending rate	
Capital requirement	Hurdle rate 10%	Hurdle rate 15%	Hurdle rate 10%	Hurdle rate 15%
8 %	5.40 %	5.80 %		
9 %	5.45 %	5.90 %	6	13
10 %	5.50 %	6.00 %	13	26
11 %	5.55 %	6.10 %	19	38
12 %	5.60 %	6.20 %	26	51
13 %	5.65 %	6.30 %	32	64
14 %	5.70 %	6.40 %	38	77
15 %	5.75 %	6.50 %	45	90

Norwegian banks' loans make up about 78 per cent of their total assets. If the entire increase in the average cost of capital is passed onto borrowers, the increase in lending rates is put at 6 basis points when the equity hurdle rate is 10 per cent and 13 basis points when the equity hurdle rate is 15 per cent given an increase in the capital requirement from 8 to 9 per cent. If competition from alternative funding sources and competition among banks is intense, it may be difficult to raise lending rates. If it is assumed that lending rates and total return on capital are fixed and that the cost of funding is unchanged, the expected return on capital falls when the capital requirement rises. This will naturally enough have implications for incentive systems based on return on equity.

Capital structure, shareholder risk and hurdle rate

According to the Modigliani/Miller theorem, the market value of a firm is independent of its capital structure. The intuition is simple. Higher leverage leads to larger fluctuations in the firm's profit after debt costs and increases the risk associated with investing in the firm's shares. Higher risk causes shareholders' hurdle rate to increase. Concurrently increased leverage leads to higher expected return on equity. (Given that expected return on total capital exceeds the expected cost of debt and given that the firm's funding structure does not affect its total return on assets.) Under given assumptions the two effects are neutralised. The weighted hurdle rate and the value of the firm are in other words not impacted by the leverage, and the firm's funding structure is therefore irrelevant. Much of the theory developed after Modigliani/Miller, and several empirical surveys of firms' capital structure, discuss the consequences of easing the assumptions in the theory: no taxes, rational risk pricing, symmetrical information and operating revenues that are independent of capital structure.

Under the Modigliani/Miller assumptions a requirement to increase capital in the banking sector would cause shareholders to reduce their hurdle rate since shares are less risky when leverage is reduced.[7] [8] In

[7] In a non-financial firm one would also expect creditors' hurdle rate to be reduced because the protection in the form of equity is larger. For banks there is greater uncertainty in this regard since many creditors already view claims on a bank as a risk-free investment (deposit guarantee and implicit state guarantee).

that case the central government's capital requirement does not affect the average cost of capital or the market value of banks. Nor, consequently, is the price of bank lending expected to rise or credit growth to subside as a result of higher capital requirements or change in the requirements as to composition of own funds.

Tax benefit and guarantees

Any tax benefit associated with debt financing is reduced if the equity ratio has to be increased because either the market or the authorities so demand. Ceteris paribus, this contributes to increasing banks' cost of capital and reduces banks' market value. The result may be a reduction, or reduced growth, in banks' lending along with higher interest rates. Favourable tax treatment of debt relative to equity represents a subsidisation of debt. There are differing views as to the size of the tax benefit related to debt finance. Because favourable tax treatment of debt is the same as subsidising debt relative to equity, it is not relevant to include the absence of such a benefit in the calculations of the economic benefit arising from higher capital requirements. Giving banks an incentive to maintain very high leverage is of course detrimental since it impairs financial stability.

In practice nation states implicitly underwrite the banking system. Depositors are covered in the first instance by deposit guarantee schemes. If these are inadequately capitalised, the state steps in as guarantor. As a rule these implicit guarantees also cover other lenders. Only rarely have banks' creditors lost money in connection with systemic crises. Signals from authorities in several countries and supranational bodies suggest that banks' creditors are less likely to be protected in the future. There are a number of examples of shareholders being zeroed out, but there are also examples of shareholders of individual banks being bailed out by the government. One effect of the implicit and explicit guarantees is that depositors and lenders do not demand “market-related” risk premiums. Another result is that creditors' incentive to monitor banks is weakened. The existence of a guarantee system means that bank shareholders carry a smaller share of expected bankruptcy and agency costs than shareholders in other sectors. Expected bankruptcy and agency costs at banks are large because leverage in this sector is particularly high. In a crisis situation loans would very probably be sold at prices significantly below their fundamental value because the buyer has less information on loan quality than the bank (bankruptcy costs). High leverage incentivises management to take excessive risk or to omit to carry through profitable projects (agency costs). Administrative costs related to bank failures are also high.

Charles Goodhart states the following:

> “Who then picks up the bill for any such failures? As demonstrated, it falls on the taxpayer. One implication is that any steps to require banks to raise new capital does raise the cost of funding to such banks, (in contrast to the Modigliani/Miller theorem), since it reduces the value of the (unpriced) put option against the taxpayer. Another implication is that the government, and the regulatory authorities, do, and should, have a direct concern in adjusting the structure of bank executive incentives and remuneration.”

[8] It is assumed that the variation in return on total assets is not affected by change in leverage, which entails that the risk associated with banks’ lending and securities investments are not affected by change in the equity ratio.

Implicit and explicit guarantees render deposits risk-free and reduce the risk to other lenders. This entails that banks' funding costs related to debt capital are lower than they would have been in a system without guarantees. Higher equity capital requirements reduce this funding advantage since the value of explicit and implicit government guarantees is reduced. This makes banking "more expensive" to pursue banking, but will reduce the probability and the extent of future crises.

Summary

The economic effects of financial crises are substantial. Even a relatively small reduction in the probability of a crisis provides an expected benefit that more than compensates for the costs of stricter regulation. The reduction in the probability of a crisis is larger where the capital requirement increases from, say, 8 to 9 per cent then when it increases from 12 to 13 per cent, which entails a decreasing marginal gain. Several empirical studies suggest that a gradual phase-in of stricter capital and liquidity requirements helps to curb the cost associated with stricter regulation. The chief reason is that this enables banks to increase their equity through retained profits and gives them time to come into line with stricter liquidity requirements such that lending volume and growth are not reduced excessively. Higher capital requirements and quantitative requirements on banks' liquidity reduce the probability of financial crises, but also contribute in general to smaller fluctuations in the economy. This is of value to risk-averse investors, and will ceteris paribus contribute to lower risk premiums and increased investments. Higher requirements on capital and liquidity will nonetheless in isolation entail costs that must be borne by banks and their customers.

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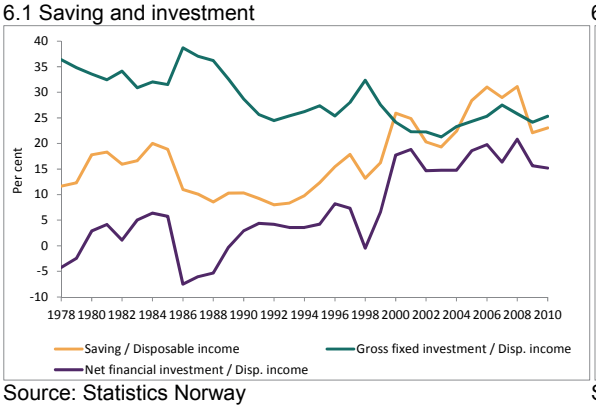
6. Structure of financial and securities markets

The structure of financial and capital markets has a bearing on the economy's vulnerability to financial instability and on which sectors are most exposed to a negative economic trend. The composition of households' and non-financial firms' financial assets shows the type of risk to which the sectors are most exposed. The composition of non-financial private sector debt gives an indication of the vulnerability of the various sectors to instability in various funding sources. The size of, and level if concentration in, the financial sector gives an indication of the seriousness of instability in this sector for the real economy and whether individual institutions are sufficiently large that a collapse of one or a small number of financial groups could create problems for the entire economy. The securities markets infrastructure is important both for market efficiency in normal times, but also for their robustness in times of crisis.

Saving, financial investment and debt

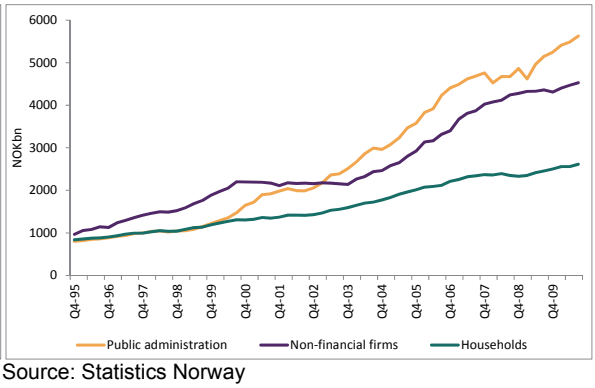
Saving is positive in Norway and the ratio of saving to disposable income has risen since the mid-1990s (chart 6.1). Real disposable income has also risen strongly in this period. Since the public sector saving surplus over the past 12 months has exceeded the private sector's need for funding, the current account has been positive, and Norway as a whole has increased its net asset position against the rest of the world in the period. This was planned and intended.

6.1 Saving and investment



Source: Statistics Norway

6.2 Financial assets



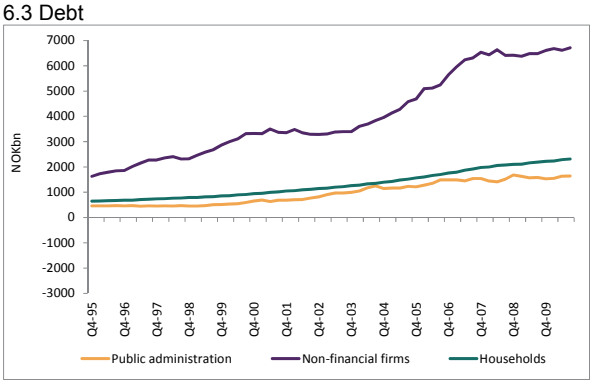
Source: Statistics Norway

In the **public administration** saving has risen sharply from the mid-1990s up to the present. This is related to sizeable oil and gas revenues and the design of fiscal policy. Some of the saving have gone to real capital investments, although most is invested in foreign share and bond markets through the

Government Pension Fund – Global. The **household** saving rate has varied widely in the period, and is currently at approximately the same level as in 1978. Real investments, mainly comprising house purchases, have been substantial, and net financial investments have been negative in parts of the period.

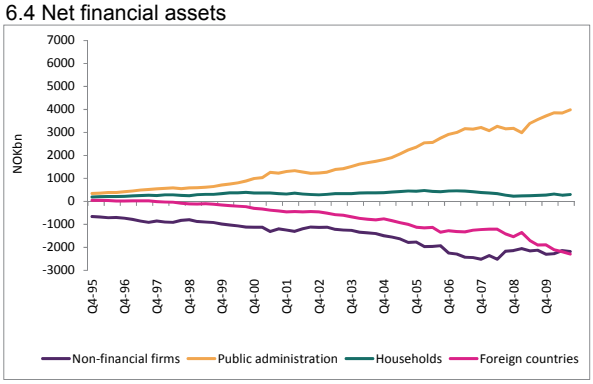
Since the mid-1990s the **public administration's** financial assets have risen sharply and significantly more than debt (chart 6.2). By the end of the third quarter 2010 the public administration's net financial assets (financial assets less debt) had grown to almost NOK 4000bn (chart 6.4). In the same period **non-financial firms'** financial assets rose considerably, but at a slower rate than debt. **Households'** financial assets and debt rose by an approximately equal margin and far less than those of non-financial firms. In terms of current kroner households' net financial assets have thus changed very little in this 15-year period. A substantial part of household borrowing has gone to financing house purchases.

6.3 Debt



Source: Statistics Norway

6.4 Net financial assets



Source: Statistics Norway

Composition of the non-financial private sector's financial assets

The gross financial assets of households, non-financial firms and not least the public administration are far larger now than 15 years ago. The composition of financial assets has also changed in this period. The risk to savers, be they households, non-financial firms or the public administration, depends on the size of their exposure to various financial assets and the risk attending various classes of financial assets.

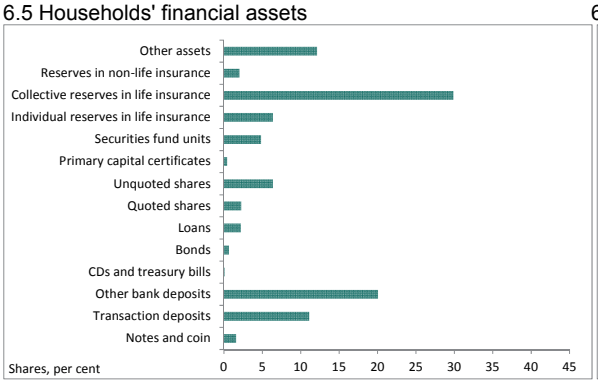
A substantial portion of **households'** financial assets are tied up in insurance-technical reserves and bank deposits (chart 6.5). Households consequently have substantial direct exposure to banks and insurers. Households' investments in quoted shares are low, and they are therefore little exposed to stock market volatility. A limited portion of their financial assets are invested in mutual fund units, which include low-risk assets such as money market instruments and bonds. There have been relatively few changes in the composition of households' financial wealth in the past 15 years. Bank deposits and insurance technical reserves have predominated throughout the period. The significance of collective reserves has increased somewhat, while the relative size of bank deposits has somewhat diminished. The share of quoted shares has also fallen, while investments in mutual fund units have increased in relative terms.

Firms are exposed to securities markets to a larger degree than households (chart 6.6). While their shareholding is substantial, exposure is concentrated on the unlisted market which features illiquid

assets whose value varies far less than that of quoted shares. Firms' lending and other assets make up a significant share of total assets. The proportion of unquoted shares has risen substantially in the 15-year period. Exposure to the bond market is and has been limited. Exposure to banks (transaction deposits and other deposits) has been relatively stable.

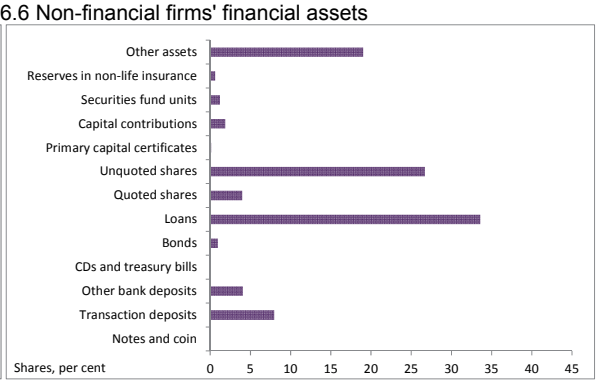
The **public sector's** financial assets are largely reflected in the activity of the Government Pension Fund – Global. Hence the public sector is to a larger degree exposed to quoted bond and stock markets than are firms and households. Loans from the public sector also make up a substantial share of the sector's overall financial receivables. The Government Pension Fund – Global is heavily exposed to quoted markets, but being a long-term, patient investor it tolerates wide variation in asset values. The Fund's shareholdings have risen substantially since the Fund was established in 1996. The same is true of its holding of money market certificates and bonds.

6.5 Households' financial assets



Source: Statistics Norway

6.6 Non-financial firms' financial assets



Source: Statistics Norway

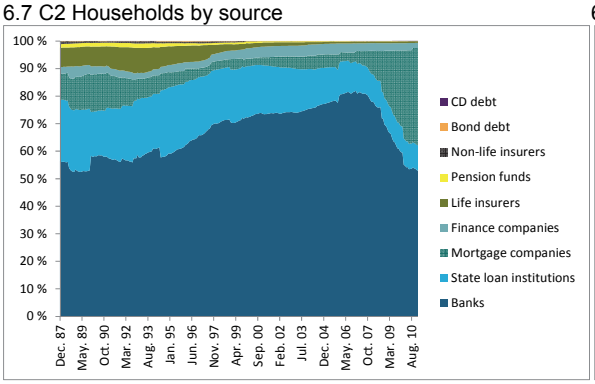
Non-financial private sector's gross debt

More than half of **households'** gross domestic debt as of end-January 2011 is debt to banks and about one third is debt to mortgage companies (chart 6.7). These proportions have changed substantially in the period January 1987 to January 2011. The relative significance of funding from state lending institutions is far smaller now than previously. Households are not raising loans in the bond and short-term paper markets, and debt to life insurers, pension funds and non-life insurers is very limited. Households' funding structure has changed substantially since 2008. Bank debt is greatly reduced both as a share of overall funding and in billions of NOK. Concurrently debt to mortgage companies has risen strongly. This was not intended by households but is a consequence of banks' transfer of residential mortgage portfolios to mortgage companies. Banks are still the main originator of such mortgages. The growth in households' debt has levelled off of late, while growth in corporate debt has quickened. There is far less variation in rates of debt growth in the household sector than the corporate sector.

The chief funding source for **non-financial firms** is banks (chart 6.9). At end-January 2010 firms' bank debt totalled more than two-thirds of the sector's gross domestic debt. This share has risen considerably over the course of the past 20 years. Bond debt is relatively speaking just as large now as at the end of the 1980s, making up about one-tenth of the sector's gross domestic debt. The bond market was a more important funding source for firms at the start of the 1990s. Life insurers and state lending institutions are insignificant funding sources, whereas mortgage companies remain an important source of funding. Bank debt has grown between seven and eight times more than bond debt

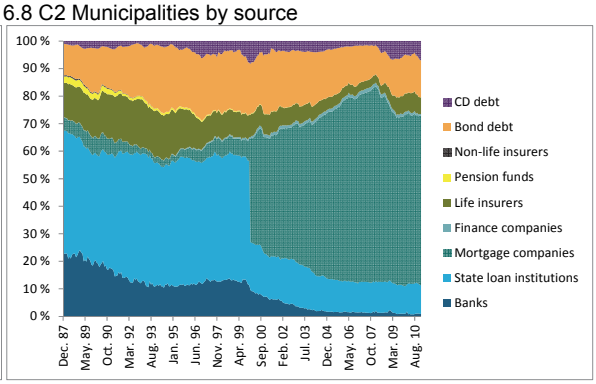
in the period January 1988 to January 2011. In the financial stability context, bank funding is far more important than funding in the bond market (chart 6.10). Another factor is that firms' funding structure is less diversified now than previously.

6.7 C2 Households by source



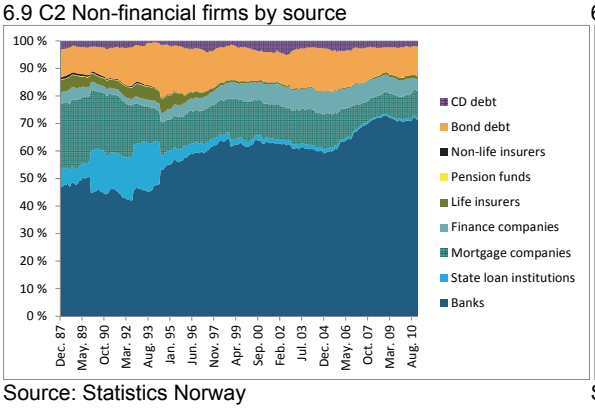
Source: Statistics Norway

6.8 C2 Municipalities by source



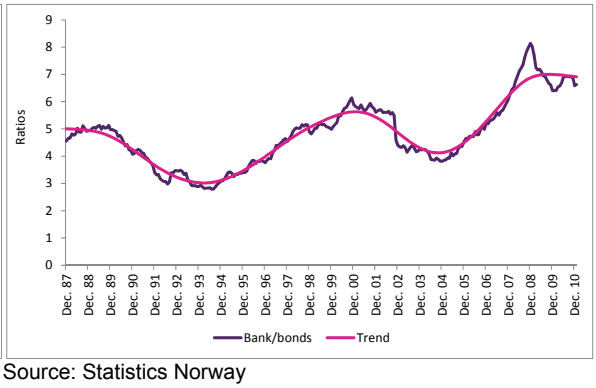
Source: Statistics Norway

6.9 C2 Non-financial firms by source



Source: Statistics Norway

6.10 Non-financial firms: bank debt/bond debt



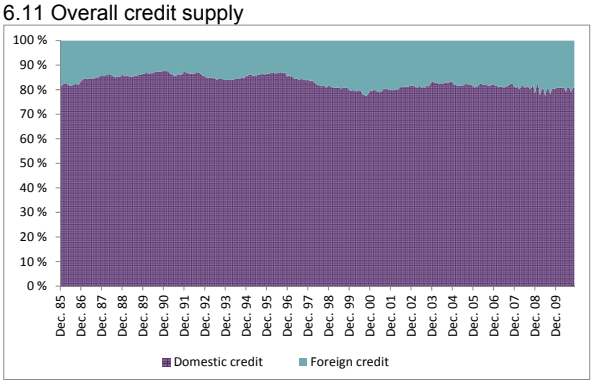
Source: Statistics Norway

At the end of January 2011 more than 60 per cent of **local authorities'** gross domestic debt was to mortgage companies, while bond debt accounted for almost 15 per cent and debt to state lending institutions for just over 10 per cent (chart 6.8). The share of debt to mortgage companies rose dramatically around the turn of the millennium when Kommunalbanken (a local government funding agency) became a mortgage company. Other, more substantive, structural changes have also taken place over the past 20 years. State lending institutions were an important funding source at the start of the period, but now play a relatively speaking less important role. Funding through life insurers remains important, but less so than previously. The bond market was also relatively speaking more important previously, but after the conversion of Kommunalbanken into a mortgage company the direct significance of the bond market has diminished somewhat. Bank funding is of little significance to local authorities. In contrast to firms and households, local authorities' debt rose strongly during the financial crisis, and growth in 2010 was also significantly higher. Activity levels among local authorities dampen the effect of setbacks in the private segment of the economy. Local authorities are more sheltered from the banking sector than previously, but at the same time more of their funding is linked directly and indirectly to the bond market.

Gross domestic and foreign debt

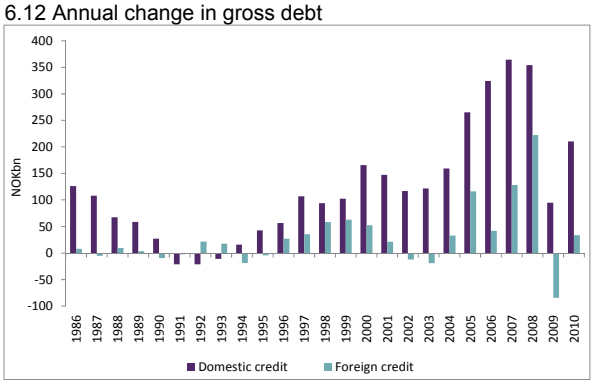
In the period December 1985 to December 2010 overall credit (C3) rose almost 8 per cent per year on average. For the entire period domestic sources have accounted for just over 80 per cent of the overall credit supply (chart 6.10). The foreign share of gross overall debt has varied from 15 per cent at the end of the 1980s to 30 per cent in 2000 and in the period prior to the financial crisis. The relative significance of foreign funding has since diminished somewhat, and is now marginally higher than at the start of the period. The variation in foreign sources of credit causes fluctuations in the Norwegian economy. This is particularly visible in periods of crisis (chart 6.12). The foreign share was historically high immediately before the technology bubble burst, and immediately prior to the financial crisis.

6.11 Overall credit supply



Source: Statistics Norway

6.12 Annual change in gross debt

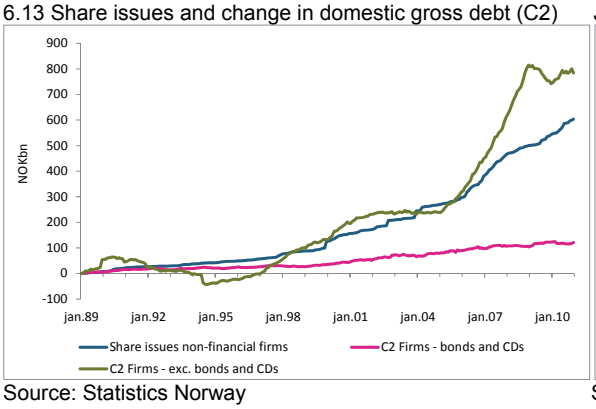


Source: Statistics Norway

Firms' funding in securities markets relative to other sources of credit

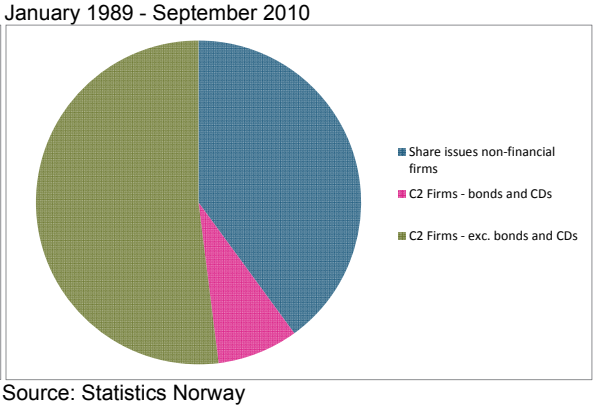
In the period January 1989 to September 2010 Norwegian non-financial firms issued shares worth almost NOK 600bn (chart 6.13). In the same period domestic bond debt rose by about NOK 100bn and other debt to domestic sources of credit (including banks) rose by about NOK 800bn. Firms have in addition funded a significant share of their operations through retained profit. Of overall new external funding (excluding loans raised abroad), stock issues registered at the central securities depository (VPS) account for 40 per cent, change in domestic short-term paper and bond debt for about 8 per cent and change in other domestic debt (including bank debt) for almost 53 per cent (chart 6.14). The securities markets, in particular the stock market, are accordingly important funding sources for private Norwegian non-financial firms. Firms' funding and activity level are thus vulnerable to turbulence in securities markets and the bank sector alike.

6.13 Share issues and change in domestic gross debt (C2)



Source: Statistics Norway

6.14 Share issues and change in firms' gross debt January 1989 - September 2010



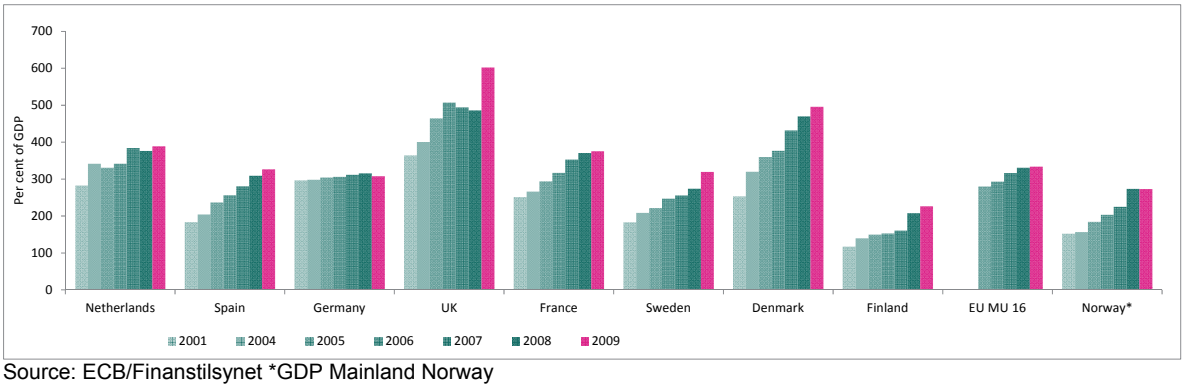
Source: Statistics Norway

Structure of the European and Norwegian financial markets

The European credit market

In recent years the size of the bank sector in the EU and in Norway (in terms of total assets) has risen relative to GDP (chart 6.15). The United Kingdom and Sweden were among the countries to show highest growth in the bank sector relative to GDP from 2008 to 2009, due in the first instance to a fall in domestic GDP and currency vis-a-vis the Euro. In Norway, banks' total assets rose relative to GDP

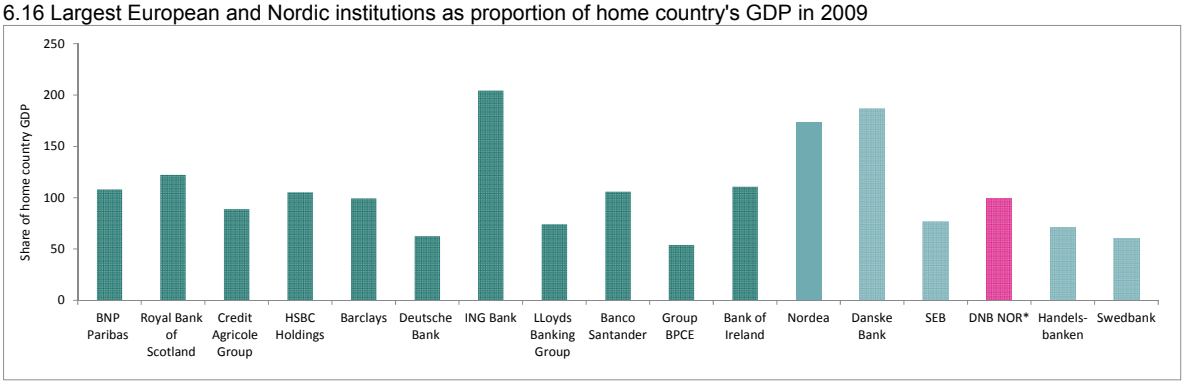
6.15 Credit institutions' total assets in relation to GDP



Source: ECB/Finanstilsynet *GDP Mainland Norway

by 80 per cent to 273 per cent from 2001 to the end of 2009. By international standards, Norway's credit sector is smaller in relative terms than the average for the 16 countries making up the EU monetary union. Of countries natural for comparison purposes, only Finland has a relatively speaking smaller bank sector. This is despite the fact that credit institutions account for a large portion of households' and firms' borrowing in Norway. This may be due to Norwegian credit institutions' negligible lending abroad and to the public sector compared with other countries and to the smallness of the Norwegian interbank market.

6.16 Largest European and Nordic institutions as proportion of home country's GDP in 2009



Sources: "The Banker", ECB, annual reports of Nordic conglomerates and Finanstilsynet
*GDP Mainland Norway

In 1990 large European banks' aggregate total assets accounted for about 20 per cent of domestic GDP compared with a figure close to 400 per cent during the financial crisis in 2008; see chart 6.16 which shows the situation in 2009. Individual institutions' relative size has increased, and Western countries have become significantly more vulnerable to events at individual institutions.

Number of actors in the credit market

The European credit market has undergone substantial consolidation; by the end of 2009 credit institutions were 14 per cent fewer in number than in 2001 (chart 6.1). In Norway the establishment of residential mortgage companies has brought a somewhat different development. When corrected for the new residential mortgage companies, the number of credit institutions in Norway has fallen by 3 per cent since 2001.

Table 6.1 No. of credit institutions 2001-2009

No.	2001	2007	2008	2009	Change %
Netherlands	561	341	302	295	-47 %
Spain	366	357	362	352	-4 %
Germany	2 526	2 026	1 989	1 948	-23 %
United Kingdom	452	396	391	389	-14 %
France	1 050	808	728	712	-32 %
Sweden	149	201	182	180	21 %
Denmark	203	189	171	164	-19 %
Finland	369	360	357	349	-5 %
Norway	219	212	216	229	5 %
EU 27	9 747	8 354	8 510	8358	-14 %

Sources: ECB/Finanstilsynet. Incl. Norwegian branches abroad

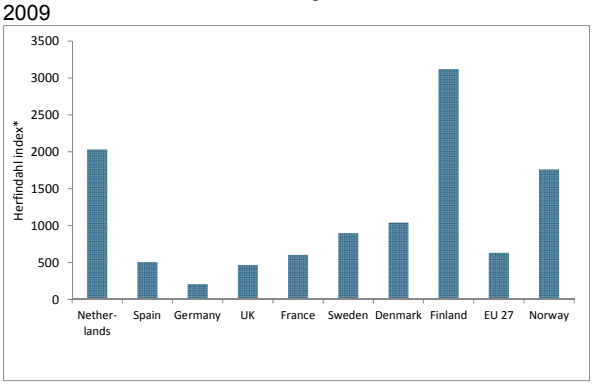
The financial crisis led to major structural changes in financial markets internationally and in the banking sector in particular. Many banks incurred heavy losses and impairment write-downs and needed to consolidate or shrink their balance sheets and strengthen their capital adequacy and liquidity positions. Some banks, however, made acquisitions in connection with disposals or forced repossessions. Mergers and acquisitions picked up somewhat in Europe from 2009 onwards.

Market concentration

At the end of 2009 market concentration in Europe was at about the same level as in the years prior to the financial crisis. Small countries have a more concentrated market than larger countries. Due to DnB NOR's size in the Norwegian market, concentration in Norway is substantially above the EU average, and only Finland and the Netherlands have a higher sector concentration measured by the Herfindahl index. Looking, however, at the overall market share of the five largest banks in each country, Norway's bank sector is the least concentrated in the Nordic region, but more concentrated than the EU average.

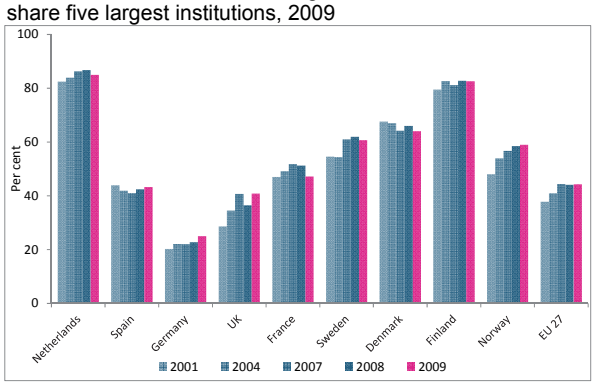
Despite it's relatively concentrated bank sector, Norway has a large number of banks relative to both GDP and population size. This is because Norway has many small, local banks. On the other hand, like other Nordic countries, the United Kingdom and the Netherlands, Norway has a low number of branches. High acceptance of new technology such as banking via the internet and telephone is a likely explanation. Of the 20 largest banks in Norway, six have effectively no branch network and are largely present in the market via other channels.

6.17 Concentration in the banking sector, Herfindahl index*, 2009



Sources: ECB/Finanstilsynet

6.18 Concentration in the banking sector, market share five largest institutions, 2009



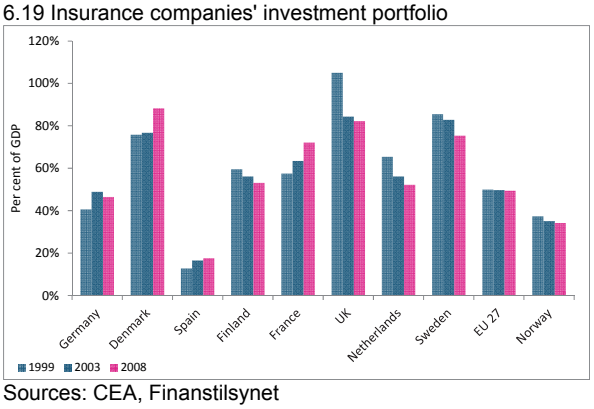
Sources: ECB/Finanstilsynet

*The sum of the square of the market shares for all banks. Index figures over 1800 indicate a highly concentrated sector, whereas figures below 800 indicate a fragmented sector

The European insurance market

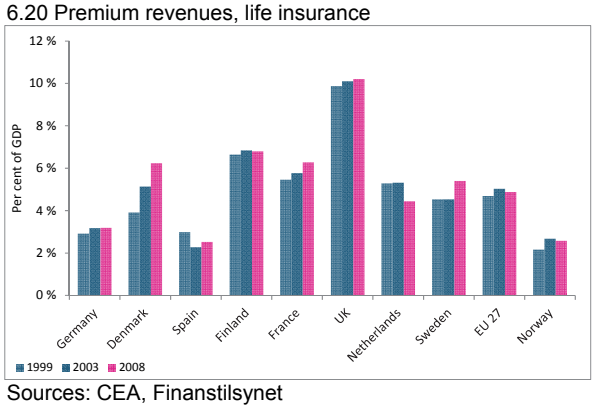
While the bank sector plays an important role in channelling capital between various sectors and households, the insurance sector redistributes capital across different life phases and promotes economic predictability over time.

6.19 Insurance companies' investment portfolio



Sources: CEA, Finanstilsynet

6.20 Premium revenues, life insurance



Sources: CEA, Finanstilsynet

Insurance companies are highly important investors internationally. By the end of 2008, European life and non-life insurers had invested EUR 6,800bn in the global financial markets. In Norway, too, the sector is an important factor in capital markets, and at the end of 2010 Norwegian life insurers had investments worth more than NOK 859bn under management. The corresponding figure for Norwegian non-life insurers is about NOK 130bn (including captives). In addition there are pension funds which at the end of 2010 had total assets approaching NOK 200bn.

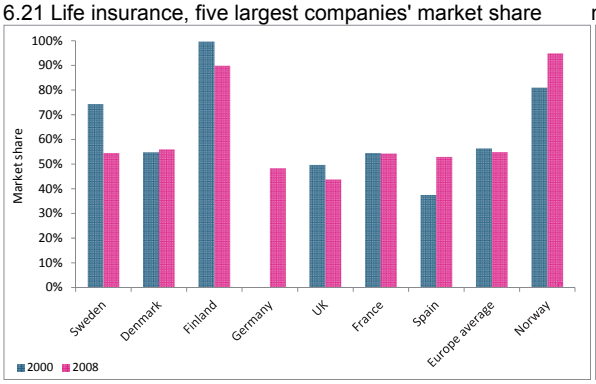
In terms of GDP, Norwegian insurers' and investment portfolios are far smaller than in the other Nordic countries and somewhat below the average for the EU (chart 6.19). The ratio has been relatively stable since 1999. The low proportion is related to the National Insurance Scheme Fund and the Norwegian Public Service Pension Fund, because of which private saving for pensions is on a lower scale in Norway than in other countries. Norwegian insurers are consequently smaller actors in the financial market than is the case in a number of comparable countries.

The ratio of premium revenues in life insurance to GDP in Norway is the lowest in the Nordic region and stands at about 50 per cent of the EU average (chart 6.20). The pension reform and introduction of mandatory occupational pensions (OTP) mean that life insurance in Norway could grow somewhat more quickly than GDP, but this will largely depend on the framework conditions for private pension saving (see the account below in the section entitled "Saving in pension products".

Market concentration

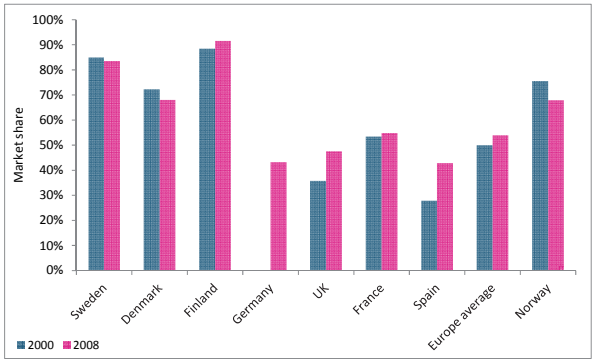
From the turn of the millennium to the end of 2008 the life insurance market in Europe moved in the direction of somewhat lower concentration while the non-life market became somewhat more concentrated (chart 6.21 and 6.22). The trend in Norway was the opposite with consolidation in life insurance and lower concentration in the non-life segments. This is due not least to the fact that several financial conglomerates with a substantial customer stock in other parts of the financial sector have established their own non-life insurance companies.

6.21 Life insurance, five largest companies' market share



Sources: CEA, Finanstilsynet

6.22 Non-life insurance, five largest companies' market share

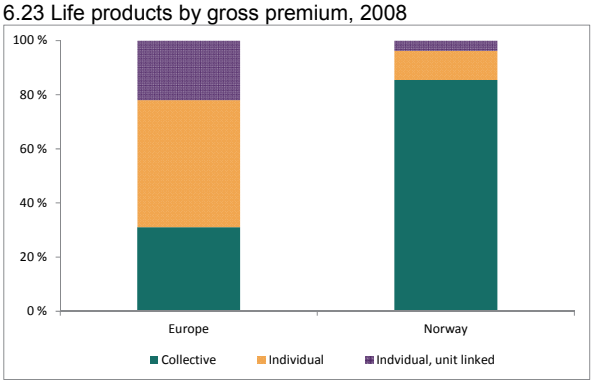


Sources: CEA, Finanstilsynet

Saving in pension products

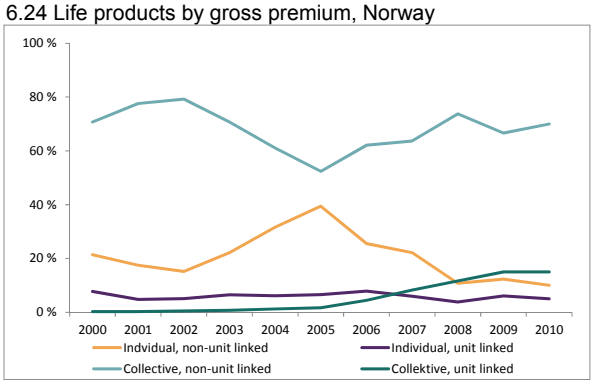
Individual saving in pension products is widespread in Europe. There are large differences between Norway and Europe in the balance between individual pension saving and collective schemes. In 2008, 69 per cent of life insurance premiums in Europe derived from individual schemes, compared with 15 per cent in Norway (chart 6.23). The low proportion of individual life insurance in Norway is probably ascribable to the National Insurance Fund, the prevalence of collective schemes and limited tax incentives for private life insurance products.

6.23 Life products by gross premium, 2008



Sources: CEA, FNO

6.24 Life products by gross premium, Norway



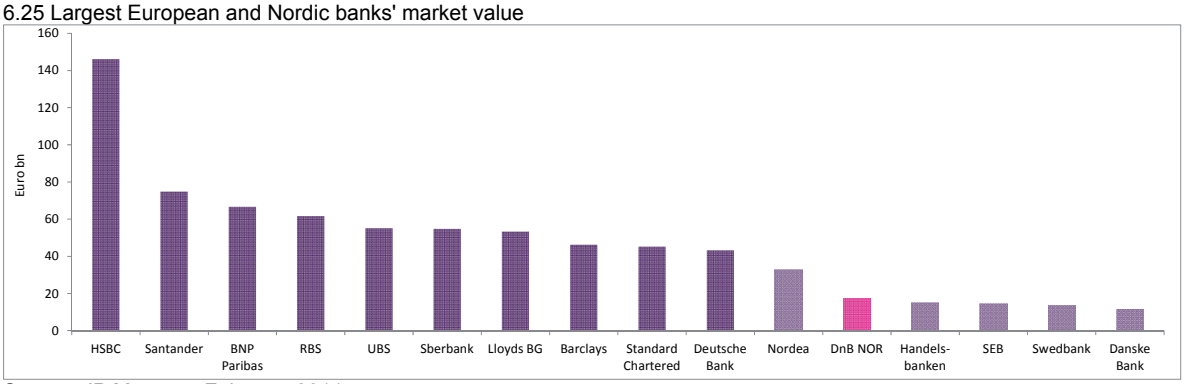
Source: FNO

In Norway the distribution between individual and collective life insurance products over the past 10 years shows that individual products rose sharply up to the reorganisation of the tax regime for individual pension saving in 2006 (chart 6.24). The proportion of individual agreements fell sharply thereafter; in monetary terms from NOK 28bn in premiums in 2005 to just over NOK 10bn in 2010. In recent years individual agreements have accounted for about 15 per cent of premiums, and framework conditions such as the tax system have a large bearing on households' saving in pension products.

Structure of the Norwegian financial market

The large Nordic financial groupings have set up operations in all Nordic countries. Several also have a substantial presence in the Baltics and other Eastern European countries. The largest Norwegian financial conglomerate, DnB NOR, has banking arms in the Baltics and Poland (DnB NORD) and in North Western Russia (DnB NOR Monchebank). Since its acquisition of the Swedish insurer Salus Ansvar in 2007, DnB NOR has also had an insurance presence outside Norway. Storebrand acquired the Swedish insurance group SPP in the same year. Gjensidige has set up operations in other Nordic countries, in the Baltics and in 2010 acquired the Danish company Nykredit Forsikring. The Nordic financial groups have grown as a result of mergers and acquisitions but remain small in the European context (chart 6.25).

6.25 Largest European and Nordic banks' market value



Source: JP Morgan - February 2011

In the Norwegian financial market seven large financial conglomerates or groupings of financial institutions had a market share of 67 per cent of managed capital at the end of 2010 (table 6.2). Their core activities are in life insurance and lending. DnB NOR is the largest financial conglomerate with a 31 per cent share of aggregate total assets. The group operates in all parts of financial services, and is the largest actor in the credit market, life insurance and securities funds. The Sparebank 1 alliance is the second largest grouping in the Norwegian financial market, followed by the Swedish financial conglomerate Nordea.

Financial groupings and alliances have gained increasing significance over the past 20 years. In 1995 there were three large financial conglomerates in the Norwegian financial market with an overall share of 25 per cent of the financial sector market. In the past five years the market share of the largest financial groupings in the Norwegian financial market have risen from 59 to 67 per cent, in part because Gjensidige and KLP have been converted to financial conglomerates and are now included in the selection.

Table 6.2 Market shares measured in relation to total assets - largest financial groupings in Norway as of 31.12.2010

Per cent of total assets	Credit institutions	Securities funds	Non-life insurance	Life insurance	Total
DnB NOR	34	21	1	29	31
SpareBank 1/collab. savings banks	13	6	6	3	11
Nordea	10	8	0	6	9
KLP	1	9	2	28	5
Storebrand	1	12	1	25	5
Terra Group	5	1	2	0	4
Gjensidige	0,3	0	30	1	1
Total financial groups/alliances	64	58	40	92	67
Other companies	36	42	60	8	33
Total market	100	100	100	100	100

Credit institutions comprise banks, mortgage companies and finance companies. The total for financial groupings is aggregate total assets in the various segments and may diverge from the conglomerates'/groupings' own accounts. 'Total market' includes Norwegian institutions' activity abroad and foreign institutions' subsidiaries and branches in Norway. For Sparebank 1 Gruppen and Terra Group the owner banks are included in the market shares.
Sources: Finanstilsynet and the Norwegian Mutual Fund Association

Foreign participants have worked up substantial shares of the Norwegian financial market (table 6.3). All the six largest Nordic financial conglomerates operate in Norway. The foreign presence is highest in the non-life insurance market where the Swedish If and Danish Tryg hold substantial market shares. Foreign banks are major participants in the Norwegian credit market, and at the end of 2010 three of the four largest banks in the Norwegian market (Nordea, Fokus Bank and Handelsbanken) were foreign-owned.

Table 6.3 Foreign-owned subsidiaries' and branches' shares of the Norwegian financial market as of 31.12.2010

Percentage of total assets*	Credit institutions	Non-life insurance**	Life insurance
Foreign-owned subsidiaries	12	1	7
Foreign branches	14	29	0,4
Total foreign-owned	26	30	7
Norwegian-owned institutions	74	70	93

* Cross-border activity is not included. ** Measured by gross premium revenue, foreign branches had a market share of 41% and foreign-owned subsidiaries a market share of 2% in non-life insurance.

Structural changes in the Norwegian financial market

The structure of the Norwegian financial market has been little affected by the financial crisis, and few major structural changes have taken place in recent years. Of greater significance are new structural rules for savings banks and the establishment of residential mortgage companies. This makes for greater flexibility in selecting business models. In the second half of 2008 and in 2009 15 residential mortgage companies were established, authorised to issue covered bonds. Two new residential mortgage companies were licensed in 2010.

In June 2010 the financial conglomerate Gjensidige Forsikring was authorised by the Ministry of Finance to convert to a public limited company. It was concurrently permitted to convert the Gjensidige foundation from an ordinary foundation to a financial foundation subject to the rules of the Financial Institutions Act. Upon admission of the conglomerate to stock exchange listing on 10 December, the foundation sold 40 per cent of its shares. About 72 per cent of these were allocated to institutions, the remainder going to private investors and employees. Gjensidige is now among the 10 largest companies on Oslo Børs. In November 2010 SpareBank 1 SR-Bank decided to convert to a public limited company. An application for conversion was sent to Finanstilsynet as the advisory

authority in December 2010. Final authorisation is conditional upon approval from the Ministry of Finance.

The Norwegian securities market

Infrastructure

The securities market infrastructure consists of marketplaces, clearing houses (central counterparties), the securities register and the securities settlement system. There are three categories of marketplaces: regulated markets, regulated markets that are also a stock exchange, and multilateral trading facilities (MTFs). Equity instruments, bonds and short-term-term paper are traded in the ordinary stock market at Oslo Børs. In addition Oslo Børs ASA has established the alternative marketplaces Oslo Axess for shares, which is a regulated market, and the Alternative Bond Market for fixed interest securities, which is an unregulated market. Oslo Børs ASA also offers the marketplace Oslo Connect where non-standardised derivatives contracts are traded. Oslo Connect is regulated as an MTF.

In 2010 Oslo Børs established mandatory use of a central counterparty for settlement of equity instruments. The intention is to reduce risk for trading members, uphold high confidence in the settlement systems and reduce transaction costs. Oslo Clearing ASA comes in as a central counterparty in settlements of derivatives and equity instruments traded on Oslo Børs, Oslo Axess and Oslo Connect. Owner rights to bonds, short-term paper and equity instruments are registered in the securities register operated by Verdipapirsentralen ASA (VPS, the central securities depository). Settlement takes place through the central securities settlement.

Organised trading in commodity derivatives takes place on two regulated markets in Norway, Nasdaq OMX Oslo ASA (formerly Nord Pool ASA) and Fish Pool ASA. In addition, Spectron Energy Services Norway Branch operates an MTF which has taken over the business of International Maritime Exchange AS (Imarex) and is regulated by the UK Financial Services Authority. Power derivatives remain the largest derivatives product, although new products with another type of commodity as the underlying are also traded. Commodity derivatives are settled through NOS Clearing for Spectron Energy and Fish Pool, and through Nasdaq OMX Oslo NUF (formerly Nord Pool Clearing ASA) for Nasdaq OMX Oslo.

Major infrastructure changes expected in Europe

Increased efficiency and integration in the capital market has been a main concern for the EU. Whereas MiFID has influenced the development of the European market for financial instruments, the infrastructure is mainly organised at the national level with associated legal and economic barriers between countries and differing market practices. A complex existing infrastructure has made it difficult to establish a well-functioning common European securities market. The costs of cross-border clearing and settlement are high. The financial crisis in autumn 2008 made authorities aware of the need for measures able to reduce risk for actors in the bilateral derivatives market, including measures to increase market transparency and reduce counterparty risk and operational risk. The authorities also saw a need for measures able to increase confidence in the market and improve market monitoring.

The new body of rules will in several areas make it more difficult for small actors to become established or to maintain their market since it will require them to relate to a wide-ranging, complex body of rules that necessitates added administrative manpower. The new rules permit cross-border business, which opens the way for competition between the actors.

Regulation on OTC derivatives, central counterparties and trade repositories (EMIR)
An initiative to address the shortcomings that surfaced during the financial crisis is the introduction of a new body of rules for clearing houses and mandatory clearing of OTC derivatives as well as an obligation to report OTC derivatives to a trade register. The EU is currently considering new rules proposed in this area in line with corresponding regulation of OTC derivatives in the US. Entry into force is expected by the end of 2012. The rules introduce a reporting requirement in respect of OTC derivatives, mandatory clearing for eligible OTC derivatives and measures to reduce counterparty and operational risk for OTC derivatives that are cleared bilaterally. The new European Securities and Markets Authority (ESMA) will decide whether clearing of a given OTC derivative should be mandatory. Further, a licensing requirement is introduced for clearing houses pursuant to common European rules, and rules governing the establishment of interoperability (links) between clearing houses and rules governing cross-border activities. For market actors the rules entail that financial institutions and a number of private actors may become subject to a clearing obligation in respect of derivative contracts which are currently settled bilaterally, for example various currency and commodity derivative contracts.

Regulation on Central Securities Depositories (CSD)
The EU is also working on the introduction of a legal framework for securities registers and for harmonisation of some aspects of securities settlements in the EU. The background is a desire to create a more transparent and stable financial system. It is recommended that securities registers should operate under a common framework entailing common European definitions of core services and ancillary services and conditions for authorisation and supervision of securities registers. Requirements will also be imposed on the solvency and organisation of business as well as rules governing access to the securities register and interoperability. The rules will also permit cross-border activity. This legal framework for securities registers will, together with EMIR and MiFID, which are currently undergoing revision, entail common European rules for systemically important infrastructural undertakings in the securities area.

With a view to promoting secure and efficient settlement of securities transactions, the EU also intends to harmonise important aspects of the securities settlement process, inter alia through new measures to improve participants' settlement discipline. This ties in with the proposed regulation of short sales. The EU is also considering harmonisation of the settlement period, ie the time elapsing between entry into a transaction and settlement. Currently two or three days beyond the transaction date (T+2) and (T+3) are used when trading shares on regulated markets in Europe.

Securities Law directive (SLD)
The Securities Law Directive is a regulatory initiative from the EU designed to improve the legal framework for storage and registration of securities, thereby protecting investors' ownership, right of disposal and execution of rights attached to securities. The directive will not impact on the company law of any member country. The preliminary deadline for implementation for member countries is the end of 2013. The new directive was prompted by a lack of legal clarity and security in this area which

impacts directly on cross-border investments within Europe. This is particularly relevant when ownership is through a chain of intermediaries in the form of nominee registration. The directive will also set the stage for well-functioning infrastructural undertakings, particularly with regard to cross-border activity. The legal framework in Norway is broadly considered to meet the proposed directive requirements in this area. This also applies to voting rights for foreign investors who avail themselves of nominee registration. They are allowed to register directly to enable their voting rights to be exercised.

Target 2 Securities (T2S)

Target 2 Securities (T2S) is a project under the European Central Bank (ECB) whose objective is to establish a competitive common European securities market. T2S is a technical platform for both cross-border and domestic securities settlements involving central bank funds. The platform will provide services to securities registers and will be run by the Eurosystem[9]. Cross-border trades will accordingly also be settled by DVP (Delivery Versus Payment) in central bank money, which reduces settlement risk. A prerequisite is that the relevant central bank makes its currency available such that liquidity is available on accounts in T2S. The object of the T2S project is to reduce costs to settlement participants and end-users by increasing competition between securities registers and help to bring the cost of settling cross-border trades into line with the cost of settling domestic trades. Operation of T2S will be based on cost absorption, and prices for the service will be public. There will be no volume discounts for large participants.

Norway's central securities depository (Verdipapirsentralen, VPS) which handles the Norwegian central securities settlement (VPO NOK) has, together with 30 European securities registers, signed an agreement of intent with the ECB to install T2S. The ECB wishes to include all European countries in T2S, subject to each country's implementation of the Settlement Finality Directive. Securities denominated in currencies other than the euro will be settled using the same technical system. Outside the Eurozone the Danish, Swedish and Norwegian central banks have formally indicated their willingness to negotiate on settlement of national currencies in T2S. Norges Bank has in a letter to the ECB stated that the Norwegian currency can join T2S if the Norwegian market so demands and the bank reaches an adequate agreement with the ECB. Negotiation of a framework agreement to formalise and regulate the relationship between the Eurosystem and securities registers is in progress.

It is imperative for financial stability that the financial infrastructure functions and that there is low risk of errors and shutdowns. To secure this, effective and well-functioning supervision of the infrastructure in area, including outsourced activities, is needed. Connection to T2S will require VPS to outsource technical operation of the securities settlement system. Outsourcing will accordingly need to be considered in relation to relative provisions and conditions set by the authorities.

Market structure

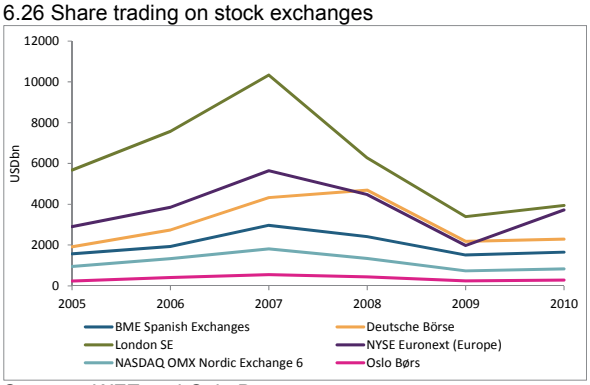
Stock markets

One of the objects of MiFID, which was introduced in 2007, was to stimulate competition between marketplaces for financial instruments in Europe. An instrument in this connection was to permit the establishment of alternative trading platforms to the established stock exchanges. The establishment of multilateral trading facilities (MTFs) has been of great significance. These are high-tech, cost-efficient

[9] The Eurosystem comprises the ECB and the central banks of countries that have introduced the euro.

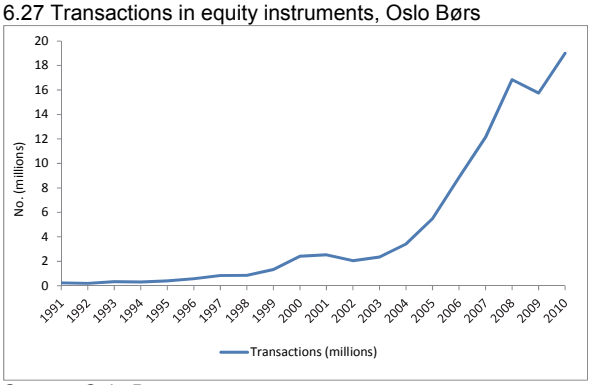
trading platforms for financial instruments quoted on traditional exchanges and regulated markets. Although the established exchanges have responded by lowering their prices, a growing share of secondary market trading has moved to the new marketplaces.

6.26 Share trading on stock exchanges



Sources: WFE and Oslo Børs

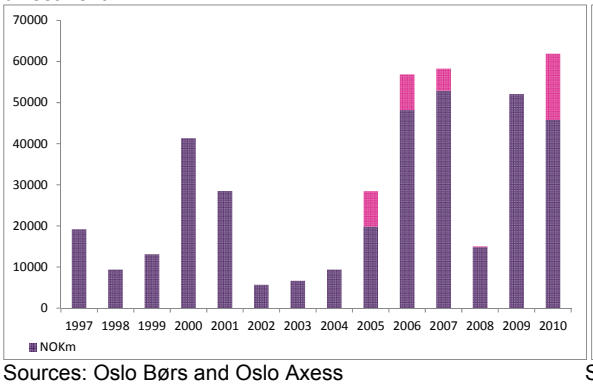
6.27 Transactions in equity instruments, Oslo Børs



Source: Oslo Børs

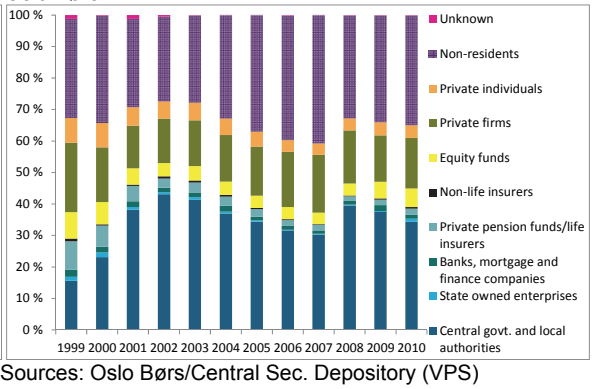
Increased fragmentation of trading results in lower liquidity at the individual marketplace, and market monitoring may be impaired since it becomes difficult to monitor the entire market. This, combined with the general market decline, brought a steep fall in the volume of equity instruments traded at the established European exchanges from 2007 to 2010 (chart 6.26). Oslo Børs' share of the turnover of shares quoted on the exchange fell from 77 per cent in 2008 to 70 per cent in 2010. On the other hand, the number of transactions in equity instruments at Oslo Børs has risen strongly for several years (chart 6.27). This growth should be viewed in conjunction with the growing spread of internet broking and the emergence of algorithmic trading. Algorithmic trading and high-frequency trading are currently little used by Norwegian investment firms. However, large foreign firms that are remote members of Oslo Børs are assumed to engage in algorithmic trading in the most liquid Norwegian shares. The strong increase in transaction numbers and the emergence of algorithmic trading are probably related to reduced transaction costs. Removal of the minimum requirement as to size of round lots has probably also played a part.

6.28 Share issues on Oslo Børs and Oslo Axess incl. divestment



Sources: Oslo Børs and Oslo Axess

6.29 Ownership breakdown, shares quoted on Oslo Børs



Sources: Oslo Børs/Central Sec. Depository (VPS)

For investment firms the emergence of new trading platforms and rapidly growing competition on price and performance have increased the need to invest in new ICT systems and imposed on firms costs of hooking up to the various marketplaces. This is particularly true of the larger investment firms

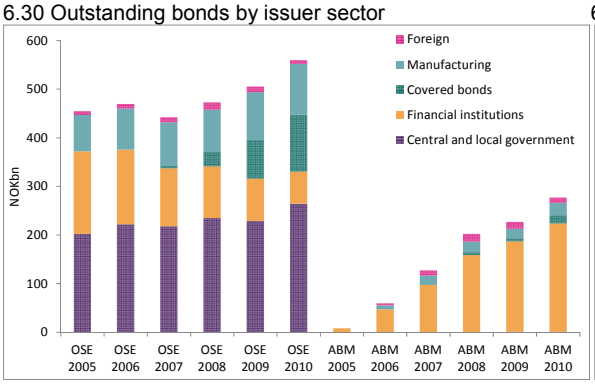
that service major investors. In recent years dark pools have emerged abroad outside the regulated markets. By trading equities in dark pools, large institutional investors are able to dispose of substantial shareholdings without this affecting the market price. When a large portion of stock trading is not visible to market actors, transparency, which is regarded as a prerequisite for an efficient securities market, is impaired. In the EU firms are obliged to disclose information on this type of transaction on a post-trade basis.

Issue activity at Oslo Børs has, with the exception of 2008, been high in recent years (chart 6.28). Compared with other Nordic stock exchanges and similar European stock exchanges, activity in the primary market has been very high and is distributed across a number of sectors. The dominating owner groups on Oslo Børs are foreign investors and central and local government (chart 6.29). Foreigners' ownership share rose up to 2007, but subsided in 2008 and after the onset of the financial crisis. The increase in central and local government equity participations from 2000 to 2002 should be seen in conjunction with the stock exchange launches of Telenor and Statoil in which the state has substantial stakes. At the end of 2010 both the public sector and foreign investors' aggregate ownership shares on Oslo Børs were just below 35 per cent. In periods where foreign investors desire to divest Norwegian shares, sale pressure in such shares is likely to be substantial, as in the second half of 2008. Foreign investors' ownership share was reduced from 40.8 to 32.8 per cent in the course of that year.

Fixed-income markets

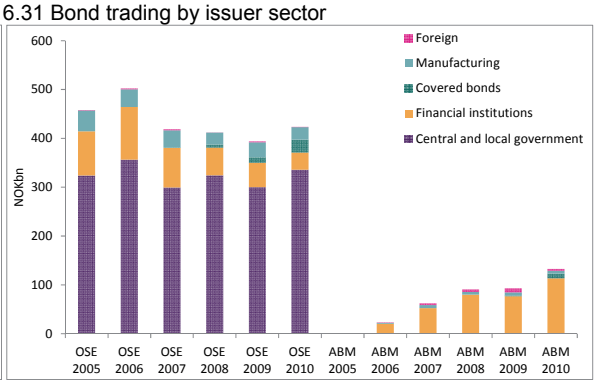
Secondary trading and liquidity in international bond markets was significantly impaired by the onset of the financial crisis in autumn 2008. Impaired liquidity and increased spreads in the secondary market also curbed activity in the primary market.

6.30 Outstanding bonds by issuer sector



Sources: Oslo Børs and Oslo ABM

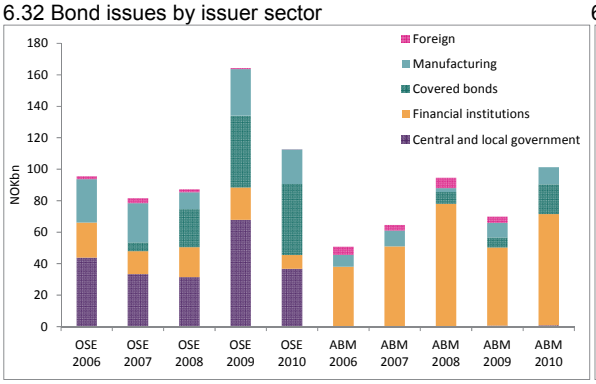
6.31 Bond trading by issuer sector



Sources: Oslo Børs and Oslo ABM

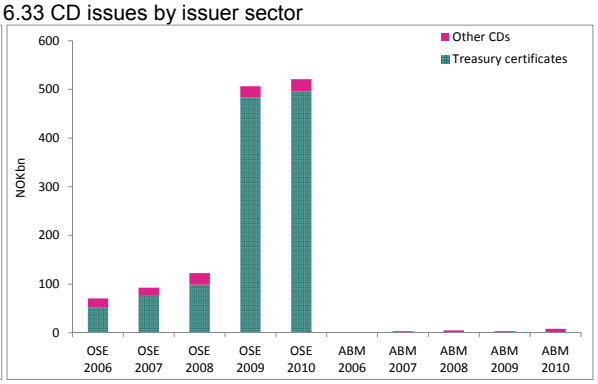
In Norway the value of outstanding bonds quoted on Oslo Børs totalled NOK 560bn at the end of 2010 (chart 6.30). A large portion of the increase in recent years is ascribable to issues of government bonds and covered bonds. The value of bonds quoted on Oslo Børs Alternative Bond Market (Oslo ABM) has risen strongly since this marketplace was established in 2005, largely due to the increased issuance volume of financial institutions. The nominal value of bonds quoted on ABM was NOK 277bn at the end of 2010. The secondary market for bonds quoted on Oslo Børs is illiquid (chart 6.31), due in part to heavy demand from life insurers and pension funds for bonds with long maturity and low credit risk. In order to meet their need for long duration, and given accounting rules that permit deviation from the requirement of recognition at market value, life insurers and pension funds largely retain bonds to maturity.

6.32 Bond issues by issuer sector



Sources: Oslo Børs and Oslo ABM

6.33 CD issues by issuer sector



Sources: Oslo Børs and Oslo ABM

Recent years have seen a steep increase in new issues and tap issues of treasury certificates quoted on Oslo Børs and Oslo ABM (chart 6.32). In 2009 new issues and tap issues of government bonds quoted on Oslo Børs were particularly large. Between 2008 and 2009 the volume of new issues and tap issues of treasury certificates on Oslo Børs also rose sharply (chart 6.33). This increase should be viewed in conjunction with the 'swap' arrangement which was initiated after the onset of the financial crisis.

THE REPORT ENTITLED RISK OUTLOOK 2011: THE FINANCIAL MARKET IN NORWAY IS A SUPPLEMENT TO FINANSTILSYNET'S ANNUAL REPORT FOR 2010.

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