

Chapter 2

Macroeconomic policies for a soft landing

Norwegian policymakers face challenging times. The economy is operating with great pressure on production capacity, the labour market is tight and there are signs of overheating – which would all argue for a restrictive macroeconomic policy stance. On the other hand, the financial sector is not immune to the global financial turmoil, the housing market shows signs of a downturn, households are increasingly indebted and there are significant downside risks. The authorities responsible for fiscal and monetary policy should therefore remain vigilant and adjust their stance if the outlook changes significantly. Their forward-looking policy framework – flexible inflation targeting and the fiscal rule jointly with the creation of an overseas fund – has proved robust to shocks in the past and should continue to serve them well. Fiscal policy also needs to continue to preserve the long-term sustainability of public finances.

Since the start of the decade stabilisation policy has used a combination of a flexible inflation targeting monetary policy regime designed to anchor expectations, and a fiscal rule designed to limit and smooth the injection of oil money into the economy. In a situation of surging oil prices and a booming mainland economy, together with strong supply shocks coming from favourable terms of trade effects and increasing immigration, macroeconomic policies have proved so far successful.

The current outlook is changing quite rapidly, however, and new challenges for fiscal and monetary policy are emerging. On the one hand, underlying inflation is accelerating, possibly faster than expected, in a context when domestic demand, although slowing, remains strong. On the other hand, financial conditions have tightened and there are emerging macroeconomic imbalances, such as high household indebtedness, which make the private sector particularly vulnerable to a sudden slowdown or monetary policy tightening. Overall, the balance of risks suggests that macroeconomic policies should remain vigilant to changes of inflation and output from their expected paths. Self-correcting forces, such as the moderation of domestic and external demand should be allowed to operate fully and possibly be accompanied by further tightening if inflationary pressures exceed current anticipations. Conversely if financial conditions or macroeconomic imbalances turn out to be more disruptive, *i.e.* lead to a sharper decline of economic activity than expected, the monetary and the fiscal stance might be loosened.

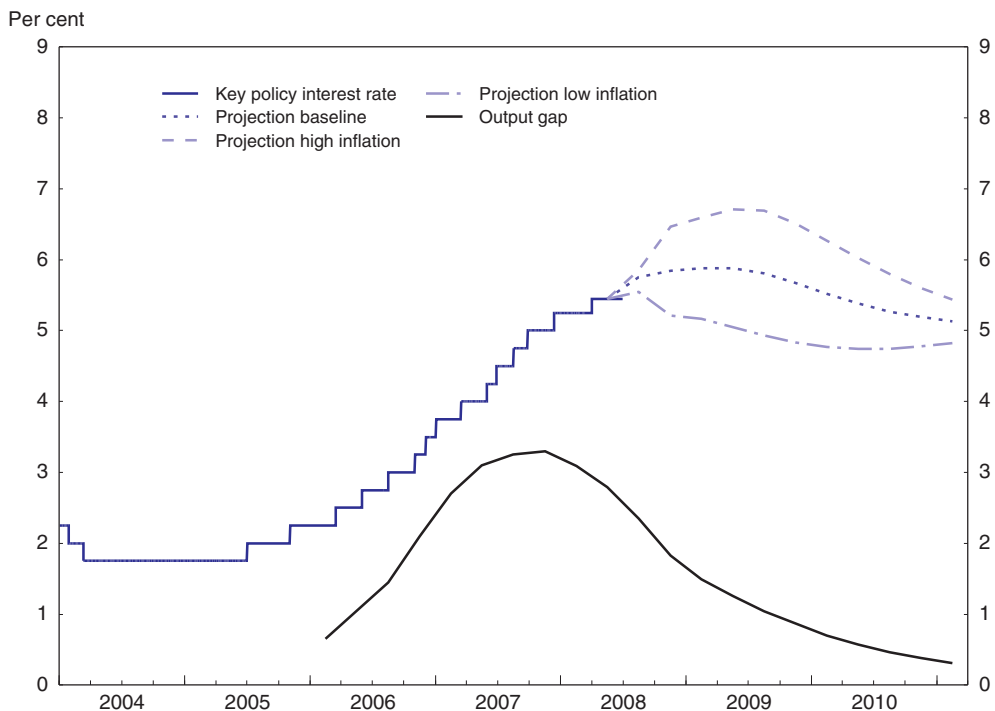
Monetary policy: the tightening cycle is coming close to an end

The operational objective of monetary policy is to achieve an annual increase in consumer prices that remains close to 2.5% over time. The Norges Bank has recently lengthened the horizon at which the inflation target is to be met, in line with the recommendation of the last *Economic Survey*. This horizon was initially set to 2 years and then extended in 2004 to the interval 1-3 years; in 2007 a less rigid formulation – the “medium term” – was adopted, though the practice of continuing to issue forecasts for three years ahead suggests that this is essentially a more flexible way of expressing the 1-3 year period previously used.¹ Such a flexible horizon improves the credibility of monetary policy strategy because it increases the probability that the target will be met, even during periods of disturbances of uncertain duration and size, and therefore enhances the credibility of the policy framework. The target for monetary policy is headline inflation (the CPI index), but Norges Bank looks at several measures of core inflation to gauge current inflation pressures and to filter out, for example, volatile electricity prices as well as changes in taxes and excise duties. Core inflation was very low for a long time. This caused concerns about too-low inflation and resulted in a period of looser monetary policy than would otherwise be implied by strong capacity utilisation in the economy.


A gradual return to neutral interest rates

In the past two and half years, policy rates were raised by 3.75 percentage points in gradual steps, reaching 5.5% in April 2008 (Figure 2.1). This tightening of monetary policy was initiated despite inflation remaining well below the policy target. In retrospect, this preventative tightening of monetary conditions proved to be necessary, as headline inflation has been on a rising trend since 2005. However, the recent acceleration of certain inflation indicators, notably for domestically-produced core prices, suggests that monetary policy may not have been entirely successful in preventing an excessive run-up of inflationary pressures. The combination of fast-rising wages and slowing productivity points to the risk of unit labour costs accelerating towards a pace of growth incompatible with the policy inflation target.

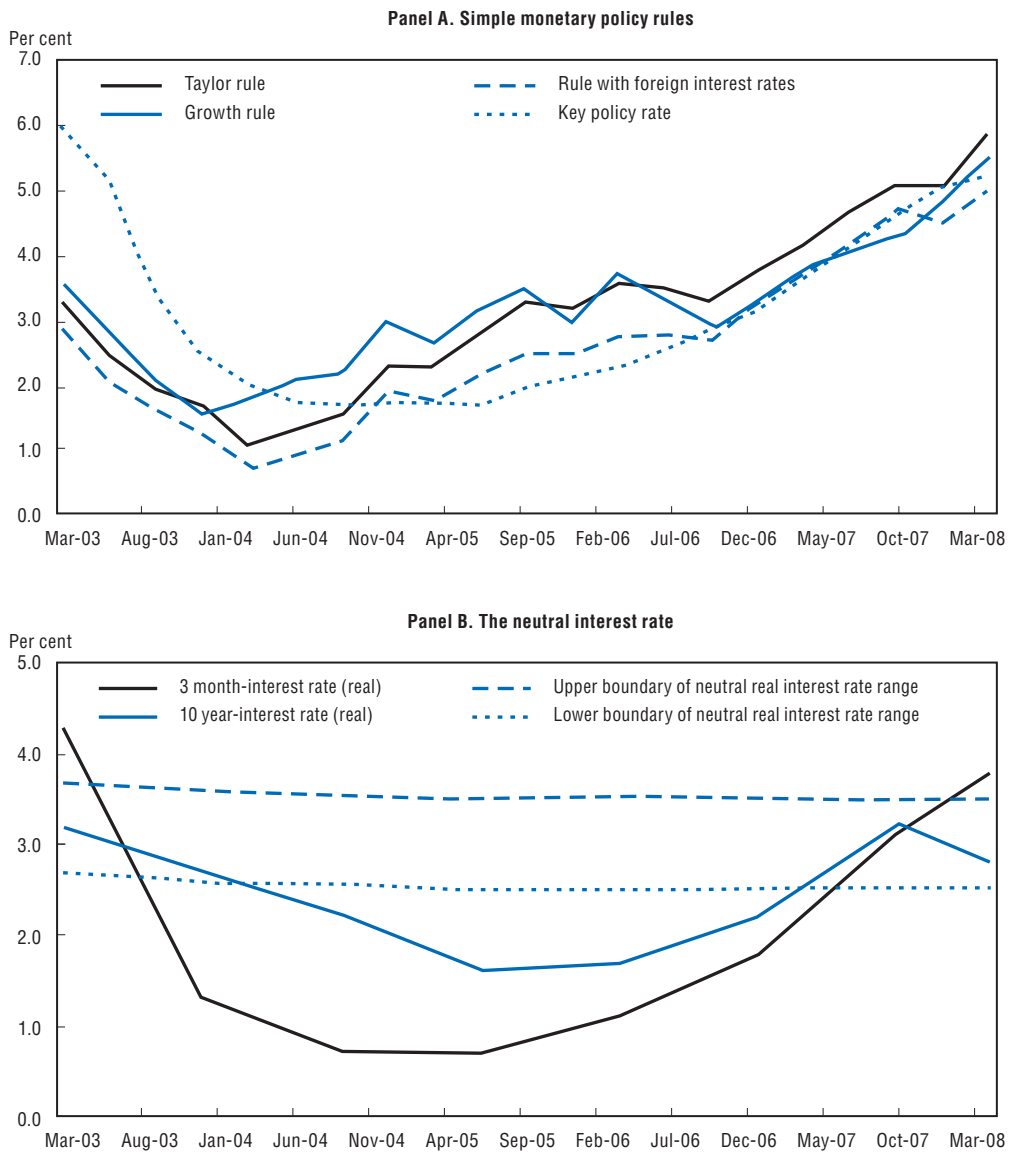
Figure 2.1. Key policy interest rate



Source: Norges Bank, as published in late April 2008.


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The Norges Bank was concerned by the fact that inflation was running well below target for a long time during 2004-06 and thus kept policy rates low, lower than would have been suggested by a Taylor rule, for example. With hindsight, the fear that low inflation would persist may have been exaggerated, so that monetary conditions remained too loose beyond the point at which the economy had turned the corner, although it is too early to draw definitive conclusions. The comparison of the actual interest rate path with simple theoretical rules, which are considered relevant to monetary policy decisions, does point to excessively loose monetary conditions from summer 2005 to spring 2006. Since summer 2007, money market rates have been higher than the simple rules. The Taylor rule suggests that the policy rate could have been set significantly lower in 2004, and raised starting in the second half of 2004, but the actual tightening cycle only began one year later,

Figure 2.2. **Assessing the monetary policy stance**¹

1. The methodology used to compute the various interest rates shown in both Panel A and B are as follows: The Taylor rule: interest rate = inflation target + equilibrium real interest rate + 1.5 x (inflation – inflation target) + 0.5 x Output gap. The growth rule: interest rate=inflation target + equilibrium real interest rate + 1.5 x (inflation – inflation target) + 0.5 x Growth gap, where growth gap = actual growth – trend growth. Rule with foreign interest rates: interest rate=inflation target + equilibrium real interest rate + 1.5 x (inflation – inflation target) + 0.5 x Output gap + 1.0 x (real interest rate among trading partners – real interest rate in Norway). The Taylor rule, the Growth rule, the Rule with foreign interest rate and the Neutral rate bands are estimated by the Norges Bank.

Source: Norges Bank.

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and with only gradual increments. A Taylor rule has of course many limitations, notably the consideration of current instead of expected inflationary and output pressures and the absence of an exchange rate channel which is relevant to a small open economy. Moreover, output pressures are gauged through output gap estimates, which are highly uncertain and which may be misleading for inferring inflation pressures (OECD 2008a). Indeed, other

policy benchmarks, such as a growth rule and a rule focusing on foreign interest rates, suggest that the gaps between actual policy decisions and these alternative rules are smaller than when using a Taylor rule.

Another way of assessing monetary conditions is to look at the difference between the money market rates and an estimated neutral interest rate, which is currently estimated in Norway to be in the lower end of the interval 2½-3½ per cent, in real terms, based on the long-term average of 10-year interest rates. Figure 2.2, Panel B, shows that the money market rates were below neutral until mid-2007, implying an expansionary policy stance well into the period of acceleration of economic growth. Recently, the 3-month interest rate exceeded the upper-bound of the interval for the neutral interest rate; this reflects not only the gradual tightening of the policy stance, but also the increase of spreads between the policy rate and money-market rates, which has affected monetary conditions in Norway after the onset of the global financial turmoil in the same way as in other countries. From this perspective, monetary policy appears to have remained expansionary well into the upswing. However, empirical estimates of the neutral interest rate come with a lot of uncertainty (Bernhardtsen, 2005).

Finally, Norges Bank's performance relies partly on its ability to forecast economic developments in real time and over the medium term. According to a number of reports (see Box 2.1), Norges Bank systematically overpredicted inflation since the introduction of the inflation targeting regime up until 2005. This is partly due to Norges Bank's forecasting tools, though it seems to depend to a larger extent on unexpected shocks, notably to the terms of trade, which were particularly difficult to foresee. While Norges Bank's past forecast errors do not seem to have undermined its credibility (Juel *et al.*, 2008), there is scope for improving and extending the set of forecasting models as well as to have an open discussion about their use and limitations (see Box 2.1).

The inflation outlook is deteriorating

Norway's economic outlook is changing rapidly and monetary policy is likely to be confronted soon with new challenges. Until the end of 2007, headline and core inflation were subdued, for three principal reasons: falling import prices for goods bought from emerging markets; a general appreciation of the effective exchange rate; subdued labour costs thanks to high productivity growth and moderate wage rises.² Some of these disinflationary forces have recently weakened and the inflation outlook looks less favourable for the period ahead. Import prices have stopped declining and may well start increasing. But the main risk probably comes from the domestic side. The price for domestically produced goods and services has been the main recent positive contributor to inflation (Figure 2.3). During the first quarter of 2008, the prices of consumer goods produced in Norway increased at an annual rate of more than 10%, while services increased at 3% (with services in which wage costs predominate growing at almost 6%) (see Figure 1.7). These two components represent almost half of goods and services consumed by households.

Increasing strains on the labour market, in spite of an abundant inflow of migrants, combined with slackening productivity growth, are behind the acceleration of business unit costs. The unemployment rate has plunged to its lowest levels since the 1980s and the number of unfilled job vacancies has soared in the last two years. In these conditions, wage growth has increased, reaching 5.4 % in 2007; in the off-shore sector, wage growth reached 6.5%. The 2008 wage round is likely to end up with similarly high wage growth, possibly

Box 2.1. The use of models to guide policy decisions

Norges Bank makes use of a relatively large number of forecasting techniques and “nowcasting” (i.e. assessment of the main macroeconomic variables in real time) tools. For the latter, it relies on surveys carried out through its regional network of 1300 institutions (firms, organisations and municipalities) five times a year. In recent years, the bank has considerably strengthened this network, feeding its inflation forecasting model with an increasing amount of data. Two recent reports observe, however, that a further effort should be made in some areas by Statistics Norway, such as wage and labour market statistics (Goodfriend *et al.*, 2007; Juel *et al.*, 2008). Monthly employment data, with a careful monitoring of foreign workers, as well as improved capacity utilisation data, would be extremely useful to get a more accurate picture of the degree of slack in the economy. Similarly, publication of productivity statistics on a more regular basis than is done at the moment may make it possible to compute unit labour costs on a more regular basis and thus provide complementary information to wages.

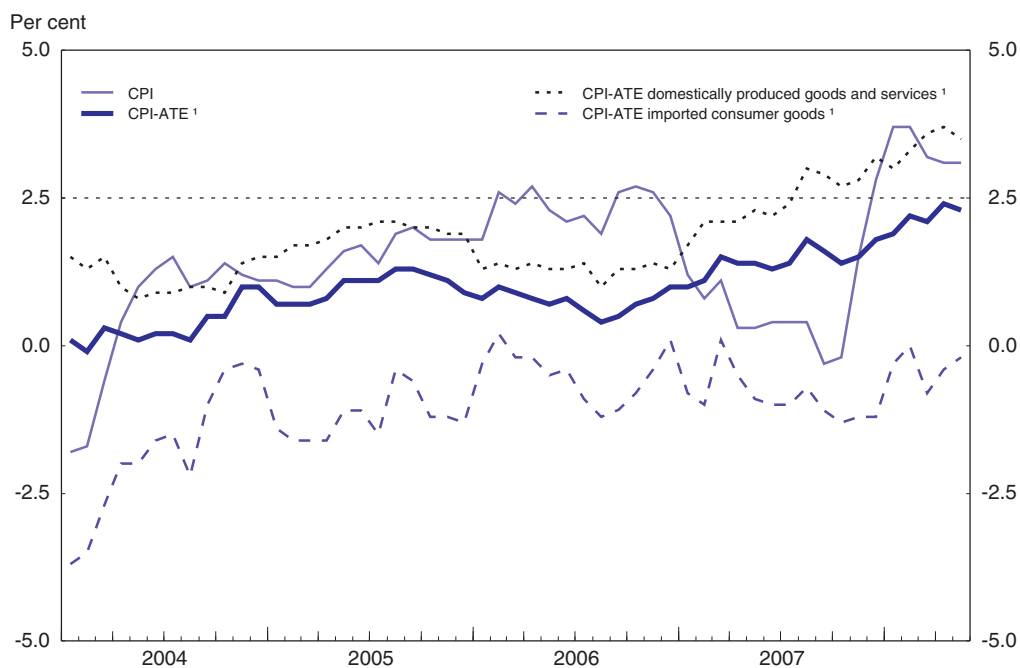
For short-term forecasting, over the first few quarters, Norges Bank uses time-series models (ARIMA and VAR). Long-term forecasts are based on the combination of a structural calibrated model and the statistical models predicting short-term developments, with an important judgmental component. Norges Bank’s structural model is a relatively sophisticated model and is based on the IMF’s Global Economy Model, which has been adopted by a number of other central banks (United Kingdom, ECB, Canada and Sweden) (IMF, 2004). A much simpler model, used in tandem with the structural model, was recently criticised for having over-predicted inflation and under-predicted uncertainty, and to have performed less well than “pure” forecasting models that, while are not grounded in economic theory, fit actual Norwegian data well.

While the structural model’s assumptions could be improved (notably those on wage formation and transmission of imported inflation to the economy,* it is certainly a tool that Norges Bank should continue to use. Together with this model, however, consideration of empirical models where the need to fit observed data has a higher weight might also be envisaged to better inform policy decisions. As suggested in Juel *et al.* (2008), pure statistical models have the advantage of exploiting more quickly and effectively real-time information and their empirical relation to inflation process than what the current core, theoretically-based model can do. It would be thus of interest for the central bank to compare projections between simpler and more sophisticated models and to openly communicate about the range of forecasts that these models produce.

* Specific assumptions that have been criticised are: “1) the exchange-rate forecast rests on the assumption of uncovered interest parity, an assumption that has very weak empirical support generally, not just for Norway; 2) the model incorporates inflation in the import sector in a rather rudimentary fashion, so that the effects of foreign shocks are unlikely to be very well captured, (for example, the model has been unable to foresee the negative impact on inflation in the import sector); 3) the model implicitly assumes a frictionless, atomistic labour market, while the Norwegian labour market is characterized by highly centralised wage formation, as mentioned above and 4) there is no role for credit market frictions or asset prices.” (Goodfriend *et al.*, 2007).


higher due to stronger carry-over effects and catching-up wages in the public sector. Slackening productivity growth has been a typical pattern at the end of most previous cycles, though more recently there have been exceptions. While future productivity growth developments remain highly uncertain, the productivity-enhancing effects of product market policies adopted in the late 1990s and early 2000s have probably already come

Figure 2.3. **Inflation**
12-month change



1. CPI adjusted for tax changes and excluding energy products

Source: Statistics Norway, Norges Bank.

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through. If true, this may imply a need for somewhat tighter monetary conditions than currently envisaged by Norges Bank.

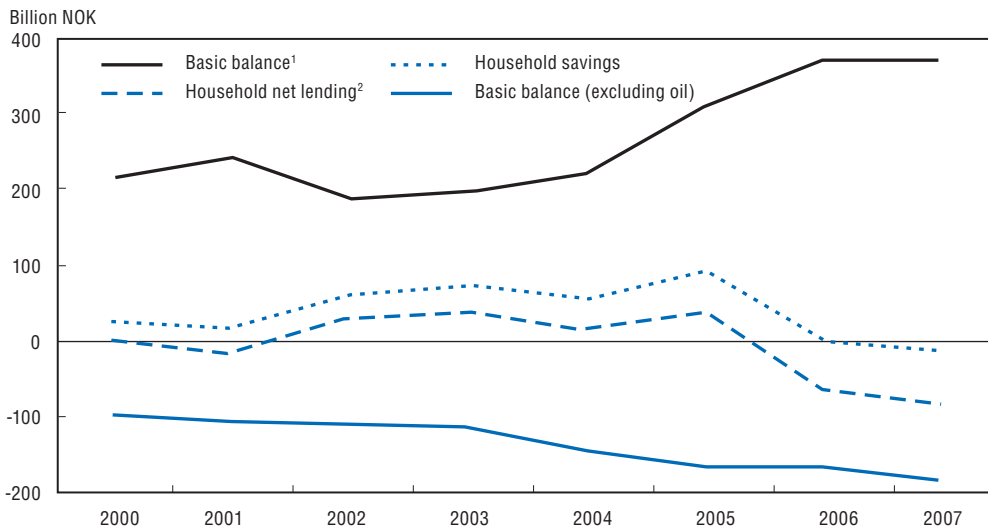
Households' vulnerable financial position

The balance-sheet position of the private sector weakened over the recent past. Reflecting strong consumption growth, and despite high real income increases, the household sector's saving ratio has fallen into negative territory; together with high residential investment, this has implied a fast deterioration of the household sector's net lending position (Figure 2.4). The business sector is also highly indebted, though debt servicing capacity is probably not an issue, thanks to substantial corporate profits and increased equity ratios accumulated in a period of rapid economic expansion. Cheap credit conditions have certainly sustained consumer spending. The ratio of household debt to household (disposable) income has increased steadily over the past ten years. In a context of rising interest rates (first as a consequence of tighter policy, later due to spill-over from the turmoil in the international financial markets) and rising indebtedness, and because nearly all household debt is contracted at floating interest rates, the interest burden has almost doubled in the last three years (interest on consumer debt is now over 10% of household disposable income³).

The housing market is finally cooling


The Norwegian housing market has been on a long upward trend, with real prices trebling over the past 14 years. The market accelerated further in 2006, showing signs of increased risk-taking and euphoria. The share of residential investment to GDP has

Figure 2.4. **Private dissaving, government saving**
NOK billion



1. The basic balance is the sum of current account balance and the net movement of long-term capital (direct and portfolio investment).
2. Net lending is defined as savings minus net acquisition of non-financial assets minus capital transfers.

Source: Statistics Norway.

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increased substantially, as did the asset price/replacement cost ratio (Tobin's Q), which is one of the highest in the OECD area. After this historical run-up, there are signs that the market may have reached the turning point. There has been a significant moderation of housing starts and building activity and the time required to complete housing transactions has lengthened. However, signs of turnaround remain mixed, and house prices (though not those of apartments) appeared to be on the rise again in early 2008. A number of indicators linked to the financial health of the housing sector give rise for concern: i) over the last five years loan-to-value ratios for new loans have been very high (over 80% for the majority of households) and a sharp fall in house prices could create problems for highly leveraged households; ii) even if the share of households with a high debt burden is not very high, a increase of interest rate of 1 percentage point would imply a worsening for many households (one third of households would then have an interest burden greater than 20%); and iii) a tendency towards longer repayment periods for instalment loans (partly due to an increase in interest-only loans) has been observed over the past seven years.

While Norges Bank should not target house prices for the conduct of monetary policy, the macroeconomic and financial effects of house price developments are one of the risks that should be considered when setting policy rates. A sharp downturn of the housing market would not only bring financial troubles to exposed households, but negative wealth effects could also have a sharply negative effect on consumption and consumer sentiment. Although the household sector's position is significantly better than in the banking crisis of the late 1980s, because of the increased value of housing, their net financial wealth is negative (excluding long-term saving such as in life insurance). There has been a strong increase in housing-related equity release loans, which reached NOK 179 billion in 2007 compared with NOK 1145 billion for traditional mortgages; equity release loans accounted

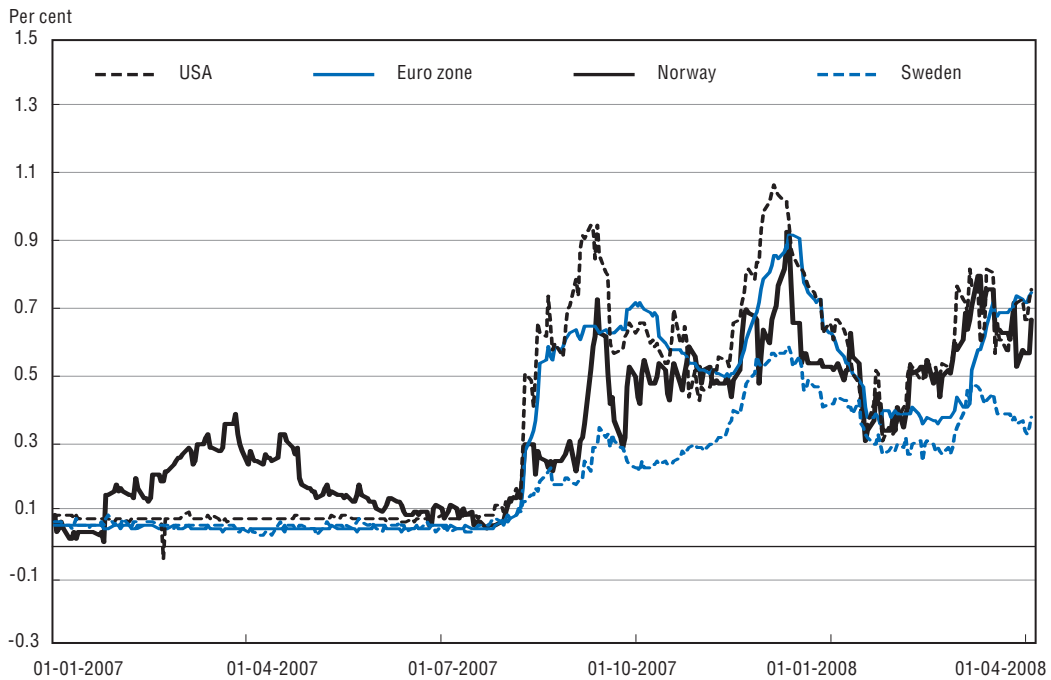
for nearly two thirds of new mortgage borrowing (which for households totalled 134 billion) in 2007. There is a danger that this continued borrowing, at floating interest rates, may have overstretched the household sector, now that credit conditions are increasingly tighter. These new type of credit facilities offer a number of advantages to the borrowers (flexible repayment period, loan withdrawals and reimbursements) and, since they are also more risky, they are slightly more regulated than standard loans (e.g. the total drawn amount is within the maximum loan-to-value ratio limits, and the latter is set at 75%-80%, lower than for traditional mortgages). Despite greater flexibility for borrowers, equity release loans call for prudent credit standards and careful screening of borrowers and of the quality of the collateral on a regular basis, as the recent report by the Financial Supervisory Authority of Norway argues.⁴ It is thus of the foremost importance to exert specific surveillance of non-traditional credit products, even more so considering the liquidity constraints that the market is currently experiencing, as discussed in the next section.

Financial stability not at risk, but signs of tighter lending conditions ahead

There is little evidence that Norwegian banks have been seriously involved in the subprime mortgage crisis. Norwegian financial institutions have not been significantly exposed to structured credit products (although they had begun to refinance some of their own mortgage lending in this way), and recorded only moderate impairments in foreign bond holdings as a result of higher credit risk premiums. Generally speaking, however, Norwegian banks' results in 2007 were good and the return on equity was high. Likewise, Norwegian banks' liquidity situation is satisfactory at the moment: despite high lending growth, banks' tier 1 capital adequacy has been relatively stable. In fact, while deposit-to-loan ratios have rapidly declined in recent years due to rapid lending growth and increasing competition for depositors' funds, the deposit-to-loan ratios rose in 2007, although the share of funding with maturity greater than one year fell for the banks as a whole. The national survey carried out in the fall of 2007 examining banks' funding situation found that, while there are no serious funding problems, the banks did face a challenge in terms of complying with their long-term funding limits. Increasing credit and liquidity risk is reflected in the large increase in the spread between the 3-month interbank rate and policy rate (the nominal sight deposit rate) since the summer of 2007 (spread of about 80 basis points in early May 2008, see Figure 2.5). As in many other OECD countries, the management of liquidity will prove challenging for some time to come.

Norges Bank recently started a Bank Lending Survey. The results for the final quarter of 2007 and the first quarter of 2008 point to a tightening of credit standards on all criteria for both the household sector and non-financial corporations (Figure 2.6). Changes in the general economic outlook as well as banks' increased risk aversion are among the main reasons behind credit tightening. Banks increased their lending margins for loans to households and reduced maximum loan-to-value ratios. For non-financial corporations, tighter credit standards were primarily implemented by increasing equity requirements and lending margins. Tightening of lending standards for the business sector was however stronger at the end of 2007 than at the beginning of 2008. Although lending conditions in Norway seem to have been tightened significantly less than in some other OECD countries (United States, Euro Zone and United Kingdom), there are increasing signs that even the very large banks in Norway are issuing bonds abroad at relatively high interest rates even at times when no significant policy rate decisions are taken.

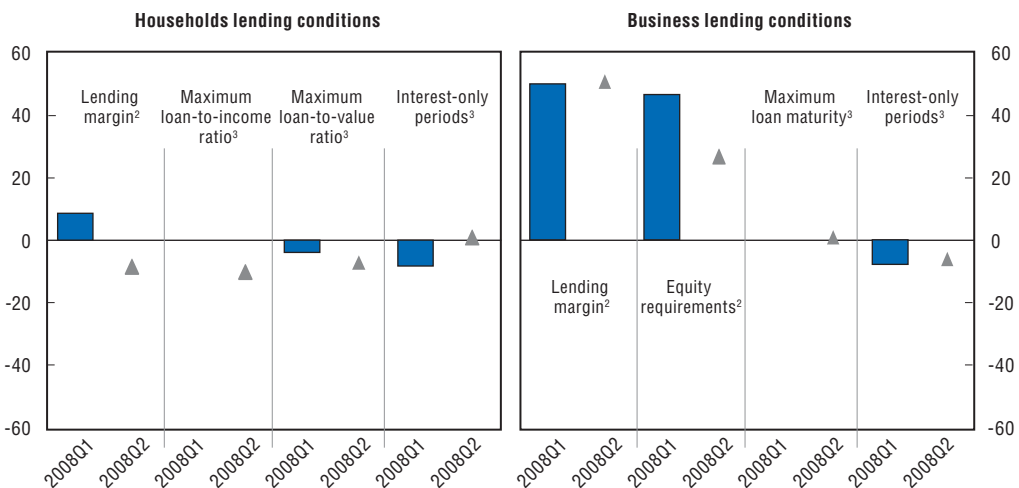
Figure 2.5. **Spread between money market rates and expected key policy rates**
3-month maturity



Source: Bloomberg, Reuters Eco Win and Norges Bank.

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Figure 2.6. **Tightening in lending conditions for households and business sector**
Net percentage balances¹



1. Net percentage balances are calculated by weighting together the responses in the survey. The bars show developments in lending conditions over the past quarter, while the triangles show the expectations over the next quarter. Interpretation of the changes in net percentage balances varies depending on the lending conditions considered (see note 2 and 3 for the interpretation). The graph should be read as follows: a balance of 46% of loan officers reported having tightened equity requirements on business loans in the first quarter of 2008, whereas 26% of them expected to do so in the second quarter of 2008.
2. Positive net percentage balances for lending margin and equity requirements indicate tighter credit standards relative to the previous quarter.
3. Negative net percentage balance for maximum loan-to-income ratio, maximum loan-value-to ratio and interest-only periods indicates tighter credit standards relative to previous quarter.

Source: Norges Bank and Survey of Bank Lending.

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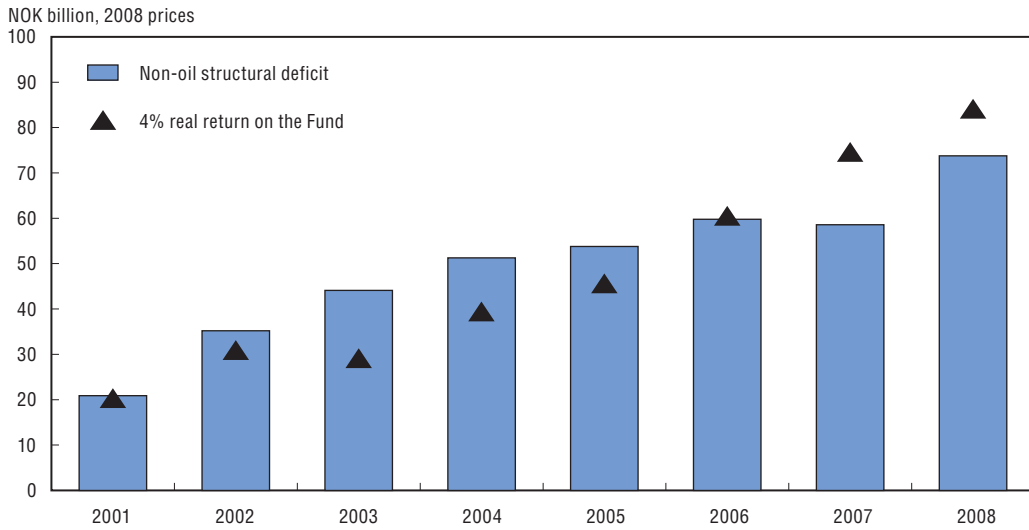
Balancing risks in the current outlook

In sum, monetary policy has to strike a delicate balance between continuing tensions on the labour market, which might call for a tighter monetary stance, and the high indebtedness of households and related downside risks. External risks should be taken into consideration too, because they are an important source of instability at the moment. Exchange rate developments too need to be taken into account, with expected interest rates among Norway's trading partners being one of the factors that influence variation of exchange rates. Overall, monetary policy will need to remain tight for most of 2008, and it might need to tighten again before the end of the year if inflationary pressures are not contained. Once domestic demand growth has clearly fallen below the pace of potential growth, some easing could be envisaged.

A fiscal rule to save public resources

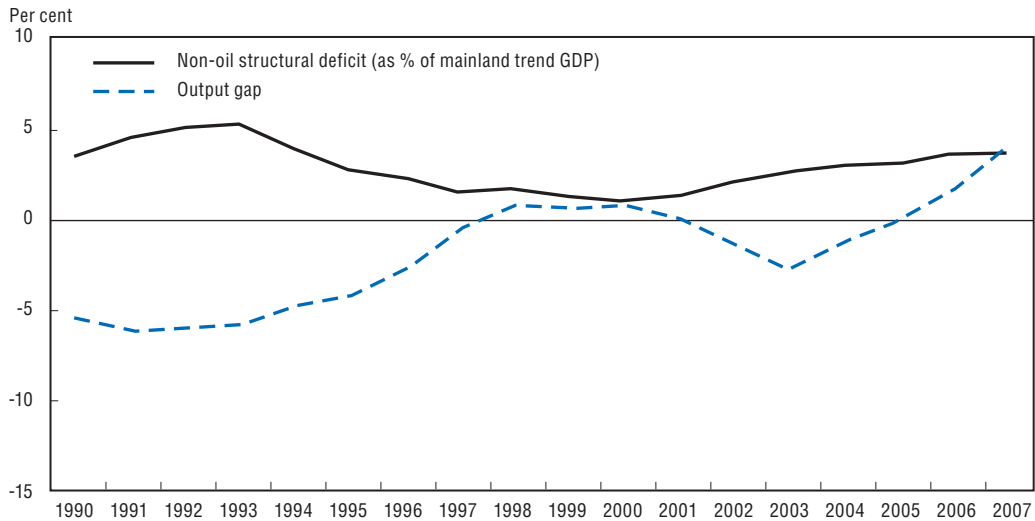
Norway has an ingenious fiscal rule that helps to insulate the economy and the budget from swings in world energy prices, gradually phases in the large returns from the exploitation of its petroleum resources into the economy, and preserves a significant proportion of wealth derived from non-renewable resources for future generations. According to this rule, government net earnings from the exploitation of oil and gas resources are transferred directly to the Government Pension Fund – Global. The Pension Fund holds its funds exclusively in foreign assets (thus largely “sterilising” petroleum revenue inflows in the balance of payments). Revenue from the Pension Fund is available to the budget but only under the provisions of the “4% rule”, whereby each year's budget is planned on the basis that the structural deficit should be equivalent to a 4% real rate of return on the value of the fund; this rule itself is to apply to the average deficit over the cycle. Deviations from the rule are allowed so as to partially offset large cyclical variations in economic activity or in the value of the fund. Undershooting the rule (*i.e.* a transfer from the Pension Fund of less than 4%) makes sense in periods of strong economic growth and, conversely, overshooting (a transfer from the Pension Fund greater than 4%) during downturns allows discretionary fiscal policy to operate counter-cyclically. Because the rule is expressed with respect to the non-oil *structural* balance rather than to the *actual* balance it also allows automatic stabilisers to work fully, in addition to any deliberate under or overshooting. Not only has the rule the merit of being relatively simple, in addition the authorities have applied it credibly so far.

Since its inception, the 4% rule was overshoot every year up to 2005 (*i.e.* more resources were injected into the economy than prescribed) (Figure 2.7). It is only in 2006 that the rule was slightly undershot for the first time. The output gap had become positive in 2005 and was already around 2% of GDP in 2006, so the fiscal stance was probably slightly pro-cyclical in those two years (Figure 2.8). In 2007, planned fiscal policy was restrictive compared with the 4% rule, but with revenues more buoyant than expected, even taking into account rapid economic growth, the rule was substantially undershot (the structural deficit was equivalent to only 3.2% of Pension Fund Value). All in all, the cycle was extremely beneficial for the public finances, because less than NOK 3 billion (or 0.02% of mainland GDP) were actually transferred from the Pension Fund to the budget (Table 2.1).⁵ The 2008 revised budget plans to undershoot the fiscal rule (expecting a structural deficit equivalent to 3.7% of the value of the Pension Fund) but is nevertheless quite expansionary with a 0.7 percentage point increase of the structural deficit expressed as a share of mainland GDP (compared with increases of 0.2 and 0.1 percentage point in 2006 and 2007

Figure 2.7. **The fiscal rule over the cycle**

Source: Ministry of Finance.

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Figure 2.8. **Has fiscal policy¹ been pro-cyclical recently?**

1. The 4% rule was introduced in 2001. Previously, the fiscal framework required a fiscal budget in balance.

Source: Ministry of Finance and OECD Analytical database.

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respectively). Giving the signs of overheating in the economy, the fiscal stimulus planned for 2008 might be too large. Unless the output gap narrows a great deal, budgetary plans for 2009 should avoid an increase in the structural deficit.

With the increases in oil prices over the last couple of years, the value of the Pension Fund has risen more rapidly than expected. In fact since 2001 the Pension Fund has on average grown at around 25% per year. Although oil prices may well fall back from recent peaks over the next few years, some scenarios point to higher nominal prices than in current official projections (in the 2008 Budget, the price is assumed to be around \$70 per barrel in 2008 and steadily declining to \$40 in 2015); under plausible assumptions

Table 2.1. **The 2007 and 2008 budgets**
NOK billion

	2007		2008
	Initial budget proposal ¹	Final Budget Revision ²	Revised Budget 2008 ³
Revenues excluding Petroleum activities	641.7	692.7	738.1
– Expenditures excluding Petroleum activities	695.8	694.0	751.1
= Non-oil budget surplus	–54.1	–1.3	–13.0
+ Net revenues from petroleum activities	364.9	316.4	355.7
+ Dividends on the Pension Fund	75.3	78.4	81.6
= Consolidated surplus	389.5	393.5	424.2
<i>Memorandum items</i>			
Structural non-oil budget surplus	–71	–57.8	–73.9
As a per cent of trend mainland GDP	–4.4	–3.6	–4.3

1. November 2006.

2. March 2008, final account figures.

3. March 2008.

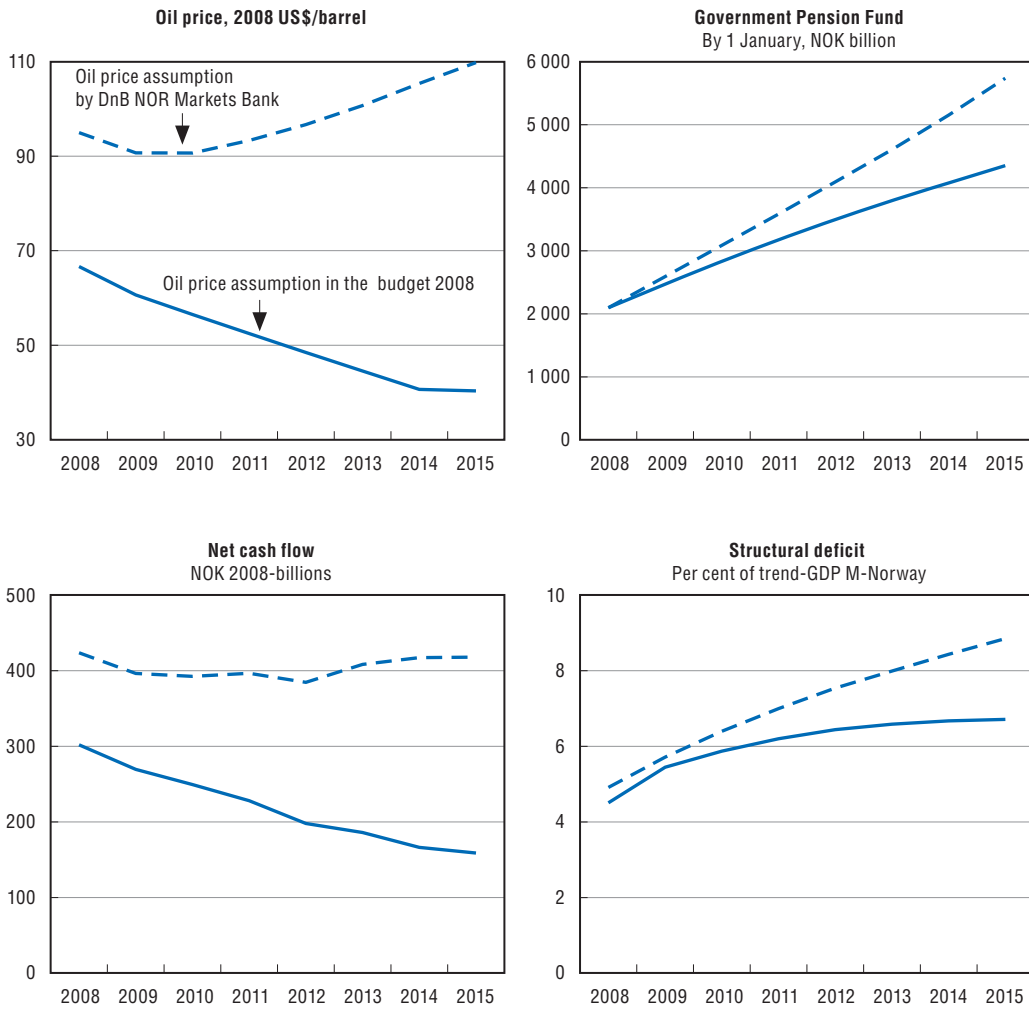
Source: Ministry of Finance.

moderate increases in oil prices could cause net cash flow to be more than double what is currently expected, with a stronger fiscal stimulus (Figure 2.9). At current (June 2008) energy prices, the growth in the Pension Fund over the next few years would be so fast as to threaten continuing overheating of the economy if the structural deficit were to be 4% of the Fund value each year. In the medium term, therefore, there is a strong case for maintaining the structural deficit well below this level and severely limiting its growth so long as there are inflationary levels of excess demand in the economy. Such a policy has a number of advantages: it provides support to monetary policy in a period of upward pressure on interest rates and the exchange rate; it reduces the risk of short term relaxation in, for example, already generous welfare spending programmes with long term fiscal costs and potential adverse incentive effects; and it builds up a greater cushion of pre-funding for the long-term fiscal gap that can be seen under current projections.


A persistent, potentially increasing, undershooting of the 4% rule could be seen as implicitly calling into question the validity of the rule itself. However, first, the rule itself provides for flexible implementation in order to match the ability of the economy to absorb the fiscal stimulus, and a period of undershooting is perfectly credible following the period of overshooting from 2002-05. Secondly, the stable benchmark that the 4% rule provides is valuable and important; provided that it can be applied flexibly to guarantee the substantial medium term undershooting currently required, there is no need to modify it for the moment. Nonetheless, it is clear that current circumstances put the rule itself under strain and there has indeed been some discussion of alternative possibilities (see IMF, 2007). There is no simple alternative; future developments in petroleum prices and progress, or lack of it, in reforms to close the long term financing gap – any rule should obviously be, first and foremost, consistent with long term fiscal sustainability – may have a bearing on how the government may need to adapt the rule in the future.

From a medium/long-term perspective the increasing fiscal stimulus will continue to affect the economy. The 2007 *Economic Survey* argued that, partly thanks to the combination of the Pension Fund and the 4% rule, Norway has successfully avoided the so-called Dutch disease (i.e. crowding-out of the traditional trade sector via strong appreciation of the real exchange rate). There is no evidence that Norway has

Figure 2.9. High oil prices and the Pension Fund



Source: Ministry of Finance and DnB NOR Markets.

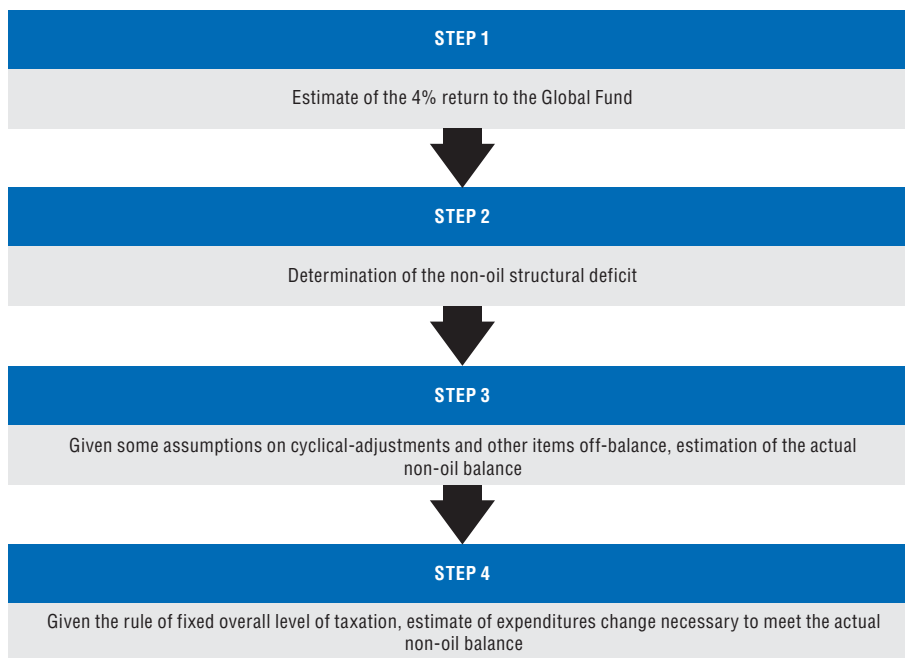
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de-industrialised more than other OECD countries, partly because positive spill-overs to the mainland economy have increased manufacturing output in the form of inputs needed to serve oil production and exploration investment. While unsustainable increases in public spending have generally been avoided (though pensions and health care are counter-examples), the rise in the real exchange rate has been gradual enough for the tradable sector to adjust relatively slowly. Yet, avoiding the Dutch disease remains an ongoing issue: high levels of demand and low levels of unemployment mean that wages are bid up across the economy, with consequent losses of competitiveness. In 2007 the wage level for blue-collar workers in Norwegian manufacturing was 41% higher than the average of that in Norway's trading partners. Looking ahead, the exposed sector will, by its nature, find it more difficult to offset these increases through productivity or price increases, and will steadily lose labour and capital to the non-traded sector. Government policy to protect the exposed sector as a whole can only delay the shift of resources, not eliminate it altogether, so long as the injection of oil money under the 4% rule continues.

Alternative fiscal rules?

The current government's fiscal framework also relies on the rule of maintaining overall taxation at its 2004 level. Having reversed the previous government's 2005 tax reductions, the government has subsequently implemented this by requiring tax changes in the budget to be revenue-neutral overall. The current framework thus requires that the overall taxation level remains unchanged; from this and the 4% rule, the determination of overall public spending in the budgetary process can be represented as a series of steps (Figure 2.10). For instance, the revised budget for 2008 aims at a structural non-oil budget deficit of around 4.3% of mainland GDP, undershooting the 4% rule by 0.3% of GDP (given the number of special adjustments that are made, the relation between the planned structural balance and actual outcomes is not straightforward [Table 2.2]). This implies a fiscal stimulus equivalent to 0.7 percentage points, including an increase of real public expenditure growth of 3¼ per cent (1 percentage point higher than in the planned budget for 2008 presented at the end of 2007).

Figure 2.10. **Steps in the implementation of the fiscal rule**



An alternative to the current policy of a fixed overall level of taxation (though there is discretion on the composition of taxes⁶), could be to aim to gradually reduce the level of taxation in the economy. Future governments may want to consider tax reductions in areas where tax pressure is particularly high with respect to the OECD area and where taxes have been shown to be distortionary, such as corporate taxes (which were the lowest in the OECD area for two decades, but now appear to be slightly above average: OECD, 2008b) and income taxes. While decisions in this respect have to be taken in light of distributional considerations too, recent OECD work suggests that switching taxation from mobile factors such as labour and particularly capital, to consumption and especially property taxes, can give significant gains in per capita GDP (Johansson *et al.*, 2008); this suggests that, in the

Table 2.2. **Interpreting the budget, 2000-2008**
Budget outcomes for 2000-07, revised budget 2008 (NOK billion, current prices)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total expenditures, excluding petroleum items	476	491	568	575	604	629	662	694	751
Total revenues, excluding petroleum items	459	490	506	509	524	564	618	693	738
a) Non-oil balance	-7.9	-1.6	-62.4	-66.1	-79.2	-64.8	-44.0	-1.3	-13.0
– Transfers from Norges Bank	-5.8	-6.0	4.5	4.7	4.9	5.1	5.3	5.6	6.0
– Net interest income (non-trend part)	2.6	1.3	1.4	2.2	4.1	2.4	8.0	-5.1	-7.8
– Tax revenues and unemployment transfers, cyclical components	-7.7	-6.3	8.8	25.6	31.0	12.6	16.1	-54.9	-59.8
– Extraordinary transfers	6.7	-2.6	20.8	-1.2	-2.1	-3.0	-4.7	-2.1	0.7
Overall correction	-4.2	-13.6	35.4	31.3	37.9	17.1	-7.6	-56.4	-60.8
b) Structural balance, budget excluding petroleum	-12	-15	-27	-35	-41	-48	-52	-58	-74
Per cent of trend mainland GDP	-1.1	-1.3	-2.2	-2.7	-3.0	-3.3	-3.4	-3.6	-4.3
Change over previous year		-0.2	-0.9	-0.5	-0.3	-0.3	-0.1	-0.2	-0.7
c) Value of Pension Fund at start of year	221	387	619	605	847	1012	1390	1783	2018
d) Expected return on Pension Fund, current prices	9	15	25	24	34	40	56	71	81
e) Excess spending (d-b), current prices	0	0	2	11	8	7	-4	-14	-7
Structural balance, per cent of Pension Fund (4% rule)		3.9	4.4	5.8	4.9	4.7	3.7	3.2	3.7

Source: Ministry of Finance.

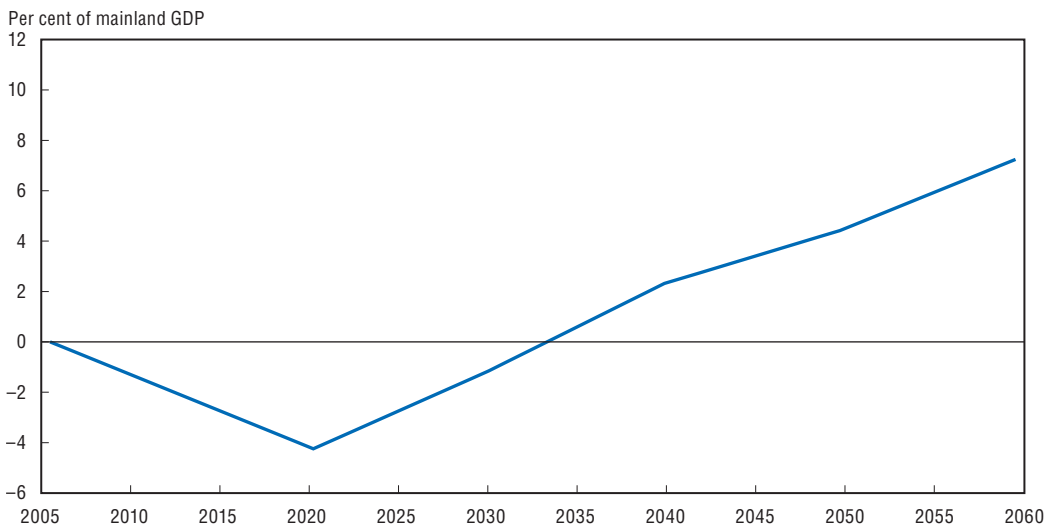
current context, reducing income taxation so as to reduce marginal rates on both labour and capital income while reducing public expenditure growth would also give significant gains.

Although concern about excessive demand pressure on the economy, discussed above, leads to a search for alternatives, there are very strong arguments for retaining the 4% rule itself. It has the merit of credibility, allowing for a robust fiscal strategy over the medium and long run while achieving the important aim of reducing the economy's short-term vulnerability to swings in oil prices. Some transfer of resources out of the tradeable sector cannot really be avoided in the longer run except by never spending the petroleum wealth (either by extracting less or allowing the Pension Fund to increase in size much faster and potentially indefinitely) but they are made much less painful by the gradual phasing in that the 4% rule generates. From the current short-term stabilisation perspective, it would be wise to allow for a substantial undershooting if the economy keeps growing at a brisk pace. But for the rule to be consistent with stable taxation levels over the next few decades, as opposed to the next few years, the rest of the public finances have to be sustainable.

Are public finances sustainable?


Despite the current comfortable public finance situation, there are concerns that the future will prove trickier. Figure 2.11 shows estimates of the general government funding gap, which is given by non-oil revenues at current tax rates plus the expected 4% return on the Pension Fund less the sum of pension and non-pension expenditure based on the current policy regime, over the next 50 years. According to this illustrative exercise, tax levels could be left unchanged until 2035; afterwards, there would be a progressive need for fiscal consolidation, which is estimated to exceed 7% of mainland GDP in 2060. This exercise is based on Finance Ministry simulations which, as mentioned earlier, assume oil prices some 40% below the level of early 2008, and exclude positive effects from pension reform that will be implemented in 2010.

Figure 2.11. Long term fiscal gap



1. The fiscal gap is given by the estimated structural non-oil deficit plus the expected return on the Pension Fund and assumes no policy changes.

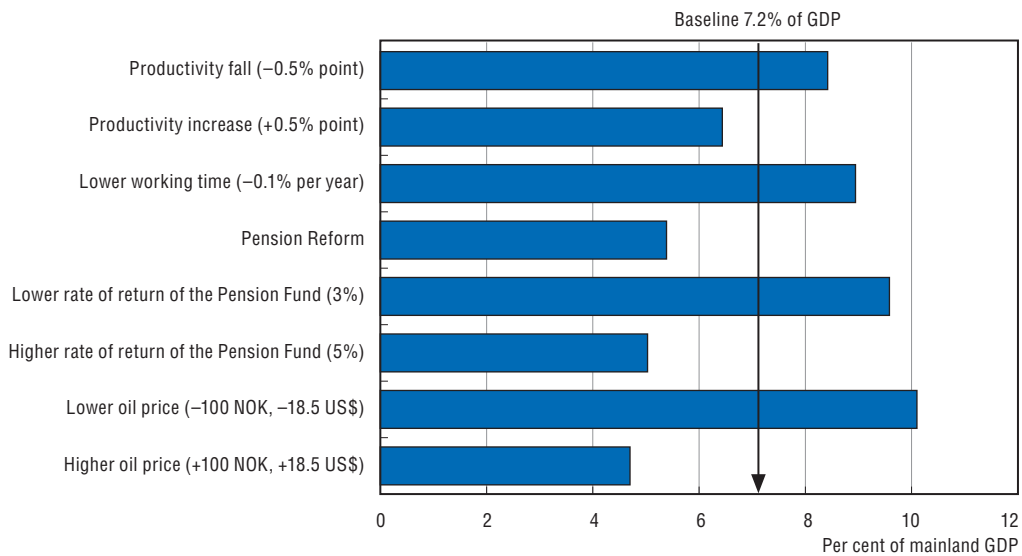
Source: Ministry of Finance.

StatLink  <http://dx.doi.org/10.1787/426031544026>

Population ageing has a strong impact on the long-term funding gap, through both health and pension expenditures. But, unlike other OECD countries, the first effects of ageing will fully unfold only after 2020: total public transfers, which now represent slightly more than 15% of GDP, will steadily increase between 2020 and 2040 (rising to over 25% of GDP) and will continue to grow, though at a slower pace, between 2040 and 2060. Though this is a time horizon which is very far ahead in the future, today's policies should take into account the long run needs of Norwegian society.


Government simulations (which refer to the endpoint of the scenario, i.e. 2060) around the baseline estimate show how structural policies can have important long run effects on this funding gap (Figure 2.12). Apart from larger leeway in case of higher oil prices (an increase of the oil price by \$ 20 per barrel implies a reduction of the funding gap by slightly less than 2% points) both longer working time and higher productivity would lead to a smaller funding gap (10% higher working time reduces the funding gap by 1.5% while an increase of ½ percentage point of productivity growth implies a 1% point reduction).

In this respect, an area where significant progress has been made is in pension reform. In 2004 a pension commission report achieved broad political agreement on a new system and, after a further round of discussion under the new government; most details were agreed in early 2007 on the basis of a 2006 White Paper. The final legislation is due to be in place in 2008, with the new pension system to be phased in as from 2010. With the aim of making the NIS (National Insurance System) financially sustainable and raising the actual retirement age, the pension reform is based on a notional (unfunded) defined contribution system. The retirement age is flexible from 62 years old onwards, based on actuarial neutrality at the margin. Pension benefits are to be based on lifetime earnings (indexed on average earnings) with a contribution rate of 18.1% up to age 75, and calculated based on life expectancy at the time of retirement. On retirement, the pension will be indexed on the average of price and wage inflation. As an effect of the reform, pension expenditures are

Figure 2.12. **Variations on the long-term fiscal scenario**¹

1. Estimates refer to the financing gap, as shown in Figure 2.10, in 2060, under alternative assumptions on the budget. The official projections in the baseline assume an oil price at \$70 per barrel in 2008, declining to around \$40 (i.e. NOK 230), and do not take into account possible effects of policy changes in labour market behavior.

Source: Ministry of Finance.

StatLink  <http://dx.doi.org/10.1787/426114813687>

estimated to be reduced to about 12% of mainland GDP in 2050, compared with about 15% in the absence of reform.

Despite the agreement on the principles of the reform, getting the details into place has been time-consuming. The reforms will be phased-in, with people retiring in the early years after 2010 being partially protected from the implications of the life-expectancy adjustment, pensions for those aged 46 in 2010 will be the first to be fully calculated under the new system. As has been happening in a number of European countries (both France and Italy, for example), there is strong resistance to the logic of actuarially fair pensions when life expectancy increases are observed to require cuts in pension benefits at any given retirement age, especially when life expectancy increases more strongly than expected, as has been the case in Norway during the last years. Thus, even before legislation had been introduced in parliament this year, negotiations in the wage round led the government to partially defer the previously agreed life expectancy adjustment for cohorts with pension benefits accumulated under the present pension system, as well as to increase its subsidy to the AFP early-retirement scheme for the same cohorts (though obtaining a significant reform of its structure) (Box 2.2). As well as causing non-negligible additional costs for public finances (in present value terms about 6% of mainland GDP), this may be a dangerous precedent with the re-negotiation of certain aspects of the new pension scheme being to some extent between social partners rather than in parliament. To reap the full gains illustrated in Figure 2.12 it is important to reform public sector and disability pensions fully in line with the key elements of the reformed main pension scheme.

In addition to saving resources to cope with future spending of an ageing society, and reducing taxation to improve economic efficiency, there are other good reasons to curb public expenditure growth. One is that the level of public spending in Norway is already

Box 2.2. Pensions in the 2008 wage round

One of the unusual (but potentially deleterious) aspects of the Norwegian practice of generally discussing policy changes extensively with the social partners before introducing legislation in Parliament, is that labour market and fiscal policy can become indirectly part of wage negotiations between employers and unions. In discussions among the government and social partners in 2007 it had been agreed that reform of the AFP early retirement scheme, which is an agreement between employers and trade unions, would form part of the 2008 wage round negotiations.

The AFP scheme had been introduced in another set of wage negotiations in an equally tight labour market in the late 1980s. It gives workers who belong to participating trade unions an early retirement pension if they retire up to five years before the normal retirement age of 67. This allows them to receive the same yearly pension benefit as the one they would be entitled to if they retired at 67. Under pressure to defuse tension in the labour market at the time, the government had agreed to finance about one third of the cost of this scheme, employers financing the rest. It has obvious disincentive effects on labour supply (see Chapter 3).

The current government and social partners agreed that these disincentive effects needed to be eliminated, and the government's aim was to apply the same logic of actuarial neutrality to this scheme as in the reformed main pension scheme.

On the positive side, the agreement now applies an actuarially fair discount to the AFP pension which increases the earlier the pension is taken. Furthermore the payment is received whether a person actually retires or not. In theory, therefore, marginal incentives to work are restored as the scheme effectively becomes a lump sum payment to anyone over 62 which can be taken in the form of an annuity. Although this improves incentives at the margin, the "income effect" of such a subsidy is likely still to reduce participation in this age group, though by less than the unreformed scheme.

On the other hand, in the context of the annual private sector wage negotiations, the government agreed to introduce an additional temporary subsidy to the AFP covering the cohorts born between 1948 and 1953, to be fully phased-out from the 1963-cohort onwards. At the moment the AFP only covers about half the private sector, with separate similar schemes covering public sector workers. At the same time, the government also agreed to partially defer a life-expectancy related adjustment to pension benefits accumulated under the existing scheme.

The Ministry of Labour and Social Inclusion estimates that, taken together, these two concessions have cost the budget the equivalent in present value terms of about NOK 100 billion, or about 6% of current total GDP, reaching a maximum annual cost of 0.2% of GDP in the late 2020s. Of this, about 20 billion is related to the increased AFP subsidy, the rest to the partially deferred life expectancy adjustment.

relatively high by OECD standards while there is evidence that it is not very cost-effective (see Chapter 4 on education and OECD 2007). Consequently, if the public provision of services is not re-organised so as to improve output efficiency, public resources could be spent with rather little improvement in the population's welfare. Similarly, with "too many" resources available to finance spending projects, there is a risk of investing money in public investments which benefit a very limited group of the population in some remote areas, but neither the country as a whole nor necessarily future generations.

Conclusions

Norwegian governments have so far been able to resist many spending pressures by adopting forward-looking behaviour in managing public resources. They have generally planned expenditures in line with cyclical developments, though in 2005 and 2006 they might have underestimated the importance of the cycle and spent more than the cyclical situation justified; while the 2007 budget turned out to have avoided giving much stimulus, the revised 2008 one reverts to significant expansion. Unless the economy slows much more radically than current OECD projections show, in 2009 fiscal policy will need to avoid any further stimulus to allow the economy to go smoothly back to its potential path.

Box 2.3. Summary of macroeconomic policy recommendations

Unless inflation falls significantly below its expected path, monetary policy should remain tight for some time ahead, while some easing could then be envisaged as domestic demand falls more in line with potential output. If inflationary pressures turn out to be stronger than expected, there may be a need for further tightening before the end of the year. In addition to carefully monitoring domestic inflation, Norges Bank should also monitor developments in housing markets and credit conditions for the private sector, which are currently the largest risks, to the extent that they affect the outlook for inflation and the real economy.

The 4% fiscal rule should be maintained unchanged for the purpose of medium to long term stabilisation of the economy, but be applied flexibly in the short term; it is a credible, simple and well thought out policy rule. From a short-term stabilisation perspective, if the economy keeps growing at a brisk pace, it would be wise to allow for a substantial undershooting, avoiding any increase in the structural non-oil deficit, until actual output converges to potential.

A relative decline of the tradable sector is probably inescapable given the increasing demand trend led by the growing fiscal stimulus, but **tax reforms, including cuts in marginal tax rates, might be considered as a way of stimulating potential employment and output in the private sector by reducing overall distortions**. In any case, **public expenditure growth must be restricted** to ensure sustainable public finances in the long term, to keep incentives to participate in the labour market high and avoid inefficient use of public resources.

The **pension reforms should be implemented as planned and without extending concessions to younger cohorts**. By the same token, the reform of public sector and disability pension schemes should be consistent with the main objectives of cost-containment and preservation of incentives to supply labour.

Notes

1. "A loosening up of the horizon might indicate that the bank considers inflation expectations to be more anchored than was the case during the first years of the inflationary targeting regime. It might also be the result of the experience that in practice it has been hard to operate with a specified time horizon." (Juel *et al.*, 2008.)
2. A national study reveals that, while in the 1980s inflation was much more strongly influenced by the Norwegian output gap, the role of the global output gap has been increasingly important in the period 1991-2006.
3. Definitions for this ratio vary, the quoted figures are based on the OECD's Analytical database.

4. For long-term credits, the Financial Supervisory Authority maintains that the bank has a right to review the credit and adjust conditions, should characteristics of the borrower change or the value of the property decline (Kredittilsynet, 2008).
5. While the 4% rule is formulated with respect to the structural deficit, the actual transfer of money from the pension to the budget deficit is by construction set as to balance the *actual* (and not the structural) non-oil budget.
6. Thus tax measures in 2007 comprised an increase in the surtax on personal income; an increase in the basic allowance for wage and pension income in the income tax; a broadening of the tax bases in the net wealth tax, including increased tax values for homes and other real estate and for securities, combined with increased minimum allowances; curtailed tax-favoured private pension saving schemes; a reintroduction of regionally differentiated rates in employer's social security contribution; introduction of a tax on NO₂ emissions from 1 January 2007; and an increase in the value added tax rate on food from 13 to 14%. 2008 saw tax policy changes, including: a broadening of the tax base in net wealth tax together with an increase in minimum allowance; tax credits for private pension saving schemes; a new tax regime for shipping and various environmental taxes.

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BASIC STATISTICS OF NORWAY

THE LAND

Area (1 000 km ²):		Major cities (thousand inhabitants, 1.1.2008):	
Total (2005)	385.2	Oslo	560.5
Mainland (2005)	323.8	Bergen	247.7
Agricultural (2004)	10.4	Trondheim	165.2
Productive forests (2003)	74.7		

THE PEOPLE

Population (thousands, 1.1.2008)	4 737.2	Total labour force (thousands)	2 507
Number of inhabitants per km ² (1.1.2008)	12.3	Civilian employment (thousands)	2 443
Net natural increase (thousands, 2007)	16.5	Civilian employment (% of total):	
Net migration (thousands, 1.1.2007)	39.7	Agriculture, forestry and fishing	2.8
		Industry and construction	24.9
		Services	76.1

PRODUCTION

Gross domestic product:		Gross fixed capital investment:	
NOK billion	227.7	% of GDP	20.8
Per head (USD)	82 016	Per head (USD)	17 043

THE GOVERNEMENT

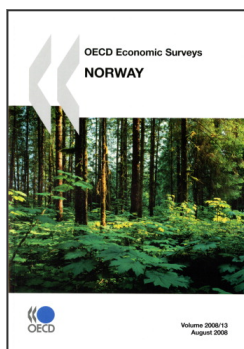
Public consumption (% of GDP)	19.8	Composition of Parliament (number of seats):	
General government (% of GDP):		Labour	61
Current and capital expenditure	32.2	Progressive	38
Current revenue	46.5	Christian Democrats	11
		Conservative	23
		Centre	11
		Socialist Left	15
Last general elections: 13.9.2005		The Liberals	10
Next general elections: September 2009		Total	169

FOREIGN TRADE

Exports of goods and services (% of GDP)	45.4	Imports of goods and services (% of GDP)	28.1
of which: Oil and gas	23.1		
Main commodity exports (% of total):		Main commodity imports (% of total):	
Fish and fish products	4.5	Ships	1.4
Base metals and products	10.6	Foods and animals	5.2
Machinery and transport equipment (excluding ships)	7.6	Chemicals and related products	8.8
Mineral fuels	64.5	Machinery and transport equipment (excluding ships)	35.6
Non-oil commodity exports by area (% of total):		Non-oil commodity imports by area (% of total):	
Denmark and Sweden	17.6	Denmark and Sweden	21.7
Germany	8.6	Germany	13.7
United Kingdom	8.4	United Kingdom	7.0
United States	8.3	United States	4.9

THE CURRENCY

Monetary unit: Krone		2007	
		NOK per USD	5.86
		NOK per euro	8.03



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