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*Chapter 2*

# Improving the implementation of monetary policy

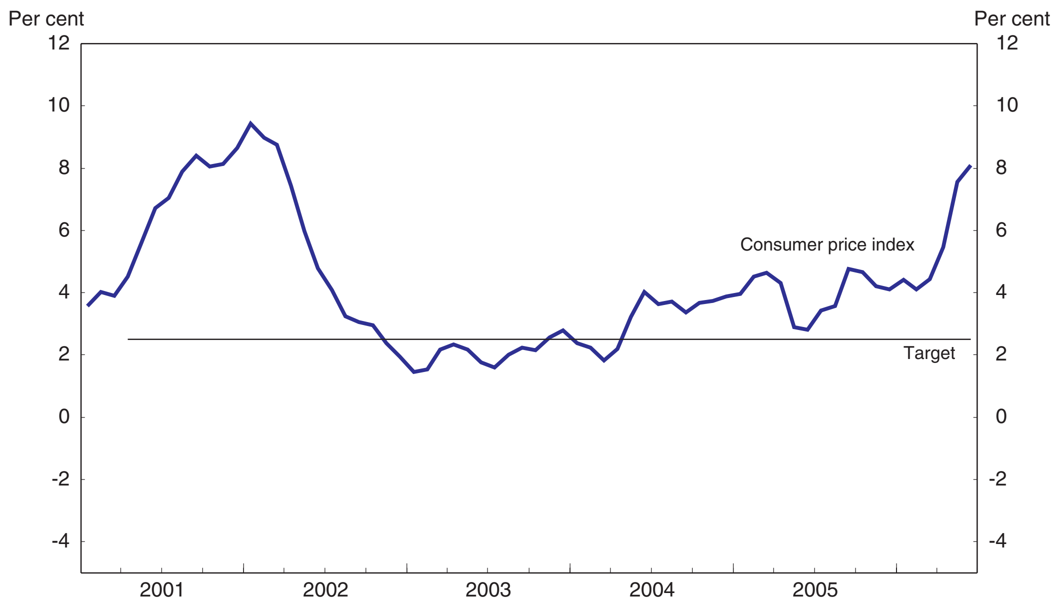
*The objective of monetary policy is to stabilise inflation at about 2½ per cent. Actual inflation, however, has exceeded this target since 2004 and is expected to continue to do so for the foreseeable future. Monetary policy has reacted too sluggishly to the worsening outlook. Furthermore, increases in short-term nominal interest rates have not translated into comparable increases in real lending rates in the market. Higher interest rates and clear communication are needed to bring inflation back to the target and to strengthen the Central Bank's inflation-fighting credibility.*

## Inflation has exceeded its target

The Central Bank of Iceland has one key objective: to stabilise the inflation rate (Central Bank of Iceland, 2001a). Specifically, it aims to keep 12-month changes in the consumer price index as close to 2½ per cent as possible. As shown in Figure 2.1, the Bank has not succeeded in hitting this target for some time. Inflation went above the target in early 2004 and has moved away from it since. In the 12 months to June 2006, the consumer price index rose by 8%, some 5½ percentage points above the target.

Figure 2.1. **Inflation exceeds the target**

12-month per cent change




*Source:* Statistics Iceland.

It is common to describe the Central Bank's target as a range of between 1% and 4%, rather than a point. For example, the Central Bank's Web site describes the boundaries of this range as "tolerance limits". The OECD has, in the past, used similar language. However, this is misleading, as it implies that inflation within these limits is tolerable. This matters because it would imply that the Central Bank was meeting its objectives through much of 2004 and 2005 and did not need to take corrective action. There is a debate among monetary economists as to whether it is better to target a range or a point, and central banks in several other countries have chosen to target a range. However, the objectives of the Central Bank of Iceland, as set out in the "Declaration on inflation target and a change in the exchange rate policy" of 27 March 2001, do not suggest that inflation of 4% is

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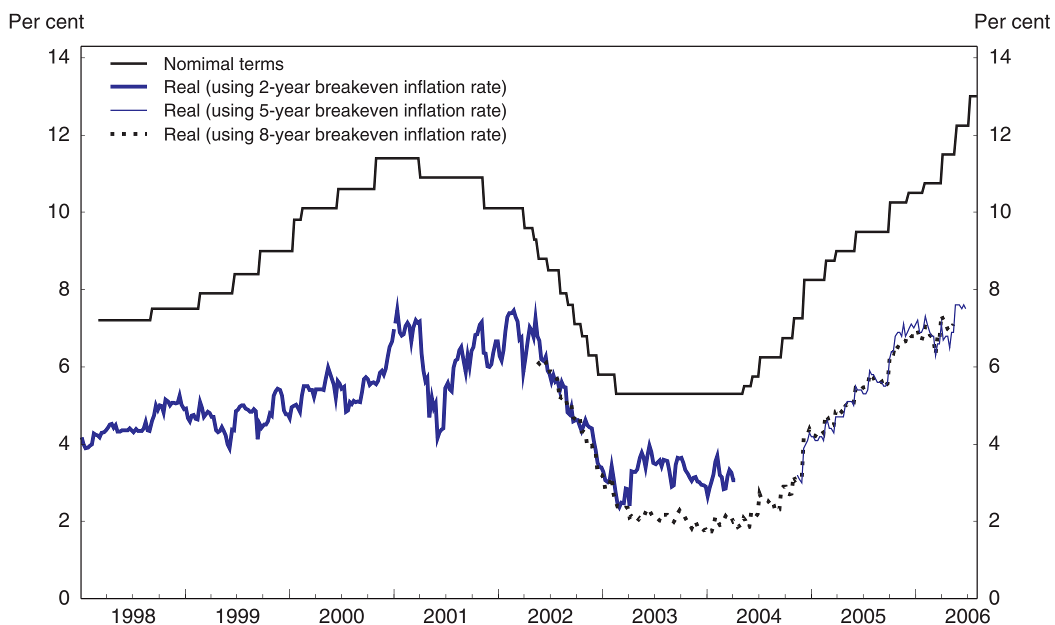
acceptable. Rather, it states "the Central Bank *will aim at an annual inflation rate of about 2½ per cent*" (Central Bank of Iceland, 2001b). There may be room for disagreement as to how broadly the term "about" should be defined. But equating it with a 3 percentage point range seems a fairly loose interpretation. Accordingly, the Central Bank has increasingly moved away from references to "tolerance limits", emphasising that its target is 2½ per cent.

Instead, the limits have two roles. They impose reporting requirements – discussed below – and they determine the urgency of a monetary policy response. Specifically, "If inflation deviates by more than 1½ percentage points from the target, the Central Bank shall bring it inside that range as quickly as possible." The implication is that smaller deviations of inflation should also be corrected, though perhaps more cautiously.

Chapter 1 discusses some of the immediate causes of the increase in inflation. However, ultimate responsibility lies with the Central Bank. It has increased the policy interest rate from 5.3% in May 2004, to 13% in July 2006 (Figure 2.2). With the benefit of hindsight, it is now evident that this series of increases has been too little, too late.

Figure 2.2. **Central Bank policy interest rate**




*Source:* Central Bank of Iceland.

This largely reflected errors in forecasting, most of which were probably unavoidable. Similar errors were made by the OECD and private sector forecasters. Although the Central Bank will continue working to improve its forecasting performance, doing so is not easy. Forecast errors will doubtless remain a central challenge for monetary policy. However, mistakes in monetary policy also reflected a failure of policy to respond sufficiently to the worsening outlook. These errors are more easily rectifiable.

As one example of this, consider the *Monetary Bulletin* of December 2005. According to its most realistic forecast (with rising interest rates and a declining exchange rate),

inflation two-years ahead was projected to be "just below 4%". Despite this considerable deviation of inflation from target, the policy interest rate was only increased by 0.25% to 10.5% and little was done to raise long-term rates. As discussed below, this action was offset by developments in financial markets and was insufficient to raise real lending rates in the market.

As another example, consider the fall in mortgage interest rates in 2004 – discussed in more detail in Chapter 4. It is sometimes suggested that this made the task of monetary policy more difficult. However, the role of the Central Bank is to offset shocks like this, in so far is they are likely to influence inflation. Moreover, the appropriate response to an easing in credit conditions is straightforward. Because resources are limited, an expansion of housing activity means that other sectors need to contract. Monetary policy can and should help bring this about this by raising interest rates. Otherwise, the market will reallocate the resources through inflation. Furthermore, the magnitude of the required policy response can be calibrated in the same units as the initial change in lending rates. So an easing in credit conditions is a relatively simple shock to offset. Despite this, the response of monetary policy in 2004 was sluggish. Although short-term nominal rates increased over 3 percentage points in late 2004 and early 2005 this was insufficient to offset expectations of higher inflation and changes in the yield curve. Real medium and long term rates actually declined. Accordingly, the housing boom was allowed to generate economy-wide excess demand and inflation.

Monetary policy needs to respond more aggressively to changes in the outlook and to signals that inflation is straying from the target. The 2.25 percentage points increase in the policy rate from March to July 2006 is a welcome improvement in this regard. So was the strong commitment given in recent *Monetary Bulletins* to keep raising rates if necessary. That said, these steps have still been insufficient to bring expected inflation into line with the target, as discussed below.

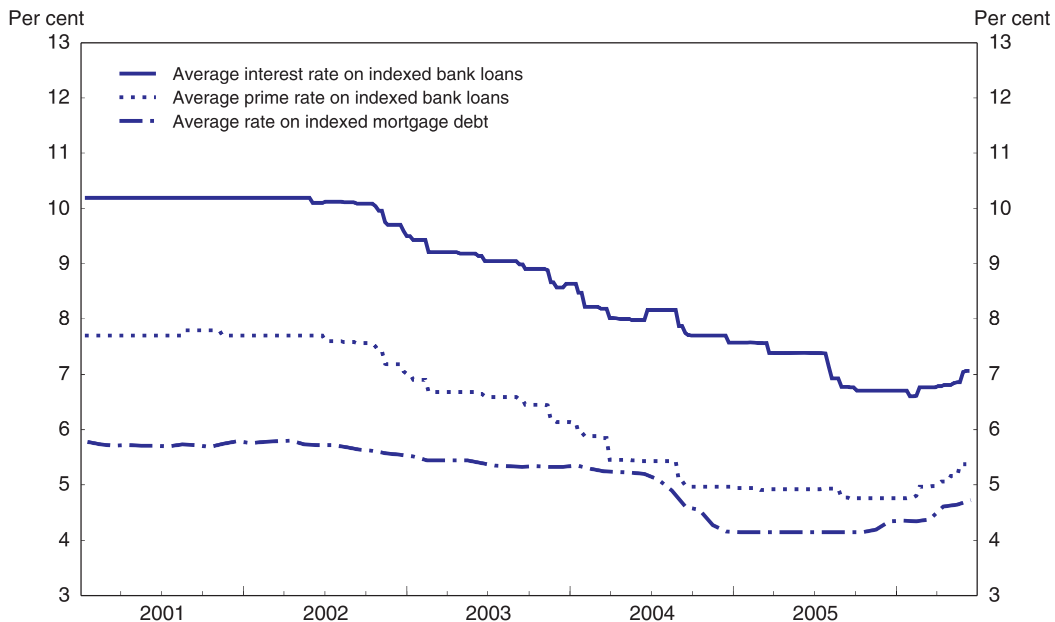
## Higher policy rates have not been reflected in real lending rates

Figure 2.3 shows various real lending rates. In contrast to the policy rate, which does not directly affect spending decisions, these interest rates are those that actually face businesses, consumers and home buyers. Real lending rates remain *lower* now than they were two years ago, despite large increases in nominal short-term interest rates.

The opposing movements shown in Figures 2.2 and 2.3 do not mean that the transmission mechanism from monetary policy to longer-term lending rates has broken down. Rather, the divergence reflects a few special factors that happen to have offset the monetary tightening. First, financial markets have become more efficient and competitive, particularly in lending for home mortgages, compressing margins. This is discussed further in Chapter 4. It is a welcome development that the Central Bank could not prevent (nor should it). However, it does mean that extra tightening is needed to compensate. Second, inflationary expectations have risen, discussed further below. Third, for some time, the yield curve became increasingly downward sloped. That is, the increase in short-term rates did not translate into comparable increases in long-term rates. This last development has rightly been of considerable concern to the Central Bank.

According to the expectations theory of the yield curve, long term interest rates equal a weighted average of short-term rates, with perhaps some small adjustments for liquidity and term *premia*. Hence a steeply downward-sloping yield curve implies that the current

Figure 2.3. **Average real lending rates**



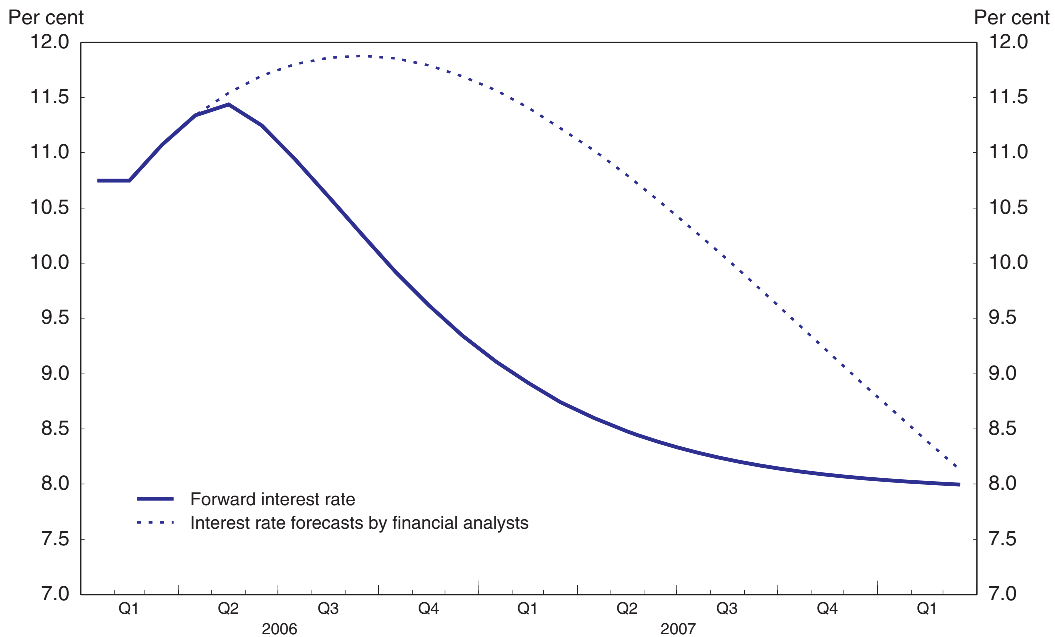

*Source:* Central Bank of Iceland, Landsbanki.

tight stance of monetary policy is not expected to persist. These expectations can prevent policy tightening from cooling the economy. Under this view, monetary policy can and should improve its effectiveness through clearer communication. The Central Bank can ensure that high short-term rates flow into long term rates by convincing the financial markets that the increase will persist.

In late 2005 and early 2006, this was a serious issue for monetary policy. Although the inflation outlook was well above target and Central Bank publications were indicating that large increases in interest rates were needed, the short-term yield curve was often flat or downward sloping. The expectations theory of the yield curve would imply that the need for interest rate increases was not being credibly conveyed to the markets. However, the Central Bank has pointed to a difficulty with this view. Figure 2.4 shows projected paths for the Central Bank policy rate as of the time of the 2006/1 *Monetary Bulletin*. The dashed line shows interest rate forecasts by financial analysts. However, the solid line, which, shows the rate implied by forward interest rates, is noticeably lower. Whereas analysts were anticipating a substantial tightening of policy, the yield curve was not. The puzzle posed by the difference between these implied paths is that it implies traders are foregoing profits. If a bank believed its analyst's projections, then it should sell 1-year securities, with their low yield, and reinvest the proceeds in a succession of short-term securities receiving higher expected returns.

The authorities have argued that "it is inconceivable that expected Central Bank interest changes could be the explanation [for the steep downward slope of the yield curve]. This must be attributed to market failure which inhibits the transmission of monetary policy" (Central Bank of Iceland, 2006a, pp. 14, 56). Specifically, the issuance of króna-denominated bonds by foreigners is said to have driven interest rates below rates

Figure 2.4. **Central Bank policy rate based on forward rates and analysts' projections**




*Source:* Central Bank of Iceland.

consistent with the expected path of short-term rates. But, in itself, this would not constitute a "market failure" as that term is usually used. Demand and supply fluctuations will routinely push interest rates away from levels implied by expectations. However, well-functioning markets would reallocate funds so as to compete away any divergence. It is only if the market as a whole is ill-informed, or there is some friction that prevents profitable trades, that interest rates can be seriously out of line with expectations.

In the absence of any clear market friction, a more plausible explanation is that the markets as a whole did not believe that high interest rates would persist. That is, financial institutions had little confidence in the analysts' forecasts. There are many reasons why this might be. The simplest explanation might be that Central Bank communication about the likely path of interest rates was reaching analysts, but not traders. But even under other interpretations, the appropriate remedy is clear and credible communication.

Even though the Central Bank may not be convinced that misperceptions of policy were important in the past, it has nevertheless greatly improved its communication to ensure that they are not currently a problem. It now provides considerably more guidance as to the likely evolution of interest rates. This is a world-wide trend in monetary policy. Arguably for this reason, divergences between interest rate forecasts and forward rates are much less noticeable than earlier in 2006. More importantly, medium-term interest rates have risen substantially in nominal terms and the short-term yield curve now has a more pronounced upward slope. This helps explain the increase in real lending rates over recent months shown in Figure 2.3.

A difficulty with indicating the future path of interest rates is that the Central Bank does not know this with certainty. There is a danger that incorrect forecasts may weaken

credibility and transparency. (In this, interest rate forecasts differ from forecasts of other variables in that they are interpretable as policy announcements). Accordingly, forecasts need to avoid excessive precision and to be conditional. The statement of March 2006 by the Central Bank is a good example. It announced that it "will tighten the monetary stance until it is convinced that a sufficient degree of tightening has been achieved to channel inflation and inflation expectations back towards target". It was suggested that this may involve an increase in interest rates of "several percentage points". The July statement was similar. These statements were considerably clearer and more informative than earlier statements and a very welcome development. Short to medium term interest rates rose accordingly. Such increases are necessary if the policy tightening is to cool the economy, as intended. Given the success of this greater transparency in both Iceland and other countries, the Central Bank is considering further steps in this direction.

The overall trend in Central Bank communication has been to provide more information. In particular, the March and July statements were clear, frank and on point. However, other statements have been more hesitant. For example, those of December 2005 and May 2006 talked of high interest rates being "maintained", rather than increased. The statement of January 2006 foreshadowed increases, but as a possibility, rather than an expectation. Although the Central Bank (2006a, p. 14) believes these statements were "unambiguous" other interpretations are clearly possible. Indeed, financial markets appear to have inferred that rates were likely to remain stable.

If interest rates fail to reflect the likely path of monetary policy, the best remedy is the provision of extra information. If that is not practical or sufficient (for example, if there really were a market failure), an additional remedy would be for the Central Bank to trade the relevant securities. For example, if the 1-year interest rate is "too low", the Bank should sell 1-year securities (either issued by itself or others), driving their price down and yield up, and buy short-term securities with the proceeds. Doing so flattens the yield curve. The overall *level* of central bank operations determines the level of liquidity and hence the level of short-term interest rates. However, if portfolio balance effects are important, then the *composition* of central bank operations can shift the slope of the yield curve. In doing so it can ensure that interest rates reflect available information, ensure that monetary policy changes are transmitted into longer-term interest rates, and generate a profit. This approach can be described as "putting the Central Bank's money where its mouth is". As such, it can provide a useful complement to communication when markets are sceptical of official statements.

## Inflation is expected to remain excessive…

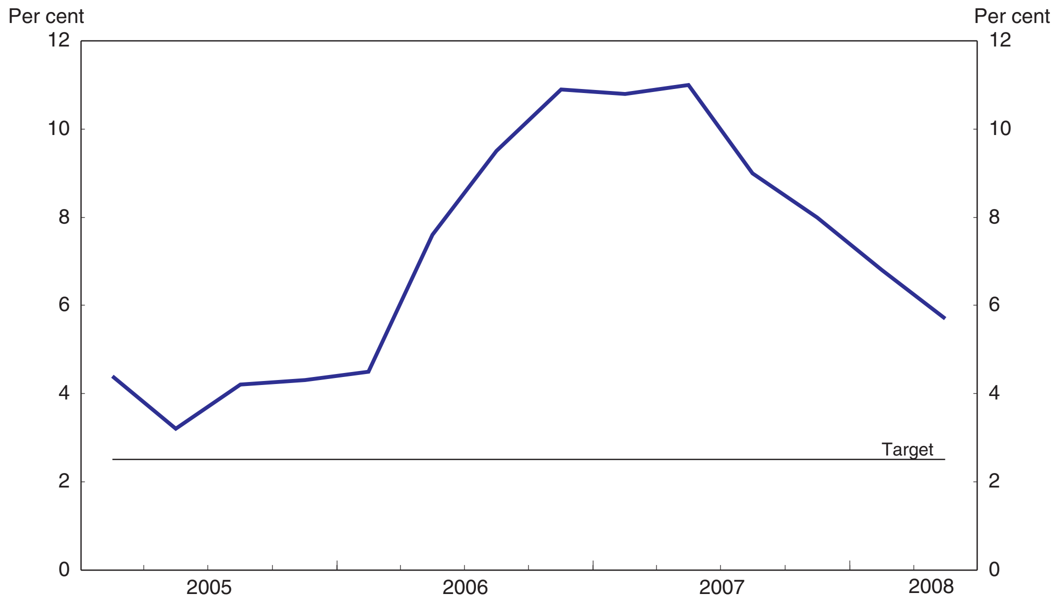
On a variety of different measures, inflation is expected to remain well above target for the foreseeable future. This is the most worrying feature of the current economic situation.

Figure 2.5 shows the Central Bank's most recent baseline inflation forecast for the period 2006Q2 to 2008Q2 (Central Bank of Iceland, 2006b). The forecast assumes that interest rates evolve in line with the expectations of private sector forecasters, which seems more realistic and relevant than the previous practice of assuming a constant interest rate. As can be seen, inflation is projected to remain well above the target throughout the forecast horizon. Households surveyed in May-June 2006 also expected inflation to remain well above target.

Another widely used measure of inflation expectations is the difference in yields between indexed and non-indexed bonds. Figure 2.6 shows the interest differential

Figure 2.5. **Central Bank inflation forecast**

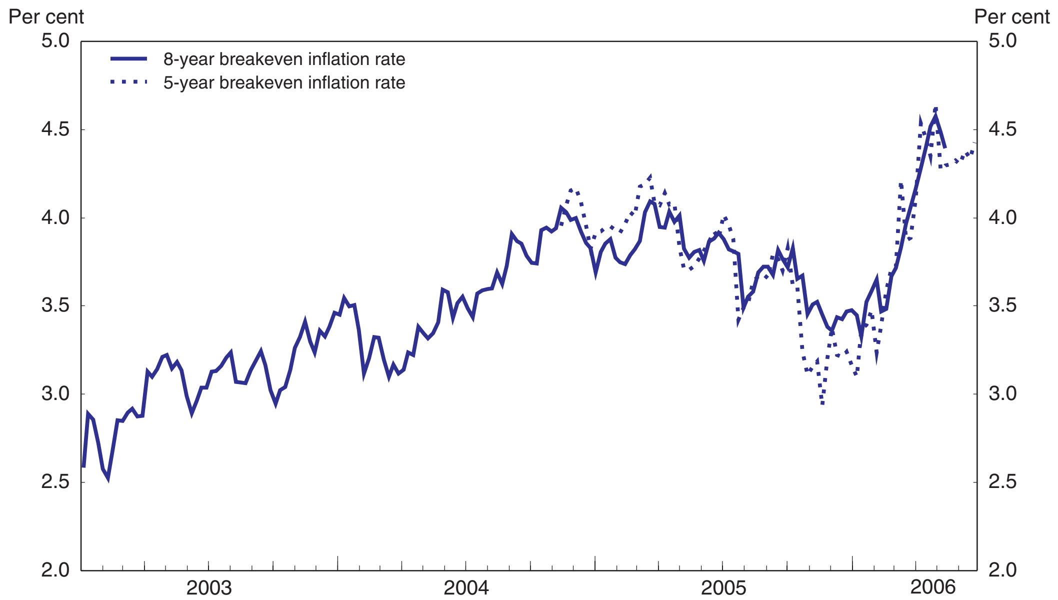
As of July 2006 for the period: Q3 2006-Q2 2008




*Source:* Central Bank of Iceland.

Figure 2.6. **Expected inflation implied by bond yields**

Breakeven inflation rate for bonds of 5 and 8 years maturity




*Source:* Central Bank of Iceland.

(technically, the "breakeven inflation rate") on indexed and unindexed bonds of 5 and 8 years maturity. The Figure implies that bond investors believe that inflation over the next several years is likely to average about 4½ per cent. They appear to have believed that monetary policy has been off-target since 2003.

As a measure of inflation expectations, the yield differential has advantages and disadvantages. One advantage is that it reflects considered expectations of investors who back their beliefs with money. Another advantage is that the series are constantly available in real time. Whereas surveys and forecasts might be considered to be out-of-date following recent Central Bank operations, that is not the case with the yield differential. In particular, the inflation premium did not significantly change after the tightening of policy in July – even though the magnitude of the increase and the bluntness of the accompanying language surprised many market observers.

One potential limitation of the yield differential is that it may be affected by risk *premia*. If investors are worried about inflation risk they will accept lower returns on indexed debt and the yield differential will overstate expected inflation. If this were important then the National Debt Management Agency could and should lower public interest payments by retiring non-indexed debt while borrowing at indexed rates. As discussed in Chapter 4, it is currently doing the opposite, presumably on the assumption that this premium is small. A more important limitation is that the yield differential is only reliable for horizons for which both indexed and unindexed debts are actively traded, such as bonds maturing in 5 years. It is possible to infer inflation expectations for other horizons, but this typically involves extrapolating the yield curve and/or comparing securities with different risk and liquidity characteristics.

### … which may require strengthening Central Bank accountability

The high expectations of inflation have several implications. First, they imply that monetary policy is not perceived to be fulfilling its responsibilities under the Central Bank Act. This has implications for Central Bank independence and accountability. Independence is usually considered to mean that the Central Bank is free to pursue its objectives as it sees fit. In doing so, the Bank is accorded substantial power and discretion. However, those objectives are agreed with the Government. The Bank is ultimately accountable to the public for how it exercises these powers and whether it meets its objectives. If it were to fail to meet its commitments and was not considered likely to do so, then accountability mechanisms would need to be strengthened.

Iceland is not yet near that stage. The Central Bank legislation and agreement with the Government impose reporting obligations on the Bank whenever inflation breaches limits:

> "The Bank will be obliged to submit a report to the Government explaining the reasons for the deviations from the target, how the Bank intends to react and how long it will take to reach the inflation target again in the Bank's assessment."

Implicitly, new reports are warranted whenever that assessment substantially changes. Consistent with this, recent *Monetary Bulletins* have discussed deviations of inflation from the target in considerable detail. As discussed above, the language has become increasingly explicit. Given the great uncertainties involved, the *Monetary Bulletin* discussion is clear, informative and sensibly argued. At face value, it would seem to fulfil the obligations of the Act well.

The problem however, is that the Central Bank's announcements do not seem to be credible. The public does not seem to believe its statement that it will do whatever is necessary to hit the target. To maintain its independence, as well as for other reasons discussed below, the Central Bank needs to correct these perceptions. That will involve backing up its statements with firm policy. For the government's part, continued monitoring of the situation is in order. If the public's pessimistic assessment of the Central Bank's commitment to inflation targeting is borne out by events, then the Central Bank would need to be made more accountable.

How that should be implemented is not clear. One possibility would be to require the Central Bank to write more reports to the government. However, given that *Monetary Bulletins* essentially serve this function, that would amount to little more than a formalisation of existing practice. Another possibility would be for closer government oversight and involvement. However, given that government ministers have criticised the Central Bank for excessively tight monetary policy, that approach may run counter to the main monetary policy recommendations of this *Survey*.

## Other reasons for strengthening credibility

Even if the public's high expectations about inflation are erroneous, they are still an important problem for the central bank. Many prices and wages are set at discrete intervals. For example, most private sector workers in Iceland have wages governed by a 3-year agreement. These wages, and infrequently set prices in general, will reflect what costs, competitors' prices and the general price level are expected to be while the wage or price is in place. Hence, if inflation is expected to be high, price setters will tend to set high prices and the expectations become self-fulfilling. Economists disagree as to how "forward-looking" these expectations are in practice and on the weight that price-setters place upon them. But the consensus is that they are an important factor in the inflation process. The Central Bank's new macroeconomic model reflects this consensus (Central Bank of Iceland, 2006a, p. 46). Accordingly, if the Central Bank could clearly establish its inflation-fighting credibility that, in itself, would make the task of reducing inflation easier. Effectively, it would lower the sacrifice ratio (the amount of unemployment required to reduce inflation by a percentage point).

For the longer term, increasing the credibility of the inflation target would help to stabilise the economy. If price setters believe that price disturbances are likely to be temporary rather than persistent, they are less likely to build them into their own prices. So monetary policy would not need to restrict activity by as much to offset an inflationary surge. That is, monetary policy does not just want *lower* inflationary expectations but also *less variable* expectations.

An increased quantity and quality of communication would assist in this, though the Central Bank has recently been performing well on this score. It may be then that firm actions and results are necessary to establish credibility. The next few months will be a test of that.

Scepticism about the Central Bank's commitment to its inflation target may reflect the view that this target would be costly to hit. In the short-term that is undoubtedly correct. To reduce inflation requires higher interest rates and less economic activity. However, this does not mean that the public should resist tighter policy. A slowdown needs to occur at some point. Monetary policy cannot permanently maintain an over-heated economy.



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Attempting to do so would result in ever-accelerating inflation – and a return to the financial crises of the 1970s. At some stage spending needs to be brought back to a sustainable level. The sooner that process starts, the less need there will be for an extended period of elevated unemployment.

Of course, the inflation target could be reset to a higher level. Indeed, measures of inflation expectations, such as those in Figure 2.6 and much public discussion of the Banks' "tolerance limits" imply that the Central Bank is actually targeting an inflation rate of 4%. But were this perception to become actual policy, then the same logic would permit another increase in the target whenever the next inflationary shock were to occur. If a target is to be credible, policy needs to adhere to it. The target should not be reset simply because policy has failed to hit it.

## The current stance of policy

As shown in Figure 2.2, the policy rate is now near its highest level in real terms in over a decade. But that is not enough. As discussed above, inflation is still not expected to approach its target. So interest rates need to rise further.

As shown in Figure 2.3, real lending rates remain low, notwithstanding modest increases in the last few months. It is not surprising then that spending on housing, investment and consumer durables remains strong. Although there are also other channels of monetary policy (through its effects on asset prices, the exchange rate, and so on) a sizeable increase in real lending rates may prove to be necessary in order to cool the economy. So increases in short-term rates need to be accompanied by clear statements aimed at increasing longer-term rates.

These recommendations seem to be consistent with the analysis of the Central Bank in its *Monetary Bulletins* of March and July. However, the Central Bank's policy announcement in May is harder to interpret along these lines. To be clear, whereas the May statement talked of *maintaining* tight monetary conditions, what is needed is a *further tightening*.

## Concluding remarks

Given its limited resources, the Central Bank of Iceland performs impressively in a number of dimensions. Its analysis, forecasting and communication display exceptional competence and professionalism. The policy framework reflects the latest thinking among the world's monetary economists. However, there is room for improvement in terms of policy implementation. Some recommendations are provided in Box 2.1.

### Box 2.1. **Recommendations on monetary policy**

Surveys and bond yields imply that inflation is expected to substantially exceed its target of 2½ per cent over the foreseeable future.

- The Central Bank needs to re-establish the credibility of its commitment to the target. This can be achieved through clearer communication and tighter monetary policy. The quality and quantity of Central Bank communication are already high – so the main requirement is for tighter policy.
- The Government needs to closely monitor the extent to which its agreement with Central Bank is being implemented. If the public's skepticism about the Central Bank's commitment to the inflation target turns out to be correct, then accountability mechanisms would need to be strengthened.
- The alternative of abandoning the 2½ per cent target in favour of a higher target should be avoided. Revisions of the target undermine credibility. Adhering to a low target will generate both lower inflation and more stable output in the long run.

There is a widespread misperception that the Central Bank and Government regard inflation of 4% as acceptable. This is contrary to the intentions and language in the declaration on the inflation target of March 2001.

- Commentators should stop describing the reporting limits for inflation of 1% and 4% as "tolerance limits", which implies that inflation of 4% is tolerable.
- The Bank should continue its efforts at public communication, emphasising that its inflation target is 2½ per cent

Recent increases in short-term policy rates have not translated into comparable increases in longer-term interest rates, thwarting the operation of monetary policy.

- The Central Bank's increasingly explicit guidance as to the likely evolution of policy is welcome and should continue.
- If that is insufficient, the Central Bank should trade the relevant securities with a view to bringing interest rates into line with expectations.

Although the policy interest rate has risen by almost 8 percentage points over the last two years, this has been insufficient to keep inflation near the target.

- Monetary policy needs to respond more aggressively to changes in the outlook.

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