

IV. Monetary policy in the advanced industrial economies

Highlights

Monetary policy in the main industrial countries remained generally accommodative during the period under review, even as economies strengthened and prospects brightened. Nonetheless, with evidence emerging that the risks to price stability had edged up, central banks took steps to reduce the degree of policy stimulus. The Federal Reserve continued to raise its policy rate at a measured pace throughout the period, to a level considered broadly consistent with long-term sustainable growth and price stability. The ECB began lifting its policy rate at the end of 2005 from its previous historically low level. A key concern for these central banks was whether the pace of tightening was appropriate in the light of high energy prices, rising resource utilisation and buoyant housing markets. The Bank of Japan, given accumulating evidence of a cessation of deflation, announced in March 2006 the end of its long-standing policy of quantitative easing. Looking forward, it envisaged a return to the use of more conventional policy instruments. However, monetary policy remained supportive of the nascent economic revival as the policy rate target was kept at zero and the real rate turned negative.

For the smaller advanced industrial economies, the policy challenges were more varied, given the more complex mix of domestic and external forces at work. The Bank of Canada, Central Bank of Norway, Sveriges Riksbank and Swiss National Bank reduced the degree of accommodation by raising policy rates from fairly low levels. Other countries, being at a more advanced stage in the business cycle, saw only minor policy adjustments. The Reserve Bank of Australia and the Reserve Bank of New Zealand raised, and the Bank of England lowered, their respective policy rates by a modest amount.

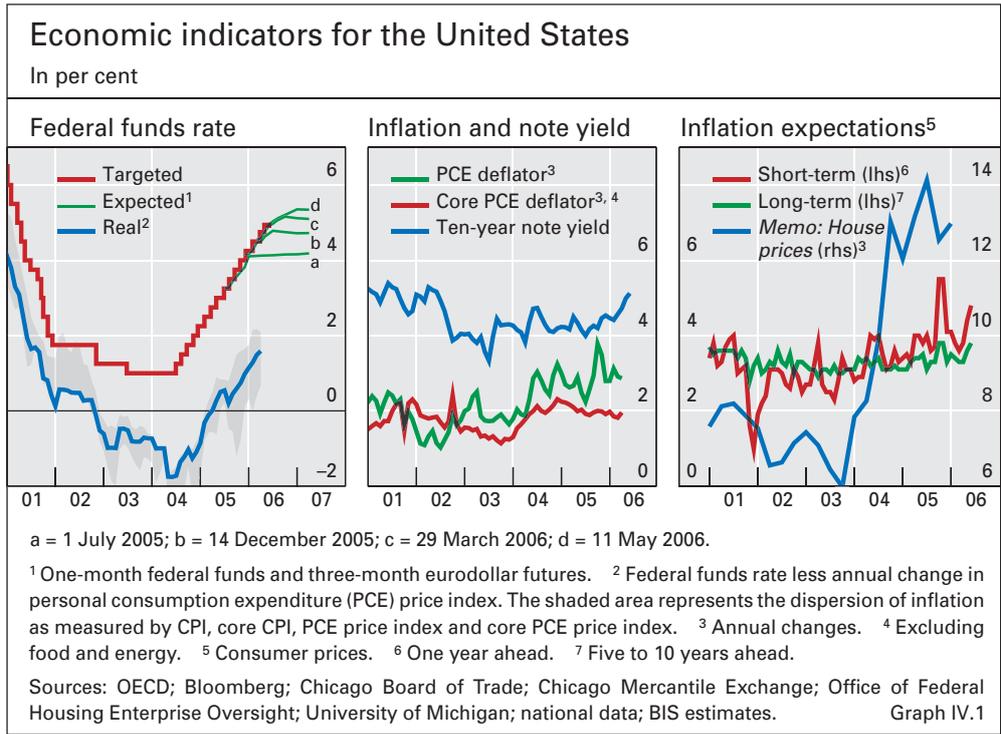
Even as upside risks arising from inflation pressures grew, many central banks took comfort from a continuing low level of underlying inflation and well anchored inflation expectations. They attributed this in part to increased global competition and its moderating influence on wages and prices. The final section of this chapter considers some of the challenges for monetary policy arising from greater global economic and financial integration (“globalisation”).

Review of developments

United States

During the period under review, the Federal Reserve continued to reduce the degree of policy accommodation. The federal funds rate target was raised by 25 basis points at each meeting of its policy committee, to 5% in May 2006 (Graph IV.1). The latest move was the 16th consecutive increase in this tightening cycle, which had begun in June 2004 with the rate at 1%. The hallmark of this cycle

The Federal Reserve raised rates ...



was that each rate move was effectively preannounced. By late 2005, however, committee members indicated less certainty about the policy outlook.

The quiescence of underlying inflation was another remarkable characteristic of this tightening phase. Headline PCE inflation continued to move up, reaching 4% year over year, as the effects of higher energy and commodity prices continued to work their way through. Nonetheless, core inflation remained low and stable near 2%. Towards the end of the period, however, evidence of strong underlying growth, a modest rise in long-term inflation expectations and higher resource utilisation – especially in labour markets – heightened the committee’s vigilance with respect to inflation risks.

The Federal Reserve’s communication strategy has played a major role in guiding markets during this tightening phase. As the policy committee began to see a possible end to the tightening, it adjusted its forward-looking statements about the likely trajectory of policy rates and the possibility of a pause. Notably, in December 2005 the well publicised use of the adjective “measured”, employed since mid-2004 to describe the likely pace of further rate increases, was dropped. The committee expressed the view that, after the removal of a significant degree of accommodation, future policy settings would need to become more sensitive to the arrival of economic data. Moreover, subsequent cumulative policy moves were unlikely to be large. Markets absorbed this linguistic adjustment with only modest reactions.

Despite its favourable assessments of how the current policy tightening cycle had been orchestrated, the committee debated the possibility both of falling behind and of getting ahead of the curve. By late 2005, when the committee stopped characterising policy as accommodative, some members began to argue that policy rates might already have reached a level consistent

... as inflation remained quiescent ...

... and growth was strong

With the end of the tightening cycle in sight ...

... risks of a policy rate overshoot needed to be balanced with ...

with output growing at potential, once the lags generally associated with the monetary policy transmission mechanism had been taken fully into account. Yet subsequent policy rate moves indicated that a majority of the committee continued to have concerns about inflation risks.

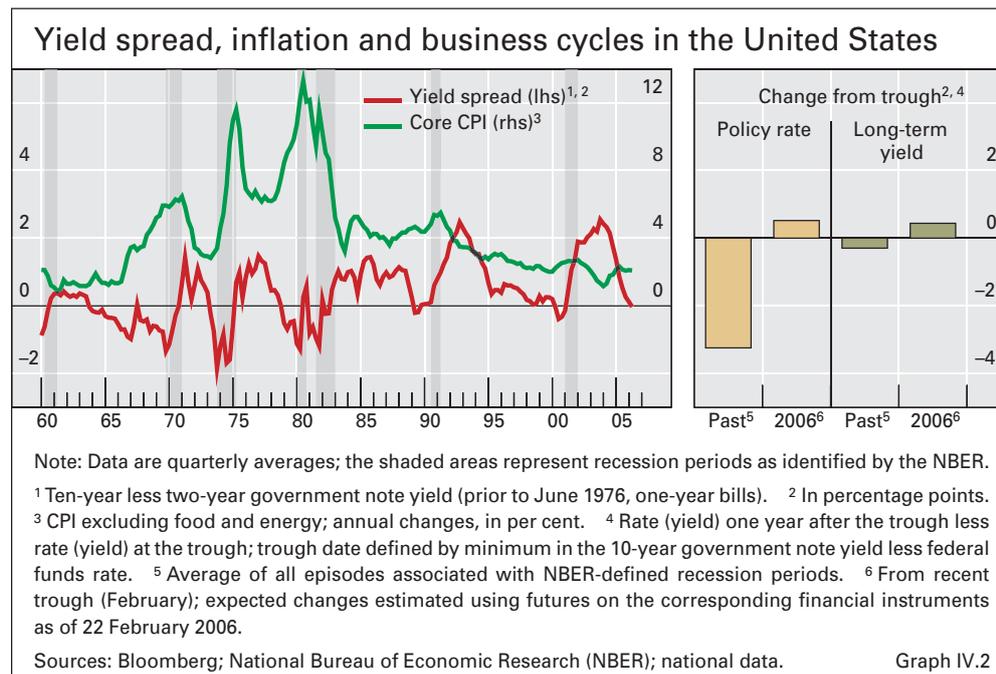
... risks to price stability

Challenges were posed by house prices, debt ...

High house prices and household debt burdens were identified as major sources of risk to future growth prospects, even as evidence emerged that the US housing market was cooling off. An important question for the Federal Reserve was whether such developments required a more restrictive monetary policy response than in the past, given that houses might have become significantly overvalued. Reviewing the issue, the policy committee agreed that, in principle, house price developments should be taken into account if they threatened the core goals of price stability and sustainable economic growth. Nevertheless, it also concluded that responding to possible mispricings at this juncture was not likely to contribute, on balance, to achieving its primary policy objectives. Uncertainties associated with judging the appropriate value and likely direction of such asset prices were deemed generally too large for the Federal Reserve to be able to act with confidence.

... and the flattening of the yield curve

The flattening of the yield curve also became a policy concern, as yield spreads fell to levels last seen in the 2001 recession. In the past, such a configuration of the term structure had provided a fairly reliable signal of imminent recession (Graph IV.2, left-hand panel). This time, however, the dynamics driving the spread seemed to be different in at least two important ways. First, the Federal Reserve appeared to have kept a lid on inflation pressures and hence had dampened expectations of a policy rate overshoot (Graph IV.2, right-hand panel). Second, nominal long-term interest rates had stayed remarkably stable in comparison with past periods of tightening, although they did rise noticeably towards the end of the period under review. This implied that the degree of policy tightening associated with the inversion had been



less than normal. Taken together, these developments called into question the continued reliability of this indicator (see Chapter IV of the *75th Annual Report*). As for the policy implications of the flattening yield curve, they would depend on the factors thought to be behind the changing dynamics. Unfortunately, these were still difficult to assess with confidence (see Chapter VI).

Euro area

Despite two increases in the policy rate, monetary policy in the euro area remained very accommodative during the period under review. The first 25 basis point rise in December 2005 came after 2½ years of the policy rate being maintained at the historically low level of 2%. Largely in response to evidence of growing risks to price stability, the ECB again raised rates by 25 basis points in March 2006, leaving the policy rate at 2.5% at the end of the period (Graph IV.3). The ECB's decisions reflected assessments based on its two-pillar monetary policy framework, one pillar focused on price stability in the short term, and the other on the longer-term price trends based on its monetary analysis.

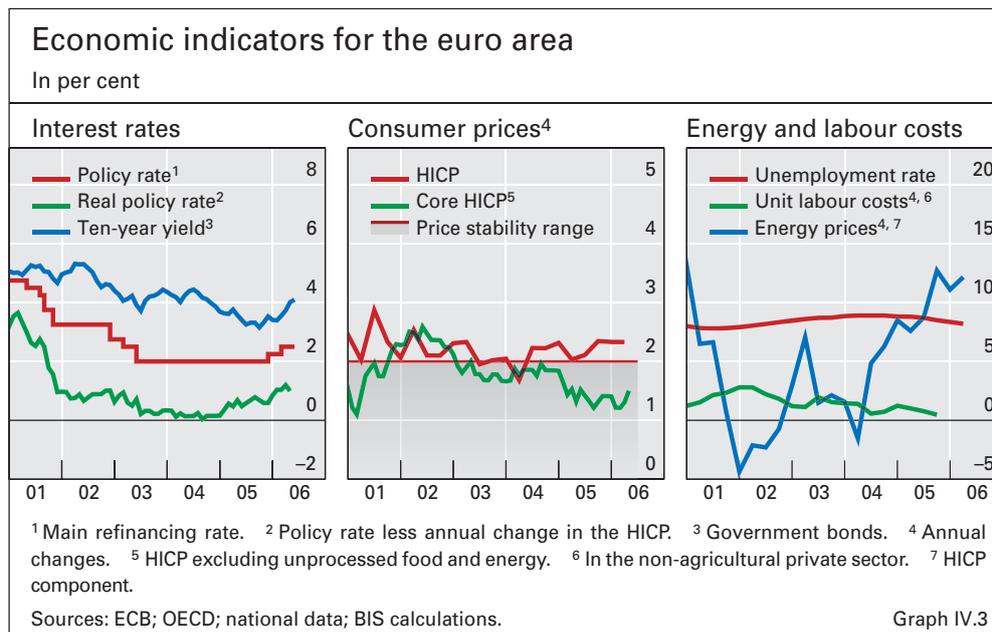
As regards the former, economic growth in the euro area was judged to have gained traction throughout the period, despite some quarter-to-quarter volatility. This, along with a rise in headline HICP inflation above 2%, the upper end of the ECB's preferred range, suggested that the extent of policy accommodation had become increasingly inconsistent with the preservation of price stability. The ECB also expressed concerns that high, and possibly rising, oil prices might still pass through to consumer prices. This, in turn, raised the possibility that such relative price developments might feed through to wage settlements, leading to second-round effects. Part of this concern reflected the ECB's emphasis on headline inflation, as core HICP inflation was low and declining and inflation expectations appeared to be well anchored.

The ECB's concerns were reinforced when considering monetary developments. M3 continued to grow at a rate far above the reference rate

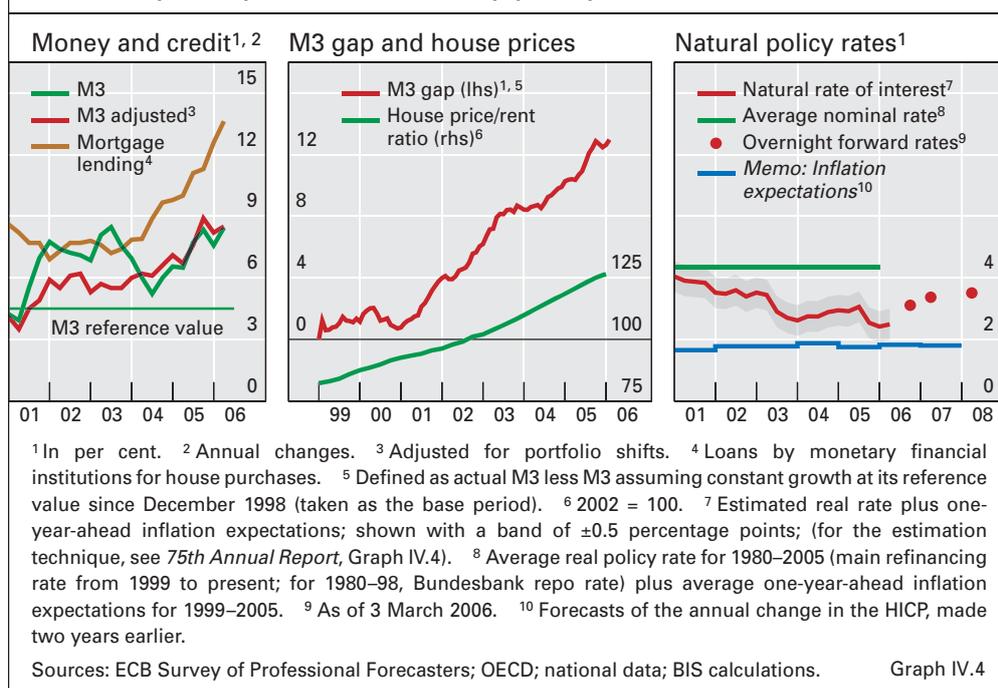
The ECB began to increase rates ...

... reflecting short-run concerns about high headline inflation ...

... as well as longer-run concerns about money ...



Monetary analysis and monetary policy in the euro area



considered consistent with medium- and long-term price stability (Graph IV.4). Earlier in this decade, M3 had also grown rapidly, but a large part of this had been attributed to technical factors. In particular, euro area residents had been adjusting their portfolios away from equities to money, revealing their preference for safe, more liquid assets. But even as these technical adjustments subsided, M3 continued to grow very robustly. Indeed, the growth rate of M3 adjusted for portfolio shifts reached new highs in the past year, at roughly twice the reference growth rate.

... credit and asset prices ...

Complementing the worrying signals from M3, credit growth to the private sector remained strong, especially mortgage lending to households. Continuing low interest rates were thought to have contributed to the momentum in the housing market, resulting in some exceptional rates of price appreciation (see Chapter VII). Indeed, France, Ireland, Italy and Spain continued to record double digit annual rates of appreciation. The ECB's own calculations showed that house price overvaluation in the euro area had not been greater in the previous 20 years. In view of the interplay of asset prices, credit growth and monetary stability, as highlighted in the ECB's policy framework, these developments were seen as pointing to longer-term risks to price stability and economic activity.

... and global imbalances

The ECB also saw external developments as a potential source of concern. In particular, the unwinding of global imbalances was perceived as a low-probability but potentially large downside risk to euro area economic activity. The potential knock-on effects for price stability, therefore, needed to be assessed along with the upside risks to inflation from the monetary analysis.

Concerns about communication

The ECB relied heavily on its communication strategy to clarify its decision-making process, particularly as expectations firmed of an imminent turning point in the policy cycle. However, the ECB was circumspect about

offering explicit forward-looking statements on the direction of policy rates. At several press conferences, officials emphasised that the Governing Council did not take decisions *ex ante* on future policy rate moves, and was therefore not in a position to preannounce a sequence of rate hikes. This was in sharp contrast to recent efforts by the Federal Reserve and the Bank of Japan to offer more guidance, albeit qualitatively, about the likely direction of policy rates at subsequent policy meetings. The ECB was concerned that such statements might be misconstrued as committing it to a specific course. In addition, with fewer “excesses” evident in euro area financial markets than in the United States or Japan, such explicit guidance arguably implied fewer potential benefits. Even so, given the ECB’s leitmotif of upside risks to price stability, markets expected further rate hikes this year and next.

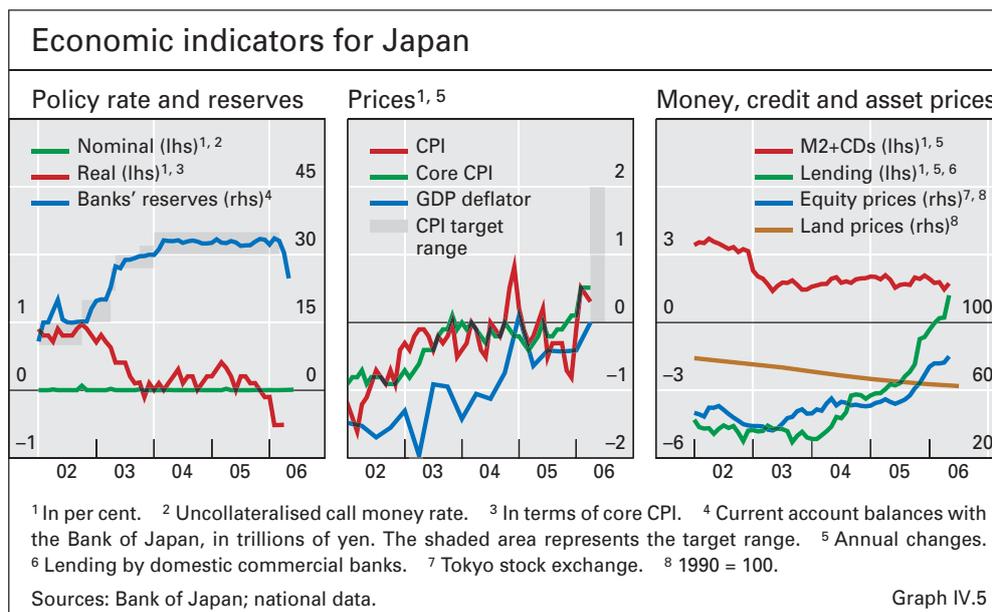
Japan

The Bank of Japan maintained a very easy policy stance as it waited for firmer evidence that deflationary forces were waning. During most of the period, the Bank continued its quantitative easing policy, which it had adopted under exceptional circumstances in 2001. Accordingly, it set an operational target for banks’ outstanding current account balances held at the Bank of Japan. This target, which remained unchanged in 2005 and early 2006 at ¥30–35 trillion, was significantly in excess of what was needed to ensure that the overnight rate stayed at virtually zero (Graph IV.5). At its inception, the quantitative easing framework had been intended primarily to avoid the possibility of a deflationary spiral in the context of fragility in the financial sector. By this criterion, the Bank of Japan concluded earlier this year that the policy had been a success.

In March 2006, the central bank ended its quantitative easing policy and returned to a more normal operational framework of targeting the (uncollateralised) overnight rate. At the time of the policy shift, the Bank of Japan emphasised its intention to keep its new target at 0% for a period of

The Bank of Japan maintained an easy stance as deflation pressures waned ...

... ending its quantitative easing framework but keeping policy rates at historical lows



time, even though the stage was being set for a withdrawal of excess reserves from the banking system. Indeed, the decline in excess reserves held at the Bank of Japan since then has been rapid. Even so, with deflation subsiding and inflation eventually rising during the period, the resulting real policy rate fell to lows not seen for many years. The Bank of Japan recognised that this would provide additional monetary policy stimulus to support the gathering momentum in economic activity.

Improving monetary policy transmission channel

Underlying the decision to shift policy was increased optimism about improvements in the monetary policy transmission channel. Admittedly, some doubts had lingered; the Bank of Japan's target range for current account balances translated into only modest improvements in M2 and private sector credit growth. But the accumulating evidence of a return to economic and financial normality helped to tip the balance towards adopting the more conventional monetary policy framework.

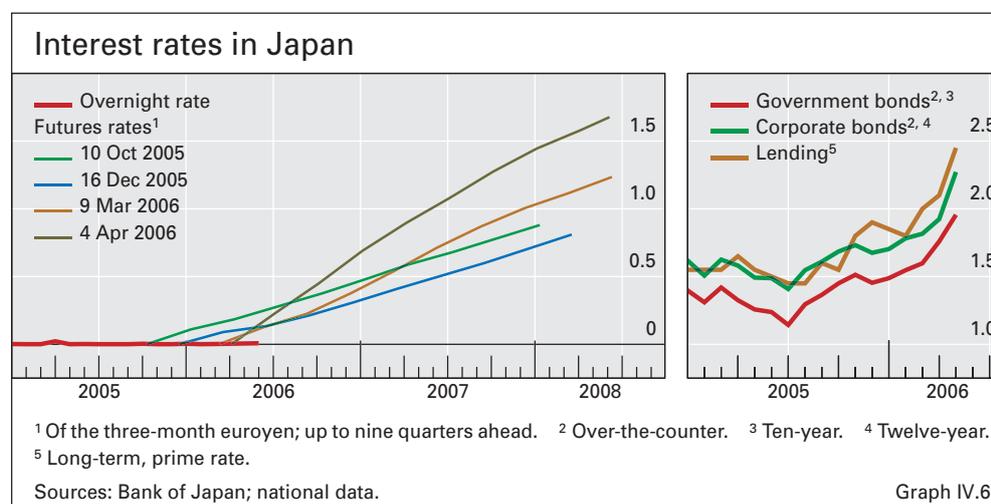
More conventional policy framework emphasises ...

The Bank of Japan also announced two other key elements of its new policy framework. First, the Bank clarified its views on price stability, defining it qualitatively as a situation where households and businesses can make economic decisions without concern about fluctuations in the general price level. Operationally, the Policy Board interpreted this to be an approximate inflation range of 0–2%. Greater clarity about its inflation objectives was expected to help orient price and wage behaviour in support of its policy goals. Naturally, given Japan's deflation experience, questions were raised about the lower bound of the range. The Bank of Japan stated that it would review the range regularly, recognising the possibility that, in the future, a wider safety margin against the risk of declining prices might be necessary.

... a preferred inflation range ...

... and a two-perspective approach

Second, the Bank of Japan outlined its "two-perspective" approach to the conduct of monetary policy. The first perspective emphasised an evaluation of the stance of policy in the light of expected developments in economic activity and inflation over a one- to two-year horizon. The second perspective was meant to address longer-term risks that might require more flexibility in the conduct of policy. Experience had illustrated that short-run inflation control alone was not sufficient to preclude wide swings in asset prices and significant



changes in the financial environment that could threaten sustainable growth and price stability over longer horizons.

While the Bank of Japan announced that the new framework was not likely to lead to any abrupt changes in short-term interest rates, markets reacted by bidding up long rates (Graph IV.6); moreover, increases were seen in both public and private sector debt markets. The movements in part reflected official statements that policy rates would eventually experience a “gradual adjustment”, after a period of remaining effectively zero, as well as a re-evaluation by the market of the economy’s improving prospects.

Markets expect an increase in policy rates ahead

Inflation targeting countries

During the period under review, many central banks in advanced industrial countries with explicit numerical objectives for inflation raised policy rates. In some cases, this seemed to reflect the fact that headline inflation moved higher, owing in large part to energy prices. However, underlying inflation generally remained low (Graph IV.7), and in some countries was well below inflation objectives.

Many central banks raised rates

These central banks saw themselves facing a set of common policy risks. First, uncertainties about the path and impact of energy prices raised upside risks to price stability, especially if second-round effects began to take hold. Second, central banks grew concerned about the downside risks associated with possible fallout from an unexpected slowdown in two key drivers of global economic activity – China and the United States. The potential adverse implications of large and growing global external imbalances formed a backdrop to these downside concerns (see Chapter V). Third, already high house valuations continued to rise to levels that looked increasingly unsustainable, raising the likelihood of a boom-bust scenario materialising. While the slower pace of appreciation in Australia and the United Kingdom was welcome, the persistent upward trend in the household debt/income ratio remained worrisome, especially with the prospect of further policy tightening in some countries.

Key risks included high energy prices ...

... global imbalances ...

... and elevated house prices

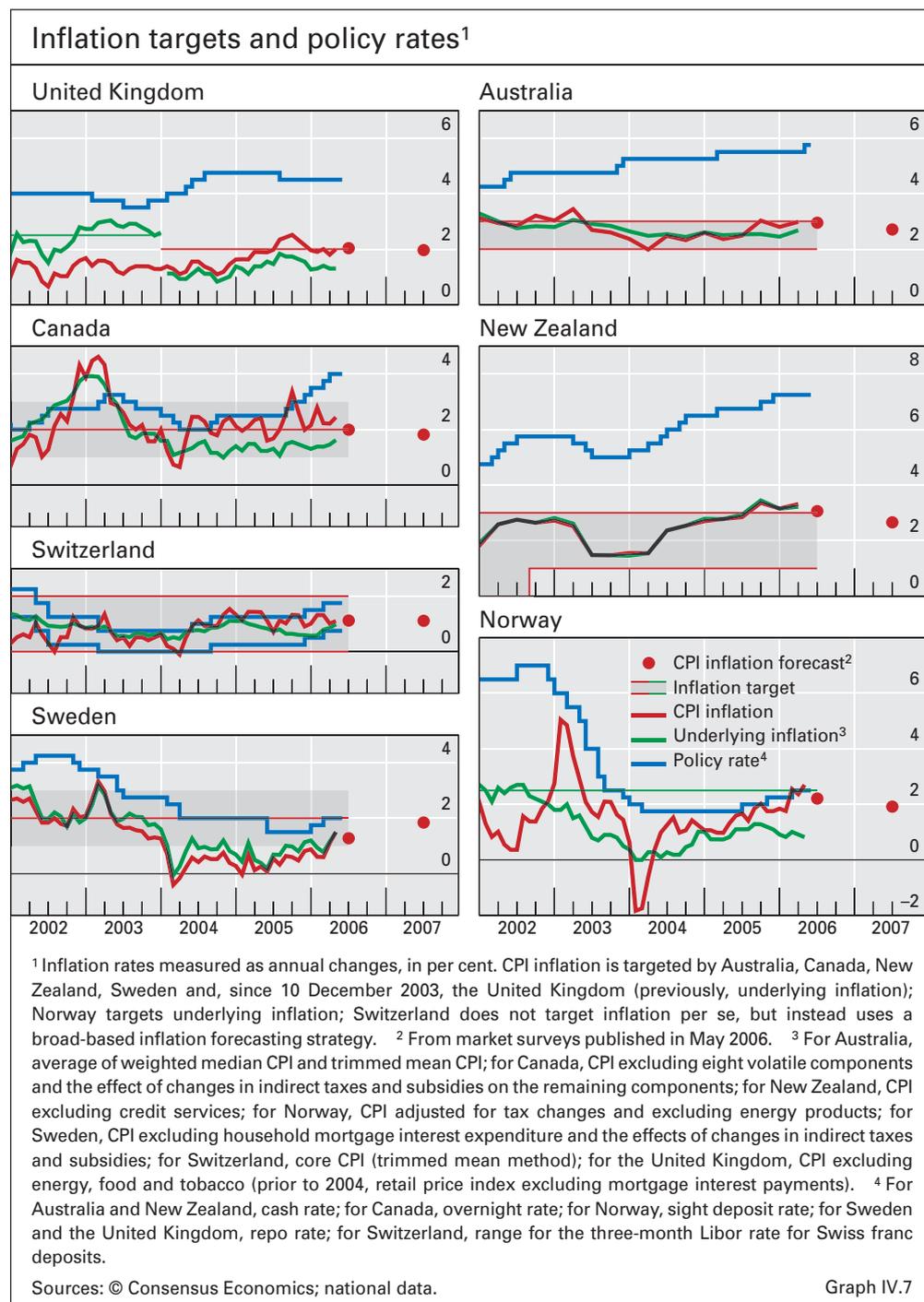
There were, of course, differences amongst these economies. Increases in rates were comparatively larger amongst those central banks whose policy rates had been near historical lows at the beginning of the period under review. The Bank of Canada, for instance, raised its overnight rate by the largest amount, taking it from 2.5% in September 2005 to 4% in April 2006 in six consecutive increases. With the economy operating near full capacity, and inflation running in the upper half of its target range, it was thought necessary to begin normalising policy rates, despite the significant appreciation of the Canadian dollar against the US dollar and low underlying inflation.

Canada raised rates in a series of steps

The Central Bank of Norway and Sveriges Riksbank also raised rates, but by more modest amounts. The former increased its sight deposit rate three times, by 25 basis points each time, reaching 2.5% by March 2006. This reflected an upturn in the Norwegian economy that was deemed to require a somewhat less expansionary policy stance. Even though underlying inflation remained well below its target, headline inflation edged up. In addition, the Norwegian central bank began publishing in November 2005 an official path for future policy rates. This followed the example set by the Reserve Bank of

Norway, Sweden and Switzerland lifted rates modestly from low levels

New Zealand in 1998 of providing the public with quantitative forward-looking information about the likely direction of policy. While the Central Bank of Norway expected the new practice to enhance monetary policy predictability and effectiveness in anchoring inflation expectations, it also noted some concerns. In particular, if such projections were misinterpreted as implicit commitments, this would complicate the conduct of policy. The Swedish central bank boosted its rate to 2% in two 25 basis point moves, as robust growth in household consumption, corporate investment and external demand became evident. At the same time, underlying and headline inflation remained just



under the lower end of the inflation target range during most of the period. Cost pressures also appeared to remain moderate.

The Swiss National Bank, with the lowest initial policy setting amongst these countries, raised the range for its policy rate by 50 basis points to 0.75–1.75%. The economic recovery in Switzerland was seen to be firming, driven by robust global demand, an improved employment situation, stronger corporate investment and solid private consumption. However, inflation remained low and stable.

Central banks in countries at a more advanced stage of the business cycle, and where policy had already been tightened significantly, made only minor adjustments to policy rates. The Bank of England was the only central bank to reduce its policy rate, with a 25 basis point cut in August to 4.5%, where it has since remained. The rate reduction was triggered by concerns about below trend GDP growth and a weakening in labour market conditions that had the potential to push inflation below the target level.

Similar to trends observed in a number of the other inflation targeting countries, the Reserve Bank of Australia raised its policy rate, by 25 basis points to 5.75% in May. Growth was expected to slow slightly while the level of capacity utilisation remained high. Underlying inflation remained moderate, in large part due to disinflationary impulses coming from stronger economic ties with China, even as headline inflation stayed near the upper end of its inflation range for much of the period. In New Zealand, economic growth slowed from a high rate as business activity softened and the housing market also showed signs of cooling. Inflation nonetheless moved above target, as price increases and cost pressures remained persistent. The Reserve Bank of New Zealand raised its official cash rate by 25 basis points in both October and December to reach 7.25%, the highest policy rate amongst these advanced industrial countries.

The experience of the Antipodean economies underscored a policy dilemma common to commodity-rich countries facing a combination of surging asset prices and high commodity prices. On the one hand, higher policy rates could help to alleviate domestic sources of overheating. Yet this response would tend to attract global capital flows, not least through carry trades (see Chapter V), appreciate the currency and, possibly, aggravate current account problems. This raised the prospect of potentially destabilising financial inflows. Recent experience in New Zealand illustrates just how disruptive it can be when these inflows reverse. On the other hand, keeping policy rates lower could feed already ebullient asset prices, thereby increasing the likelihood of domestic boom-bust behaviour.

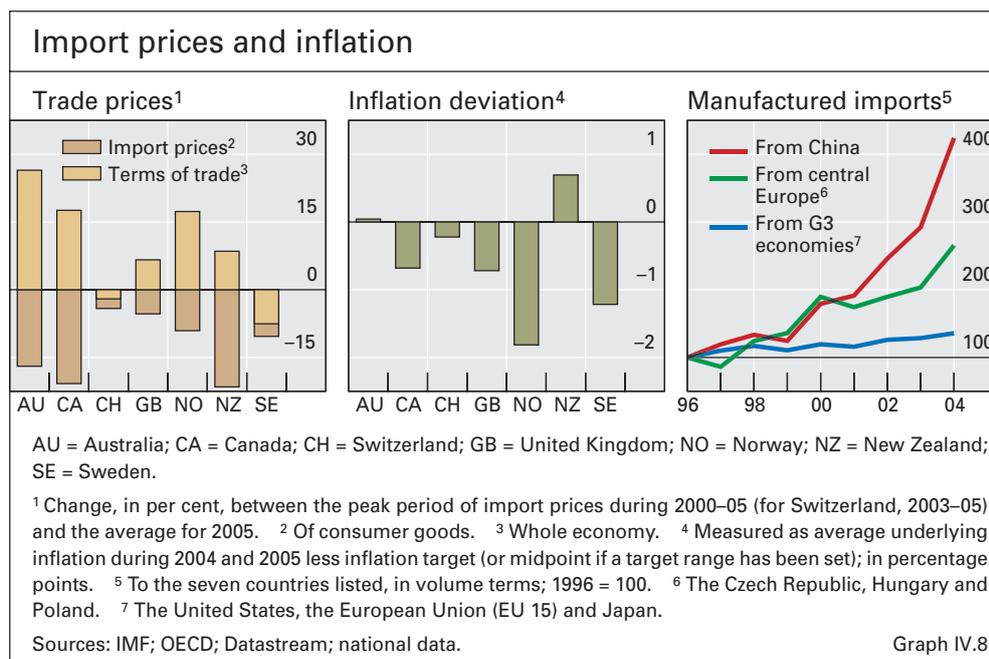
Other global forces also weighed on policy decisions in a number of countries. One concern was that unexpectedly persistent downward pressure on inflation from global competition in consumer goods and services, despite high energy and commodity prices, might cause some tendency to undershoot inflation objectives (Graph IV.8). These positive supply side developments largely reflected a notable shift in import patterns, with China and some newly industrialised countries in central and eastern Europe supplying a rapidly increasing volume of low-cost imports of manufactured goods.

Such global forces have allowed policy rates to remain lower than otherwise, but have arguably aggravated domestic concerns about rising

UK, Australian and New Zealand rates were kept relatively high

Global financial flows implied policy trade-offs ...

... as did disinflationary pressures from abroad



asset prices and levels of indebtedness, suggesting a further need to raise policy rates. At the same time, tightening could increase the likelihood of undershooting the inflation objective. Indeed, with inflation running at the low end of their inflation targets, the Central Bank of Norway and Sveriges Riksbank have already been facing such a policy dilemma for some time.

Globalisation and monetary policy

Globalisation complicates the conduct of monetary policy

As central banks became more attentive to emerging domestic signs of upside risks to price stability during the period under review, they looked to global developments as a possible source of countervailing pressure to keep inflation low and stable. Indeed, since the second half of the 1990s at least, central banks have become increasingly alert to the potential implications for domestic macroeconomic developments, and inflation in particular, of the process of greater real and financial integration in the world economy (“globalisation”). It was earlier in the 1990s that the integration of China, India and the former Soviet bloc into the global economy began in earnest, adding significantly to the underlying momentum of globalisation. Could this process be helping to moderate inflationary forces and to keep inflation under tighter control? And what new challenges could it still pose for monetary policymaking?

This section explores these issues in more detail. It examines, in turn, how globalisation may have strengthened central banks’ incentives and ability to deliver price stability, how it may have been altering the information content of traditional guideposts for monetary policy settings, and how it may have influenced the monetary policy transmission mechanism and central banks’ room for manoeuvre. The section concludes by considering potential challenges and risks ahead, together with possible policy responses.

Globalisation, central bank incentives and price stability

A remarkable feature of the global disinflation record over the last couple of decades has been its breadth (Graph IV.9). There is no doubt that central banks' determination to fight inflation, following the lessons learnt during the Great Inflation era, has been the main factor behind this trend (see the *75th Annual Report*). Yet the striking similarity across countries, despite wide differences in monetary policy frameworks, exchange rate regimes and the configuration of other economic forces impinging on these economies, suggests that other common forces may also have played an important role. Globalisation is a natural candidate.

There are various ways in which globalisation could have helped central banks to reduce inflation and keep it low. Some of them are direct. For example, increased global competition in goods, services and factor input markets and greater cross-border investment (Graph IV.10) have surely affected the process of wage and price formation and, consequently, inflation dynamics in the industrialised countries (see Chapter II). Others are more indirect and involve rather subtle, yet arguably more lasting, effects which operate largely by enhancing central bank incentives to achieve and maintain price stability. At least five such channels can be singled out.

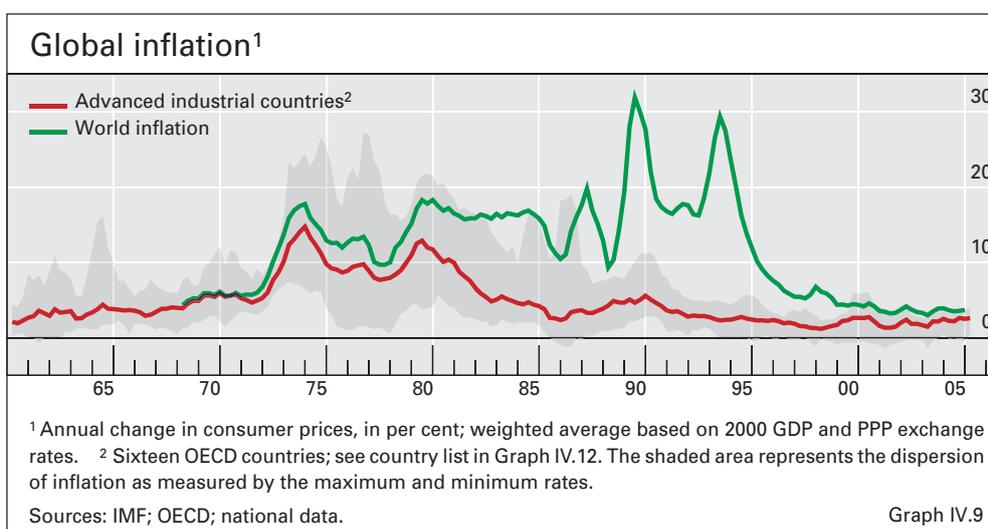
First, globalisation may have significantly lowered the costs of disinflation and hence helped to speed it up. Globalisation has involved a series of favourable supply side developments in low-cost production centres around the globe that yielded a contemporaneous reduction in price pressures and an expansion of output. By accommodating these effects while resisting unfavourable ones, central banks could thus opportunistically cut the output and employment costs of the fight against inflation.

Second, while better monetary policy management has surely supported greater output stability across many economies (Graph IV.11), globalisation may also have played its part. Globalisation has expanded the range of options through which businesses and investors can diversify country-specific risks. In addition, global supply chains have helped to reduce the bite of country-

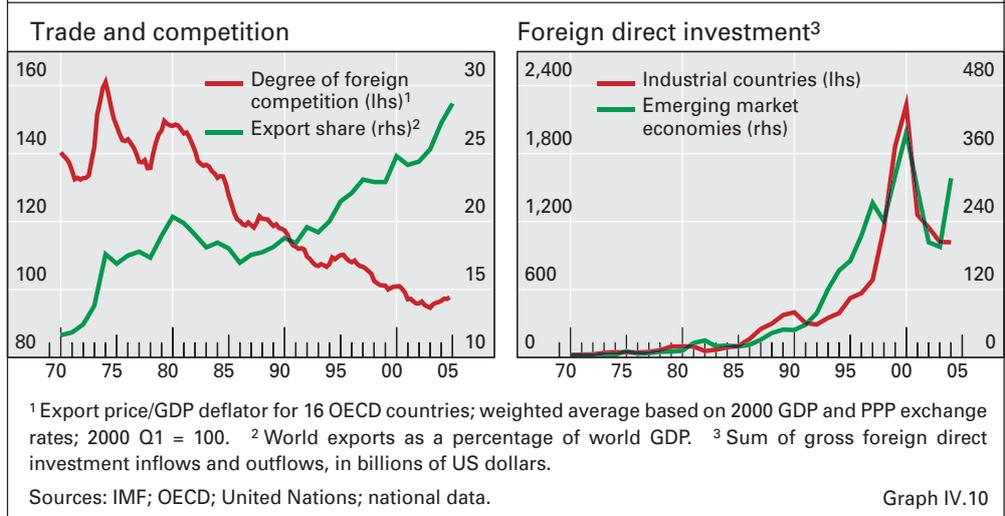
Globalisation has influenced the inflation process in various ways:

by lowering costs associated with disinflation ...

... moderating domestic business cycles ...



Key indicators of globalisation



specific capacity constraints. To the extent that globalisation has smoothed the business cycle, it has also naturally supported the central banks' focus on maintaining price stability.

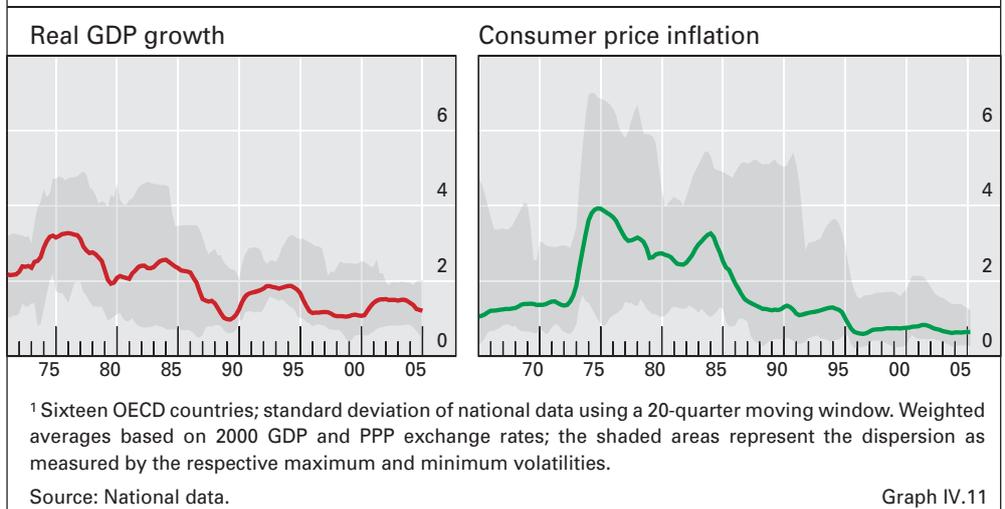
... rewarding
good policy
frameworks ...

Third, globalisation may have imposed greater discipline on policymakers. Economic and financial integration has naturally tended to increase the costs of slower progress towards good macroeconomic performance in general and price stability in particular. Good performance has meant more global resources flowing in and supporting growth; poor performance has meant resources flowing out, at times in a rapid and destabilising way. Indeed, past economic and financial crises exemplify the ability of global markets to levy particularly harsh penalties on countries judged to have unsound policies.

... reducing
downward nominal
rigidities ...

Fourth, globalisation may have made central banks more willing to tolerate very low inflation rates. This is because globalisation has also lowered the

Volatility of growth and inflation in advanced industrial countries¹



costs associated with deflation. Intensifying global competition has contributed to making factor input and final goods markets more efficient. It has also strengthened incentives for institutional reforms that promote market flexibility, especially those making wages and prices more flexible downwards. Hence, it has made modest deflation less worrisome, in large part because profits can be maintained in such circumstances. Indeed, the Bank of Japan has recently emphasised the degree of market flexibility as a critical criterion for determining the range of inflation outturns consistent with price stability.

Finally, globalisation may have contributed to bolstering central bank credibility. By increasing the speed of disinflation and helping to offset other inflationary forces through the above mechanisms, globalisation may have boosted public confidence in the inflation-fighting credentials of central banks. This, in turn, may have enhanced central bank control of the inflation process, by helping to align the expectations of consumers, workers and investors with those of the central bank in a self-reinforcing way. Arguably, this virtuous circle has played a part in anchoring inflation expectations more firmly.

... and boosting central bank credibility

Of course, this and the other mechanisms could also work in the opposite direction if resistance to globalisation were to strengthen in a material way. While this is still a possibility, the trend towards greater global integration has thus far remained in place.

Globalisation and traditional monetary policy guideposts

It stands to reason that the pervasive influence of globalisation on domestic economies might have had a significant impact on the traditional guideposts of monetary policy. Central banks rely on these indicators to assess inflationary pressures and to set the stance of monetary policy. They include, in particular, measures of domestic economic slack, such as output and unemployment rate gaps, and the natural rate of interest.

Globalisation has also altered traditional policy guideposts

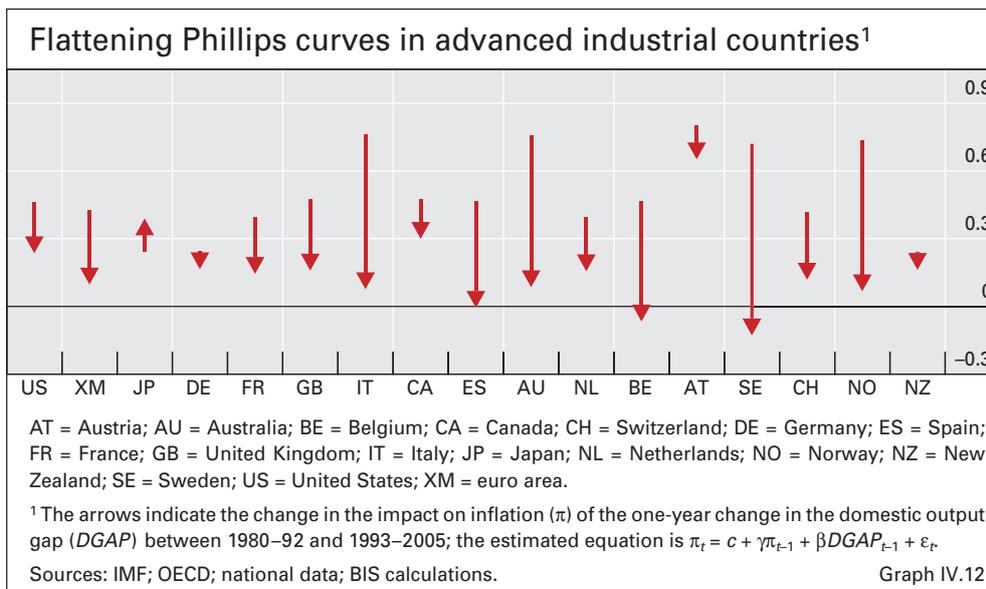
As regards measures of economic slack, it appears that inflation has become less sensitive to traditional measures of domestic resource utilisation. In other words, empirical Phillips curves – considered by many to be the workhorse of monetary policymaking – seem to have become flatter in most economies (Graph IV.12). Explanations for this have centred on fundamental changes in the basic monetary policy framework. Much greater emphasis is now placed on price stability and well anchored inflation expectations.

Domestic slack has become less reliable

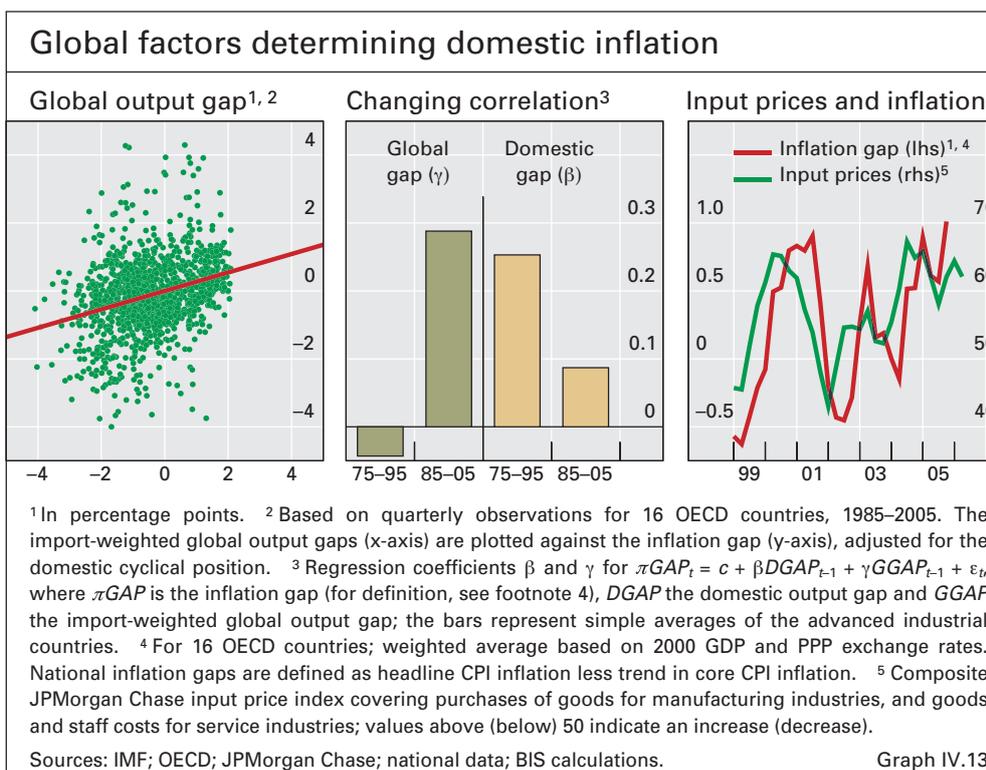
A complementary view is that, in a globalised world, global measures of economic slack could have gained significance in determining inflation, at the expense of purely domestic measures. This is not to say that the impact of domestic slack on inflation no longer matters, but rather that it can only be properly assessed from a more global perspective. While the transformation is far from complete, a global perspective would certainly help to account for the moderate wage and price pressures seen of late in a number of industrial countries. Simultaneously, the influence of globalisation could also help to explain the high price of certain factor inputs that are traded extensively in international markets, such as oil and other commodities (see Chapter III).

Further, there is some statistical evidence supporting the view that, over time, global measures of slack have become more important as drivers of

Global slack has become more important



domestic inflation. Notably, the correlation between domestic goods and services inflation and measures of global output gaps has been positive and growing for advanced industrial countries, even as the sensitivity of domestic inflation to domestic output gaps has declined (Graph IV.13). The influence of global factors has also been evident further upstream in the production process, in the strong bivariate correlation between global input prices and inflation (same graph). The empirical record confirms that these two sets of correlations have become apparent over the past decade, at the same time as global



economic integration has deepened. While it may be too soon to say precisely how globalisation is changing all such relationships, the fact that it does have implications for the dynamics of domestic inflation seems increasingly clear. And, looking forward, this influence might be expected to grow further as long as globalisation trends persist.

The consequences of globalisation for the non-accelerating inflation rate of unemployment (NAIRU) in advanced industrial countries are more ambiguous. On the one hand, stiffer import competition has tended to provide incentives for reallocating labour to sectors with a comparative advantage. This process would tend to raise the NAIRU given higher labour market churning associated with job creation and destruction. On the other hand, labour market contestability and migration have probably acted as countervailing forces because labour has become more quiescent and less demanding in the face of increased competition (see Chapter II). On balance, the recent empirical evidence suggests that contestability and migration, at least so far, may be the dominant forces in advanced industrial countries, thereby contributing to lowering the NAIRU (Graph IV.14). At the same time, the net impact on individual countries is likely to have varied depending on differences in the way domestic labour markets have adjusted to the globalisation process.

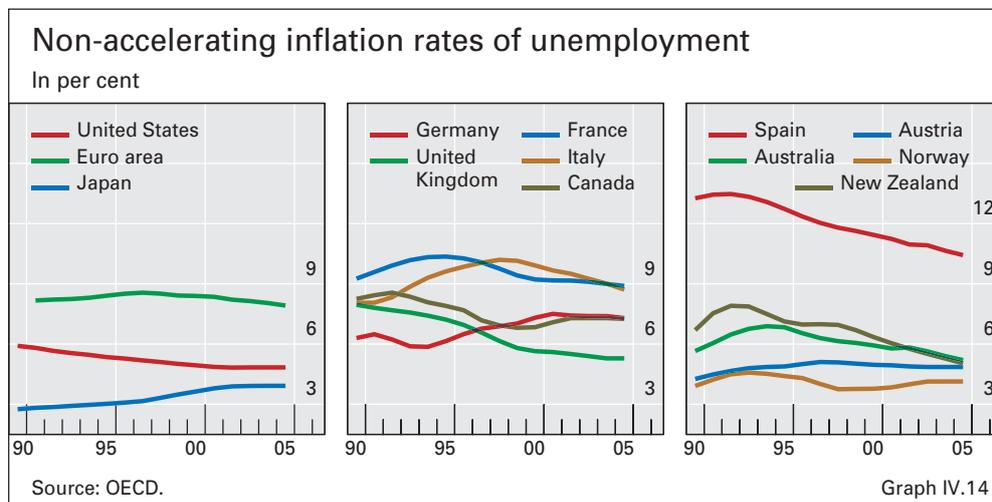
Globalisation could also be expected to raise the long-run natural rate of interest. The long-run natural rate can be defined as the level of the policy rate consistent with sustainable output growth at potential and hence long-term price stability in the steady state, ie eschewing cyclical effects. This concept has gained prominence in the current policy context, as central banks have been gradually reducing the strong monetary stimulus associated with historically low rates. The reason for expecting a higher long-run natural rate is that greater economic and financial integration should promote more efficient use of labour and capital, thereby boosting long-run productivity growth and therefore economic growth potential. The major expansion of the global labour force also points in the same direction, as it should contribute to lifting the marginal return on capital.

At the same time, the usefulness of estimates of the long-run natural rate of interest, as a guide to short-run policy, is complicated by two considerations:

NAIRU estimates have been affected ...

... as has the natural rate of interest

Various factors tend to raise the natural rate ...



... but falling risk premia tend to lower conventional estimates

one empirical and the other conceptual. The principal empirical problem is that financial globalisation might also be expected to have a downward effect on risk premia. If globalisation has resulted, on balance, in a better allocation of risk, premia for market interest rates would tend to fall, especially for longer-term instruments. The variation in the premia would, in turn, complicate inferences about the natural rate for those central banks that use longer-term interest rates to estimate the natural rate, as is the convention. Moreover, other factors driving risk premia might also be at work, which could further complicate assessments. In such cases, the implications for the longer-run natural rate would depend on whether the recent declines were thought to be temporary or permanent, and whether they were thought to affect policy rates and longer-term interest rates differentially (see Chapter VI).

Tensions between cyclically adjusted and long-run natural rates

Second, while in qualitative terms the long-run natural rate (abstracting from risk premia considerations) could be expected to rise, the impact on the cyclically adjusted natural rate is less clear. For instance, if the growth of supply, on balance, outstrips demand in the short run, the cyclically adjusted natural rate would be expected to decline. This implies a tension between the initial impact and the eventual direction in which policy rates might be expected to gravitate over the medium run.

Globalisation, the transmission mechanism and the policy room for manoeuvre

Financial globalisation may have ...

As regards the transmission mechanism from policy rates to aggregate demand and the room for manoeuvre in setting policy rates, it is the financial dimension of globalisation that is arguably more relevant. While the effects of financial globalisation are of older vintage, they have also been very much in evidence in recent years.

... weakened the link between policy rates and domestic asset prices ...

Financial globalisation has undoubtedly increased the role of global factors in influencing domestic asset prices, thereby weakening the link between policy rates and rates of return on various asset classes and hence expenditures. Admittedly, the impact of policy rates through expectations of future policy on inflation may have been strengthened, at least to the extent that globalisation may have helped central banks to gain credibility. However, in an integrated global financial market, risk premia are bound to reflect common influences more strongly, especially on assets having longer maturities. Changes in global investors' appetite for risk and asset class preferences were very prominent in the period under review. Moreover, they affected both government and corporate securities and even real estate (see Chapters VI and VII).

... and constrained central banks' room for manoeuvre

Financial globalisation might also have constrained somewhat the independent room for manoeuvre of national monetary policies. To be sure, under flexible exchange rates, central banks ultimately retain the freedom to determine national inflation rates. But the greater sensitivity of capital flows to perceived yield differentials makes it harder to calibrate domestic interest rates and can exacerbate policy trade-offs, particularly between internal and external balances. The recent experience of countries where interest rates have been comparatively high by international standards, and hence have been the target of carry trades, is a case in point (see Chapter V). All else equal, exchange rate considerations increase the implicit costs of keeping rates away from those

that prevail in global capital markets. At a more strategic level, financial globalisation has not only put capital flow issues at the forefront of policy deliberations but has also had implications for the sustainability of various types of exchange rate regimes.

Challenges, risks and possible policy responses

The above analysis indicates that, while globalisation has helped central banks to lower inflation and keep it low, it has also raised new challenges that merit attention. More muted inflation outturns than might have been expected at this stage in the business cycle, and persistent interest rate “conundrums”, are just some of the recent symptoms of what might be a substantially new policy environment shaped by global forces. A key issue for policymakers is whether the old rules of the game have been altered so much as to compromise their ability to achieve the goals of policy. The more immediate challenges arise from the heightened influence of global factors on domestic inflation determination and the risks of potential deflationary episodes.

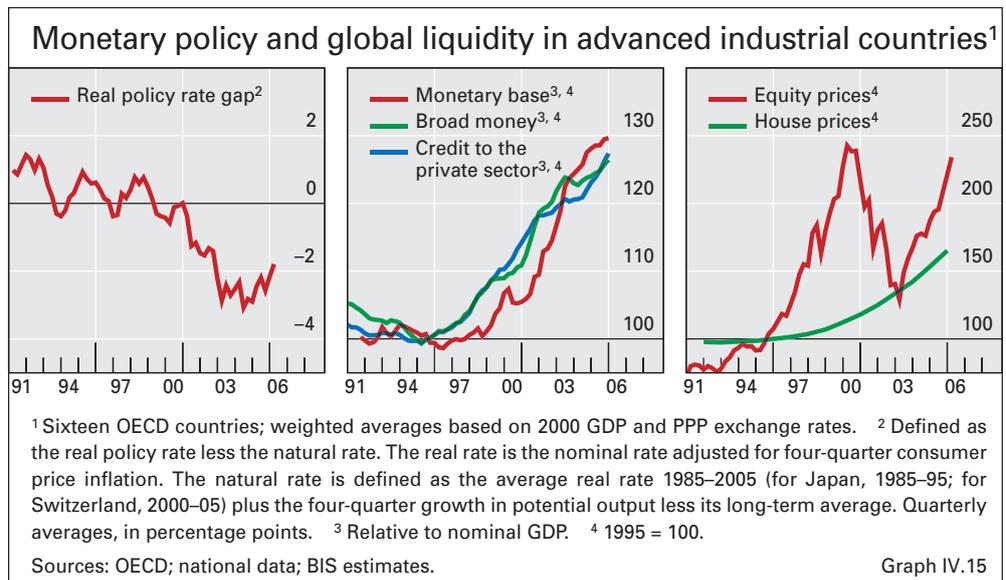
A first challenge relates to the need to incorporate global factors in the assessment of *near-term* inflationary pressures. Focusing solely on measures of domestic slack can lead policy astray, depending on how far such measures are representative of more global conditions. Near-term inflation pressures would be underestimated if global conditions were tighter than domestic ones, and overestimated if global slack truly offset domestic tightness. At the current policy juncture, for instance, such considerations could help to explain why rising rates of domestic capacity utilisation have nonetheless coincided with surprisingly quiescent inflation in individual advanced industrial countries. However, if spare global capacity were to disappear, these countries might suddenly find themselves facing significant inflationary pressures.

A second challenge relates more closely to the need to incorporate global factors in the assessment of more *medium-term* prospects and hence of the cumulative effect of policies over time (Graph IV.15). When judged against

Key challenges include ...

... calibrating policy responses with altered guideposts ...

... the medium-run implications for financial imbalances ...

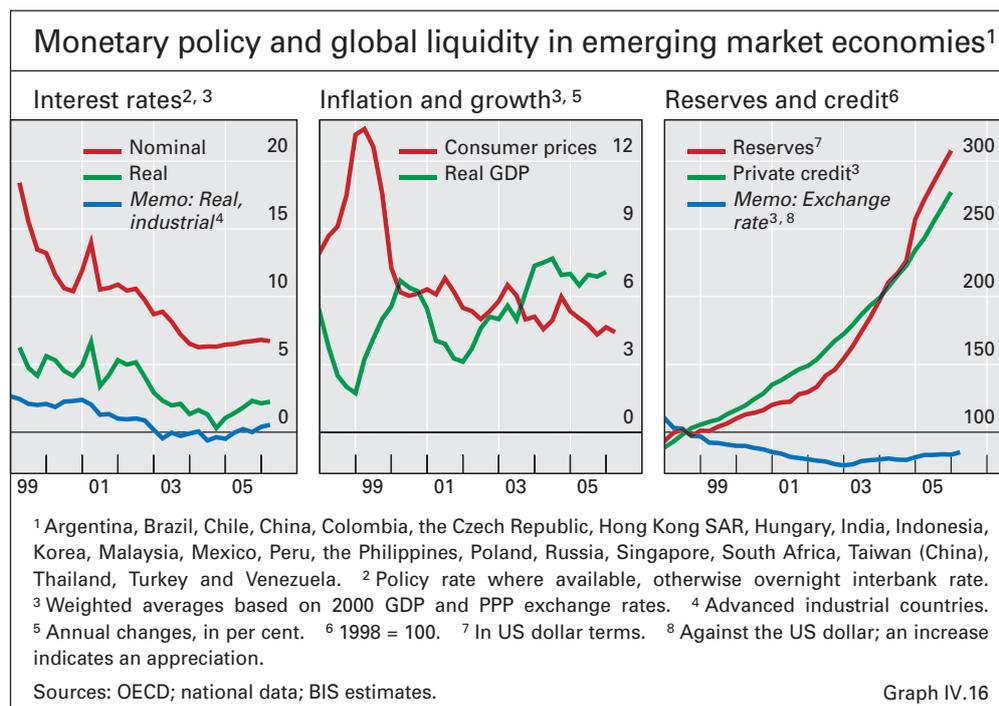


traditional estimates of long-run natural rates, policy rates have been unusually low for an unusually long time. And this has occurred precisely at a time when one might expect such natural rates to have increased, owing to the favourable impact of globalisation on long-run growth potential. The question is whether such protracted deviations might not have undesirable implications for the longer term, by contributing to the build-up of imbalances that could have disruptive consequences at some point. In particular, unusually low policy rates across much of the globe have gone hand in hand with an unusually strong expansion in monetary and credit aggregates as well as a protracted boom in asset prices, especially in residential real estate markets.

The monetary policies of both the G10 and the emerging market economies have contributed to this. Given financial globalisation, accommodative monetary policies in advanced industrial countries have led to downward pressure on their currencies and, consequently, upward pressure on currencies elsewhere. In an attempt to resist this, emerging market economies have frequently kept interest rates low, even in cases where domestic factors might otherwise justify higher rates. Moreover, efforts to prevent foreign exchange rate appreciation have simultaneously led to a rapid increase in foreign reserves (see Chapter V) and in monetary and credit aggregates (Graph IV.16). As discussed in Chapter III, the risk is that inflationary pressures might re-emerge with a vengeance and/or that the unwinding of the financial imbalances could undermine economic activity and contribute to unwelcome disinflation.

All this points to a third challenge relating to the nature of deflation risks. In a low-inflation environment, globalisation has arguably put a premium on understanding the forces behind any deflationary pressures that might emerge from time to time. Downward price pressures arising from favourable global supply developments would raise the likelihood of a falling general price level

... and understanding the nature of possible deflation pressures



(“deflation”). However, as emphasised in the *73rd Annual Report*, supply side-driven deflations are more likely to be accompanied by continuing output growth, real wage gains, buoyant asset prices, and strong household and corporate balance sheets, all else equal. The costs of such deflationary episodes would obviously be far smaller than those associated with demand-driven deflations. Against this background, there is a risk that central banks could find themselves unintentionally leaning excessively against the threat of such “good”, or at least “benign”, deflations. Such leaning could therefore contribute to the emergence of the cumulative boom-bust disequilibria noted above. Paradoxically, it could even sow the seeds of “bad” deflations, which might be eventually associated with a disorderly unwinding of financial imbalances.

How could central banks mitigate the policy challenges raised by the increased relevance of global factors in domestic outcomes? Possible responses relate to monitoring, analysis and multilateral actions.

Central banks could ...

Central banks could put greater emphasis on monitoring external developments, as part of their regular assessment of the policy environment, with the aim of identifying potential sources of global problems earlier in the pipeline. To facilitate this, they might put greater weight on sectoral data by market segment than is currently done. This would reflect the growing importance of global linkages amongst product lines and, a fortiori, global inflationary pressures that could arise from more globalised input markets. In addition, stronger emphasis on improving the speed of reporting and accuracy of real-time data would bring many potential benefits, especially with respect to tracking global slack.

... improve external monitoring ...

... enhance data availability and timeliness ...

The greater emphasis on the global perspective also calls for the strengthening of analytical efforts to understand the behaviour of the increasingly globally integrated economy. A key desideratum is to further deepen existing international models of the business cycle and inflation. One way to achieve this would be to extend analytical frameworks to capture more accurately the spillovers across national borders, the limitations of current exchange rate regimes in ensuring the independence of domestic inflation outturns over relatively long periods, and the dynamics of contestability in labour, capital, goods and services markets. More ambitiously, it would be worth exploring more “top-down” approaches, in which the dynamics of the global economy are not derived purely from the “bottom-up” aggregation of individual countries’ behaviour. Another key desideratum is a better integration and more systematic interpretation of the real and financial determinants of global business fluctuations. Such efforts would help to illuminate the global dimensions of the monetary policy transmission mechanism and the associated monetary policy challenges.

... and bolster analytical efforts to understand the many facets of globalisation

Finally, the increasing impact of globalisation on domestic inflation naturally implies that additional benefits might be gained from paying greater attention to joint policy forums and multilateral responses. To the extent that global factors are playing a more important role, country-specific policy reactions might prove insufficient to produce desirable outcomes. This puts a premium on forming a multilateral consensus on diagnoses, potential solutions and, if possible, implementation strategies.

Globalisation implies that multilateral policy approaches may bring benefits