

The debate on deflationary risks in Germany

Falling inflation rates and repeatedly disappointed growth expectations in many major industrial countries have thrust the risk of deflation into a prominent position in the current public debate. In particular the unstable German economy with its persistently weak growth has, in view of the low rate of inflation, led to fears of impending deflation in some quarters.

Indeed, a merely temporary decline in the price level is sometimes wrongly described as "deflation". However, the term "deflation" should be used only if there are negative rates of price change over a longer period of time. A development of this kind can result in a self-perpetuating downward spiral, in which conventional economic policy options are severely restricted.

The German economy is currently not exhibiting any critical signs of impending deflation. However, the risks resulting from the macroeconomic stagnation, which is still continuing in 2003, should be monitored carefully. Against this background, confidence-bolstering structural reforms embedded in a consistent overall strategy are of key importance.

Deflation

Deflation as a continuous decline in the general price level

In the following, the term “deflation” is used to describe a continuous decline in the general price level. Like inflation, it constitutes a breach of the central bank’s objective of maintaining price stability. A temporary decline in the price level, which may occur during a period of low inflation, is not covered by this concept of deflation.

A mere decrease in the prices of some categories of goods, in individual sectors or in certain regions should also not be termed deflation. In a market economy, such adjustments in relative prices are a response to changes in supply and demand – for example, differences in sectoral productivity developments – and are essential for an efficient, wealth-enhancing allocation of resources. Thus, for example, the marked price decreases in the information and communication technologies are an expression of the rapid technological progress made in this sector and not an indication of a deflationary trend.

Price level decreases owing to supply-side improvements...

Even a decline in the general price level is not necessarily a cause for concern – the reasons for such a development are much more crucial. A fundamental distinction can be made between supply factors and demand factors. Decreases in the price level owing to positive supply shocks (eg a somewhat greater increase in productivity, a higher degree of competition as a result of deregulation or a fall in commodity prices) are a result of being able to produce more goods with a given input or apply production factors in the pro-

duction process less expensively. Under otherwise unchanged conditions, the goods produced can be offered at lower prices.

In comparison, a sharp fall in aggregate demand with a given production potential leads to the underutilisation of production capacity, which likewise reduces the price level. Although the fall in demand tends to be moderated by the price movement, a price decline can also lead to expectations of further price reductions and thus reinforce demand-side restraint.

Whereas the former kind of price level decreases are usually temporary and thus fairly innocuous in economic policy terms, sustained price decreases of the latter kind are problematic as they can be accompanied by a disruption of the macroeconomic equilibrium, thus leading to additional destabilising effects on prices.

Possible self-perpetuating effects of deflation

Deflation can potentially drag an economy into a self-reinforcing crisis. At the same time, the possibilities of countering these unwelcome developments through economic policy are limited.

In principle, there are several transmission channels through which a sustained fall in the general price level can have a negative effect on real economic activity. Expectations with respect to further price level developments play a key role in self-perpetuating effects.

... or negative demand-side developments

Self-perpetuating effects owing to reluctance to purchase, ...

If the price decline is connected with the prospect of a further future fall in prices, this may lead to a general reluctance to purchase. This in turn would lead to a further decrease in aggregate demand, which would additionally serve to strengthen the downward movement of the price level.

... an increase in real debt, ...

In existing debt contracts with fixed nominal payments, a fall in the price level leads to an increase in real debt and in the real interest burden. This results in a greater probability of default on the part of debtors, which can intensify the deflationary developments for several reasons. Thus, the increase in the financial system's risk provisioning and the deterioration in corporate credit ratings leads to sluggish lending, which in itself further weakens aggregate demand. The rising number of insolvencies caused by the unexpected increase in real debt and in the real interest burden also contributes to the general economic downswing. This gives rise to job losses, fears for the future and income uncertainty, thereby further intensifying the general reluctance to purchase.

... and higher real interest rates...

In principle, nominal interest rates cannot become negative as long as a risk-free, liquid and interest-free asset exists in the form of cash. The real interest rate rises with the rate of deflation once the zero interest rate bound has been reached. Therefore, the real interest rate can no longer be lowered in order to stimulate economic activity in this situation.

There is a similar although less binding effect in a monetary union: the short-term nominal interest rate is the same in all the member

states and the monetary policy is determined by the average price outlook for all of these countries. If there are differences between the national rates of price change, then the real interest rates also vary from country to country if there is a common nominal interest rate. This can have a destabilising impact if one country or a group of countries shows signs of deflation owing to excessively low demand, whilst the other countries do not. The real interest rate is then higher in the countries with deflation than in the other countries, which further curbs demand in the former and thus strengthens the deflationary tendencies. However, the central bank will react to these retarding effects if they impact on the whole monetary area's outlook for inflation.

Furthermore, deflation places particular strains on public finances. Without taking into consideration active government countermeasures, it leads to an increase in the government deficit through the action of the automatic stabilisers. This affects revenue from taxes and social security contributions in particular. A fall in employees' per capita gross wages and salaries, above all, would have a strong negative impact as the usual budget relief afforded by fiscal drag would be reversed.¹ However, a fall in employment, declining private consumption and dwindling

... as well as strains on public finances

¹ The focus here is solely on the financial "strains" placed on government budgets by decreasing (or negative) fiscal drag. However, one must not overlook the fact that, although fiscal drag affords relief for government budgets, it constitutes a fundamental macroeconomic problem as it expands the growth-inhibiting "tax wedge" between labour costs and net wages. In other words, inflation may take pressure off fiscal budgets on the revenue side, but is nevertheless macroeconomically harmful through this channel.

corporate profits would also put a strain on government revenues.² On the expenditure side, rising unemployment leads to labour market-related additional spending. This contrasts with savings through the government buying tangible goods more cheaply. Interest expenditure is likely to react to a fall in the nominal interest rate level (to be expected in a deflation) only with a time lag owing to the medium to long-term maturity structure.

However, there are also factors which can counter the self-perpetuating downward process outlined above. The increase in the real debt burden as a result of deflation is mirrored by real growth in creditors' assets. This tends to boost demand: the increase in the real money stock, in particular, lowers interest rates and thus helps to heighten demand. In addition, positive wealth effects may lead to greater purchases of goods. However, these positive effects are likely to be limited. Firstly, if the debtor becomes insolvent, it is not possible to (fully) realise the increase in assets.³ Secondly, the general uncertainty prevalent in a deflationary situation is likely to mean that creditors will also exercise restraint in their buying behaviour. Thirdly, it is to be assumed that creditors have a lower propensity to spend than debtors which implies that, with regard to expenditure, the real increase in assets is also not likely to have a full compensatory effect.

Downward nominal wage rigidities, which are often cited in this context, do not necessarily have a stabilising effect either, above all in the case of stronger price decreases in excess of the productivity rate. As nominal

wage reductions are precluded, price level decreases lead to higher real wages. Although this counteracts sustained expectations of falling prices and increases employees' purchasing power, higher real wages tend to reduce employment and, with that, the total income of all employees. The question of which of the two effects will dominate depends ultimately upon the institutional framework of the labour market as well as the duration and strength of the initial contractionary shock.

In a monetary union, deflation in one country – *ceteris paribus* – improves the price competitiveness of that country. This – when viewed in isolation – increases foreign demand for domestic goods and reduces domestic demand for foreign goods, which has a stabilising effect on domestic price developments. However, in a single currency area, there is also a potential risk that the deflationary tendencies in a large member state will be "exported" to the other member states. If foreign demand for goods produced by a country with deflation increases as a result of that country's heightened price competitiveness and demand for other countries' goods falls as a result, downward price pressure may also ensue in the latter group.

² A sharp fall in prices would lead to a sharp fall in turnover tax revenue as the turnover tax already paid on previously purchased intermediate goods and services (as part of input tax relief) can be deducted from the turnover tax payments for (cheaper) end-products. A downturn in profits in the corporate sector affects tax revenue, although most losses can probably be offset against tax on future profits only with a time lag.

³ This does not apply to cash, which does not constitute a repayable government debt, and so no compensatory effect is to be expected.

... which are however probably weaker than the destabilising effects

All in all, the above considerations make it clear that deflation brings with it particular macroeconomic dangers, as it can be accompanied by a number of self-perpetuating effects. Furthermore, once a deflationary situation has set in, the monetary and fiscal policy options for stimulating economic activity and thus ending the downward spiral are limited.

Limited scope for economic policy...

Therefore, the possibilities for increasing demand by means of active, expansionary fiscal measures are restricted insofar as deflation increases the deficit through the workings of the automatic stabilisers; in addition, outstanding general government debt is driven up in real terms. This also leads to an increase in ongoing real interest payments, which further limits the scope for expenditure. Moreover, economic expectations cannot be stabilised by means of expansionary fiscal measures if the government is already in an unsustainable fiscal position and economic agents therefore have to expect that a future increase in the tax burden will be unavoidable.

The monetary policy options have been largely exhausted once short-term nominal interest rates hit zero. Expectations of a declining price level then lead to positive short-term real interest rates which rise as the rate of deflation increases. This further curbs aggregate demand. However, a negative real interest rate, which is impeded by the zero interest rate bound, may possibly be advisable in order to overcome a severe economic downturn. Furthermore, the impact of alternative liquidity-providing measures would probably be restricted. It is thus to be feared that the

additional funds will either remain with the banks – as they estimate the risk of granting new loans in a deflationary phase to be too high (credit crunch) – or will be used by non-banks to repay existing loans or accumulate financial assets rather than for spending (liquidity trap).

Owing to the given limits of a “classic” macroeconomic policy, it is extremely difficult to combat deflation once it has already set in. Therefore, the attention of the individual policy areas should be focused on applying appropriate preventative measures to stop the economy slipping into deflation.

... so preventative measures are particularly important

Periods of deflation

Even though the past few decades were marked above all by inflationary processes, since 1980 there have also repeatedly been periods of declining price levels. Industrial countries were also affected (see table on page 20). These phases were, however, mostly only of short duration and low intensity. They were frequently caused by an exchange-rate-related fall in import prices (as was the case, for example, in Germany at the end of 1986 and beginning of 1987). Only in Japan have consumer prices fallen over a longer period of time since the mid-1990s.

By contrast, notably the last quarter of the 19th century and the period between the First and the Second World War saw particularly marked phases of sustained and sometimes significant price level decline. Above all the 19th century was marked by

Deflation at the end of the 19th century caused by the gold standard...

Periods of price decline in selected industrial countries since 1980 *

Country	Consumer prices	GDP deflator
Australia	97/III – 98/I	98/IV
Canada	94/IV	98/I 98/III – 98/IV 01/IV – 02/II
Germany	86/III – 87/I	00/I – 00/IV
Japan	86/IV – 87/I 95/IV – 96/I 98/III 99/I – present	86/III – 87/II 94/IV – 96/IV 98/II – present
Netherlands	86/III – 87/IV	86/IV – 87/II
New Zealand	99/I – 99/III	91/I 91/III 97/I – 97/II 99/I 99/III – 99/IV
Sweden	98/IV – 99/I	97/I
Switzerland	98/IV	97/I – 97/III 98/III – 99/II

* G7 countries as well as Australia, Belgium, the Netherlands, New Zealand, Sweden and Switzerland.

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constantly recurring periods of deflation. From 1875 to 1899 alone, Germany experienced three periods of price level decline (see chart on page 21). The predominant monetary system of the time, the international gold standard, no doubt played the main contributory role in this. Whereas the money supply was largely fixed through the available amount of gold, the demand for money rose constantly, not least as a result of the population increase, industrialisation and the growing number of countries pegging their currencies to gold. Money therefore became more scarce and the price level fell. Owing to the large gold discoveries made at the end of the 19th century as well as, in particular, the increasing tendency to sever deposit money from currency in circulation (which was pegged to gold), deflationary risks later re-

ceded into the background; they were replaced increasingly by inflationary tendencies.

Besides this monetary explanatory factor, real economic developments no doubt also helped to bring about deflation. Technological progress had caused productivity to increase, especially in the industrial sector, which led to a fall in the price of industrial goods. In addition, the development of new areas under cultivation, above all in the United States, together with technological progress in the transport sector caused the prices of agricultural products to fall sharply. The price decreases in the United States were finally transmitted to other countries through the gold standard mechanism.

... and technological progress

There were also episodes of constantly falling prices between the First and the Second World War. Besides the deflation of 1920–22 in the United States, the Great Depression of 1929–33 should be mentioned in particular. During this period, prices in Germany fell at an annual average rate of 6½% and real gross national product decreased by around 3% per year. The downturn in production was even more dramatic in the USA than in Germany.

Deflation in the Great Depression

The 1929 stock market crash in the USA is often cited as the trigger for the Great Depression. However, in addition to the rigidities of the international gold exchange standard of the time, the Federal Reserve's excessively restrictive monetary policy was probably also responsible for the onset and tenacity of the Great Depression. The Federal Reserve tolerated the considerable slowdown in lending

Role of monetary policy

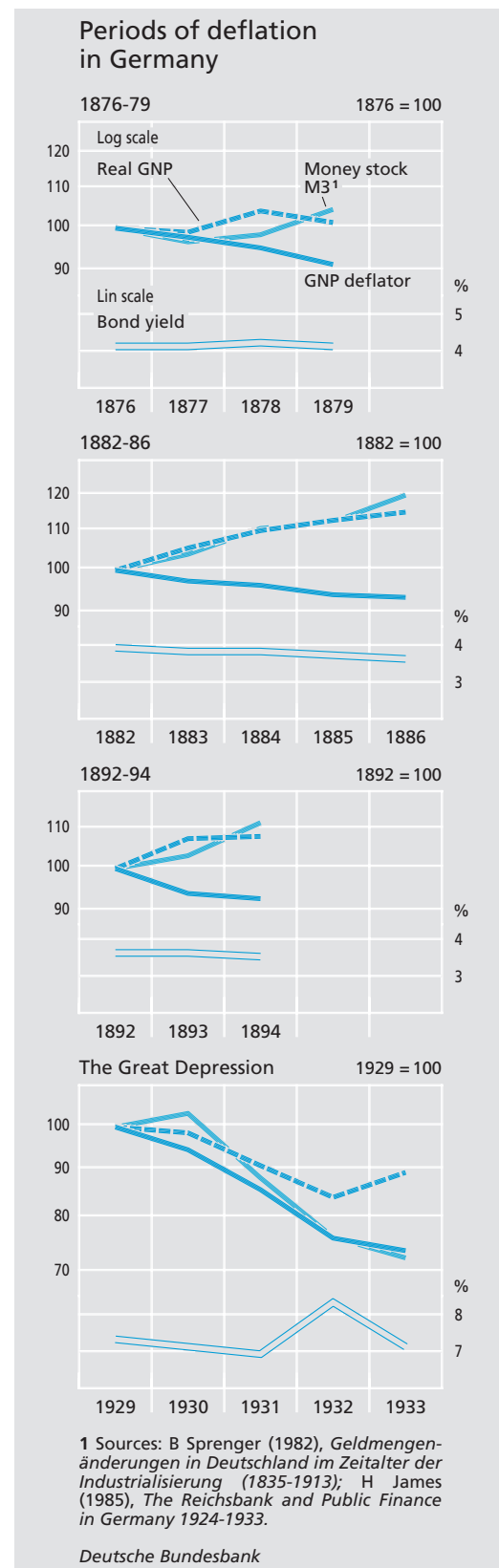
following the stock market crash as well as the decrease in the money stock M1. In 1932, the short-term real interest rate averaged 11% despite the interest rate reductions introduced in the meantime. The terms of finance were thus extremely unfavourable. This restrictive monetary framework no doubt also intensified the difficulties in the banking sector.

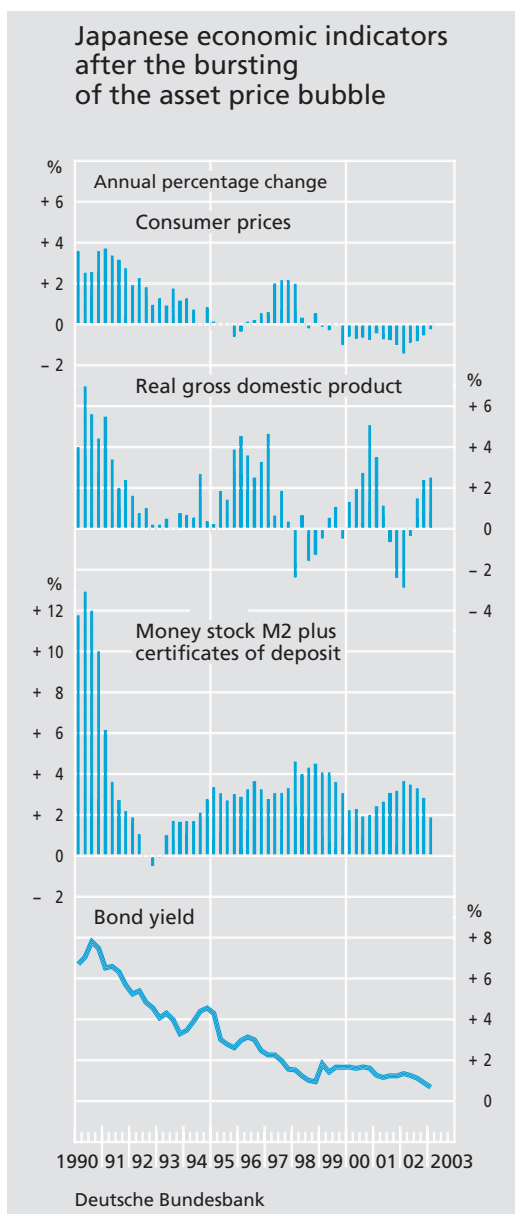
*Deflation
in Japan:
asset price
decrease...*

A more recent example of deflation can – as already mentioned – be seen in the case of Japan, which repeatedly experienced phases of persistently falling consumer prices in the 1990s. At the same time, the GDP growth rate weakened. In this respect, the developments in Japan were similar to those in the Great Depression. In both cases, a speculative bubble on the asset markets burst. This pushed down macroeconomic demand and the price level as a result of corporate insolvencies, banking crises and other recession-induced consequences. Nevertheless, the price level decline in Japan was considerably weaker than, for instance, the fall in prices in Germany during the Great Depression. Moreover, overall production did not diminish during this period.

*...and
monetary
conditions*

The economic slowdown in Japan was accompanied by a comparatively small increase in the money stock and – primarily as a result of supply-side and structural factors – a substantial downturn in Japanese banks' real lending to the private sector, which has actually been falling more rapidly since 1999. With hindsight, it is now clear that the deflationary risks in Japan were obviously not recognised in time. Initially, the downswing at





the beginning of the 1990s appeared to bear a great resemblance to comparable past economic cycles. Only later did it become apparent that economic recovery was considerably more sluggish than on previous occasions, which was also exacerbated by the bursting of the housing price bubble and the East Asia crisis.⁴ Even though the Bank of Japan had lowered the central bank rate to almost 0% by 1995, this was not enough to prevent the

country sliding into deflation. The continued appreciation of the yen in the first half of the 1990s was also a contributory factor. Although the long-term interest rates also fell during the economic downturn, they still stood at 5% in 1995 as market participants were not expecting the price level to decline in the future. From today's perspective, real financing costs were thus very high.

All in all, this description of individual deflationary periods, in particular the Great Depression and the last decade in Japan, shows that a deflation can have grave consequences for an economy. These arise on the one hand from the fact that deflation can become self-perpetuating and thus pull the economy into a downhill slide. On the other hand, the fact that it is very difficult for traditional economic policy measures to stop such a development once this slide has started also plays an important role.

Experience of deflation

Current situation in Germany

In view of the definition of deflation given earlier in this article and historical experience of periods of price decline, it becomes clear that the present economic situation in Germany cannot be described as deflationary.

Currently no deflationary developments in Germany as...

Although inflation rates have been falling significantly for more than a year, they are still positive. On an average of the April-May period, the consumer price index was 0.8%

... rise in HICP,...

⁴ See: T Bayoumi and C Collins (eds), *Overview in Post-Bubble Blues, How Japan Responded to Asset Price Collapse*, International Monetary Fund, 1999, p 2.

higher than 12 months previously. Even taking into consideration the measurement problems involved in recording prices, which have, moreover, become less important in Germany owing in particular to improved quality adjustment procedures, a general price decline is not in evidence. In fact, there is practically price stability in Germany.

... significant wage increases, ...

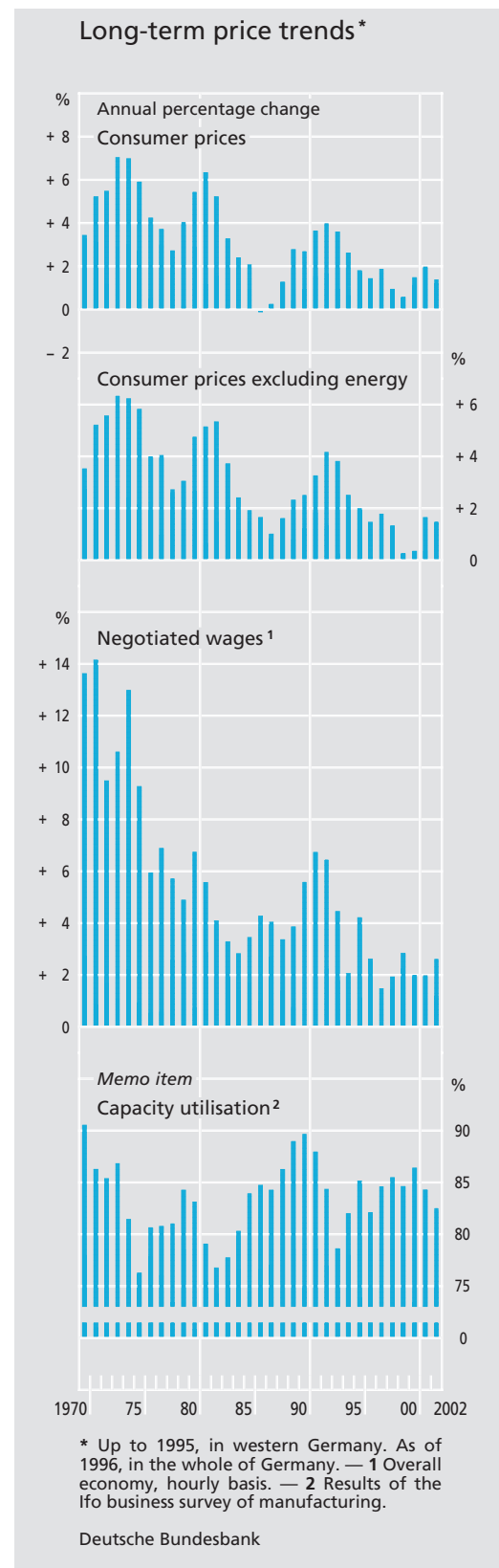
Wages have further increased significantly despite the poor economic situation. In the first quarter of 2003, negotiated wages were around 3% higher than 12 months previously. Owing to the elimination of benefits outside the agreed pay scales, the wage increases effectively paid per employee were somewhat lower (2.4%) and further improvements in productivity helped to reduce corporate cost pressures. However, unit labour costs also increased again by around ½%, ie at the moment, a deflationary trend is not in evidence here either.

... no wait-and-see attitude to buying owing to expectation of falling prices, ...

Economic activity is very sluggish at present. However, the economy has not in general shifted onto a downward track despite a slight decline in the first quarter of the year. Instead, the situation is marked by prolonged stagnation. A wait-and-see attitude to buying triggered by the expectation of falling prices, which is characteristic of a deflation, is not in evidence. The recent slight reduction in the propensity to consume can be explained instead by employment risks and the associated income risks.

... no general sharp fall in housing prices

Unlike in Japan, it can also not be stated that there has been a general sharp fall in the prices on the property markets in Germany.



Consumer price index (principal components)

Annual percentage change

Item	2000 Share in %	2002			2003	
		Q2	Q3	Q4	Q1	April- May
Energy	8.1	-1.6	-0.3	3.4	7.7	1.6
<i>of which</i>						
Refined petroleum products	4.2	-3.3	0.6	8.4	14.4	0.1
Food	9.0	0.5	-0.8	-1.0	-2.2	-1.0
<i>of which</i>						
Seasonal products	1.6	-3.2	-4.7	-4.6	-9.5	-4.6
Industrial goods	31.3	1.0	0.7	0.2	0	0.1
Services	27.1	2.5	2.6	2.1	1.4	1.7
Rents	24.4	1.4	1.5	1.4	1.2	1.2
Total	100.0	1.3	1.1	1.2	1.2	0.8

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Despite the heterogeneity of the market segments and data imperfections, house prices experienced a rather flat underlying trend and only a slight price decline in the second half of the 1990s. The upward trend also remained in evidence with regard to residential properties in the last two years.

Price forecasts predict positive price trend

Finally, almost all of the available price forecasts for Germany predict that there will be a further positive price trend in the next two years. It is apparently possible that the zero bound will be reached temporarily during some months in 2004, although this would be predominantly as a result of a further reduction in the cost of imports, the price development of which recently had a marked effect on the general rate of inflation (see chart on page 26). However, neither the national and

international forecasting institutes nor the financial markets expect the price level to undergo a self-perpetuating downward spiral. A sharp fall in prices in some market segments, such as for information and communication technology goods, are – as already mentioned – not an expression of deflation, but rather the result of enormous increases in productivity and, to that extent, a sign of functioning competitive markets as well as of the “breathing” of relative prices required to fulfil the allocative function of prices.

Are there deflationary risks in Germany?

Even though the term “deflation” does not fit the current economic situation in Germany, the question still remains whether

Germany is suffering from a persistent period of stagnation

there is a danger of the economy sliding into deflation owing to its weak and fragile overall state. As the Bundesbank set out in detail in its policy paper entitled "Ways out of the crisis",⁵ Germany is currently suffering from a crisis of growth and confidence, in which short-term, medium-term and long-term negative factors are eclipsing and reinforcing one another. The economy is not going through a classic short-term, self-adjusting recession, but rather a persistent period of stagnation, which has now been continuing for almost three years and is increasing vulnerability to negative shocks.

The further decline in capacity utilisation is dampening companies' propensity to invest. The labour market is in the grip of the economic slump and this, in turn, is having a negative effect on disposable income, public opinion and the propensity to consume. Confidence in the self-healing powers of the economy and the ability of politicians to implement reforms has taken a blow. Some elements of risk for deflationary tendencies to come into being may certainly develop from the length of this "virtual stagnation", especially as no clear stimuli for overcoming the economic downturn are as yet discernible.

In this context, exchange rate developments are also worthy of consideration. Since the beginning of the year, the euro has risen by 12½% against the US dollar and by almost 9% against the weighted average of all the major currencies. This could lead to two kinds of restraining price effects. On the one hand, the higher exchange rate puts direct pressure on import prices, whilst on the other, appreci-

Price forecasts *

Annual percentage change

Organisation	2003	2004
GDP deflator		
OECD	0.8	0.6
IMF	1.1	1.2
European Commission	1.2	0.8
Research institutes	1.1	1.0
Consumer prices		
OECD	0.8	0.4
IMF	1.0	0.7
European Commission	1.3	1.2
Research institutes	1.3	1.2
Consensus	1.2	1.2

* Sources: OECD: Economic Outlook, April 2003 (provisional); IMF: World Economic Outlook, April 2003; European Commission: April 2003 economic forecast; research institutes' spring 2003 reports; Consensus Forecast, May 2003.

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ation curbs foreign demand for domestic products. Both developments have been noticeable for some time and are also contained in most of the forecasts for 2004.

The weak trend in bank loans is also often seen as a risk factor. Although this can be explained predominantly by the cyclically-induced muted demand for credit on the part of the private sector, the banks also appear to be exercising more caution in their lending activities in response to the greater risks involved (see also article on pages 67 to 76 of this Monthly Report). Thus, higher interest rates are being charged for high-risk loans

⁵ Deutsche Bundesbank, Ways out of the crisis – Some points to consider for economic policy in Germany, March 2003 (downloadable from the internet under www.bundesbank.de).



and the criteria for collateral are more stringent. In addition, there have been cutbacks in credit volume. Credit supply behaviour as a whole has become more prudent.

The potential interaction of the various negative factors could at worst intensify the economic weakness or even further delay the expected recovery. However, it is unlikely that the economy will slide into a self-perpetuating downward spiral of price level decline and contractionary tendencies on the product and financial markets. Risks from exchange rate developments are normally only temporary as their price effects taper off after a certain time. Even a – welcome – fall in the price of oil and the resultant dampening of consumer prices is hardly likely to create a permanent deflationary impetus. Despite certain difficulties regarding financing via bank loans, in particular on the part of small and medium-sized enterprises, it would be incorrect to speak of a general credit crunch; the banking system still functions normally and loans are still available at market conditions equivalent to risk. Furthermore – as already mentioned – there are counter-forces in European monetary union which hinder the emergence of deflationary tendencies in individual regions, even in ones as large as Germany. The improvement in competitiveness associated with the price stability achieved here in Germany will, in the medium term, strengthen the demand for domestic products and thus stimulate economic activity.

Low probability of deflationary downward spiral

All in all, there is therefore currently nothing to indicate that Germany is slipping into deflation with a sustained price level decline

and a self-perpetuating real economic downhill slide. Nevertheless, given the fragile nature of the general economy, price trends and the aforementioned risk factors should be monitored and analysed carefully so as to detect potential deflationary developments in a timely manner.

Conclusions for economic policy

Germany is currently one of the euro-area countries with the highest degree of price stability and also has a substantial effect on the development of the EMU price aggregate owing to the size of its economy. Consumer price inflation is just under 2% in the euro area at present and is therefore within the range in which the ECB Governing Council considers that price stability can be maintained in the medium term. A stable price level is macroeconomically advantageous. It encourages competition and helps to avoid conflicts with regard to wage policy or income distribution. Stable prices are therefore an essential prerequisite for adequate economic growth.

In principle, both inflationary as well as deflationary developments are to be averted in order to maintain price level stability. Moreover, in the EMU the knock-on risk of a crisis being passed on from a large member state to other countries must be taken into consideration. Monetary policy takes deflationary risks into account in two ways. Firstly, the ECB Governing Council – in its recent specification of its monetary policy strategy – spelled out its stability policy expectations

with a medium-term euro-area inflation rate of “just under 2%”. In view of the current divergence of inflation rates, this goal offers all the member states a sufficiently large safety margin for deflation. Secondly, the ECB Governing Council has created monetary conditions – most recently through its decision of 5 June 2003 to lower interest rates – which allow adequate scope for renewed positive real economic growth and, from the point of view of monetary policy, realisation of the stability objective under the ECB’s strategy.

The focal point of the debate on deflationary risks in Germany is above all the weak growth of the German economy since the mid-1990s, which is marked by a loss of confidence among investors and consumers, falling capacity utilisation, rising unemployment and protracted restraint in investment. This persistent stagnation must be overcome by means of structural reforms. The implementation of overdue reforms would improve the German economy’s resistance to macroeconomic disruptions and provide protection against deflationary risks in the medium term.

The key aspects of such a comprehensive structural reform are sustainable public finances together with a reduction in output-inhibiting and incentive-distorting subsidies and social benefits, a reform of the pension and health insurance schemes which takes into account the demographic strains and high non-wage labour costs in Germany, as well as an overhaul of the institutional framework on the labour market. As the positive long-term effects of such reforms may be ac-

*Monetary
policy takes
risks into
account...*

*...but structural
reforms are
crucial*

accompanied by negative income effects, at least in the short term, it is important to implement the reform measures in a way that bolsters confidence in the reliability and dur-

ability of the policy. In this case, positive expectation effects may, even in the short term, help to overcome the stagnation.