U.S. Economy Contracting – Economic Policy Reacts with Massive Countermeasures

The U.S. economy has been slowing down perceptibly since late autumn of last year, and the rattle in the world economy's engine can now be felt around the globe. The slump in investment activity, in particular, and the fact that private consumption can only be financed through recourse to monetary assets, i.e. through 'dissaving', are causing concern. But U.S. economic policy is living up to its responsibilities in this area. Fiscal policy is still geared towards stimulating private consumption this year, while monetary policy has switched to a distinctly expansionary course. There is no danger of accelerated inflation. Econometric simulations show that this monetary policy approach is likely to succeed.

Economic engine USA begins to stall

The U.S. economy began to slacken perceptibly in late autumn of last year. While national output had expanded at an annualised rate of 4.6% in the summer half of 2000 compared with the winter of 1999/2000, output grew by only 1.4% in the winter of 2000/2001.[1] Given that the USA performed the role of engine of the world economy practically without interruption throughout the 1990s, while other economic areas would hardly have achieved the same dynamism on their own strength, the engine trouble is being painfully felt world wide. Both Japan and Europe are suffering significant losses in growth as a result. In Germany alone, growth is likely to decline by 0.6 percentage points.[2]

The boom in the U.S. economy during the 1990s was based on domestic demand, in other words on sprightly investment and vigorous expansion of private consumption. Investment growth has slowed down considerably since last autumn. The expansion of private fixed capital formation fell from 9% in the summer half of the year to 0.6% in the winter half. The decline in private consumption growth, which decreased from 4.4% to 3.2%, was less severe, and private consumption thus certainly continued to have a supportive effect on the economy (cf. figure 1: Components of growth).

However, the relatively strong expansion of private consumption also represented a growing burden on the net monetary stocks of private households. Although employment (cf. figure 1: Employment), especially in manufacturing industry, was in decline, which should have encouraged precautionary saving, from autumn 2000 onwards 'dissaving' actually increased. Following a continued average savings rate of zero percent in the summer half of 2000, a negative savings rate of –0.9% of disposable income was recorded for the first time in the winter of 2000/2001.

The fact that private consumption has weakened, though it is still relatively strong, is one reason for the significant reduction in inventories (the change in private inventories fell from 0.6% of real GDP in the fourth quarter of 2000 to –0.2% in the first quarter of 2001). The more important reason was that expectations became increasingly pessimistic. In autumn of last year, the first signs of the slowdown did not lead to reduced output but to increased inventories. However, as the view became widespread that the decline would be more severe than initially expected, inventories, now seen as excessive, were also reduced at the beginning of this year.

Although the business climate has improved slightly (cf. figure 1: Business climate) – in part as a result of the Federal Reserve Bank's drastic interest-rate cuts – the economic situation in the USA is currently extremely fragile. The substantial slump in investment activity is worrying. While reticent investment behaviour is undoubtedly a normal reaction to the fact that the bubble has now burst in the 'New Economy' and that the euphoria on the equity market has faded, the really decisive factors are the current significant compression of profits ad the lower sales and profit expectations. Both gross and net profits declined in the last two quarters at two-figure annualised rates. Because the decline in output did not immediately lead to redundancies, there was a corresponding mathematical decrease in the labour productivity of the national economy; an increase of 2% in the fourth quarter of 2000 was followed by a decline of 1.2% in the first quarter of 2001. This, together with a sharp increase in hourly wages, led to a substantial increase in unit labour costs by 5.2% in the first quarter of 2001 compared with one year earlier. In addition, U.S. enterprises are now also spending more on energy.[3] However, this development – given a sharp decline in demand – has not been translated into a corresponding

[1] Unless otherwise indicated, the annualised changes in the seasonally adjusted figures presented below are changes on the previous period.

[2] Cf. 'The world and the German economy in the spring of 2001'. In: *Economic Bulletin,* vol. 38, no. 5, May 2001.

[3] Cf. A. Greenspan's speech to the Economic Club of New York, 24 May 2001; *(http://www.federalreserve.gov/boarddocs/speeches/2001/200105242/default.html)*

Figure 1
USA: Growth Indicators

1 Current Activity Diffusion Index, Business Outlook Survey, Federal Reserve Bank of Philadelphia, seasonally adjusted and sliding three-month average. — 2 Calculation based on number of jobs, figures are seasonally adjusted and smoothed out, annualised growth rate compared with previous month. — 3 Excluding energy and unprocessed foodstuffs. — 4 Each aggregate's contribution to growth as a share of total GDP growth.
Sources: Bureau of Economic Analysis (Survey of Current Business); Bureau of Labor Statistics; U.S. Federal Reserve System; DIW calculations.

increase in inflation. Inflation amounted to 3% and 3.3% in March and April, respectively, compared with the previous year (cf. figure 1: Cost-of-living index).

The situation is also fragile because it is doubtful whether private consumption will continue to prove supportive to the U.S. economy. The adjustments to output in the traditional sectors of industry, in particular, but also in New Economy firms are certainly likely to substantially dampen the increase in the disposable income of private households.

What is more important, however, is the fact that it will hardly be possible to further reduce the savings rate of private households or, more precisely, further reduce monetary assets. U.S. households cannot finance their consumption on the never-never indefinitely. On the contrary, the likely result of increased job uncertainty, lower increases in disposable income, and lower share prices and dividends is that sooner or later private households will 'dissave' less or even start building up net monetary assets again. This alone will further curb the expansion of private consumption.

If the reduction of monetary assets were to come to a halt within the near future, then the current slowdown could lead to a recession. But this is not inevitable. The avoidance of a recession depends to a large extent on the reaction of economic policy. If policy makers manage to stabilise the profit expectations of industry through timely and decisive action, then the income losses should be limited, uncertainty will decrease and both investment and private consumption will grow again.

U.S. economic policy has taken just such a stabilising stance. Financial policy will use tax cuts to help neutralise the dampening effect of an increase in the private savings rate through the expansive effect of a reduction in the government savings rate (budget surpluses). And monetary policy is already using relatively low interest rates to ensure that loans are made easier for investors while building up of monetary assets is becoming less attractive for private households.

Tax reform stabilises private consumption

After the new government took up office, in February it presented a detailed blueprint for a package of tax reforms.[4] The background to the proposal were forecasts by the Congressional Budget Office (CBO) that of the total budget surpluses of US-$ 5 600 billion expected up to 2011, with the exclusion of health and social insurance spending (and a certain reserve), a total of US-$ 1 600 billion would be available for distribution over the entire period. In order that no potential for additional government spending programmes would be created, tax cuts, in particular, were to be used to feed these funds back into the wallets of private households. In giving a share of the budget surplus back to private households, the implicit aim of the proposal is to bind future total government spending in an even tighter way to specific rules and to further restrict the discretionary room for manoeuvre for spending programmes over the next decade.

The main aspects of the approved reform include lower tax rates, higher children's allowance, the (re)-introduction of tax relief for married couples and the abolition of wealth tax. Together with a number of smaller items – especially in the area of child-rearing – the current forecast predicts that the tax reform will cost US-$ 1 350 billion up to 2011.[5] This corresponds to relief amounting to over 1% of nominal GDP at the beginning of the period and to somewhat less than 1% at the end of the period.

Although this tax reform has both allocative and distributive effects,[6] what concern us here are the consequences for economic growth. The new tax scale will change the effect of the automatic stabilisers built into the tax system, which soften the effects of cyclical fluctuations. The top tax rate is to be reduced by over 6 percentage points, while the tax rates in the medium-income bracket will each be reduced by only three percentage points. This will modify the progression of the tax system. At the same time, a low entry-level tax rate will be introduced for the low income bracket.

In order to assess the consequences of the tax reform for the economy, it is important to look at how the cumulated relief effects are distributed over time. Around 30% of the tax reductions will take effect before 2006, while the remaining 70% will probably not become effective until between 2006 and 2011.[7] The uneven distribution over time is due to the gradual expiry of the current regulations and the phased reduction of the tax rates (as well as the total gradual abolition of wealth tax). Thus the economic effects of the tax reform will be weaker this year and next year at least than the average effect for the entire period. The result of the dis-

[4] Cf. 'Blueprint for New Beginnings'; (*http://www.whitehouse.gov/news/usbudget/blueprint/budtoc.html*).

[5] According to the CBO's May 2001 estimates. Cf. Congressional Budget Office, 'An Analysis of the President's Budgetary Proposal for Fiscal Year 2002'. Report to Congress. (*http://www.cbo.gov/index.html*)

[6] Cf. the essays on the home pages of various American think-tanks, such as the Brookings Institution and the Heritage Foundation (*http://www.brook/edu*; *http://www.heritage.org*).

[7] Cf. Congressional Budget Office, 'An Analysis of the President's Budgetary Proposal for Fiscal Year 2002' (Report to Congress), p. 6. The calculation is based on the 'compromise proposal' between the Senate and the House of Representatives.

Main Elements of the U.S. Government's Tax Reform Programme[1]

Measure	Estimated lost revenue (cumulative up to 2011)
Tax rates Introduction of a 10% entry-level tax rate for the first US-$ 6 000 or US-$ 12 000 of the taxable income of singles and married couples, respectively. Phased reduction of tax rates: the top tax rate will be reduced to 33%, all other tax rates reduced by 3 percentage points; the 15% tax rate will be maintained, but there will be a new entry-level tax rate of 10%.	US-$ 840 billion
Children's allowance Increase in children's allowance for children living in the household from US-$ 500 to US-$ 600 this year, and gradual increase to US-$ 1 000 by 2010.	US-$ 190 billion
Deduction for jointly assessed married couples Reduction of disadvantages for jointly assessed married couples The allowable deduction will be raised from 2005 onwards.	US-$ 60 billion
Abolition of wealth tax The tax rates will be reduced from 55% to 45% in 2007, while at the same time the tax-free allowances will be gradually increased to US-$ 3.5 million in 2007; wealth tax is to be abolished as of 2011, while gift tax will remain in force.	US-$ 145 billion

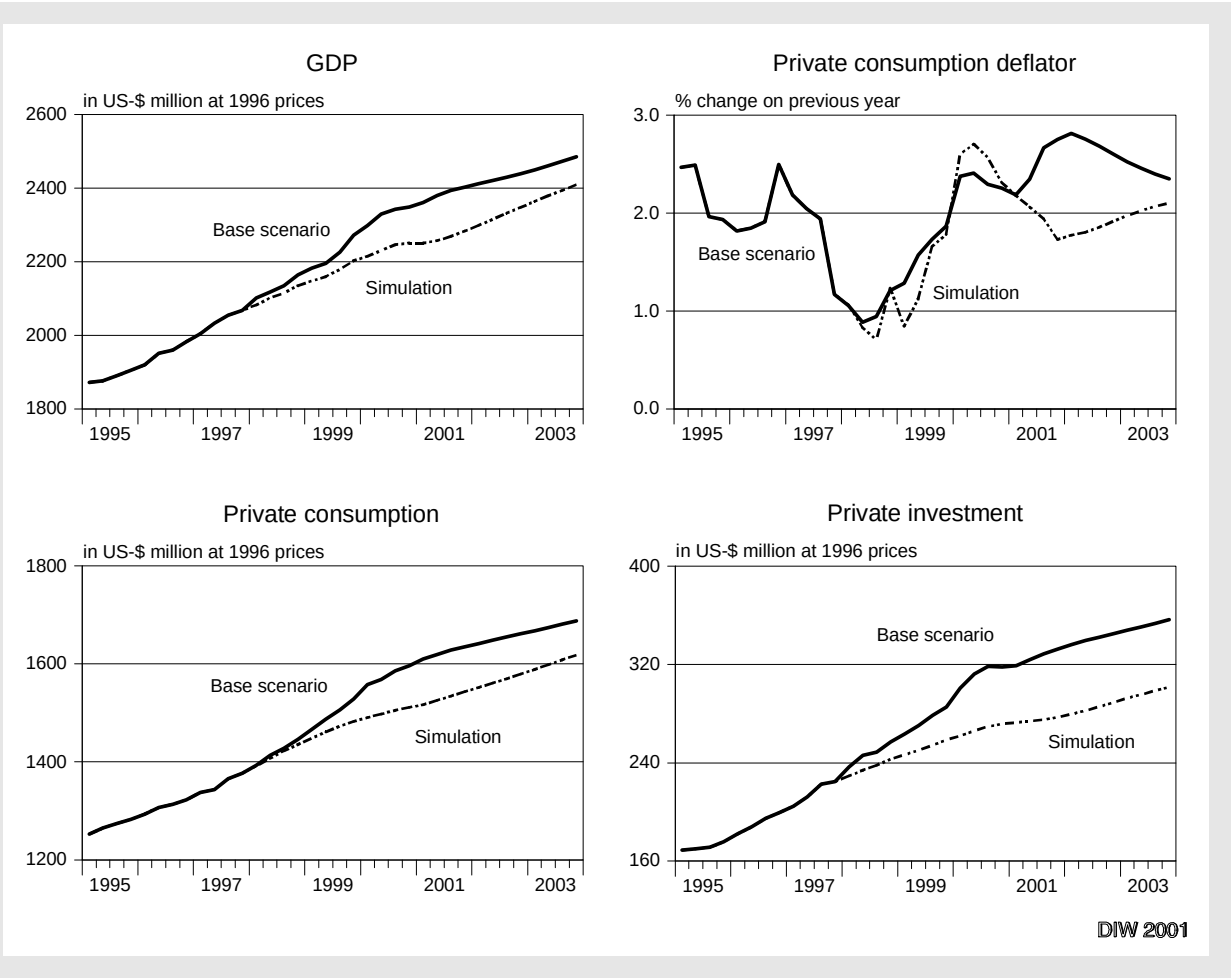
1 Resolution of 26 May 2001.
Source: CBO calculations.

cussion between the government and the Congress was that owing to the weak state of the economy, at least US-$ 100 billion will become effective in fiscal year 2001 (from July 2001 to June 2002), some of this during the calendar year 2001.

Under the terms of the bill passed on 26 May 2001 (see Overview), the reduction of the entry-level tax rate for the first US-$ 6 000 of the taxable income of singles or the first US-$ 12 000 of the taxable income of married couples to 10% will be backdated to 1 January 2001. All U.S. tax payers who have paid 'too much' tax since the beginning of 2001 will receive a cheque for US-$ 300 or US-$ 600 from the tax office this summer. Similarly, the reduction of the tax rates in the higher income groups (initially by one percentage point) will already take effect on 1 July. The children's allowance will also be increased this year, by US-$ 100 per child. These benefits will be augmented in 2002 by refunds under the annual adjustment of wage tax based on the lower tax rates now defined for 2001. According to CBO calculations, this will have an effect of around US-$ 50 billion this year and US-$ 75 billion next year. In mathematical terms, this would correspond to economic stimulation amounting to half a percentage point of nominal GDP this year and to three quarters of a percentage point next year. To compare: the German tax reform will have an effect of over one percentage point of GDP this year. Further tax cuts will be implemented in 2003 and especially in 2005. In 2005 they will amount to almost one percentage point of GDP.

What must be asked in the case of the USA is whether the tax relief for private households will lead to a corresponding increase in consumption or whether – also in view of the precarious economic situation – the savings rate will increase. In particular, the rapid distribution of money via collection-only cheques is likely to stimulate consumption this year already among the more consumption-oriented lower-income groups. The total effect will mainly depend, however, on whether profit and investment expectations are stabilised and lead to increased output and employment. It is here, especially, that interaction between fiscal policy and monetary policy is required.

Figure 2
Simulation of Monetary Policy in the USA



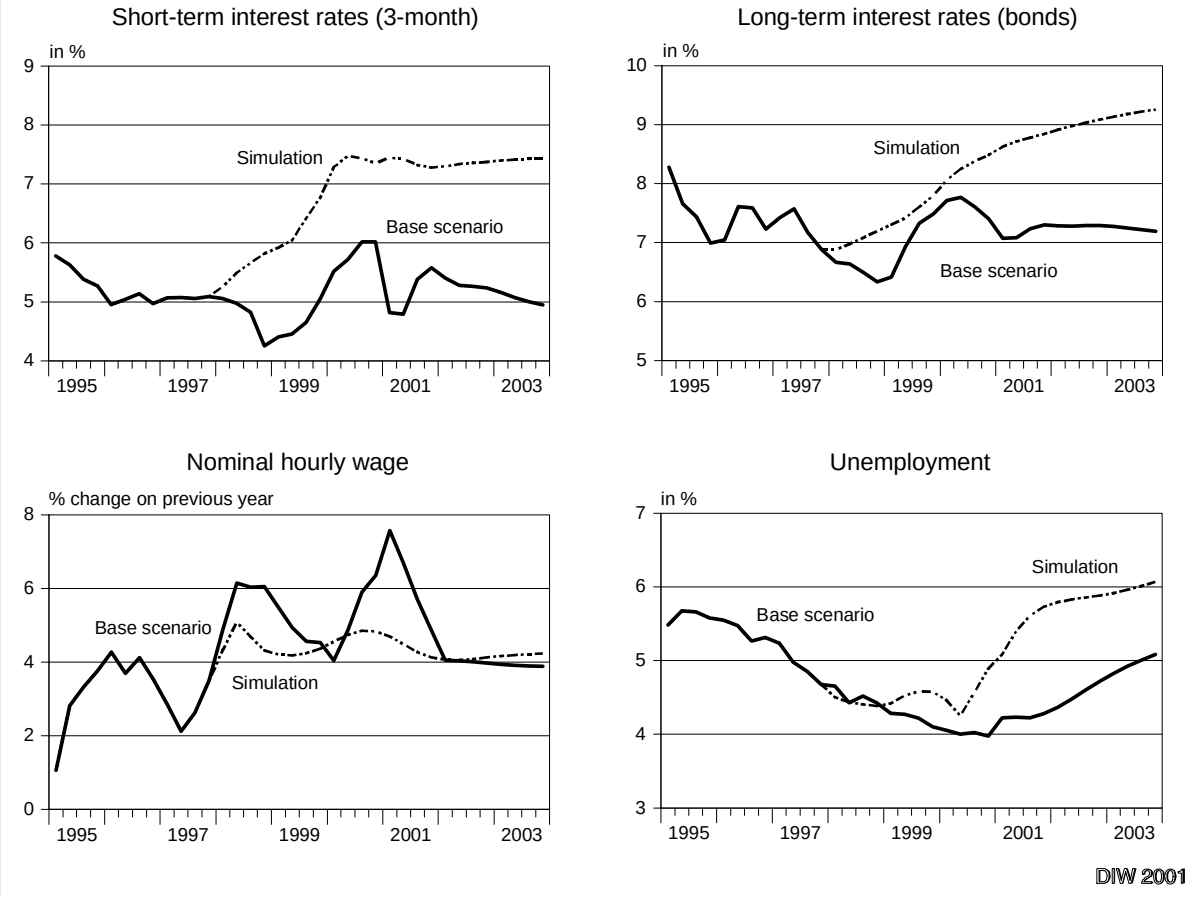
The base scenario represents the Fair model's standard solution from the second quarter of 2001 onwards. The reaction function remains unchanged.
The coefficients of the reaction function were changed in the simulation (see note in Box), and a model prognosis was drawn up starting from the first quarter of 1998.
Sources: http://www.fairmodel.econ.yale.edu/; DIW calculations.

Monetary policy takes expansionary stance

In view of the slowdown in growth, over the last few months the Fed has reduced its interest rates in a number of rapid and resolute steps from 6.5% to 4%, in other words by a total of 2.5 percentage points. According to the usual multipliers borrowed from the commonly used macro-econometric models,[8] an interest-rate reduction of one percentage point can be expected to have an expansionary effect on real GDP of between 0.4 (Fair model) and 0.6 (FRB model) percentage points in the first year, and of between 1.3 (Fair model) and 1.6 (FRB model) percentage points in the second year. The reduction of the prime rates by 2.5 percentage points since the beginning of this year is thus already likely in itself to increase real growth by between 1 and 1.5 percentage points. Thus, the Fed has clearly demonstrated once again how seriously it takes its economic policy task of reacting quickly and appropriately to a slowdown. This confirms the empirically proven impression that the Fed's objective function is broadly defined and also gives according weight to employment growth. This differentiates the policy of the Fed from the policy of other central banks – such as the Bundesbank in the past and now the European Central Bank – whose reactions give much more significance to combating inflation.[9]

In order to illustrate the effects of different central bank strategies for the USA, appropriate simulations were carried out. What would be the situation in the USA if the Fed had had a more narrowly defined function, geared more towards battling inflation?

Figure 2 (contd)
Simulation of Monetary Policy in the USA



The base scenario represents the Fair model's standard solution from the second quarter of 2001 onwards. The reaction function remains unchanged.
The coefficients of the reaction function were changed in the simulation (see note in the box), and a model prognosis was drawn up starting from the first quarter of 1998.
Sources: http://www.fairmodel.econ.yale.edu/; DIW calculations.

The interest-rate reaction function of the Fed, which in addition to the inflation rate also takes the level and development of unemployment into account, was accordingly changed in the Fair model to this end (see notes in the box).

The results for the main values are shown in figure 2. The empirically estimated reaction function of the Fed represents the base scenario. This monetary policy stance also implies a restrictive course for the last two years. The figures in the base scenario are 'real' figures up to and including the first quarter of 2001; from the second quarter of 2001 onwards, predictions are made based on the empirically estimated reaction functions for the USA. The base scenario shows that a slowdown in the economy gives rise to strong interest-rate reductions, which lead to economic recovery in the following year at the latest.

For the alternative scenario the coefficients for the reaction function (see notes in the box) were changed. It was assumed in the simulation that the Fed's policy from 1998 onwards was geared more towards combating inflation. The short-term interest rate is higher than in the reference scenario for the entire simulation period, as is the long-term interest rate.[10] The results show clearly that if monetary policy had been more restrictive, the upturn in the USA would not have achieved the

[8] The analysis of the U.S. economy is based on Ray Fair's model and the Federal Reserve Bank's model.

[9] This type of reaction function is often termed 'conservative' in the literature.

[10] In the Fair model the long-term interest rate is directly linked to the short-term interest rate.

Box

Simulations Using the Fair Model

Ray C. Fair's U.S. model was used for the macro-economic simulations. Fair's model is a tried-and-tested structural macro-economic model which is freely available on the Internet at *http://fairmodel.econ.yale.edu/.* The model is a demand-oriented economic model with rational expectations, which uses behavioural equations to illustrate the interaction between macro-economic variables. The strength of the model lies in the fact that it links the values from the national accounts with the aggregated monetary balance and can thus also illustrate wealth effects. The exogenous values used in the model, such as export demand and import prices, are taken from a multi-country model also developed by Ray C. Fair.

The reaction function of the central bank is extremely important when a model of this kind is used to analyse monetary policy. In the Fair model, the Fed's interest-rate reaction depends especially on the domestic inflation rate, as well as on the level of and change in unemployment. A dummy variable was introduced for the disinflation-policy period under the former Fed chairman Paul Volcker.[1]

Simulations were used to help estimate what the situation would be in the USA if the Fed had followed a 'more conservative' policy.

Unfortunately there have been few reliable estimations so far on the reaction function, for example of the ECB. However, our own estimations for Germany under the regime of the German Bundesbank suggest that the coefficient for the reaction to inflation must be greater than those of the Fed's reaction function, while that for the reaction to unemployment must be much smaller than those of the Fed's reaction function. This is in accordance both with the estimations in Fair's MC3 multi-country model and with the findings of other researchers. For theoretical reasons, Clarida, Galí and Gertler use a coefficient for the reaction to inflation that is greater than one.[2]

In the simulations presented here, the coefficients for the reaction function to inflation have been doubled, the coefficients for the Fed's reaction to the level of unemployment have been reduced by 30% and the coefficients for the change in unemployment have been reduced by 50%. Tests based on a higher reduction of the coefficients showed that the system becomes unstable.

[1] Ray C. Fair has pointed out in a number of works that he can find no significant difference between the coefficients for the reaction of the Fed to inflation risks for the periods before and after Paul Volcker. Cf. Ray C. Fair: 'Actual Federal Reserve Behavior and Interest Rate Rules'. In: FRBNY Economic Policy Review, Vol. 7, No. 1, 2001, pp. 61-72.

[2] The theoretical justification is the risk of monetary destabilisation of the system, in other words of a self-reinforcing inflation process that is not combated energetically enough by the central bank. Cf. Richard Clarida, Jordi Galí, Mark Gertler: 'Monetary Policy Rules and Macroeconomic Stability: Evidence and Some Theory'. In: Quarterly Journal of Economics, Vol. 115, 2000, pp. 147-180. Clarida et al.'s argument only holds water, however, if wealth effects are left out of the equation. If monetary impulses are not only transmitted via the real interest rate, however, but also via the revaluation of wealth, then the coefficient must not necessarily be greater than one. In Fair's model, too, the estimated coefficient (0.68) is well below one.

same ebullient dynamism as in the past two years. Both investment and private consumption would have been weaker, while the economic upturn would have been curbed much sooner by monetary policy.

The findings on inflation and unemployment are particularly interesting. It turns out that if the Fed had been committed to combating inflation with greater vigour, the USA's very positive labour market trend would not have ensued because the upturn would have come to an earlier halt due to the monetary restriction. At the same time, the broader definition of the Fed's monetary policy goal does not perforce lead to a wage-price spiral. Even with the less tough monetary policy in force, the increase in unemployment at the start of the downturn in the USA results in lower wage demands and weaker inflationary pressure. In the base scenario – which, as we said, is based on the empirically estimated reaction function of the Fed – inflation still increases up to the beginning of 2002 (to over 3%), but in the long term the Fed's policy results in the same inflation rate as in the simulation of a tougher battle against inflation. However, the unemployment level is significantly lower in the base scenario than in the alternative scenario. Thus, while a tougher battle against inflation prevents excessive inflation in the short term, this is at the price of higher unemployment in the long term.

Conclusion

The current direction of U.S. economic policy gives cause for hope that the quite severe downturn will be overcome quickly and efficiently. Whether the U.S. economy will develop a growth trend as strong as that at the

end of the 1990s is questionable, however. There are too many indications that the strong dynamic in the period 1998 to 2000 was partially due to the speculative bubble on the equity market and to a New Economy fever, which are not likely to recur in the near future. Nonetheless, economic policy will pursue a stance targeting growth and employment, which will not lead to inflation. This monetary policy strategy is very different from that followed by the Bundesbank in the past and now pursued by the ECB. The ECB's approach leads to strong growth trends being brought to an early halt by monetary restrictions for fear of inflationary excesses. This prevents long-term reduction of unemployment.

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