

## Roger W Ferguson, Jr: Economic outlook for the United States

Remarks by Mr Roger W Ferguson, Jr, Vice Chairman of the Board of Governors of the US Federal Reserve System, at the Howard University Economics Forum, Washington DC, 3 March 2006.

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I appreciate the opportunity to speak to you today about the macroeconomic outlook for the U.S. economy. I will discuss both the baseline outlook and some of the risks to that outlook. As always, the views that I will be expressing are my own and do not necessarily represent those of my colleagues at the Federal Reserve.

Last year was, in some respects, a difficult one for the American people and the economy. As you recall all too well, the hurricanes in the fall inflicted a terrible human toll, in terms of both the number of lives taken and the dislocation of so many people. On the economic side, the storms destroyed residential and business capital along with critical infrastructure and also disrupted economic activity, particularly in the energy and petrochemicals industries and at ports on the Gulf Coast. These effects also contributed to the sharp increase in energy prices that occurred last year. Both the aftermath of the storms and the influence of the higher energy prices are reflected in the slower growth of real (that is, inflation adjusted) gross domestic product in the fourth quarter of last year.

Even so, over the course of the year as a whole, real GDP rose a bit more than 3 percent, payroll employment increased significantly, labor productivity posted another solid advance, and the unemployment rate moved down further. Increases in overall consumer prices were boosted by the rise in energy prices, but increases in prices apart from those for food and energy--that is core inflation--remained moderate. In light of the challenges confronting the economy, this was quite a favorable outcome.

Moreover, much of the slowdown in growth last quarter reflected factors that are unlikely to persist. First, as I mentioned, the hurricanes significantly damped economic activity in the Gulf Coast region and led to a sharp increase in energy-related imports. Although the recovery of economic activity in the worst-affected areas will take a long time, many of the affected industries, including those in the energy sector, have made considerable progress toward returning their production to normal levels. Second, much of the weakness in consumer spending came from a sharp drop in motor vehicle sales after the end of last summer's employee pricing programs. Third, defense spending, which can be volatile from quarter to quarter, dropped sharply in the fourth quarter. The unwinding of these factors should provide some support to growth of real activity in the near term.

Indeed, the most recent data suggest that economic activity in 2006 is off to a solid start. Payroll employment expanded briskly in January--the latest month for which figures are available--on top of sizable gains over the preceding two months. Although these increases contain some bounceback from the effects of the hurricanes, they also likely reflect underlying strength in labor demand--an impression that is corroborated by the recent low readings on initial claims for unemployment insurance. In addition, the underlying pace of activity in the industrial sector has been quite robust recently. Real household spending continued to climb in January; although unseasonably warm weather that month left an imprint on the data, the result suggests some underlying strength in this sector. Housing activity has, on balance, been a bit softer recently but still remains at a high level.

Overall, the fundamentals appear sufficient to support continued economic expansion. Underlying productivity growth remains strong, the financial positions of households and businesses remain conducive to spending, and, if we have no further run-up in oil prices, the drag on activity from higher energy prices should diminish over time. And the outlook for activity abroad is quite favorable. In Japan, the expansion appears to be broadening, and signs suggest that the Japanese financial sector may finally be stabilizing. Prospects in Europe are gradually improving, particularly in Germany, after several years of sluggish growth. Many emerging market economies also are doing well, with exports providing a significant boost to activity in these countries. These developments should provide some ongoing support to the U.S. economy.

## **The inflation outlook**

The continued surge in energy prices was the dominant factor affecting inflation last year. Rising energy prices contribute to consumer inflation in several ways--by boosting prices for gasoline and other energy goods; by raising the price of non-energy goods and services as firms pass on increased energy costs; and by putting upward pressure on expectations of future inflation. Despite those pressures, core inflation has, as I mentioned, remained contained, a result likely attributable to a range of causes.

The decline in the economy's energy intensity is one of the factors that has restrained the pass-through of energy prices into core inflation in recent decades. As energy prices started to rise in the 1970s, households responded by purchasing products that were more energy efficient and adjusting their consumption habits in other ways. Businesses responded by designing and purchasing capital goods that were more energy efficient and by redesigning production processes in ways that used less energy. One measure of these changes in energy intensity is the ratio of energy use to real GDP, which has fallen more than half since the mid-1970s.

Econometric evidence suggests, however, that the pass-through of energy prices to core inflation has dropped by more than would be implied by the decline in energy intensity. In particular, we often look at forecasting equations for core inflation that include a term for the price of energy, weighted by a measure of energy intensity. Using data for years preceding 1981, the pass-through of energy prices to core prices is large and statistically significant. In the period since 1981, the evidence of pass-through of energy prices to core inflation is more limited. Because the energy-price term in these models already controls for the decline in energy intensity, this result suggests that other factors also are restraining the pass-through of energy prices to core inflation.

Although many factors could have led to these results, a likely explanation is that inflation expectations have become better anchored. In the 1970s, monetary policy unfortunately allowed large increases in energy prices to have a persistent effect on inflation, a policy that undercut the Fed's credibility and caused long-run inflation expectations to be more volatile. Since that time, however, the Federal Reserve has been more aggressive in fighting all sources of inflationary pressures, including energy price changes. This effort appears to have paid off not only in low and stable inflation but also in a reduction in the sensitivity of long-run inflation expectations to energy prices. The reduced sensitivity is evidenced by how little movement has appeared in survey measures in response to the rise in energy prices over the past two years.

This same tendency can be seen in longer-horizon measures of inflation compensation derived from a comparison of yields on nominal Treasury securities and those on Treasury inflation-protected securities (TIPS), which are indexed to a measure of price change. Specifically, for the period five to ten years ahead, the TIPS-based measure of inflation compensation has remained well anchored in recent quarters. Moreover, econometric evidence suggests that since early 2004, energy prices have had only a modest effect on TIPS-based inflation compensation at relatively longer horizons. Because inflation-indexed securities were not issued in the 1970s and early 1980s, we cannot know for sure how these recent effects differ from those that might have operated earlier, but I believe that the difference would be stark.

All told, increases in energy prices over the past couple of years probably added about 1/2 percentage point to core inflation in 2005, and the lagged pass-through of past increases in energy prices appears likely to add roughly the same amount this year, provided that energy prices do not rise significantly further.

## **The term structure of interest rates**

Another development that has received considerable attention recently is the term structure of interest rates--the yield curve. Typically, longer-term interest rates are higher than short-term rates, so a curve plotting yields would rise as maturity lengthens. However, since late last fall, yields on longer maturities have been equal to or less than those at some shorter maturities, creating a flat to inverted yield curve. Going back to the 1950s, a simple picture suggests that the yield curve tends to invert before recessions. In addition, some academic research, along with recent market commentary, suggests that the shape of the yield curve is a strong predictor of future economic growth.

However, the Treasury yield curve is now only slightly inverted between one and five years and is roughly flat beyond that. Moreover, yield curves can be flat or inverted either because short-term

interest yields are relatively high or because long-term rates are relatively low. Historically, flat or inverted yield curves owing to unusually high short-term rates have tended to be followed by slowdowns, but that has not been the case for those episodes of inverted yield curves owing to relatively low long-term rates. And, in the current situation, the flatness of the term structure results largely from relatively low long-term yields.

In addition, the relationship between the yield curve and future economic growth may have weakened in recent decades because the decline in inflation, the dropoff in the variance of economic growth since the mid-1980s, and financial innovation may have altered the sensitivity of households and businesses to changes in rates. Indeed, in simple regression models estimated with recent data, a change in the slope of the term structure has a smaller effect on economic growth than when the models are estimated with data taken from a longer sample period. And models using the more recent data anticipate more rapid real GDP growth in coming quarters than do models using the longer sample period.

The relationship between the yield curve and future growth also appears to depend on the factors that are keeping long-term rates low. Long-term interest rates embody both expectations of future interest rates as well as the amount of compensation demanded by investors for the risk of unanticipated movements in real interest rates and inflation--that is, the term premium. By historical standards, the term premium appears to have come down significantly in recent years and to be quite low. A flat yield curve resulting from low term premiums should have quite different implications for future growth than would a flat yield curve resulting from tight monetary policy. Indeed, an exogenous decline in term premiums would make financial conditions more accommodative and would, other things being equal, be followed by higher growth. To account for these developments, an estimate of the term premium can be added to a simple regression model of the relationship between real GDP growth and the slope of the yield curve. Forecasts of future real GDP growth from this extended model are higher than those from models that include only the slope of the yield curve. And the forecasts from this extended model currently are very close to the private-sector consensus forecast.

Thus, we have reasons to believe that the current configuration of the term structure is not signaling an economic downturn. At the same time, the amount of economic stimulus arising from low long-term rates is probably not especially large. Indeed, low long-term rates may be signaling relatively low demand for capital around the world relative to saving, which in turn may reflect a lack of sufficiently attractive investment opportunities. For example, in the United States, the nominal share of business fixed investment in GDP has risen recently only to about its long-run average--a level arguably somewhat lower than might be expected given the low level of long-term interest rates. Because interest rates equilibrate the supply and demand of capital, an excess of desired saving relative to desired investment would tend, all else equal, to hold down long-term rates. In turn, low rates have stimulated activity in areas outside of business investment: Housing has been boosted significantly, and consumer spending may also have received some additional impetus.

### **Some risks to the outlook**

All told, the U.S. economic expansion appears to be solidly on track. Nevertheless, the outlook for real activity faces a number of significant risks, including the possibility that house prices and construction could retrench sharply and that energy prices could rise significantly further.

Housing construction has been a significant source of strength in this expansion, and consequently, some analysts have suggested that a correction in this sector could take a big bite out of growth. By my reading, the incoming data suggest that the housing market has begun to cool somewhat, but they do not point to a sharper falloff. Sales of both new and existing homes have declined in recent months, although they remain at a high level; and after cutting through volatility likely related to swings in weather, housing starts appear to have softened recently. Moreover, other indicators of activity, along with anecdotal reports, also seem consistent with an easing, but not with a sharp downward correction.

Of course, house prices may become an area of vulnerability. House prices have increased at a remarkable rate during the past several years, and for some fundamentally sound reasons, including low mortgage rates. However, the possibility remains that the recent run-up in prices may be greater than can be justified by the fundamentals and that increases in house prices may moderate or undergo a sharper adjustment. The latest data on house prices--including the figures released this

week--provide a hint that a moderation in house prices, and nothing more serious, may now be under way.

The primary channel through which a deceleration or downturn in housing prices would be likely to affect the economy is the so-called wealth effect. That is, the path of house prices directly affects the value of housing wealth, and changes in wealth influence households' consumption and saving. Estimates from the Federal Reserve Board staff's large econometric model and from various consumption equations suggest that wealth effects are somewhere in the neighborhood of 3-1/2 cents on consumption for every dollar of change in wealth, with roughly half the effect realized within a year.

However, these estimates are uncertain, and plausible estimates of the wealth effect range from about 2 cents to 6 cents for every dollar of change in wealth. Moreover, these estimates are obtained from equations that look at changes in total wealth, whereas historically, much of the variation in wealth has reflected movements in equity prices. Although efforts have been made to isolate the effects of changes in different types of wealth, it is difficult to get precise estimates of wealth effects specifically for real estate. And, it is always possible that the effects of housing wealth on consumption might have changed in ways that would be hard to identify using standard econometric modeling techniques. For example, the effects could, perhaps, have increased in the last decade as a wave of financial innovation made it easier and less costly for households to tap accumulated housing equity.

A decline in consumer confidence is another channel through which a correction in house prices could affect the economy. In the current situation, a sizable deceleration in house prices could have an outsized effect on consumer confidence and thereby reduce household spending by more than is implied by conventional estimates of the wealth effect.

Another possible avenue for gauging the effects of housing prices on the economy is to look at experiences in other countries. House prices have risen markedly in recent years in many industrial countries amid low long-term interest rates, ample liquidity, and steady economic growth. Although movements in real house prices flattened out or turned down in several countries in the first half of 2005, they have since recovered for the most part. Of the countries that have seen recent booms in house prices, Australia has experienced a decline in real house prices over the past year; real prices are down about 3 percent since their peak at the end of 2003. During this period, residential investment contracted, and the growth of real consumption slowed a bit; but the economy continued to grow, in part because investment in other sectors picked up in response to strong global demand.

More countries have experienced a slowdown in rates of increase in home prices than experienced an outright decline. For example, in the Netherlands--where residential property prices rose particularly rapidly in the late 1990s--the rate of increase slowed significantly beginning in 2000. In 2002 and 2003, the economy experienced a mild recession, with domestic demand contracting as a result of declines in investment (including residential investment) and contracting consumption. But, even so, the economy started to recover in 2004 and 2005, and house prices there have continued to rise in recent years.

In the United Kingdom, house prices also flattened out last year, and this deceleration was accompanied by a slowdown in real consumption growth. More recently, house prices have started rising again, and consumption growth has also picked up.

The experiences in Australia and the United Kingdom could be taken as suggesting that adjustments in house prices can be associated, on balance, with continued modest economic growth, while the Dutch experience paints a slightly more pessimistic picture. Having said that, one difficulty in interpreting the foreign evidence is that gauging the direction of causality is difficult--that is, are adjustments in house prices causing a slowdown in real economic growth or is a slowdown in activity causing the adjustment in house prices. On this point, a recent Federal Reserve study of international experience documented the pro-cyclicality of real house prices: House prices have tended to reach a maximum near business cycle peaks, with real GDP growth slowing during the first year or so after house prices peak.<sup>1</sup>

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<sup>1</sup> Alan G. Ahearn, John Ammer, Brian M. Doyle, Linda S. Kole, and Robert F. Martin (2005), "House Prices and Monetary Policy: A Cross-Country Study," International Finance Discussion Papers 2005-841 (Washington: Board of Governors of the Federal Reserve System, September).

Given the limits of what we know about the future path of housing prices and about the implications of any particular house-price scenario for real activity, the Federal Reserve will have to continue monitoring this area closely.

Further increases in energy prices are another risk to the economic outlook. The spot price of West Texas intermediate crude oil rose from around \$30 per barrel in December 2002 to around \$65 per barrel in mid-August 2005, shortly before Hurricanes Katrina and Rita made landfall. Since the storms hit, prices have fluctuated widely in response to developments in both domestic and foreign oil markets and recently stood a bit below pre-Katrina levels. Over the same time period, prices of far-dated futures contracts have also risen a substantial amount. As oil prices have pushed higher since late 2003, prices of natural gas also have trended up sharply. And storm-related disruptions to natural gas production as well as weather patterns this winter have caused considerable volatility in natural gas prices.

Economic theory suggests that energy price hikes of this magnitude should have an important contractionary effect on the economy by reducing the purchasing power of households and holding down business profits outside the energy sector. Persistently higher oil prices also likely reduce labor productivity and potential output over time as firms adjust their production processes to use less energy. As for the reduction in aggregate demand, higher energy prices increase the bill for imported oil and natural gas, which can be viewed as a "tax" on U.S. residents by foreign energy producers, thereby holding down aggregate demand. Given the rise in energy prices since 2003, the import "tax" has risen more than \$150 billion annually. Although they are imprecise, simulations from the Federal Reserve Board staff's large-scale econometric model, which account for these effects, suggest that increases in spot and futures prices of energy from late 2003 to the present subtracted a 1/2 percentage point from real GDP growth in 2004 and more than 1 percentage point in 2005. The model suggests the subtraction this year will be about a 1/2 percentage point.

In addition to their effect on economic activity, further increases in energy prices also pose a risk to the inflation outlook. Looking ahead, the path of far-dated futures prices for oil indicates that markets are not expecting prices to rise significantly further. However, given strong global demand for energy resources and the ever-present risk of supply disruptions, additional increases in energy prices cannot be ruled out. Such increases would boost the overall inflation rate and might put additional upward pressure on production costs and inflation expectations, which in turn, could create forces that would tend to push core inflation up. If that were to occur, the Fed would need to be particularly vigilant to ensure that inflation remained under control.

### **Where do we go from here?**

As you know, the Federal Reserve seeks to foster price stability and to promote sustainable growth in output, and the members of the Federal Open Market Committee (FOMC) are committed to achieving these objectives. Translating these general economic objectives into operational decisions about monetary policy poses many challenges, and no simple toolkit of economic and financial indicators or economic models can provide reliable guidance at all times. Rather, the FOMC must assess the implications of a wide range of developments and data as well as rely on the best modeling that the economics profession can provide.

In the current situation, the economic expansion appears to be on track and core inflation has remained moderate. As I indicated, significant risks, if realized, could alter this generally sanguine outlook, and the Federal Reserve will continue to monitor developments closely. Given the considerable uncertainties facing the economy and the outlook for policy, policy decisions in coming months will depend heavily on the implications of incoming economic data for future growth and inflation.