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Foreign economies turned around in 1999 and will grow strongly in 2000. The question is whether growth abroad will help the United States through its effect on our exports more than it will hurt us through its effect on raw materials prices.

The strength of consumer spending will continue to depend on the strength of the stock market in 2000, as it did in 1999. The question is whether high stock prices can remain high enough to sustain consumer spending.

(Editors note: This article was written in early March 2000 before the stock market panic of mid-April 2000.)

While these three trends and the likely increases in interest rates will dominate the nature of the expansion we will see in 2000, the overriding uncertainty is how long the economy can continue to grow faster than its capacity. The Federal Reserve has warned that a lack of balance between the growth in spending and the growth in the ability to produce cannot be sustained without increasing inflation. The Fed has warned that it will move to prevent inflation when it believes the threat has become too great.

Figure 1 shows the past relationship between interest rates and inflation.

Higher interest rates would certainly change the environment for spending decisions. Higher oil prices or a decline in stock prices would also change that environment. Of these I view a continued increase in interest rates as the most likely barrier to unrestrained growth. Indeed, the big story over the next few months is likely to be a series of interest rate increases on the part of the Fed. Increases of three-fourths to a full percentage point are likely.

The Federal Reserve will try to slow the economy’s growth without stopping it, which means they will try to bring about a “soft landing.” It may be difficult to accomplish, but a soft landing is probably how the economy’s performance will be characterized at the beginning of 2001.

For the year 2000, I expect growth at a rate of 3½ percent to 4 percent to continue. I expect growth to slow, somewhat to a rate closer to 3 percent or so in 2001. Even though we may see another year of growth well above 3 percent, the growth at recent levels cannot be sustained indefinitely. The question is when the economy will encounter the barriers to growth that will finally slow it down, and whether the slowdown can take place without troublesome side effects, such as a spurt of unacceptable inflation or a stock market crash, which could hinder the return to growth.

**The Trends of the Old Millennium Will Continue in 2000**

Among the trends that were well established in 1999 and that will continue in the year 2000 are the following:

- Barring a collapse in the stock market, consumer spending is likely to remain robust.
- The growing demand for U.S. workers will continue in the year 2000. The question is whether enough new workers will appear to meet that demand or whether the demand will be dissipated in the form of higher wages or seep away into increased imports.
- Foreign economies turned around in 1999 and will grow strongly in 2000. The question is whether growth abroad will help the United States through its effect on our exports more than it will hurt us through its effect on raw materials prices.
- The strength of consumer spending will continue to depend on the strength of the stock market in 2000, as it did in 1999. The question is whether high stock prices can remain high enough to sustain consumer spending.

While these three trends and the likely increases in interest rates will dominate the nature of the expansion we will see in 2000, the overriding uncertainty is how long the economy can continue to grow faster than its capacity. The Federal Reserve has warned that a lack of balance between the growth in spending and the growth in the ability to produce cannot be sustained without increasing inflation. The Fed has warned that it will move to prevent inflation when it believes the threat has become too great.
Decline in Unemployment and Increase in Wages

The recent decline in unemployment has been welcome, but the question remains whether further declines are possible without an outbreak of wage inflation. I must confess that I am surprised that wage inflation has not already appeared. Figure 2 shows the relationship between wage inflation and unemployment in the 1980s and 1990s. The observations in the box show the record for the past five quarters. Clearly, the recent performance has shown much less inflation than would be expected based on the historical relationship. It is this benign performance of wage inflation that has permitted the economy to reach very low levels of unemployment in 1999. But regardless of the extent to which past relationships have changed, it remains the case that employment cannot grow more rapidly than the labor force indefinitely.

Wages can be measured in two ways. By one measure wage inflation has been benign in recent years, while by the other measure it has been explosive. One of the two major surveys of wages is a measure of wages paid by firms. The other survey measures wages received by workers. These two surveys have often yielded different results, for reasons that are related to the process of the typical business cycle, but the difference between the two rates of wage inflation is larger now than it has ever been. Wages paid by firms have not increased as much as would have been expected based on the past relationship between wages and unemployment. It is the inflation in wages paid by firms that is shown in figure 2. Wages received by households have soared. This difference has had wonderful implications for overall economic performance. Inflation has remained low because labor costs have been contained at the firm level, while labor income at the household level has grown rapidly and helped to support consumer spending.

How can wage increases at the firm level be lower than wage increases received at the household level? The answer is found in promotions and job reclassifications. A promotion leads to a wage increase for an individual worker. But a firm does not report wage increases for each worker, but rather reports wage increases for each job classification.

The metaphor of a job ladder helps to explain the difference. Think of a hierarchy of jobs that ranges from simple to difficult. The difficult jobs are on the top rungs of a ladder and the simple ones are on the bottom. Each job is filled by a worker, hence all employed workers are assumed to be standing on one of the rungs of the job ladder. As the economy expands, each rung of the ladder gets wider and new employees are needed to fill the new vacancies.

Many of the unemployed workers are not qualified to enter the work force at the top rungs, however. They typically enter employment at a lower rung. To fill the vacancies on the upper rungs, it is necessary to promote existing workers. In this way, a widening of each rung causes workers to climb the job ladder to more difficult and better paid positions, and hence to increase the number of vacancies on the bottom rungs for the unemployed to fill.

Workers receive pay increases from two sources in the job ladder metaphor. One increase comes from climbing the job ladder to better paying jobs on the upper rungs. The second source of pay increases for workers comes when firms raise their pay scales for the whole job ladder, which implies that they increase what is paid to workers on each rung of the ladder. On the surveys of wages at the firm level, firms report the amounts they pay at each rung of the ladder. In the household surveys, individuals report the wages they have received, which include increases from moving up the job ladder as well as increases they have received because the whole job ladder has received increases.

With widespread labor shortages, and with unemployment low and falling, the opportunities for workers to move up the job ladder in recent years have been unparalleled. The wage surveys show the largest divergence ever between the increased wages being earned by households and the increased wages being paid by firms. Since it is wages paid that is commonly thought to be inflationary, the recent expansion has had a surprisingly small increase in inflationary wage increases when judged by the large decline in unemployment we have experienced.

Wages and Productivity

Official productivity statistics measure employment at the firm level. The hidden increase in wages that was noted in the preceding section can also be construed as an unmeasured increase in productivity.

The increase in pay from climbing the job ladder is a measure of the increase in the market value of the
worker’s ability to produce. It is an increased payment for the particular configuration of skills that a worker possesses.

Macroeconomic measures of the growth in employment over the business cycle camouflage this possible increase in productivity. This increase arises because the average value of the skills of the unemployed are less than the average value of the skills of the employed. As the unemployment rate falls, we would expect to see a decline in actual worker productivity. If measured productivity does not fall, we could claim that the absence of a measured decline hides an increase in real productivity.

How does the current economic expansion affect productivity? From the perspective of the employer, the new people employed on each rung of the ladder after the expansion are slightly less qualified than the employees who were on the same rungs before the expansion. Worker qualifications have been downgraded. Productivity might be expected to fall. Hence the absence of a decline in productivity represents a hidden productivity increase.

Climbing up the job ladder is great from the perspective of the climbing workers, but it downgrades the average skill level at each rung of the ladder for the firm. There is no prior reason to expect that an expansion would lead to a reduction in the levels of skills expected of workers. Hence, there is a sense in which the increased pay of workers reflects the increased value of their old skills to the economy. It is a productivity increase in the sense of the increased value of the work performed by each worker.

**International Forces**

Despite the increased integration of the world’s economies, distinct regional cycles remain. At one extreme, the United States has just been through a wonderful decade, while at the other extreme, Japan has had a terrible one. Other economies have performed at levels between these two extremes, with Europe showing signs of life in 1999 that will continue into 2000.

The birth of the euro went smoothly in a technical sense, but its economic performance has been weak. This weakness has mistakenly been blamed on an apparent skepticism of investors for Europe’s future economic performance. In my view, the euro's problem is a much simpler one related to the current supply and demand for euro-denominated assets. The euro bond market has exploded beyond anyone's anticipation. But the explosion is driven by an increased willingness on the part of large firms to float euro securities, not by an increased demand for those securities by institutional investors. The increased supply of euro securities is from companies with a large exposure to euro-denominated risks. It should not be interpreted as a speculative position taken by these companies based on their political judgment about the long-term future of Europe.

Not surprisingly, the unexpectedly large issuance of these euro-denominated securities is having the same depressing effect on the value of the euro as would the sale of any euro-denominated asset. If companies continue to borrow in the euro market, the euro will remain weak. And the incentive to borrow in euros will remain strong as long as euro interest rates remain well below dollar interest rates.

Recovery is expected in 2000 not only in Europe but in the rest of the world as well. The one major exception is Japan, which is still digging out from the problems caused by its bubble of the late 1980s—declining real estate prices, bad loans, and excessive levels of capital investment. As recovery proceeds abroad (except in Japan), exports cannot be expected to pick up to the levels they reached in 1987 before the Asian currency crises, because much of the rest of the world has devalued so strongly since then. So even if foreign economies recover, they will retain a cost advantage that will make it difficult for U.S. exporters to keep their market shares abroad. As a result, I expect only a modest improvement in our trade deficit in 2000 despite the emergence of strong growth abroad.

Strong growth abroad will hurt the U.S. economy by leading to increases in the prices of raw materials. These prices started to increase in 1999 and their further increase in 2000 could be a major inflationary force in the U.S. Oil prices in 2000 will depend not only on political forces, but also on the demand for oil, which should grow. Past OPEC price increases have been able to stick without cartel cheating only in 1973 and 1979, which were periods of strong economic performance with a growing demand for oil. A continued effort to substitute other energy sources for oil (similar to what occurred in response to past oil price increases), along with technological breakthroughs in the use of alternative sources of energy if oil prices remain high, would suggest that OPEC would not be wise to raise prices too much above current levels.

Every $15 per barrel of oil represents 1 percent of GDP. Expenditures on oil are now 2 percent of the U.S. GDP, up from one percent before the recent price increase. On this basis further modest price increases are not likely to derail the current strong expansion. At this point, it would take increases in the price of oil to $60 per barrel or more to disrupt the U.S. economy.

**Wisconsin**

Labor shortage in Wisconsin continues and will dominate the outlook for Wisconsin this year and next (see
Because times are now good in other states as well, there is little reason to expect an in-migration of workers from other states to alleviate Wisconsin's labor shortages. Furthermore, labor force participation is already so high it is hard to expect much further increase in employment from the existing population.

Employment in manufacturing may grow some as exports recover some strength. But exports are unlikely to return to previous levels because devaluations abroad have lowered costs. The dollar will have to fall—an unlikely event—if exporters are to regain their markets abroad.

Growth in manufacturing employment will come at the expense of the service sector as workers move to the higher paying jobs in manufacturing. Wage increases are likely to continue in Wisconsin especially at the lower end of the wage scale at least as the shortage of workers is likely to worsen. Employment growth in Wisconsin is likely to remain about a half percentage point below the national average because of the labor shortage.