The Federal Reserve Board

Testimony of Chairman Alan Greenspan

The Federal Reserve's semiannual report on monetary policy
Before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate
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Mr. Chairman and members of the Committee, I appreciate the opportunity to present the Federal Reserve's semiannual report on monetary policy.

The U.S. economy over the past year again performed admirably. Despite the challenges presented by severe economic downturns in a number of foreign countries and episodic financial turmoil abroad and at home, our real GDP grew about 4 percent for a third straight year. In 1998, 2-3/4 million jobs were created on net, bringing the total increase in payrolls to more than 18 million during the current economic expansion, which late last year became the longest in U.S. peacetime history. Unemployment edged down further to a 4-1/4 percent rate, the lowest since 1970.

And despite taut labor markets, inflation also fell to its lowest rate in many decades by some broad measures, although a portion of this decline owed to decreases in oil, commodity, and other import prices that are unlikely to be repeated. Hourly labor compensation adjusted for inflation posted further impressive gains. Real compensation gains have been supported by robust advances in labor productivity, which in turn have partly reflected heavy investment in plant and equipment, often embodying innovative technologies.

Can this favorable performance be sustained? In many respects the fundamental underpinnings of the recent U.S. economic performance are strong. Flexible markets and the shift to surplus on the books of the federal government are facilitating the build-up in cutting-edge capital stock. That build-up in turn is spawning rapid advances in productivity that are helping to keep inflation well behaved. The new technologies and the optimism of consumers and investors are supporting asset prices and sustaining spending.

But, after eight years of economic expansion, the economy appears stretched in a number of dimensions, implying considerable upside and downside risks to the economic outlook. The robust increase of production has been using up our nation's spare labor resources, suggesting that recent strong growth in spending cannot continue without a pickup in inflation unless labor productivity growth increases significantly further. Equity prices are high enough to raise questions about whether shares are overvalued. The debt of the household and business sectors has mounted, as has the external debt of the country as a whole, reflecting the deepening current account deficit. We remain vulnerable to rapidly changing conditions overseas, which, as we saw last summer, can be transmitted to U.S. markets quickly and traumatically. I will be commenting on many of these issues as I review the developments of the past year and the prospects going forward. In light of all these risks, monetary policy must be ready to move quickly in either direction should we perceive imbalances and distortions developing that could undermine the economic expansion.

Recent Developments

A hallmark of our economic performance over the past year was the continuing sharp expansion of business investment spending. Competitive global markets and persisting technological advances both spurred the business drive to become more efficient and induced the price declines for many types of new equipment that made capital spending more attractive.

Business success in enhancing productivity and the expectation of still further, perhaps accelerated, advances buoyed public optimism about profit prospects, which contributed to another sizable boost in equity prices. Rising household wealth along with strong growth in real income, related to better pay, slower inflation, and expanding job opportunities, boosted consumption at the fastest clip in a decade and a half. The gains in income and wealth last year, along with a further decrease in mortgage rates, also prompted considerable activity in the housing sector.

The impressive performance of the private sector was reflected in a continued improvement in the federal budget. Burgeoning receipts, along with continuing restraint on federal spending, produced the first unified budget surplus in thirty years, allowing the Treasury to begin to pay down the federal debt held by the public. This shift in the federal government's fiscal position has fostered an increase in overall national saving as a share of GDP to 17-1/4 percent from the 14-1/2 percent low reached in 1993. This rise in national saving has helped to hold down real interest rates and to facilitate the financing of the boom in private investment spending.

Foreign savers have provided an additional source of funds for vigorous domestic investment. The counterpart of our high and rising current account deficit has been ever-faster increases in the net indebtedness of U.S. residents to foreigners. The rapid widening of the current account deficit has some disquieting aspects, especially when viewed in a longer-term context. Foreigners presumably will not want to raise indefinitely the share of their portfolios in claims on the United States. Should the sustainability of the buildup of our foreign indebtedness come into question, the exchange value of the dollar may well decline, imparting pressures on prices in the United States.

In the recent economic environment, however, the widening of the trade and current account deficits had some beneficial aspects. It provided a safety valve for strong U.S. domestic demand, thereby helping to restrain pressures on U.S. resources. It also cushioned, to some extent, economic weakness in our trading partners.

Moreover, decreasing import prices, which partly came from the appreciation of the dollar through mid-summer, contributed to low overall U.S. inflation, as did ample manufacturing capacity in the United States and lower prices for oil and other commodities stemming from the weak activity abroad. The marked drop in energy prices significantly contributed to the subdued, less than 1 percent, increase in the price index for total personal consumption expenditures during 1998. In addition, supported by rapid accumulation of more efficient capital, the growth of labor productivity picked up last year, allowing nominal labor compensation to post another sizable gain without putting added upward pressure on costs and prices. I shall return to an analysis of the extraordinary performance of inflation later in my remarks.

The Federal Open Market Committee conducted monetary policy last year with the aim of sustaining the remarkable combination of economic expansion and low inflation. At its meetings from March to July, the inflation risks accompanying the continued strength of domestic demand and the tightening of labor markets necessitated that the FOMC place itself on heightened inflation alert. Although the FOMC kept the nominal federal funds rate unchanged, it allowed the real funds rate to rise with continuing declines in inflation and, presumably, inflation expectations. In August, the FOMC returned to an unbiased policy predilection in response to the adverse implications for the U.S. outlook of worsening conditions in foreign economies and in global financial markets, including our own.

Shortly thereafter, a further deterioration in financial market conditions began to pose a more serious threat to economic stability. In the wake of the Russian crisis and subsequent difficulties in other emerging-market economies, investors perceived that the uncertainties in financial markets had broadened appreciably and as a consequence they became decidedly more risk averse. Safe-haven demands for U.S. Treasury securities intensified at the expense of private debt securities. As a result, quality spreads escalated dramatically, especially for lower-rated issuers. Many financial markets turned illiquid, with wider bid-asked spreads and heightened price volatility, and issuance was disrupted in some private securities markets. Even the liquidity in the market for seasoned issues of U.S. Treasury securities dried up, as investors shifted toward the more actively traded, recently issued securities and dealers pared inventories, fearing that heightened price volatility posed an unacceptable risk to their capital.

Responding to losses in foreign financial markets and to pressures from counterparties, highly leveraged investors began to unwind their positions, which further weighed on market conditions. As credit became less available to business borrowers in capital markets, their demands were redirected to commercial banks, which reacted to the enlarged borrowing, and more uncertain business prospects, by tightening their standards and terms on such lending.

To cushion the domestic economy from the impact of the increasing weakness in foreign economies and the less accommodative conditions in U.S. financial markets, the FOMC, beginning in late September, undertook three policy easings. By mid-November, the FOMC had reduced the federal funds rate from 5-1/2 percent to 4-3/4 percent. These actions were taken to rebalance the risks to the outlook, and, in the event, the markets have recovered appreciably. Our economy has weathered the disturbances with remarkable resilience, though some yield and bid-asked spreads still reflect a hesitancy on the part of market participants to take on risk. The Federal Reserve must continue to evaluate, among other issues, whether the full extent of the policy easings undertaken last fall to address the seizing-up of financial markets remains appropriate as those disturbances abate.

To date, domestic demand and hence employment and output have remained vigorous. Real GDP is estimated to have risen at an annual rate exceeding 5-1/2 percent in the fourth quarter of last year. Although some slowing from this torrid pace is most likely in the first quarter, labor markets remain exceptionally tight and the economy evidently retains a great deal of underlying momentum despite the global economic problems and the still-visible remnants of the earlier financial turmoil in the United States. At the same time, no evidence of any upturn in inflation has, as yet, surfaced.

Abroad, the situation is mixed. In some East Asian countries that, in recent years, experienced a loss of investor confidence, a severe currency depreciation, and a deep recession, early signs of stabilization and economic recovery have appeared. This is particularly the case for Korea and Thailand. Authorities in those countries, in the context of IMF stabilization programs, early on established appropriate macroeconomic policies and undertook significant structural reforms to buttress the banking system and repair the finances of the corporate sector. As investor confidence has returned, exchange rates have risen and interest rates have fallen. With persistence and follow-through on reforms, the future of those economies has promise.

The situations in some other emerging market economies are not as encouraging. The Russian government's decision in mid-August to suspend payments on its domestic debt and devalue the ruble took markets by surprise. Investor flight exacerbated the collapse of prices in Russian financial markets and led to a sharp depreciation of the ruble. The earlier decline in output gathered momentum, and by late in the year inflation had moved up to a triple-digit annual rate. Russia's stabilization program with the IMF has been on hold since the financial crisis hit, and the economic outlook there remains troubling.

The Russian financial crisis immediately spilled over to some other countries, hitting Latin America especially hard. Countering downward pressure on the exchange values of the affected currencies, interest rates moved sharply higher, especially in Brazil. As a consequence of the high interest rates and growing economic uncertainty, Brazil's economic activity took a turn for the worse. Higher interest rates also had negative consequences for the fiscal outlook, as much of Brazil's substantial domestic debt effectively carries floating interest rates. With budget reform legislation encountering various setbacks, market confidence waned further and capital outflows from Brazil continued, drawing down foreign currency reserves. Ultimately, the decision was taken to allow the *real* to float, and it subsequently depreciated sharply.

Brazilian authorities must walk a very narrow, difficult path of restoring confidence and keeping inflation contained with monetary policy while dealing with serious fiscal imbalances. Although the situation in Brazil remains uncertain, there has been limited contagion to other countries thus far. Apparently, the slow onset of the crisis has enabled many parties with Brazilian exposures to hedge those positions or allow them to run off. With the net exposure smaller, and increasingly held by those who both recognized the heightened risk and were willing to bear it, some of the elements that might have contributed to further contagion may have been significantly reduced.

The Economic Outlook

These recent domestic and international developments provide the backdrop for U.S. economic prospects. Our economy's performance should remain solid this year, though likely with a slower pace of economic expansion and a slightly higher rate of overall inflation than last year. The stocks of business equipment, housing, and household durable goods have been growing rapidly to quite high levels relative to business sales or household incomes during the past few years, and some slowing in the growth of spending on these items seems a reasonable prospect. Moreover, part of the rapid increase in spending, especially in the household sector, has resulted from the surge in wealth associated with a run-up in equity prices that is unlikely to be repeated. And the purchasing power of income and wealth has been enhanced by declines in oil and other import prices, which also are unlikely to recur this year. Assuming that aggregate demand decelerates, underlying inflation pressures, as captured by core price measures, in all likelihood will not intensify significantly in the year ahead, though the Federal Reserve will need to monitor developments carefully. We perceive stable prices as optimum for economic growth. Both inflation and deflation raise volatility and risks that thwart maximum economic growth.

Most Governors and Reserve Bank Presidents foresee that economic growth this year will slow to a 2-1/2 to 3 percent rate. Such growth would keep the unemployment rate about unchanged. The central tendency of the Governors' and Presidents' predictions of CPI inflation is 2 to 2-1/2 percent. This level represents a pickup from last year, when energy prices were falling, but it is in the vicinity of core CPI inflation over the last couple of years.

This outlook involves several risks. The continuing downside risk posed by possible economic and financial instability around the world was highlighted earlier this year by the events in Brazil. Although financial contagion elsewhere has been limited to date, more significant knock-on effects in financial markets and in the economies of Brazil's important trading partners, including the United States, are still possible. Moreover, the economies of several of our key industrial trading partners have shown evidence of weakness, which if it deepens could further depress demands for our exports.

Another downside risk is that growth in capital spending, especially among manufacturers, could weaken appreciably if pressures on domestic profit margins mount and capacity utilization drops further. And it remains to be seen whether corporate earnings will disappoint investors, even if the slowing of economic growth is only moderate. Investors appear to have incorporated into current equity price levels both robust profit expectations and low compensation for risk. As the economy slows to a more sustainable pace as expected, profit forecasts could be pared back, which together with a greater sense of vulnerability in business prospects could damp appetites for equities. A downward correction to stock prices, and an associated increase in the cost of equity capital, could compound a slowdown in the growth of capital spending. In addition, a stock market decline would tend to restrain consumption spending through its effect on household net worth.

But on the upside, our economy has proved surprisingly robust in recent years. More rapid increases in capital spending, productivity, real wages, and asset prices have combined to boost economic growth far more and far longer than many of us would have anticipated.

This "virtuous cycle" has been able to persist because the behavior of inflation also has been surprisingly favorable, remaining well contained at levels of utilization of labor that in the past would have produced accelerating prices. That it has not done so in recent years has been the result of a combination of special one-time factors holding down prices and more lasting changes in the processes determining inflation.

Among the temporary factors, the sizable declines in the prices of oil, other internationally traded commodities, and other imports contributed directly to holding down inflation last year, and also indirectly by reducing inflation expectations. But these prices are not likely to fall further, and they could begin to rise as some Asian economies revive and the effects of the net depreciation of the dollar since mid-summer are felt more strongly.

At the same time, however, recent experience does seem to suggest that the economy has become less inflation prone than in the past, so that the chances of an inflationary breakout arguably are, at least for now, less than they would have been under similar conditions in earlier cycles.

Several years ago I suggested that worker insecurity might be an important reason for unusually damped inflation. From the early 1990s through 1996, survey results indicated that workers were becoming much more concerned about being laid off. Workers' underlying fear of technology-driven job obsolescence, and hence willingness to stress job security over wage increases, appeared to have suppressed labor cost pressures despite a reduced unemployment rate. More recently, that effect seems to have diminished in part. So while job loss fears probably contributed to wage and price suppression through 1996, it does not appear that a further heightening of worker insecurity about employment prospects can explain the more recent improved behavior of inflation.

Instead, a variety of evidence, anecdotal and otherwise, suggests that the source of recent restrained inflation may be emanating more from employers than from employees. In the current economic setting, businesses sense that they have lost pricing power and generally have been unwilling to raise wages any faster than they can support at current price levels. Firms have evidently concluded that if they try to increase their prices, their competitors will not follow, and they will lose market share and profits.

Given the loss of pricing power, it is not surprising that individual employers resist pay increases. But why has pricing power of late been so delimited? Monetary policy certainly has played a role in constraining the rise in the general level of prices and damping inflation expectations over the 1980s and 1990s. But our current discretionary monetary policy has difficulty anchoring the price level over time in the same way that the gold standard did in the last century.

Enhanced opportunities for productive capital investment to hold down costs also may have helped to damp inflation. Through the 1970s and 1980s, firms apparently found it easier and more profitable to seek relief from rising nominal labor costs through price increases than through cost-reducing capital investments. Price relief evidently has not been available in recent years. But relief from cost pressures has. The newer technologies have made capital investment distinctly more profitable, enabling firms to substitute capital for labor far more productively than they would have a decade or two ago.

Starting in 1993, capital investment, especially in high-tech equipment, rose sharply beyond normal cyclical experience, apparently the result of expected increases in rates of return on the new investment. Had the profit expectations not been realized, one would have anticipated outlays to fall back. Instead, their growth accelerated through the remainder of the decade.

More direct evidence confirms improved underlying profitability. According to rough estimates, labor and capital productivity has risen significantly during the past five years. It seems likely that the synergies of advances in laser, fiber optic, satellite, and computer technologies with older technologies have enlarged the pool of opportunities to achieve a rate of return above the cost of capital. Moreover, the newer technologies have facilitated a dramatic foreshortening of the lead times on the delivery of capital equipment over the past decade, presumably allowing businesses to react more expeditiously to an actual or expected rise in nominal compensation costs than, say, they could have in the 1980s. In addition, the surge in investment not only has restrained costs, it has also increased industrial capacity faster than factory output has risen. The resulting slack in product markets has put greater competitive pressure on businesses to hold down prices, despite taut labor markets.

The role of technology in damping inflation is manifest not only in its effects on U.S. productivity and costs, but also through international trade, where technological developments have progressively broken down barriers to cross-border trade. The enhanced competition in tradable goods has enabled excess capacity previously bottled up in one country to augment worldwide supply and exert restraint on prices in all countries' markets. The resulting price discipline also has constrained nominal wage gains in internationally tradable goods industries. As workers have attempted to shift to other sectors, gains in nominal wages and increases in prices in nontradeable goods industries have been held down as well.

The process of price containment has potentially become, to some extent, self-reinforcing. Lower inflation in recent years has altered expectations. Workers no longer believe that escalating gains in nominal wages are needed to reap respectable increases in real wages, and their remaining sense of job insecurity is reinforcing this. Since neither firms nor their competitors can count any longer on a general inflationary tendency to validate decisions to raise their own prices, each company feels compelled to concentrate on efforts to hold down costs. The availability of new technology to each company and its rivals affords both the opportunity and the competitive necessity of taking steps to boost productivity.

It is difficult to judge whether these significant shifts in the market environment in which firms function are sufficient to account for our benign overall price behavior during the past half decade. Undoubtedly, other factors have been at work as well, including those temporary factors I mentioned earlier and some more lasting I have not discussed, such as worldwide deregulation and privatization, and the freeing up of resources previously employed to produce military products that was brought about by the end of the cold war. There also may be other contributory forces lurking unseen in the wings that will only become clear in time. Over the longer run, of course, the actions of the central bank determine the degree of overall liquidity and hence rate of inflation. It is up to us to validate the favorable inflation developments of recent years.

Although the pace of productivity increase has picked up in recent years, the extraordinary strength of demand has meant that the substitution of capital for labor has not prevented us from rapidly depleting the pool of available workers. This worker depletion constitutes a critical upside risk to the inflation outlook because it presumably cannot continue for very much longer without putting increasing pressure on labor markets and on costs.

The number of people willing to work can be usefully defined as the unemployed component of the labor force plus those not actively seeking work, and thus not counted in the labor force, but who nonetheless say they would like a job if they could get one. This pool of potential workers aged 16 to 64 currently numbers about 10 million, or just 5-3/4 percent of that group's population--the lowest such percentage on record, which begins in 1970, and 2-1/2 percentage points below its average over that period. The rapid increase in aggregate demand has generated growth of employment in excess of growth in population, causing the number of potential workers to fall since the mid-1990s at a rate of a bit under 1 million annually. We cannot judge with precision how much further this level can decline without sparking ever greater upward pressures on wages and prices. But, should labor market conditions continue to tighten, there has to be some point at which the rise in nominal wages will start increasingly outpacing the gains in labor productivity, and prices inevitably will begin to accelerate.

Ranges for Money and Credit
At its February meeting, the Committee elected to ratify the provisional ranges for all three aggregates that it had established last July. Specifically, the Committee again has set growth rate ranges over the four quarters of 1999 of 1 to 5 percent for M2, 2 to 6 percent for M3, and 3 to 7 percent for domestic nonfinancial debt. As in previous years, the Committee interpreted the ranges for the broader monetary aggregates as benchmarks for what money growth would be under conditions of price stability and sustainable economic growth, assuming historically typical velocity behavior.

Last year, these monetary aggregates far overshot the upper bounds of their annual ranges. While nominal GDP growth did exceed the rate likely consistent with sustained price stability, the rapid growth of M2 and M3 also reflected outsized declines in their velocities, that is, the ratio of nominal GDP to money. M2 velocity dropped by about 3 percent, while M3 velocity plunged by 5-1/4 percent.

Part of these velocity declines reflected some reduction in the opportunity cost of holding money; interest rates on Treasury securities, which represent an alternative return on non-monetary assets, dropped more than did the average of interest rates on deposits and money market mutual funds in M2, drawing funds into the aggregate. Even so, much of last year's aberrant behavior of broad money velocity cannot readily be explained by conventional determinants. Although growth of the broad aggregates was strong earlier in the year, it accelerated in the fourth quarter after credit markets became turbulent. Perhaps robust money growth late in the year partly reflected a reaction to this turmoil by the public, who began scrambling for safer and more liquid financial assets. Monetary expansion has moderated so far this year, evidently in lagged response to the calming of financial markets in the autumn. Layered on top of these influences, though, the public also may have been reapportioning their savings flows into money balances because the huge run-up in stock prices in recent years has resulted in an uncomfortable portion of their net worth in equity.

For the coming year, the broad monetary aggregates could again run high relative to these ranges. To be sure, the decline in the velocities of the broader aggregates this year should abate to some extent, as money demand behavior returns more to normal, and growth in nominal GDP should slow as well, as suggested by the Governors' and Presidents' central tendency. Both factors would restrain broad money expansion relative to last year. Still, the growth of M2 and M3 could well remain outside their price-stability ranges this year. Obviously, considerable uncertainty continues to surround the prospective behavior of monetary velocities and growth rates.

Domestic nonfinancial debt seems more likely than the monetary aggregates to grow within its range for this year. Indeed, domestic nonfinancial debt also could grow more slowly this year than last year's 6-1/4 percent pace, which was in the upper part of its 3 to 7 percent annual range. With the federal budget surplus poised to widen further this year, federal debt should contract even more quickly than last year. And debt in each of the major nonfederal sectors in all likelihood will decelerate as well from last year's relatively elevated rates, along with the projected slowing of nominal GDP growth.

The FOMC's Disclosure Policy
The FOMC at recent meetings has discussed not only the stance of policy, but also when

and how it communicates its views of the evolving economic situation to the public. The FOMC's objective is to release as much information about monetary policy decision making, and as promptly, as is consistent with maintaining an effective deliberative process and avoiding roiling markets unnecessarily. Since early 1994, each change in the target nominal federal funds rate has been announced immediately with a brief rationale for the action. The FOMC resolved at its December meeting to take advantage of an available, but unused policy, originally stated in early 1995, of releasing, on an infrequent basis, a statement immediately after some FOMC meetings at which the stance of monetary policy has not been changed. The Federal Reserve will release such a statement when it wishes to communicate to the public a major shift in its views about the balance of risks or the likely direction of future policy. Such an announcement need not be made after every change in the tilt of the directive. Instead, this option would be reserved for situations in which the consensus of the Committee clearly had shifted significantly, though not by enough to change current policy, and in which the absence of an explanation risked misleading markets about the prospects for monetary policy.

Year 2000 Issues

Before closing, I'd like to address an issue that has been receiving increasing attention--the century date change. While no one can say that the rollover to the year 2000 will be trouble free, I am impressed by the efforts to date to address the problem in the banking and financial system. For our part, the Federal Reserve System has now completed remediation and testing of 101 of its 103 mission-critical applications, with the remaining two to be replaced by the end of March. We opened a test facility in June at which more than 6000 depository institutions to date have conducted tests of their Y2K compliant systems, and we are well along in our risk mitigation and contingency planning activities. As a precautionary measure, the Federal Reserve has acted to increase the currency in inventory by about one-third to approximately $200 billion in late 1999 and has other contingency arrangements available if needed. While we do not expect currency demand to increase dramatically, the Federal Reserve believes it is important for the public to have confidence in the availability of cash in advance of the rollover. As a result of these kinds of activities, I can say with assurance that the Federal Reserve will be ready in both its operations and planning activities for the millennium rollover.

The banking industry is also working hard, and with evident success, to prepare for the event. By the end of the first quarter, every institution in the industry will have been subject to two rounds of on-site Y2K examinations. The Federal Reserve, like the other regulators, has found that only a small minority of institutions has fallen behind in their preparations, and those institutions have been targeted for additional follow-up and, as necessary, formal enforcement actions. The overwhelming majority of the industry has made impressive progress in their remediation, testing, and contingency planning efforts.

Concluding Comment

Americans can justifiably feel proud of their recent economic achievements. Competitive markets, with open trade both domestically and internationally, have kept our production efficient and on the expanding frontier of technological innovation. The determination of Americans to improve their skills and knowledge has allowed workers to be even more productive, elevating their real earnings. Macroeconomic policies have provided a favorable setting for the public to take greatest advantage of opportunities to improve its economic well being. The restrained fiscal policy of the Administration and the Congress has engendered the welcome advent of a unified budget surplus, freeing up funds for capital investment. A continuation of responsible fiscal and, we trust, monetary policies should afford Americans the opportunity to make considerable further economic progress over time.

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