I am delighted to be here today to discuss the economic outlook for 2005 and beyond. But before I do, it would be helpful to review briefly the course of economic activity over the past year or so. The usual disclaimer applies here, however: the views expressed are my own, and are not necessarily those of others in the Federal Reserve System.

Looking back, 2004 was the year that the economic recovery from the recession of 2001 finally set down firm roots. Real output grew four percent over the year ending in the third quarter. This is the same rate at which output grew over the course of 2003, so from that point of view, 2004 might not look much better. But this superficial similarity masks the significant improvements in the strength of the recovery that have taken place this past year.

Business investment has made rapid gains over the last year and a half. In dollar terms, capital goods spending is on a solidly upward trend. Adjusted for price changes, business investment has been even stronger, given the continuing secular decline in equipment prices. Third quarter investment in equipment and software was up nearly thirteen percent in real terms over the previous year. Anecdotal reports of managers’ hesitance to commit to investment outlays notwithstanding, the data clearly indicate that opportunities to profitably deploy new capital goods continue to emerge.

Household spending has remained on track throughout the recession and recovery. Despite job market weakness dating back to 2001, consumers apparently have been anticipating healthy future job prospects. Looking through the fairly substantial month-to-month choppiness, trend growth in consumer spending has risen from around two and one half percent in 2001 to around four percent, consistent with a steadily firming labor market over that time frame. Related, residential investment has been driven to all-time highs by historically low real interest rates, and this category has continued to surprise on the upside this past year.

The key improvement in 2004 has been the long-awaited pickup in net job growth. As is well known, employment in this recovery has lagged behind the pace of other post-war U.S. recoveries, but in the spring the pace of new hiring finally accelerated. Employment growth rose to over 200 thousand per month for several months. Job growth sagged a bit over the summer, but picked up again in the fall. November employment now stands two million, or 1.6 percent, ahead of a year ago, an average gain of 171 thousand per month. This comfortably exceeds the working age population growth rate of just under one percent, and thus notable progress has been made toward absorbing the overhang of those willing to work.
The path of labor productivity — the amount of real output per hour of worker input — is essential to understanding labor market developments over the past year, and indeed, over the past decade. I’ll return to this topic later in my remarks, but for now I’ll just note that the sluggish pace of job gains prior to this year has been a reflection of the striking extent to which firms have been able to expand real output without needing to add workers. This phenomenon appears to be drawing to a close, as firms more recently have been forced to make net hires to sustain output gains.

Inflation has remained steady this past year, and, just as importantly, inflation expectations have been contained. Inflation rates firmed at the beginning of the year, in part due to the surge in energy prices. This left a discernable effect on near-term expectations of inflation, as measured, for example, by spreads between nominal and inflation-indexed Treasury yields. The inflation compensation built into five-year spreads rose initially in the spring, settled back a bit over the summer, but then drifted up again. But expectations at longer horizons have remained steady, and a variety of survey measures have also been relatively stable.

FOMC policymakers responded to the firming inflation outlook by initiating in June a series of increases in the target federal funds rate. Such a policy shift was inevitable, in the sense that the strengthening recovery was going to require real interest rates to rise, whether or not inflation accelerated. The key point here is that real short-term interest rates have to vary in response to shifts in economic fundamentals, even if noticeable fluctuations in inflation are absent.

Looking forward to 2005, it seems reasonable to project a continuation of growth along a quite similar trajectory. Consumer spending, fueled by expectations of sustained income growth, should continue to expand at something near the strong pace we have been seeing. The currently low measured savings rate has led some to fear a pullback in household spending, but this hypothesis should be taken with a grain of salt. The reported savings rate is based on a measure of income that omits capital gains on household assets, and as a result is downward biased to an extent that varies over time. And besides, consumer spending that is high relative to current income can be taken as a signal of households’ confidence in their future income prospects.

Business investment spending might well show a temporary slowdown in the first quarter after the expiration of the tax incentives, but should resume expanding at a robust pace shortly thereafter, reflecting assessments that substantial opportunities remain to enhance efficiency by installing new capital goods, particularly IT and communications equipment.

Output growth next year should also be helped by a reduction in the drag from net exports. Although exports will be dampened somewhat by moderating growth among our major trading partners, the recent fall in the dollar ought to support export growth and contain imports as well. On the other hand, the declining fiscal policy impetus and the likely downward trend in housing starts will both detract from output growth. On balance, GDP growth seems most likely to lie in the three and one half to four percent range next year, barring some unforeseen crisis.
The outlook for productivity is pivotal to next year’s economic prospects, and it is especially hard to project at the present time. Swings in expected near-term productivity growth were not nearly so critical for the economic outlook in the past as they have been over the last decade or so. Labor productivity growth slowed down, famously, around 1974. The middle of the 1990s then saw a significant acceleration in productivity growth, from about one and one half percent per year to about two and three quarters percent. This acceleration was marked by “capital deepening,” meaning an acceleration in the process of enhancing output per worker by increasing the amount of capital per worker.¹

Capital formation fell dramatically in the recession of 2001, of course, and didn’t begin recovering until about a year and a half ago. Surprisingly, however, productivity growth accelerated even further as the recession began, and has averaged about four and one quarter percent since the first quarter of 2001. Productivity growth over this period has not been driven by capital deepening. Instead, the dominant force has been what economists call “total factor productivity” (TFP), meaning that growth in output per worker has been due to increases in the amount of output produced by given amounts of capital and labor. In other words, firms lifted output per worker by becoming more efficient at using their existing labor and capital resources, rather than by applying more capital per worker.

While this conclusion – that recent productivity growth represents mostly TFP rather than capital deepening – is an accounting necessity, given the slowdown in employment and investment while output recovered, it also accords well with widespread accounts of the recent evolution in business strategies. The late 1990s saw a dramatic run up in the deployment of new communications and computing technologies (capital deepening, in other words), along with stunning gains in the productivity of the industries producing these technologies. When limits were reached in the extent to which further additions to capital could be profitably absorbed, investment decelerated sharply and the recession began. With many firms taking a pause in investment and demand growth slowing, managerial attention turned toward devising ways of reducing costs within the context of firms’ existing capital infrastructures (TFP growth, in other words).

Productivity optimists see the recent surge in productivity growth as evidence of the extent to which fruitful efficiency gains remain to be discovered and exploited by firms. To them, the sustained growth in output per worker in the absence of investment spending on the scale seen in the late 1990s strongly suggests that productivity growth is likely to come in significantly above the long term average rate of around two and one quarter percent, perhaps closer to three percent.

An alternative view sees capital deepening and TFP gains as to some extent substitutes. Business managers face a trade-off between planning and adding capital infrastructure, and devoting efforts to reorganizing business processes to use existing infrastructure and resources more effectively. This view is consistent with the notion that recent productivity gains stem from firms learning to extract efficiency gains from the high-tech capital they installed in the late 1990s. Significant acceleration in total factor productivity growth occurred in the industries producing information technology. Capital deepening, especially with IT and communications equipment, was characteristic of the industries using such technologies.

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late 1990s, essentially a process of “learning-by-doing.” If that is the case, TFP gains are likely to decelerate as investment continues to climb, which may to some extent offset productivity gains from the current growth in capital deepening.\(^2\)

These perspectives on the future of productivity growth – the optimistic extrapolation view and the learning-by-doing view – are not mutually exclusive. Unfortunately, however, we do not now have the analysis necessary to distinguish between them, or to pin down their quantitative implications. Suffice it to say that there is significant uncertainty about whether productivity gains at the recent elevated rates are likely, or whether a reversion to the longer run trend rate of around two and one quarter percent is occurring.

The importance of productivity growth for the economic outlook stems from its role linking aggregate demand to labor market pressures. It is now widely recognized that slower productivity growth, for any given rate of demand growth, means more rapid employment growth and thus less downward pressure on wages. Unless markups shrink to absorb the attendant acceleration in unit labor costs, the result would be upward pressure on inflation. Recent data suggest that a slowdown in productivity growth may already be in train, consistent with the alternative view described earlier. It is true that markups are now elevated by historical standards, and thus are likely to trend down in the near term. But should the emerging step-down in productivity growth persist and markups not decline rapidly, real interest rates may need to rise more rapidly than is now anticipated.

Note that my discussion places productivity trends rather than inflation on center stage. This is not because inflation is unimportant or unaffected by swings in near-term productivity prospects of the sort I have been considering. On the contrary, keeping inflation and inflation expectations well-contained is a central bank’s primary responsibility. But even if inflation remains low and constant, as we would like, we may still need to move the Fed funds rate fairly often. Real, inflation-adjusted, interest rates must vary over time as economic fundamentals change, even without visible perturbations in inflation prospects.

I expect inflation and inflation expectations to remain well-contained in 2005. The sequence of policy tightenings initiated in June seemed to check the rise in inflation expectations that emerged earlier in the year. Moreover, monetary policy is capable of preventing oil price increases, or changes in the foreign exchange value of the dollar for that matter, from showing through to the underlying inflation rate. Financial market participants expect increases in the Fed funds rate to continue next year, although not at the pace of the last half year. The realized pace of tightening, however, is bound to depend on how economic fundamentals unfold over the year.

\(^2\) Current additions to the capital stock may themselves be the source of future TFP gains.