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Growth in the Post-Bubble Economy

The U.S. economy entered a recession in March 2001. The consensus view is that the recession ended sometime around December 2001. In the five quarters since then, real GDP has expanded at an average compound growth rate of 2.7%. A closer look at the data reveals that the pace of the recovery has been uneven across sectors. While the consumer and housing sectors have shown continued strength, the long-awaited rebound in business investment has yet to occur. This fact highlights the very different nature of the 2001 recession in comparison to previous recessions. This *Economic Letter* examines the behavior of some key macroeconomic variables during the 2001 recession and places them in historical perspective. This exercise helps shed light on the underlying causes of the recession and identifies some fundamental factors that can be expected to influence growth in the years ahead.

A mild recession?

The 2001 recession is often described as being "mild." Figure 1 lends some credence to this idea. The figure compares the trajectory of real GDP during the 2001 recession to the average trajectory observed during the six prior recessions. In each case, the level of real GDP is normalized to 100 at the start of the recession, i.e., at the business cycle peak. The figure shows that the drop in real GDP from peak to trough in 2001 was significantly less pronounced than the average drop. This outcome can be largely attributed to the amazing resilience of the U.S. consumer.

Figure 1
Real GDP

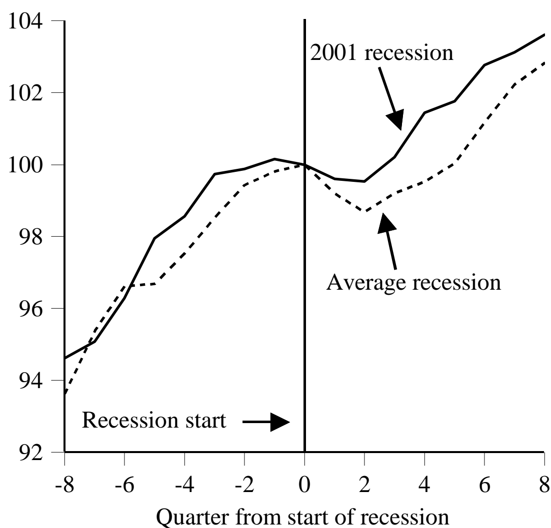
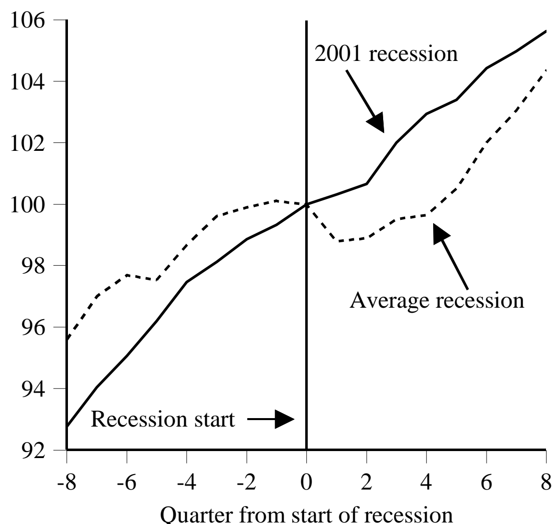


Figure 2 shows that real household spending (defined as real personal consumption expenditures plus real residential investment) did not decline at all during the 2001 recession. Since this category of spending accounts for about three-fourths of U.S. GDP, its continued expansion was crucial in limiting the severity of the recession. This behavior contrasts sharply with that observed during previous recessions when household spending typically slowed prior to the business cycle peak and then declined for two or three quarters.

Figure 2
Real household spending
Personal consumption and residential investment



Several factors account for the strong performance of household spending during the past two years. Fiscal stimulus in the form of tax rebates, cuts in marginal tax rates, and extended unemployment benefits provided support to consumer disposable income. Attractive financing deals offered by domestic auto manufacturers gave a significant boost to consumer durables purchases. Most importantly, low mortgage interest rates spurred record home sales and set off a refinancing boom that allowed consumers to tap the equity in their homes to pay for a variety of goods and services.

An investment boom and bust

Figure 3 shows that the decline in business investment during the 2001 recession was much more severe than average. Interestingly, business investment peaked two quarters before the start of the 2001 recession in

contrast to the coincident peak observed on average. The seeds for the subsequent drop in investment were actually sown during the boom years of the late 1990s. From 1996:Q1 until its peak in 2000:Q3, real business fixed investment expanded at an average compound growth rate of 10% per year—about 2.5 times faster than the growth rate of the U.S. economy as a whole.

Much of the surge in business investment during the late 1990s was linked to computers and information technology. During these years, measured productivity growth picked up, inflation remained low, and the unemployment rate declined. Such observations were often cited as evidence of a permanent structural change—one that portended faster trend growth in the years ahead. Widespread belief in the so-called "new economy" caused investors to bid up stock prices to unprecedented levels relative to earnings (see Lansing 2002).

It is now clear that the investment boom of the late 1990s was overdone. Firms vastly overspent in acquiring new technology and in building new productive capacity—with an attendant increase in employee headcount—in an effort to satisfy a level of demand for their products that proved to be unsustainable. A recent study by Gordon (2003) documents the many transitory factors that boosted the demand for technology products during the late 1990s. These include: (1) telecom industry deregulation that led to the creation of new firms, each demanding large amounts of equipment to build communication networks, (2) the need to replace computers in order to run a new generation of software starting with Windows 95, (3) the one-time invention of the world wide web, (4) the surge in equipment and software demand from the now defunct dot-coms, and (5) a compressed PC replacement cycle heading into Y2K.

The extraordinary burst of investment during the late 1990s coincided with the emergence of a major speculative bubble in the U.S. stock market—itself fueled by the very same optimistic projections about the future. In a recent paper, Caballero and Hammour (2002) present the view that the stock market bubble and the investment boom were mutually reinforcing phenomena. In particular, rapidly rising stock prices provided firms with a low-cost source of funds from which to finance their investment projects. The resulting surge in capital accumulation served to increase measured productivity growth which, in turn, appeared to justify the enormous run-up in stock prices. Figure 4 shows that the trajectory of the S&P 500 stock index, both before and after the 2001 recession, is strikingly similar to the trajectory of investment.

About two quarters after the bubble burst in March 2000, firms started to cut back sharply on new investment as it became clear how much excess capital had been accumulated. Rather than investing in new technology or capacity, firms started to make better use of the technology and capacity they already had. Firms also began to undertake the painful but necessary steps to bring their cost structures into line with the post-bubble demand environment. In many cases, the required adjustments have involved large numbers of employee layoffs, thus contributing to a rise in the unemployment rate from 3.9% in October 2000 (a 30-year low) to 6.1% in May 2003. Job losses in the U.S. economy have continued to trend upward for more than a year after the presumed end date of the 2001 recession—yet another atypical pattern relative to the average recession.

Figure 3
Real business fixed investment

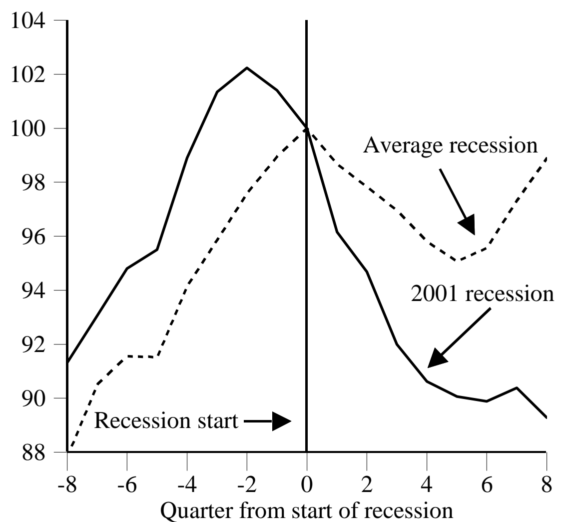
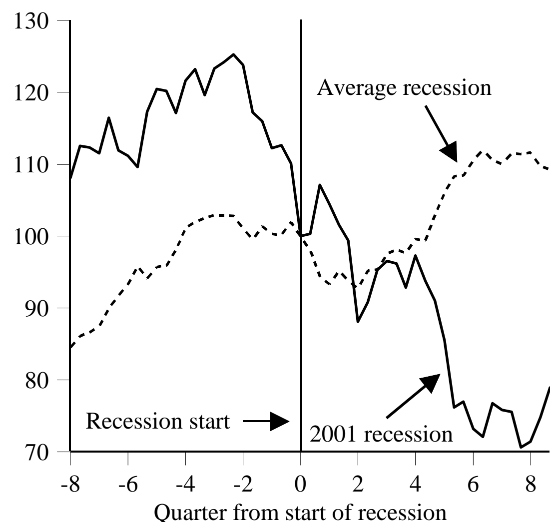


Figure 4
S&P 500 index



House prices and the U.S. dollar

In response to three consecutive years of declining stock prices starting in 2000, households have shifted

more of their assets into real estate (see Marquis 2003). This portfolio rotation effect has contributed to the strength of the residential housing market. House price appreciation in recent years has been nearly double the growth rate of per capita disposable income. In some geographic areas, the ratio of house prices to rents (a valuation measure analogous to the P/E ratio for stocks) is at an all-time high, thus raising concerns about the existence of a housing bubble. For the U.S. economy as a whole, the ratio of house prices to rents is currently about 16% above its 30-year average (see *The Economist* 2003 and Krainer 2003).

U.S. imports have grown much faster than exports in recent years. In the first quarter of 2003, the nominal trade deficit (imports minus exports) hit a record $484 billion—about 4.5% of nominal GDP. This number implies that the U.S. economy requires about $1.3 billion per day in foreign capital inflows to finance our imported goods. During the boom years, foreign investors were quite willing to purchase U.S. stocks and bonds for their portfolios. This activity put upward pressure on stock prices, downward pressure on bond yields, and led to the appreciation of the U.S. dollar on foreign exchange markets.

From mid-1995 to its peak in early 2002, the trade-weighted nominal dollar appreciated by nearly 40% against a basket of major currencies. Since then, the dollar has retraced more than half of the earlier gains. A falling dollar suggests that foreign investors are unwinding some of their dollar-denominated portfolio holdings in order to seek higher returns elsewhere. While a weaker dollar helps stimulate U.S. exports, it can hurt growth in foreign countries that sell goods to the U.S. If a rapid, disorderly depreciation of the dollar were to occur, foreign investors would likely demand higher risk premiums for holding dollar-denominated assets. This development, in turn, could lead to lower stock prices and higher bond yields, thereby slowing the growth of domestic demand.

Growth in the years ahead

During the past two years, the consensus economic forecast has consistently predicted a robust near-term acceleration in business investment, which has yet to emerge, notwithstanding substantial monetary policy easing and the enactment of two fiscal stimulus packages (with a third signed into law on May 28, 2003).

The sluggish nature of the investment recovery may owe partly to several shocks that have subdued business and investor confidence. These shocks include the September 11 terrorist attacks, a wave of corporate accounting scandals, and the recent U.S. invasion of Iraq. Alternatively, in the aftermath of what many consider to be the greatest speculative bubble in history, it is quite possible that investment is being restrained by fundamental factors that will take longer to overcome. Capacity utilization in the U.S. industrial sector is currently at a 20-year low —only 74.4% as of April 2003. Large amounts of excess capacity combined with technological advances that foster market competition in a global economy have created an environment where many firms lack pricing power. The lack of pricing power restrains the growth of nominal sales—typically an important factor in the determination of a firm's capital expenditure plans. It is worth noting that much of the recent earnings gains of S&P 500 companies have been achieved not through increases in sales but instead through cost-cutting measures.

The likelihood of a robust pickup in sales is ultimately linked to the outlook for household spending. The fact that household spending performed so well during the 2001 recession means that there is less pent-up demand going forward. Hence, the upside potential for household spending growth appears rather limited. On the downside, continued weakness in the labor market and the eventual slowing of the mortgage refinancing boom poses the risk that consumers will rein in their spending. So, to the extent that business capital expenditures are "demand-determined," the projected acceleration in investment may prove to be less vigorous than the consensus forecast expects.

Kevin J. Lansing
Senior Economist

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