

Recession Looms for the U.S. Economy in 2007

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Introduction

The recovery that began in November of 2001 is likely to come to an end in 2007. The main factor pushing the economy into recession will be weakness in the housing market. The housing market had been the primary fuel for the recovery until the last year, as there was an unprecedented run-up in house prices since 1997. With prices now headed downward, construction and home sales have dropped off by almost 20 percent against year ago levels. Even more importantly, borrowing against home equity, which had been the main factor fueling consumption growth, will plummet as many homeowners lack any further equity to borrow against. The result will be a downturn in consumption spending, which together with plunging housing investment, will likely push the economy into recession. The economy will see a substantial net loss of jobs, with nominal wage growth slowing as the labor market weakens over the course of the year.

Overview

This recovery has been fueled to a very large extent by a housing bubble, just as the second half of the nineties cycle was fueled by a stock bubble. Since 1997, average house prices have risen by more than 50 percent, after adjusting for inflation. Historically, house prices have moved at approximately the same pace as the overall rate of inflation.¹ This unprecedented run-up has not been associated with extraordinary population or income growth, both of which have been below their average pace for the post-war years since 2000. It is also not associated with any new restrictions on supply, as housing construction was at near record levels over the period 2003-2005. The run-up in house sale prices was also not associated with any extraordinary increase in rents, which rose only slightly more rapidly than the overall rate of inflation over this period. In short, the run-up in house prices cannot be explained except as a speculative bubble.

This bubble fueled the economy directly through its impact on the housing sector and indirectly through the impact that housing wealth had on consumption. Housing construction and sales account for more than six percent of GDP. The run-up in prices has led to a near doubling of sales of new and existing homes since the mid-nineties. It has also led to record nationwide vacancy rates for both rental and owner occupied housing. In past downturns housing investment has fallen by 30-40 percent. The sector has never seen as much overbuilding as it has experienced in the current cycle. Also, with the huge baby boom cohort now entering its retirement years, demand for housing should be shrinking relative to the size of the population in the years ahead. Based on past patterns, it is reasonable to expect a drop in output in the housing sector from its 2005 peaks of at least 40 percent. It should reach this bottom by the end of 2007 or early 2008 at the latest.

The wealth effect created by the housing bubble fueled an extraordinary surge in consumption over the last five years, as savings actually turned negative. (The country's demographics, with most of the baby boom cohort still in its prime saving years, is heavily tilted toward saving.) The run-up in prices

¹ Background data on the housing bubble can be found in Baker, D., 2005, "The Housing Bubble Fact Sheet," Center for Economic and Policy Research [http://www.cepr.net/publications/housing_fact_2005_07.pdf] and Baker, D., 2006, "Is the Housing Bubble Collapsing? Ten Economic Indicators to Watch" Center for Economic and Policy Research [http://www.cepr.net/publications/housing_indicators_2006_06.pdf].

created \$5 trillion in excess housing wealth. Conventional estimates of the size of the housing wealth effect imply that this wealth would have generated an additional \$200-\$300 billion of consumption (1.6-2.3 percent of GDP).

It is plausible that the impact of this bubble wealth was actually considerably larger than the conventional estimates imply. Historically, the saving rate in the United States had averaged close to eight percent of disposable income. The savings rate began to decline sharply in the nineties, at least partially in response to the stock bubble, although other factors likely played a role. However, even assuming a baseline savings rate of just four percent, the current rate of -1 percent implies an amount of excess consumption of almost \$480 billion annually, given current income levels. This higher figure is consistent with data showing that households were borrowing more than \$600 billion annually against their home equity in 2005.

This home equity-fueled consumption will be sharply curtailed in the near future. In spite of the record run-up in house prices, the ratio of homeowners' equity to market value stood at a record low in the second quarter of 2006. (This is especially striking since the baby boom cohort is now ages 42-60 and would be expected to have accumulated considerable equity in their homes.) With house prices now falling, the number of homeowners who have exhausted the ability to borrow against their home will rise rapidly. A sharp run-up in credit card debt earlier this year provides evidence that this is already happening, as people who were unable to borrow against their homes likely turned to their credit cards. However, credit card borrowing cannot replace borrowing against home equity (the volume of outstanding credit card debt is less than one tenth of the volume of mortgage debt); millions of homeowners will soon be forced to curtail their consumption as home prices decline.

Homeowners will also be hit by the resetting of more than \$2 trillion in adjustable rate mortgages in 2006 and 2007. While most homeowners in the United States have generally opted for fixed rate mortgages, adjustable rate mortgages have become far more popular in the last five years. This is especially striking, since the mortgage rate available on fixed rate mortgages was at its lowest level in fifty years. Presumably, homebuyers opted for adjustable rate mortgages to take advantage of the lower starting rate. Typically, this rate is locked in for a period of three years. More than 30 percent of the mortgages issued in 2003 and 2004 had adjustable rates, which were record years for mortgage financing. The lock-in period on these mortgages is ending in 2006-07. In many cases the interest rate is resetting upward by close to two percentage points. This will be a major strain for many homeowners who were already struggling to meet mortgage payments on over-priced houses. Some homeowners will be unable to meet these higher payments and forced to sell, putting further downward pressure on the housing market.

There also will be an increase in default rates, as many homeowners will be unable to meet mortgage payments and unable or unwilling to sell their homes. The rise in defaults will put severe strains on the portions of the financial industry that hold large amounts of mortgage debt.

The turnaround in the housing market has already begun to affect the economy. There was a marked slowdown in consumption growth beginning in the second quarter, which has continued into the third quarter according to currently available data. At the least, it seems that the savings rate is no longer declining. It is likely to begin rising in the near future, and will almost certainly have moved into positive territory by early 2007. This means that consumption growth will be trailing income growth.

With the housing and consumer sectors both showing weakness, there is little prospect that growth in other sectors will be able to offset this drag on growth. The continuing large budget deficits rule out any substantial boosts to government spending or further tax cuts. State and local governments are in better financial shape, but this is driven in part by higher property tax collections, which in turn are based on the run-up in house prices. With house prices moving downward in many areas, tax collections are likely to fall in the near future also.

Investment spending has weakened in recent months, following the slower growth in consumption. Measures of capacity utilization have already fallen substantially from the not very high levels reached in the spring. While investment growth may stay positive in 2007, it is likely to be slower than it was in 2005 and the beginning of 2006. It will provide little offset to the downturn in housing and consumption.

TABLE 1
Summary Predictions

	4th Quarter 2006 — 4th Quarter 2007
GDP Growth	-0.7%
Job Growth	-1.2 million
Nominal Wage Growth	3.4 percent
Inflation (CPI)	2.6 percent
Core Inflation (CPI)	2.6 percent
Inflation (GDP Deflator)	2.4 percent
Residential Construction	-12.0 percent
Consumption	-1.2 percent
Investment	2.0 percent
Exports	4.0 percent
Imports	-2.0 percent
Government Expenditures	2.0 percent
Government Budget Deficit (Fiscal '07)	\$370 billion
Trade Deficit	\$750 billion
Existing Home Sales	5,600,000
Housing Starts	1,670,000
	End of Period
Unemployment Rate	6.3 percent
Federal Funds Rate	4.00 percent
10-Year Treasury	5.20 percent
Dollar/Euro	0.77 euro
Dollar/Yen	105 yen

The slowdown in the U.S. economy should lead to a modest improvement in the trade deficit, assuming that there are no major adjustments in currency prices and that oil stays near its current price. Since the trade deficit has been growing, and would likely continue to grow if the economy sustained its recent growth path, it would take substantial slowing just to hold the size of the deficit constant. With a falloff in GDP growth over the course of the year, the deficit may fall by around \$40-50 billion (about 0.4 percent of GDP) from its current level.

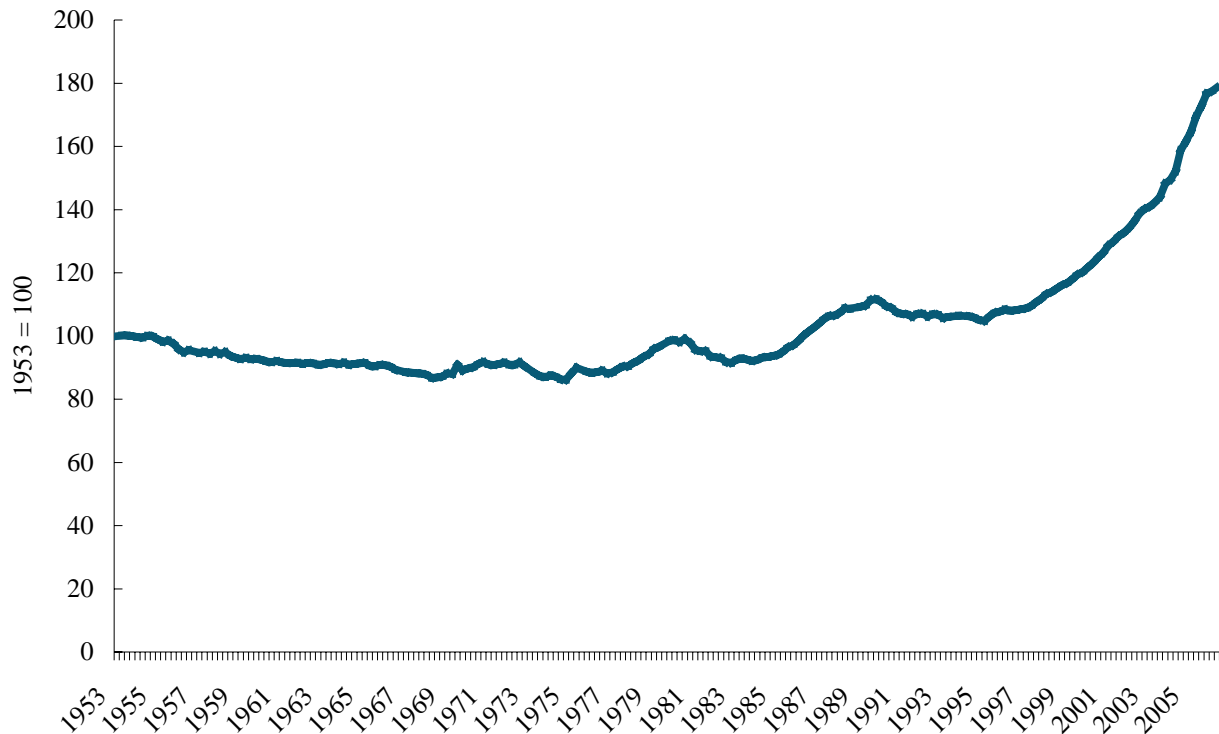
The Fed is likely to respond to the slowdown by lowering interest rates. It will almost certainly be very cautious in its rate reductions for two reasons. First, even with the economy slowing, inflation is still above the Fed's, or at least Bernanke's, target rate. With Bernanke feeling the need to establish his reputation as an inflation fighter, he will be hesitant to abandon the battle against inflation too quickly.

The other reason that the Fed is likely to be cautious in lowering rates is that it is far more concerned about long-term rates than the short-term interest rates directly under its control. The long-term rate has barely budged in response to the two-year tightening by the Fed. (The 10-year Treasury rate was just over 4.6 percent when Greenspan began tightening in June 2004, which is also the rate in November 2006.) Investors, and more importantly the Chinese and Japanese central banks have been willing to hold long-term treasuries at very low real interest rates. The central banks are presumably holding these bonds to support the dollar and the U.S. economy, thereby sustaining their export market. They must recognize that they will lose money on these bonds when they decide to sell them, but consider this loss to be an acceptable price for sustaining their exports. However, if they came to feel the Fed was being reckless in its monetary policy, these central banks may become less willing to hold long-term bonds. Any substantial sell-off could lead to sharp rises in long-term interest rates in the United States. The fear of such a sell-off (either by central banks or private investors), will lead the Fed to be very cautious in lowering interest rates. However, it is likely that it will begin dropping rates in its first meeting in 2007 and will lower them by 1.0-1.5 percentage points over the course of the year.

Housing

The key factor determining the strength of the U.S. economy in 2007 will be the extent of the decline in the housing market. Historically, house prices have just kept even with the overall rate of inflation. Since the mid-90s, inflation-adjusted house prices have risen by a nationwide average of more than 50 percent, implying an over-valuation of close to one-third.

FIGURE 1
Real House Sale Prices



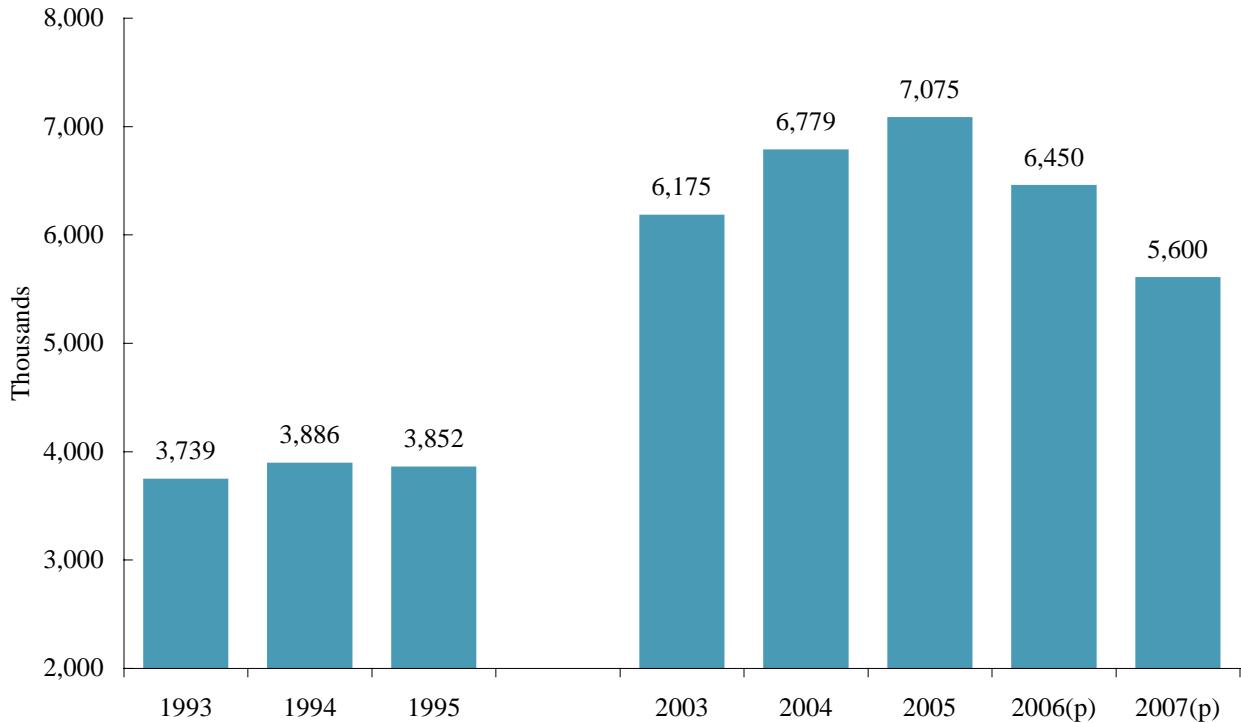
Source: OFHEO, BLS, and BEA.²

This over-valuation has provided an enormous boost to the economy over the last five years, leading to record high sales of existing homes and near record rates of construction. The charts below make comparisons to the mid-90s, since these were the years just prior to the beginning of the housing boom when the economic recovery was already well underway. With the U.S. population having increased by approximately 10 percent over the last decade, it would be reasonable to expect an increase in sales and construction numbers of approximately 10 percent. Instead, housing starts had increased by more than 50 percent at their 2005 peak, and sales were up by almost 90 percent. Assuming that the mid-90s provides a reasonable reference point (few economists argued that housing was depressed at the time), the data indicate that construction will stabilize at a level that is more than 25 percent lower than the 2005 peak and that stable level for sales will be more than 40 percent lower. Of course, given the extraordinary overbuilding of the last few years, it is likely that

² The real house price shown in Figure 1 uses the BLS home price index for 1953 to 1977, the OFHEO House Price Index from 1982 to 2006, and averages the change in the two indexes over the period from 1977 to 1982.

the economy will overshoot on the way down. Construction and sales could fall considerably below these levels for a few years as the housing market adjusts to a more normal situation.

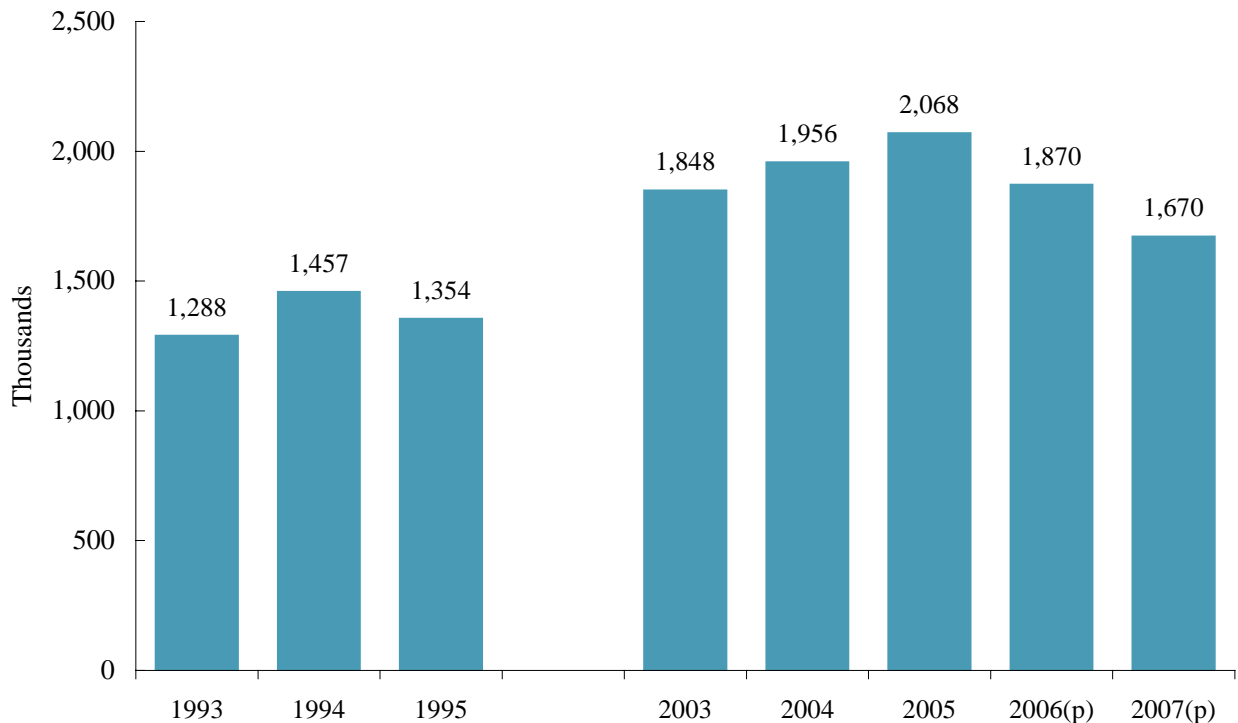
FIGURE 2
Sales of Existing Single Family Homes



Source: NAR [[http://www.realtor.org/Research.nsf/files/REL0603TS.pdf/\\$FILE/REL0603TS.pdf](http://www.realtor.org/Research.nsf/files/REL0603TS.pdf/$FILE/REL0603TS.pdf)]

Sales of existing homes have already fallen sharply in first nine months of 2006. The projections shown in Figure 2 assume that this decline continues for the rest of the year and through 2007. The projection assumes that 2006 sales will be 6,450,000, a decline of 8.8 percent from the 2005 peak. It assumes that sales will decline by another 13.2 percent to 5,600,000 in 2007.

FIGURE 3
New Housing Starts

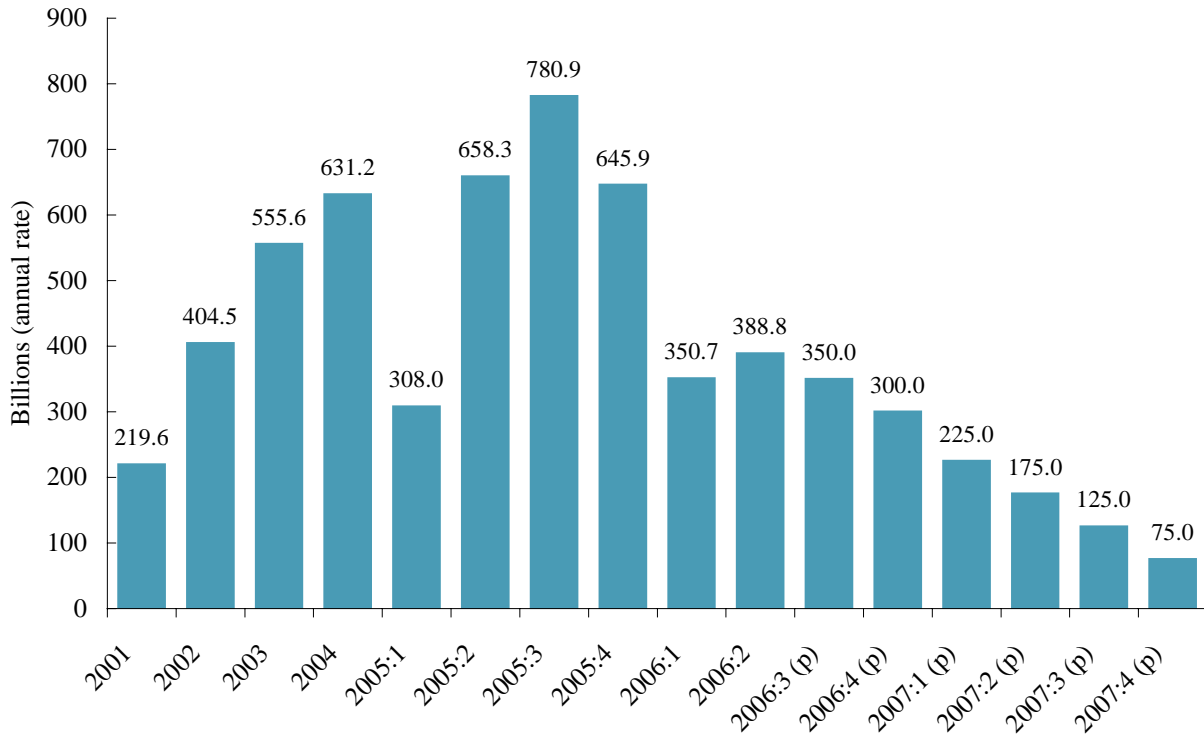


Source: Census Bureau, http://www.census.gov/const/www/quarterly_starts_completions.pdf

The projections in Figure 3 show year-round housing starts for 2006 totaling 1,870,000, a decline of 9.6 percent from the peak hit in 2005. The projections assume that housing starts will decline by another 10.7 percent to 1,670,000 in 2007. It is likely that housing starts will decline further to the range of 1.5 to 1.6 million in 2008, although overshooting could cause housing starts to fall below this level for a period of time.

Housing has been important not only for its direct effect on the economy through the employment of workers in the construction, real estate, and mortgage banking sector, it also has been important through the effect of housing wealth on consumption. Homeowners have been borrowing against their homes at a record pace. As a result, the nationwide ratio of home equity to home value stands at a record low of 54.1 percent at the end of the second quarter of 2006. This ratio averaged close to 70 percent in the 60s, 70s, and 80s. This is remarkable since the unprecedented increase in house prices over the last decade would be expected to lead a high ratio of equity to value (a rise in house prices translates one to one into an increase in equity). Also, the nation's demographics, with the huge baby boom cohort nearing retirement, should be tilted toward having higher than normal ratios of equity to value.

FIGURE 4
Mortgage Equity Withdrawals



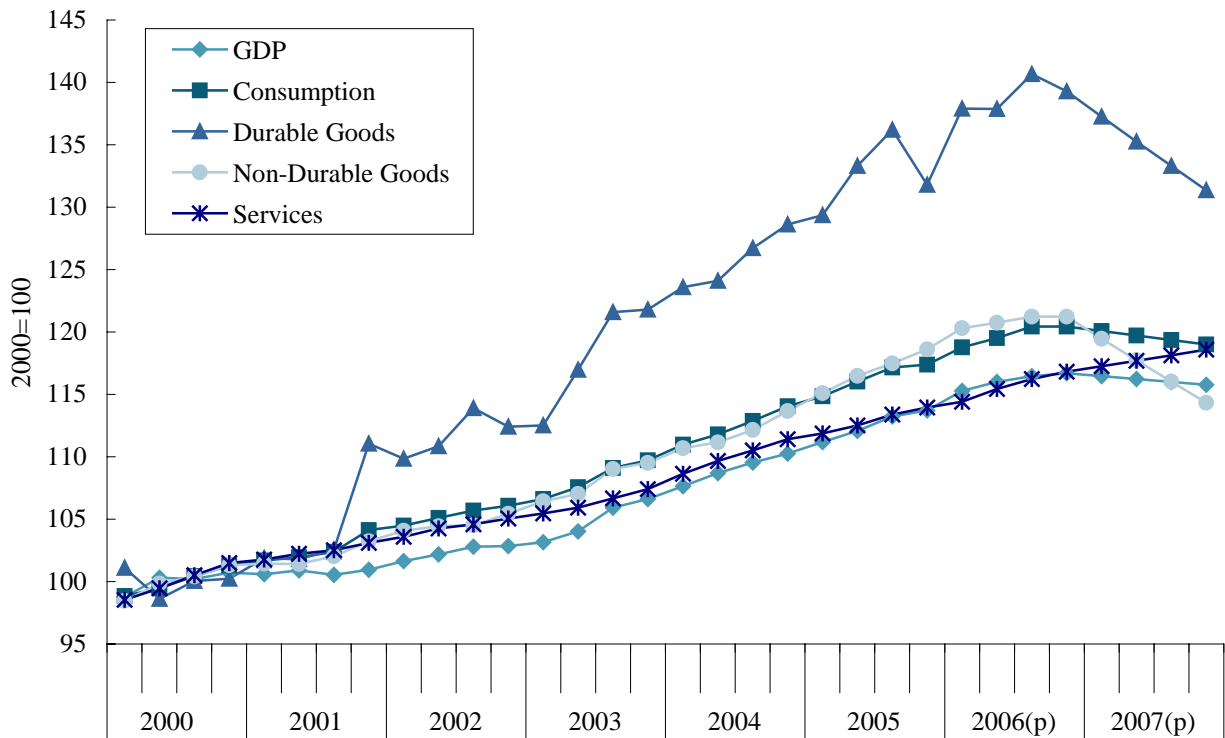
Source: Federal Reserve Board, Flow of Funds, Table B.100 and NIPA, Table 5.3.5, line 19.

With house prices now falling, the number of homeowners who no longer have any equity against which to borrow is increasing rapidly. This will substantially slow the growth in consumption, a process that may have already begun in 2006. Limitations on the ability to borrow against home equity may also explain the uptick in the growth rate of credit card debt. Credit card debt has grown at a 10.1 percent annual rate from April through September after having grown at an average annual rate of just 3.6 percent from 2002 through 2005.

Consumption

Consumption has been the leading factor driving the economy in this business cycle. The consumption share of GDP rose from 68.7 percent at the peak of the last cycle in 2000, to 70.3 percent of GDP in the third quarter of 2006. All components of consumption have expanded at a healthy pace, as shown in Figure 5 but consumer durables have shown by far the most rapid pace of growth. However, the strong reported growth in durable goods consumption is primarily the result of falling computer prices leading to an increase in the real measure of durable goods. The share of durable goods consumption in GDP has actually fallen slightly since 2000, dropping from 8.7 percent of GDP in 2000 to 8.1 percent in the third quarter of 2006. The shares of expenditure on non-durable goods and services have both risen, more than offsetting this decline.

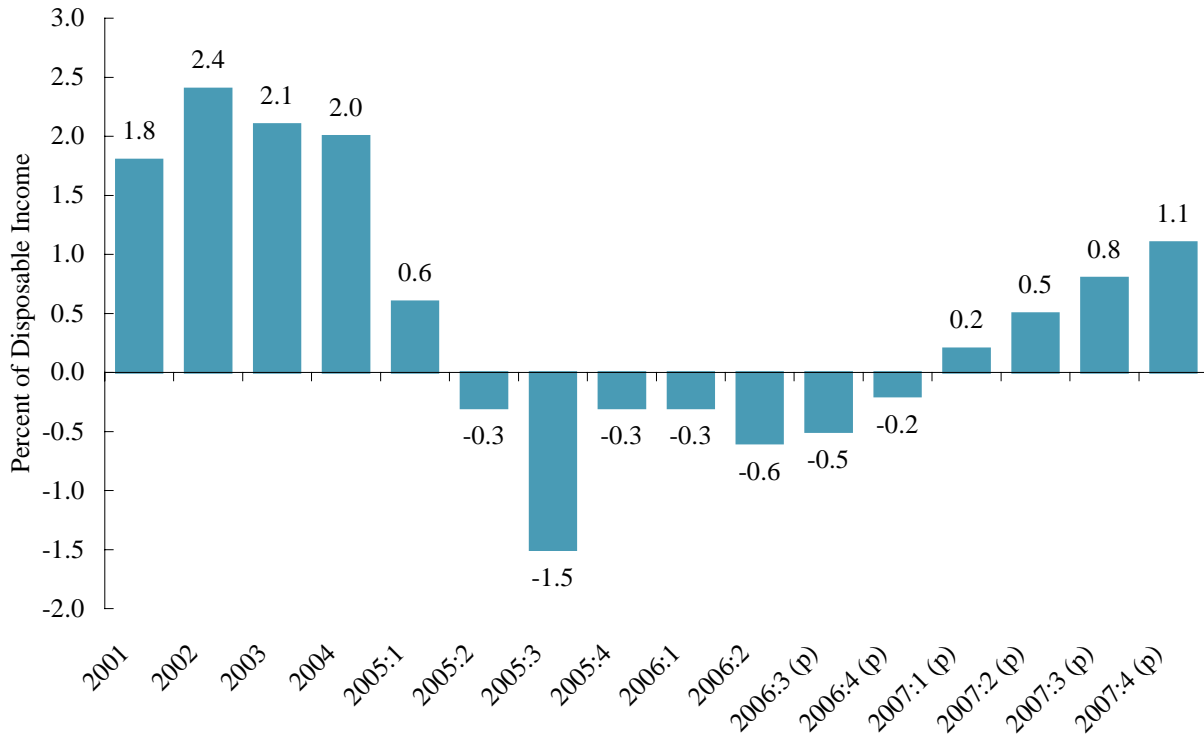
FIGURE 5
Consumption Spending



Source: Bureau of Economic Analysis and author's projections.

The growing share of consumption in GDP was fueled by a drop in the savings rate. The wealth effect from the stock bubble had already depressed the savings rate to a then post-war low of 1.8 percent in 2001 (it had averaged more than 8 percent in the 60s, 70s, and 80s). The savings rate has continued to decline in the current decade due to the housing wealth effect.

FIGURE 6
Savings Rate



Source: Bureau of Economic Analysis and author's projections.

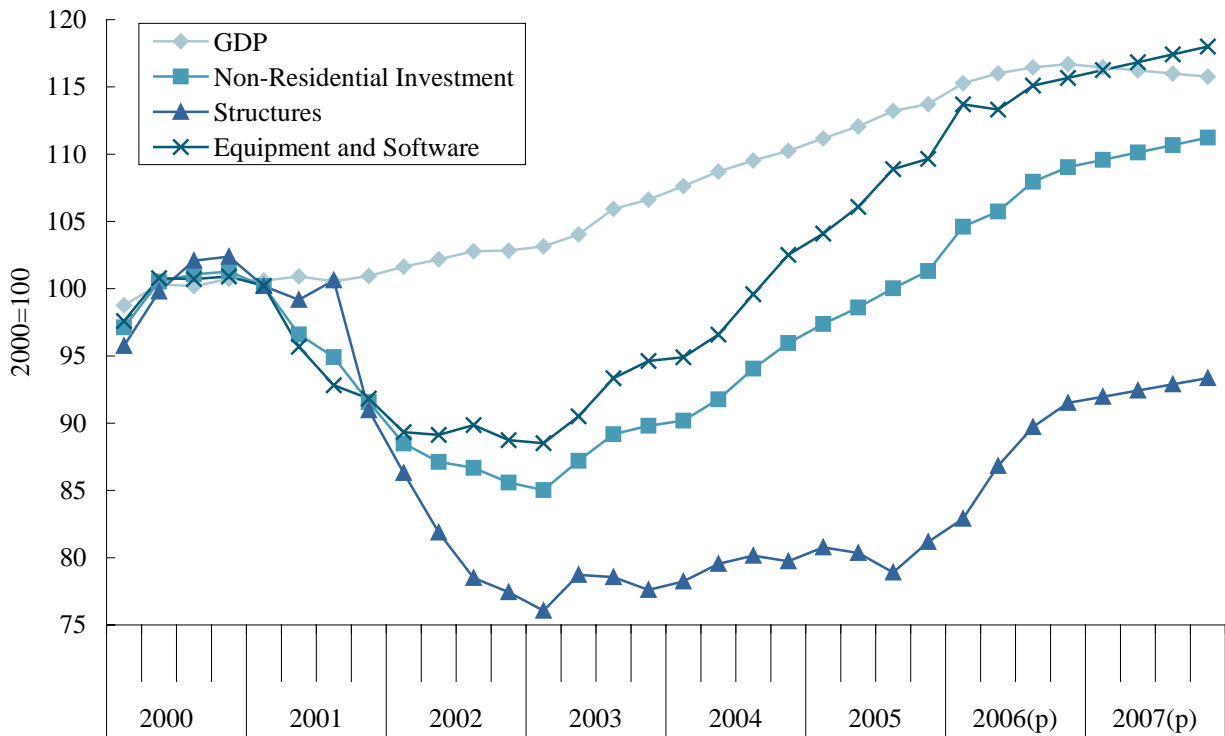
With millions of homeowners reaching the limits of their ability to borrow, the savings rate will begin to rise in 2007 back towards more normal levels. As the savings rate continues to rise in 2008 and 2009, consumption growth will trail the growth in disposable income. The resetting of \$3 trillion in adjustable rate mortgages at substantially higher interest rates will also reduce income available for consumption.

Investment

Investment growth has been relatively weak thus far in this recovery. (Investment growth was somewhat overstated in the 90s by the growth of car leasing. A leased car counts as an investment by the leasing company. A purchased car appears in consumption.) One of the main reasons was that the economy had sustained a very high level of investment in the late 90s as a result of the tech bubble. This led to overinvestment in large segments of the economy, and also created a relatively high starting point. Two other factors have also depressed investment. The housing bubble has pulled resources (construction workers and material) away from non-residential construction. As a result, a backlog of demand for non-residential structures accumulated over the last few years. The other factor depressing investment is the trade deficit. With demand for manufactured goods increasingly being filled by imports, many industries are investing in other countries rather than domestically.

As the economy slows, the pace of growth of investment is likely to slow as well. This slowdown was already showing up in equipment and software investment in 2006. Growth in the second and third quarters averaged just 2.5 percent. Non-residential investment actually picked up sharply in the second and third quarters of the year as resources were finally freed up from residential construction. However, this burst will be relatively short-lived as the backlog of demand in the non-residential sector will be quickly filled. (Non-residential construction rose at a 20.3 percent annual rate in the second quarter. It rose at a 14.3 percent rate in the third quarter.) Investment growth in both categories will average close to two percent in 2007.

FIGURE 7
Investment Spending

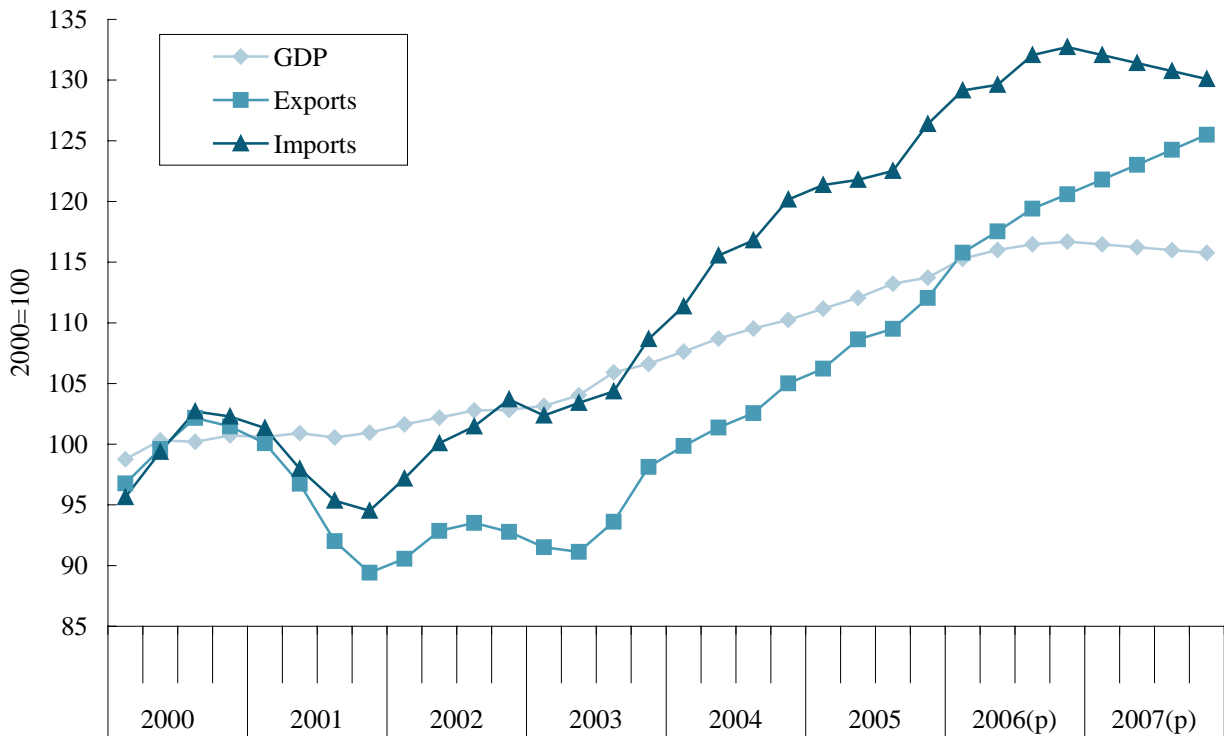


Source: Bureau of Economic Analysis and author's projections.

Exports and Imports

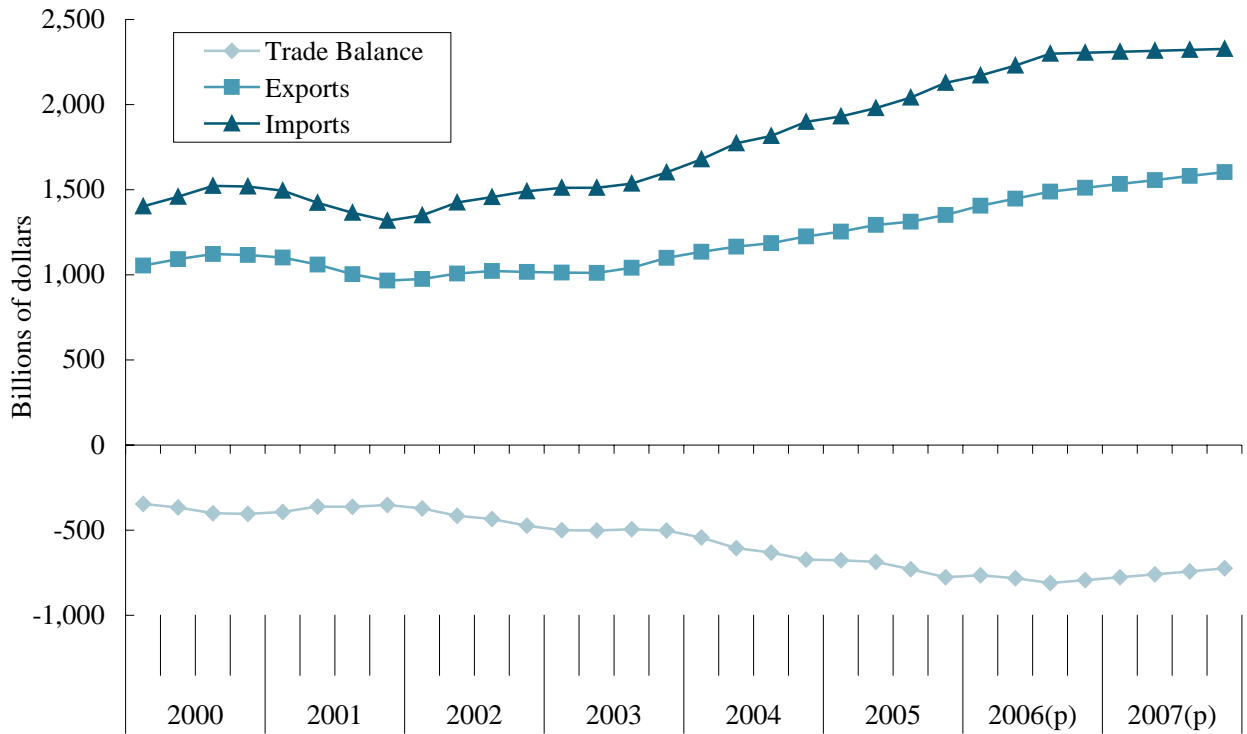
The high value of the dollar has led to rapid growth in the trade deficit over the course of the business cycle. In the last two years, the size of the nominal deficit has been inflated due to the sharp jump in oil prices. With the economy weakening, real imports will fall by close to 2 percent in 2007. While exports of end products are likely to continue to grow at close to their current pace, a growing share of U.S. exports are intermediate goods for products that are later imported back into the United States. With imports falling, this will reduce the demand for exports of intermediate goods. This should cause the growth of total exports to fall back to around 4.0 percent. On net, the reduction in imports and the increase in exports will add approximately 0.7 percentage points to GDP growth.

FIGURE 8
Exports and Imports



Source: Bureau of Economic Analysis and author's projections.

FIGURE 9
Exports, Imports, and Trade Balance



Source: Bureau of Economic Analysis and author's projections.

The rise in exports and decline in imports will produce a modest improvement in the trade deficit. The decline in real imports of two percent, coupled with a three percent rise in import prices will lead to an increase in nominal imports of one percent, or just over \$20 billion. Export prices will rise by 2.0 percent, which will lead to an increase in the nominal value of exports of 6.6 percent or approximately \$90 billion. This will lead to a net improvement in the trade deficit of \$70 billion by the 4th quarter of 2007, as shown in Figure 9.

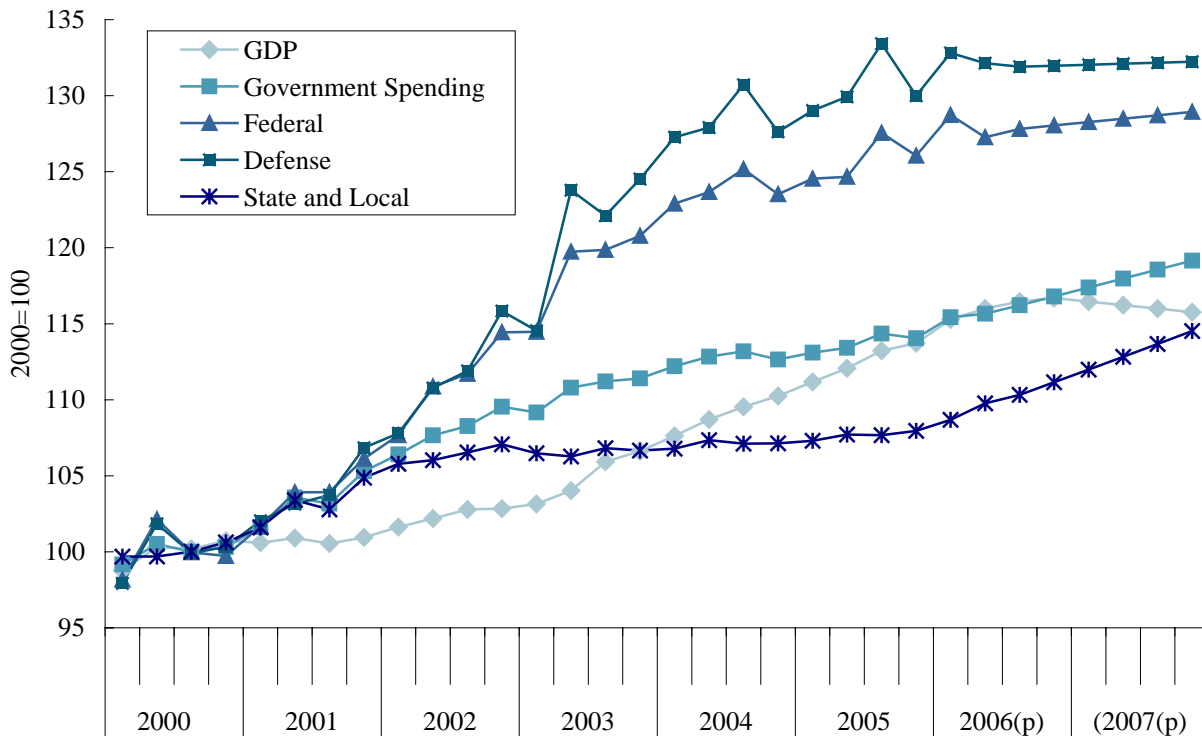
Government Spending

Government spending is likely to make somewhat more of a contribution to GDP growth in 2007, primarily due to the relatively rapid growth of state and local spending. State and local spending had grown very slowly from 2002 to 2005 as many states were in a weak financial situation following the recession. However, state and local finances are considerably stronger in most areas and there is backlog of unmet demands. While tax collections may slow over the course of 2007, appropriations will have been made when the budget situation was relatively strong. State and local spending will grow by 3.0 percent in 2007.

The growth of federal spending is likely to slow due to pressures to limit the size of the deficit and possibly some reduction in the size of the forces occupying Iraq. Federal spending will grow at a 0.7 percent rate in 2007, with real defense spending increasing by 0.2 percent and non-defense spending rising at a 1.8 percent rate. This will lead to an overall increase in government spending of 2.2 percent.

The decline in GDP will lead to a substantial drop in tax revenues. As result, the deficit in fiscal year 2007 will be \$370 billion. It will rise to \$460 billion in fiscal year 2008.

FIGURE 10
Government Spending



Source: Bureau of Economic Analysis and author's projections.

Job Growth

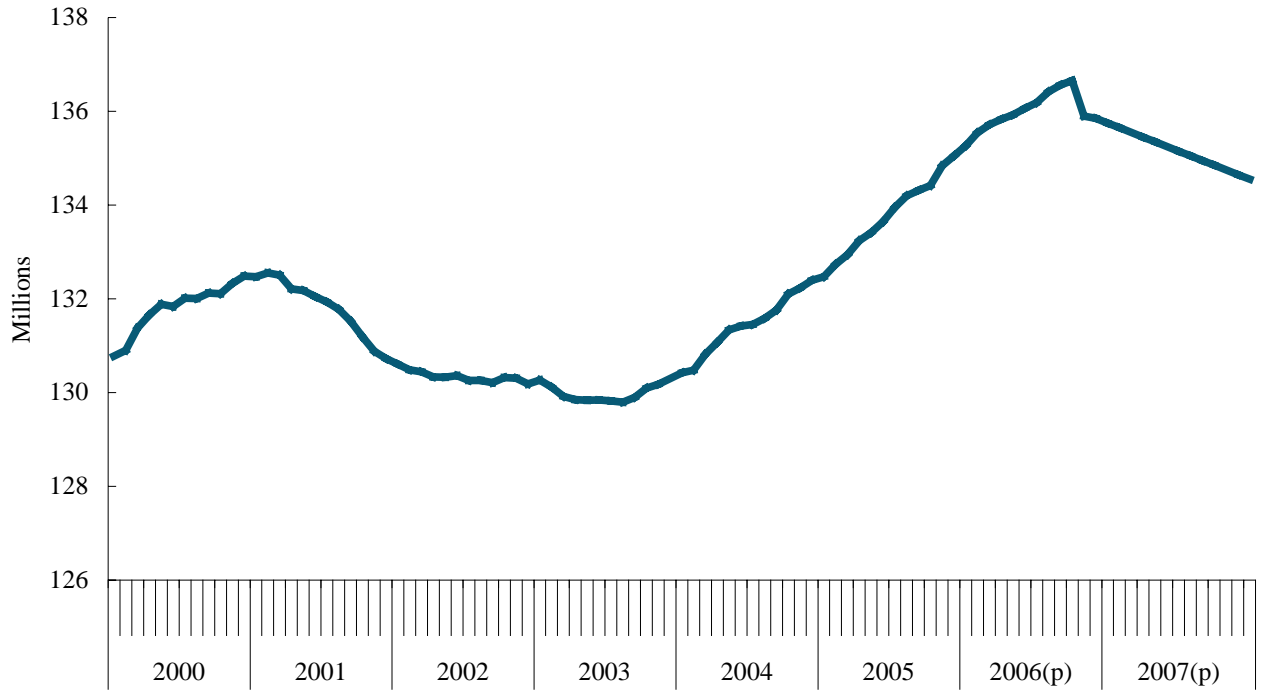
The rate of job growth has slowed sharply over the course of 2006. The economy was creating jobs at a healthy rate of 230,000 per month in 2005.³ In three months ending in October 2006, job creation averaged 157,000. Job growth in the private sector averaged just 119,000 over this period. This rate is virtually certain to slow sharply in the months ahead. Thus far the slowdown in construction has led to almost no falloff in employment in the construction sector. Similarly, employment in real estate is still at its peak levels, even though sales of new and existing homes are both down by close to 15 percent on a year over year basis. Clearly employment levels in these and other housing related sectors will soon adjust to the falloff in demand.

As consumption growth falls off, there will be reduction in employment growth in other sectors. This downturn is already visible in manufacturing, which has lost 55,000 jobs from July to October. Retail trade has also been shedding jobs, with employment down by 63,000 year over year. Much of this job decline is attributable to consolidation within the industry, but it is likely that slower demand growth will lead to continuing job losses even as the impact of the consolidation diminishes. Slower consumption growth will likely also curtail the growth in employment in restaurants, a sector that added 292,000 jobs over the last year. The health care sector, which added 300,000 jobs in the last year, is likely to sustain a healthy pace of job growth, as is the government sector, which added 230,000 jobs.

Over the course of the year, the economy will shed 1.2 million jobs. The greatest job loss will be the housing related sectors, construction, real estate, and mortgage banking, but most sectors are likely to be affected by the drop in output.

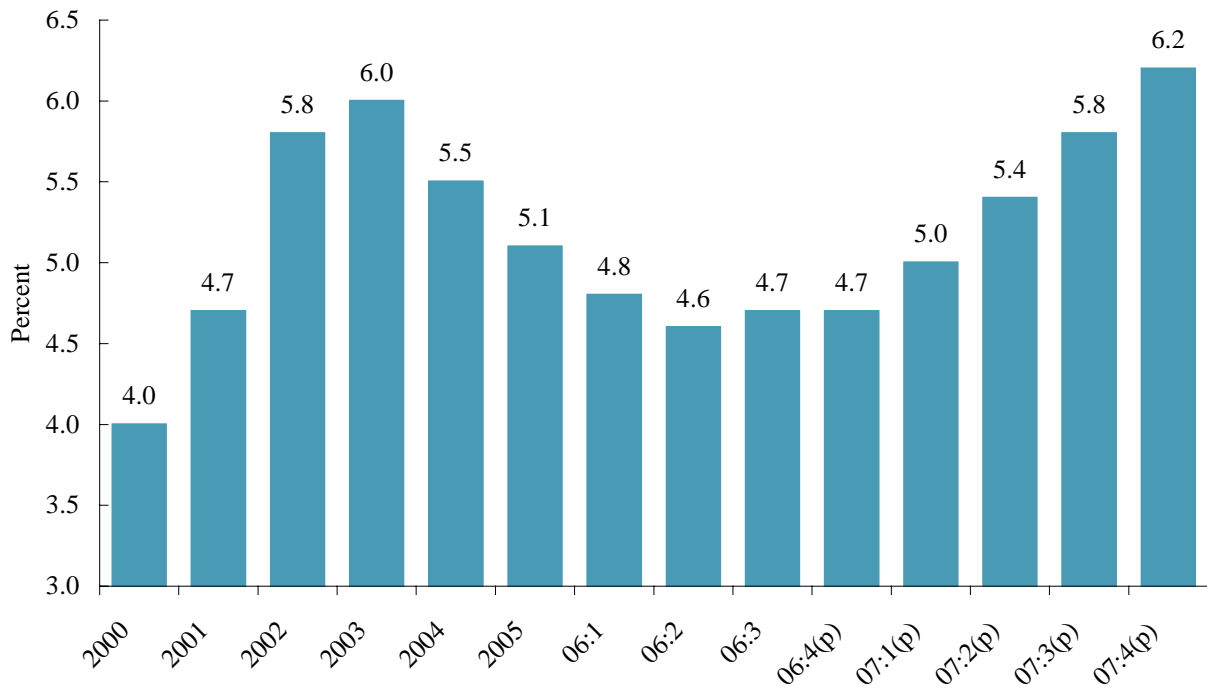
³ This includes the addition of 810,000 jobs from the Bureau of Labor Statistics benchmark revision to the establishment survey.

FIGURE 11
Jobs (Establishment Survey)



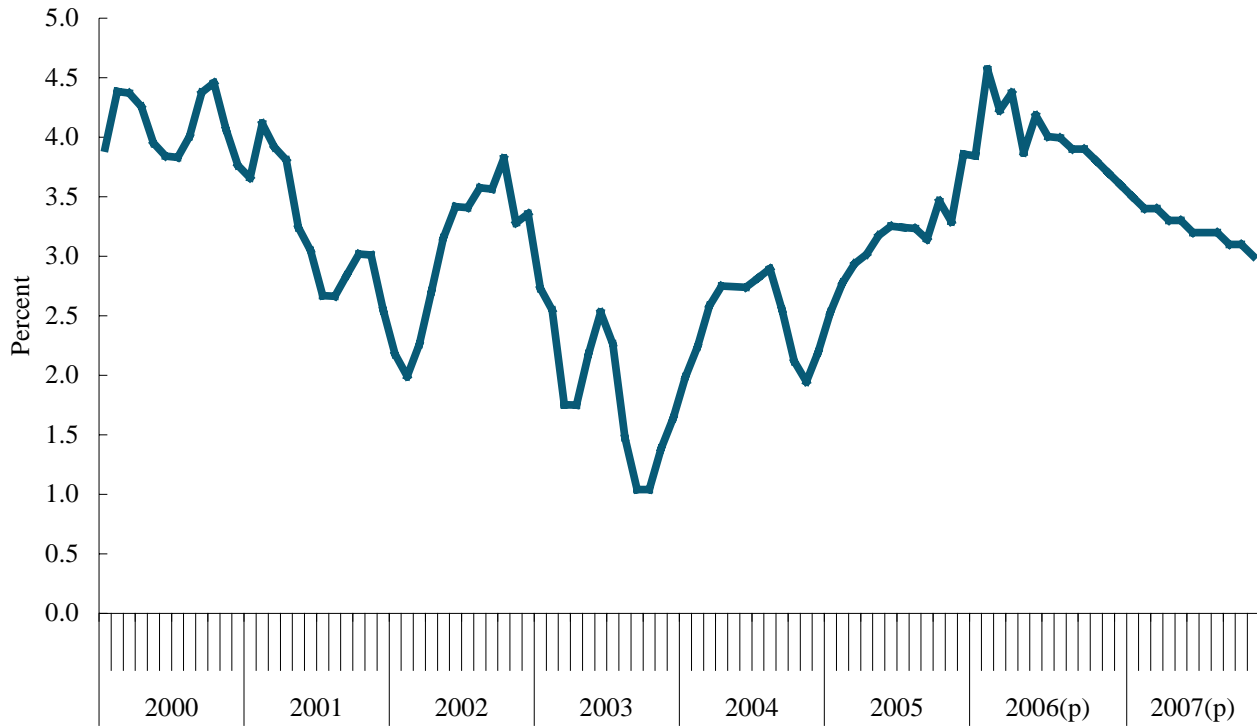
Source: Bureau of Labor Statistics and author's projections.

FIGURE 12
Unemployment Rate



Source: Bureau of Labor Statistics and author's projections.

FIGURE 13
Nominal Wage Growth (3-month average, annual rate)



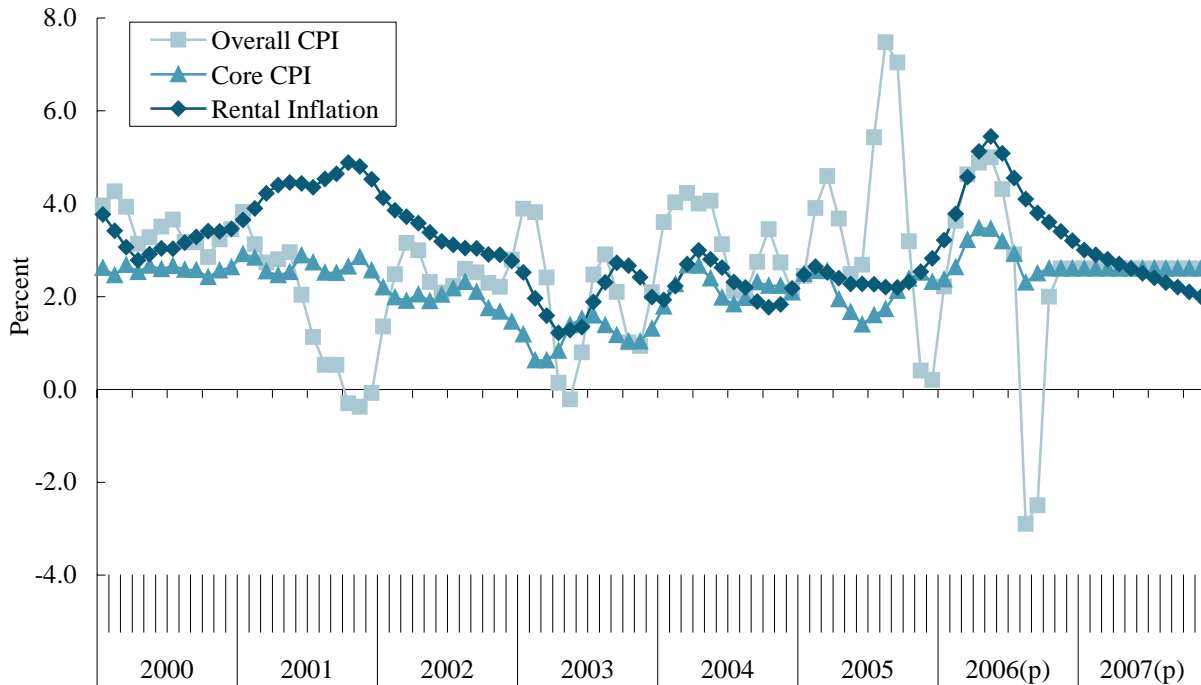
Source: Bureau of Labor Statistics and author's projections.

With slower job growth, the unemployment rate will begin to rise, which will in turn weaken the labor market and lead to slower wage growth. Unemployment will begin rising by the end of 2006. (The 4.4 percent figure for October was probably somewhat of a fluke.) By the end of 2007, the unemployment rate will be over 6.0 percent. Wage growth will slow from its current level of 4.0 percent to under 3.0 percent by the end of 2007. For the calendar year, it will average 3.4 percent.

Inflation

There will be important forces pushing inflation in opposite directions in 2007. The higher unemployment rate and resulting downward pressure on wage growth will help to ameliorate inflation. Similarly, the oversupply of housing and the record high vacancy rates will lead to downward pressure on rents. The rental components account for more than 30 percent of the overall consumer price index and almost 40 percent of the core index, so a slower rate of rental inflation will have a substantial impact on the overall index.

Figure 14
Inflation – CPI (3-month average, annual rate)



Source: Bureau of Labor Statistics and author's projections.

On the other side, productivity growth has slowed sharply over the last year. Productivity rose by just 1.3 percent from the third quarter of 2005 through the third quarter of 2006. This is down from a growth rate of more than three percent in 2001-2004. This number will be revised down by approximately 0.2 percentage points after the benchmark revision to the establishment survey. In addition to slower productivity growth, import prices are likely to stay on an upward path in 2007. Non-oil import prices had been falling earlier in this cycle. However, with most other economies growing rapidly and the dollar falling at least modestly against other currencies, we are likely to see some further increase in the inflation rate in non-oil imports.

On net, the inflation rate is likely to moderate slightly in 2007 as the impact of slower wage growth and rental inflation more than offsets the impact of slower productivity growth and higher inflation in import prices. The core and overall CPI inflation rate should both average 2.6 percent over the year, with both easing downward from their current rates over the course of the year. Rental inflation is likely to end the year at just over 2.0 percent, driven down by the record high vacancy rate.

Interest Rates and the Dollar

The Fed will be torn between the desire to slow inflation, which will remain slightly above its target range, and the need to boost the economy. (The risk of inflation is likely to appear somewhat worse with the apparent slowing of productivity growth to just 1.0 percent over the last year. While this effect may be largely cyclical, slower productivity growth will reduce the extent to which higher costs can be absorbed by business without either experiencing a loss in profits or raising prices.) With the economy's weakness becoming evident by the end of the year, the Fed is likely to begin lowering rates no later than its first meeting in January. However, just as raising the Federal Funds rate had little impact on the 10-year treasury rate, lowering the Federal Funds rate is likely to have little effect in lowering rates, especially in a context in which the bond market seems to have already anticipated a drop in interest rates.

By the end of the year, the Fed will likely have lowered the Federal Funds rate to close to 4.0 percent. However, investors are likely to be more concerned about the prospects of a falling dollar as rising interest rates in Europe, Japan and elsewhere make foreign currencies more attractive. For this reason, the short-term and long-term rates will move in opposite directions. The 10-year treasury rate is likely to end the year close to 5.2 percent, which would still be relatively low by historical standards in both nominal and real terms.

Both the euro and the yen will appreciate modestly against the dollar, with the dollar worth 0.77 euros and 105 yen by the end of the year. This analysis assumes only modest appreciation of the yuan (about 2 percent) against the dollar. If the Chinese government allows for more rapid appreciation, then long-term interest rates in the United States could be considerably higher.

After 2007

The ability of the economy to recover from the 2007 recession will depend both on how quickly the imbalances are corrected (the housing bubble and the over-valued dollar) and the direction of the policy response. The Federal Reserve Board will have to choose whether to fight the risk of inflation associated with a declining dollar (which is essential for correcting the trade imbalance) or whether to provide stimulus to counterattack the slump brought on by the collapse of the housing bubble. Since there may be no consensus for either path, it is very possible that it will end up in an intermediate position where it lowers interest rates modestly, but does not act to aggressively counteract the slump.

Fiscal policy could be subject to a similar paralysis. It would be reasonable for Congress to enact a stimulus package including tax cuts and/or spending measures to counteract the slump; however, concern over the size of the deficit could prevent effective action. If political factors prevent effective monetary and fiscal measures, then a slump caused by the collapse of the housing bubble could be prolonged considerably.