

Why the U.S. Won't Have a "Lost Decade"

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Abstract

The U.S. now is not the Japan of the 1990s. The odds are extremely low that the U.S. will suffer a "lost decade" of low growth, high unemployment, banking and business weakness, and ineffective public policies like Japan did in the 1990s.

The U.S. is now quite likely to be in recession. An important trigger for the recession has been the downturn in housing markets. Residential construction has dropped sharply. Sizable house price declines have reduced household wealth and reduced the values of mortgage-backed securities. The recession is being exacerbated by atypically severe disruptions in U.S. financial markets.

Recent events in U.S. housing and financial markets have similarities to events at the beginning of Japan's lost decade. Sensibly enough, questions have arisen about whether the U.S. might endure a similar lost decade.

The U.S. economy is extremely unlikely to have a "lost decade." There are several, very important differences between conditions and policies in Japan in the 1990s and the U.S. today and over the next few years.

The bubble in U.S. house prices was smaller than Japan's. Compared with Japan, the U.S. will have much faster population growth, which adds considerably to the longer-term demand for housing. Commercial real estate prices also rose less in the U.S. than in Japan. Real estate has also constituted a smaller share of total assets in the U.S. than in Japan. Equity values have fallen much less in the U.S. than they did in Japan. Despite recent mortgage-related losses, the U.S. financial sector is better capitalized than Japan's was. Several large U.S. banks have already attracted additional capital. U.S. corporations now generally have considerable liquidity.

The consensus of forecasters is, despite the recent financial disruptions, that the U.S. economy will have slow growth over 2008 and faster growth in 2009 and thereafter. Compared with the low and slowing growth rate of the world economy that Japanese exporters faced around 1990, U.S. exports will continue strong growth due to the weakened dollar and strong GDP growth outside the U.S.

The Federal Reserve has been aggressive in its monetary policy easings and supportive in its financial policy innovations. A tax rebate has already been enacted and will boost GDP growth this year. Further Fed easings and innovations are likely if conditions warrant them. Further fiscal and financial regulatory policy changes are also likely if conditions warrant them.

The steady inflation premiums in bond yields imply that a recovery-retarding deflation of the sort that gripped Japan in the 1990s is very unlikely in the U.S.

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Why the U.S. Won't Have a "Lost Decade"

Introduction

The U.S. now is not the Japan of the 1990s. Nor is the U.S. the Japan of today.

There are a number of reasons why the current difficulties in the U.S. are unlikely to result in a financial and economic slump anything like the depth and duration of Japan's "lost decade." Many of these reasons individually make it unlikely; taken together they make it extremely unlikely.

The recent sequence of events and policies in the U.S. has been broadly similar to the sequence in Japan starting in the middle of the 1980s. The lackluster (and worse) performance of the Japanese economy generally since then and the recent weakness of both the Japanese and U.S. economies have spurred consideration about U.S. economic prospects. That the U.S. might suffer difficulties as severe as those experienced by Japan since the end of its asset price bubble is a prospect that investors and analysts are right to consider (The Economist 2008). It is also a prospect that policymakers take seriously, not because it is likely but because the costs of such difficulties are so large. Indeed, U.S. policymakers have already acted vigorously to minimize the effects of recession in the short run and reduce the likelihood of a prolonged, Japanese-style slump over the longer run.

To reduce the repercussions of the 2001 recession and of September 11th on the economy, the Federal Reserve cut U.S. interest rates from about 6 percent down to 1 percent. The Fed held rates at historically low levels for a prolonged period. For several years, until 2007, the U.S. economy enjoyed strong economic growth, apparently strong and profitable financial institutions, and rapidly rising residential real estate prices.

The buoyant U.S. economy, and especially the financial and housing sectors, resulted partly from supportive fundamentals (including low interest rates) and partly from a bubble in residential real estate. Consumption and investment in housing was particularly strong. In response to very low unemployment, monetary policy was tightened, with the Fed's target interest rate rising from 1 percent in 2004 to over 5 percent in 2006. Coupled with higher energy prices, higher interest rates began to reduce overall economic growth. Perhaps independently, the bubble in U.S. residential real estate prices was deflating by 2007. In considerable part due to the bursting of the residential real estate bubble, in addition to the hikes in interest rates and in energy prices, by early 2008 the U.S. economy seemed to be in a recession.

Up to a point, these recent events in the U.S. followed a pattern similar to that followed by Japan, where that pattern presaged a long, painful economic slump in Japan.

The Plaza Accord in 1985 was designed to weaken the dollar. In part to reduce the repercussions of the Accord, which indeed sharply strengthened the yen, the Bank of Japan cut interest rates from 5 percent in 1985 to 2½ percent by 1987, where they remained for a prolonged period. Then, apparently in response to the ensuing development of the "bubble economy" in Japan, the Bank of Japan raised its policy interest rate from 2½ percent in 1989 to 6 percent in 1990. On the heels of higher interest rates and of higher energy prices triggered by the Gulf War, prices of equities and real estate in Japan fell dramatically.

Following that popping of the Japanese asset price bubble, Japan suffered its "lost decade" of the 1990s, and beyond. Japan has for some years now been struggling with high unemployment and with GDP considerably below its sustainable level. Japan's

nonfinancial corporate sector has been weak and peppered with “zombies” – businesses that are economically insolvent but still in operation. Japan’s banks have had low profitability, have directed too much credit toward zombies, and directed too little credit toward creditworthy and new businesses. As shown in Figure 1, after narrowing the gap in per capita real incomes until 1991, since then Japan’s economy has faltered relative to that of the U.S. Japan’s economy has also grown much less than the world economy as a whole.

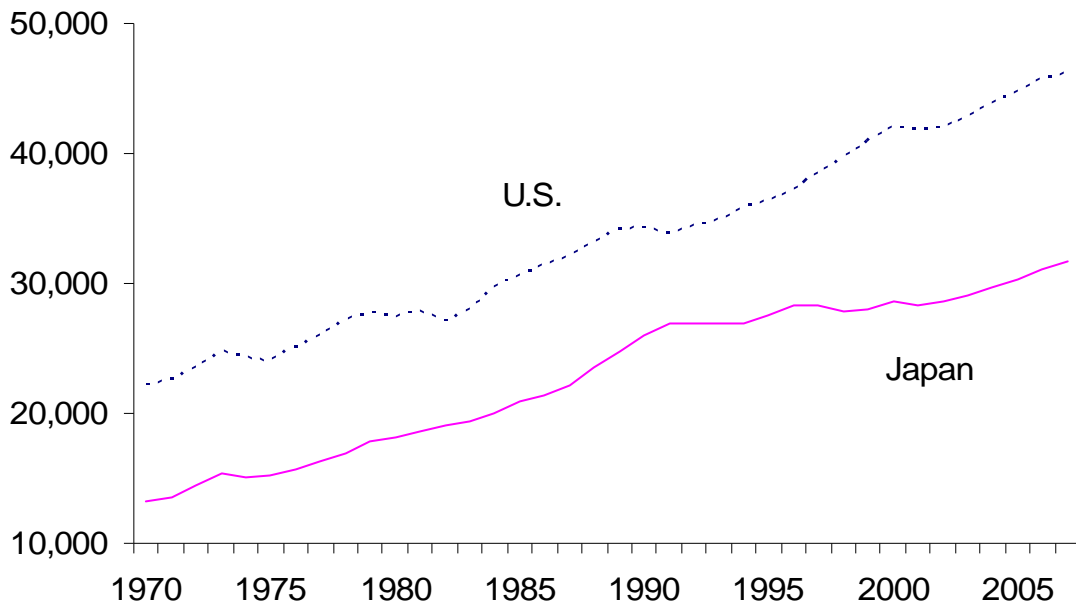
Figure 1

Japan and U.S. real, per capita GDP

(2007 U.S. dollars, converted using purchasing power parity exchange rates)

Annual data, 1970-2007

Sources: Government of Japan, U.S. Bureau of Economic Analysis, U.S. Census Bureau



Below we argue that the U.S. economy is extremely unlikely to falter as much as the Japanese economy has. In some important respects, the U.S. economy has not experienced shocks as adverse as those associated with the popping of the asset price bubble in Japan in the early 1990s. The bubble in U.S. residential real estate prices was considerably smaller than the Japanese bubble. By contrast to the Japanese experience, the U.S. real estate bubble did not seem to have spread into U.S. equity markets. In addition, ongoing population growth (due partly to considerable net in-migration) provides steady, increasing demand for residential real estate and for commercial real estate. Continuing, healthy productivity growth helps support strong profitability of U.S. businesses and underpins demand for real estate generally.

Financial markets in the U.S. have been disrupted in recent months, to be sure. But, there are also elements of strength in the financial sector. Despite some large and high-profile losses, the U.S. financial sector started from a position of being well capitalized and very profitable. The financial sector has recently demonstrated its willingness and ability to raise more capital. U.S. nonfinancial businesses remain quite profitable and their balance sheets, by and large, are quite healthy, with considerable cash and moderate leverage.

Just as importantly, U.S. macroeconomic policies have responded rapidly and vigorously to signs of trouble. In a matter of a few months, the U.S. enacted a \$170 billion economic stimulus package, which will funnel extra disposable income to U.S. households starting in the spring of 2008. Since last Fall, the Federal Reserve sensibly made several large reductions in the federal funds rate, totaling 300 basis points by the end of March 2008. The Federal Reserve also initiated a number of large, new, liquidity

facilities in late 2007 and early 2008. The rapid recapitalization of financial firms and rapid responses of macroeconomic policies in the United States contrast starkly with the hesitant and delayed policy responses of the Japanese government during the lost decade in Japan.

We believe that concerns recently raised about the Federal Reserve's traditional monetary policy actions and its non-traditional financial policy actions actually should provide more comfort than concern. To the extent that monetary policy has eased enough to lift inflation forecasts (even if only marginally), it reduces the risks of a Japanese-like deflation, which further retarded the halting recovery in Japan since the early 1990s. To the extent that the Bernanke Fed's financial policies lubricate the wheels of finance, they enable lenders to extend more credit to sound businesses and households, and thereby promote economic growth.

In addition, the U.S. government has prodded the private sector to move with alacrity to restructure household debts in ways more like the beneficial restructurings that laws provide for restructuring debts of businesses that become troubled.

The U.S. financial and real sectors have been struck by sizable shocks over the past year. But the U.S. has suffered a relatively smaller shock than Japan did when its asset price bubble popped. The U.S. had a smaller and less pervasive bubble and attendant woes following its dissipation than Japan did.

The U.S. started from a relatively strong position in the late 2000s. U.S. financial institutions had more capital to buffer them and made larger responses to their difficulties. U.S. policymakers, in part because they are acutely aware of the Japanese

experience in the 1990s and since, are actively countering adverse developments in mortgage and other financial markets.

Of course, there has been pain – and there will be more, for households, business, financial institutions, and some investments. But the likelihood of a “lost decade” in the U.S. is extremely low. Rather, the vigorous policy responses are much more likely to prevent a 2008 recession from being much longer or deeper than other, recent U.S. recessions have been. In addition, the responses of the private and public sectors are helping to secure the foundations for a healthy U.S. economy in coming years.

A. Smaller Real Estate Bubble in the U.S.

Interest in house prices stems in part from their effects on household wealth and resulting consumer spending and their effects on residential construction, and thereby their effects on the overall strength of aggregate demand and of GDP. Houses are a major component of households’ assets. Higher house prices tend to raise households’ consumption spending and to stimulate employment and production in housing-related industries, especially construction. Interest also stems from lower house prices affecting the extent of losses that financial institutions might bear and the resulting effects on the supplies of credit and their repercussions on aggregate demand and GDP.

House prices rose enormously in Japan during its asset price bubble, which occurred during the late 1980s and just into the early 1990s. House prices also rose steeply in the U.S. during the middle of the 2000s. Below we quantify how much more house prices increased during the bubble period in Japan than they did in the U.S. since 2000.

Figure 2 shows annual nominal residential real estate prices and the consumer price index (CPI) for Japan. (Japanese real estate (i.e., land) price data report prices for land underlying buildings, but not for land plus buildings. U.S. real estate (i.e. house) price data report prices for land plus buildings, but not for land and buildings separately.) The national-average residential real estate price in Japan more than doubled during the bubble period. Figure 2 also shows that house prices fell so much after the 1980s that nominal house prices in 2007 were back about to their values in the middle of the 1980s.

Figure 3 plots data for U.S. national-average nominal house prices and for consumer prices (CPI). Until the late 1990s, house prices in the U.S. rose little more than the overall level of prices rose. Since then, and until recently, they rose much more than the CPI rose.

Figure 4 shows inflation-adjusted (real) residential real estate prices in Japan and the U.S. These real prices were obtained by dividing the nominal house price data by the CPI data that we showed in Figures 2 and 3. First, note that the percentage increase in Japan during its asset price bubble was much larger than in the U.S. since 2000. For example, from 1985-1991, real house prices in Japan rose by 74 percent, while they rose in the U.S. from 2000-2006 by 36 percent, or about half as much as in Japan. Of course, choosing different years will alter the percentages somewhat, but the general perception holds that Japanese house price increases during its asset price bubble were larger than those in the U.S. in recent years.

Secondly, Figure 4 displays several periods when real house prices declined. Declines in real house prices are not uncommon in the U.S. In real terms, house prices fell in the years near the recessions of the mid 1970s, early 1980s, and early 1990s. Each time, after

a recession, real house prices rebounded with the U.S. macroeconomy. Thus, in real terms, house price declines in the U.S. are neither unusual around recession years, nor are they necessarily harbingers of very-long-lasting declines in house prices.

Figure 4 also shows that the large increases in real house prices in the U.S. that began in the late 1990s (and that were not interrupted by the 2001 recession) carried the real price index for houses to record levels. Those increases were responses both to strengthening fundamentals and to a bubble in house prices. One of the fundamental factors that supported house prices was the generally lower level of interest rates, and especially the lower mortgage interest rates. Both short-term and long-term interest rates were quite low for a long span of time in the macroeconomic expansion following the 2001 recession. By some perspectives, the Federal Reserve under Alan Greenspan kept its federal funds interest rate way too low for way too long in the 2000s.

Figure 2

Nominal residential land prices and the consumer price index (CPI) in Japan

Annual data, 1970-2007, indexed = 100 in 1970

Sources: Bank of Japan, Government of Japan

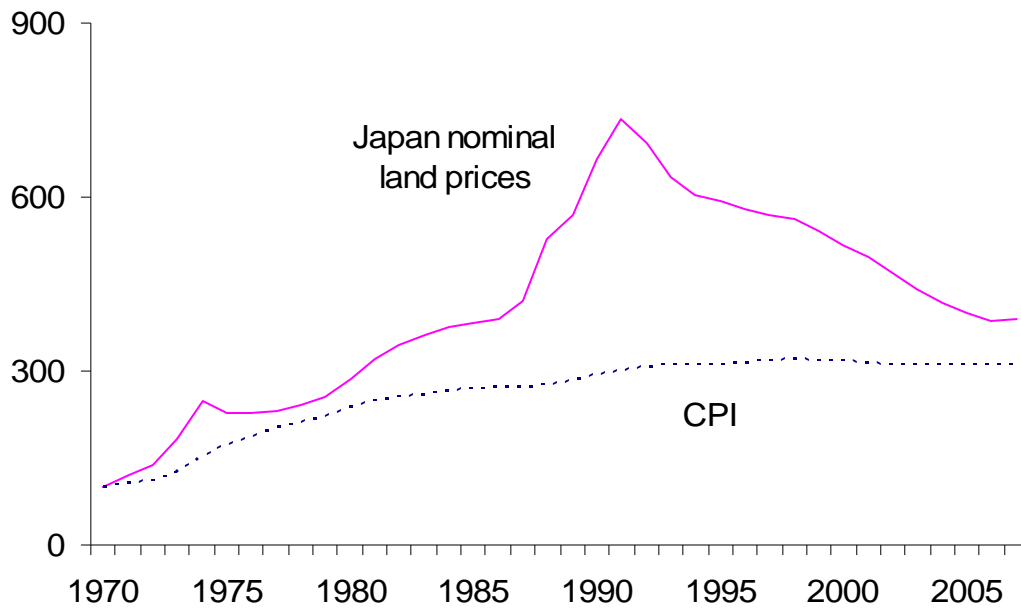


Figure 3

Nominal U.S. house prices and the consumer price index (CPI) in the U.S.

Annual data, 1970-2007, indexed = 100 in 1970

Sources: Case-Shiller, OFHEO, U.S. Bureau of Labor Statistics

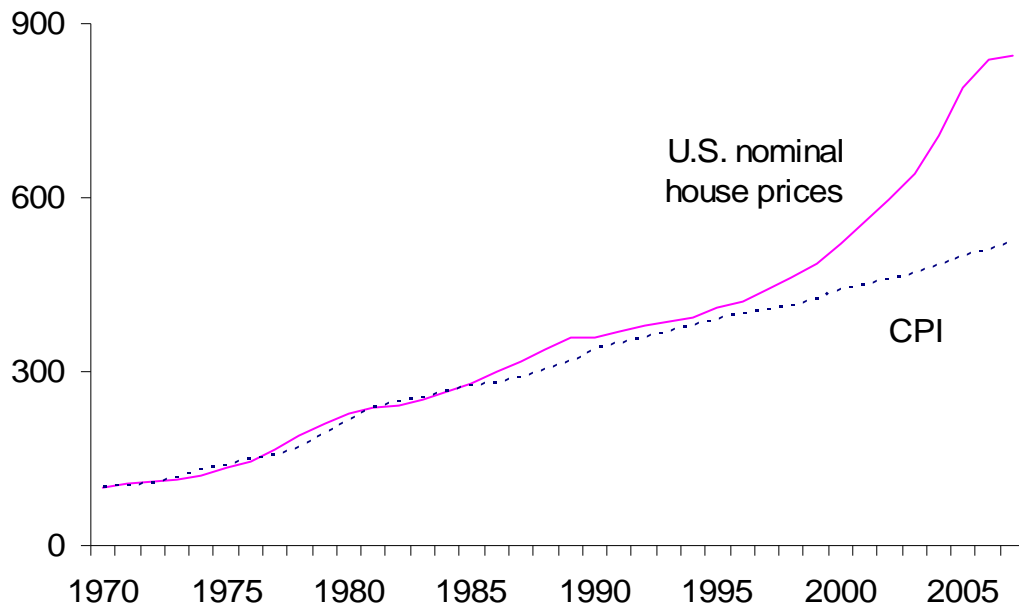
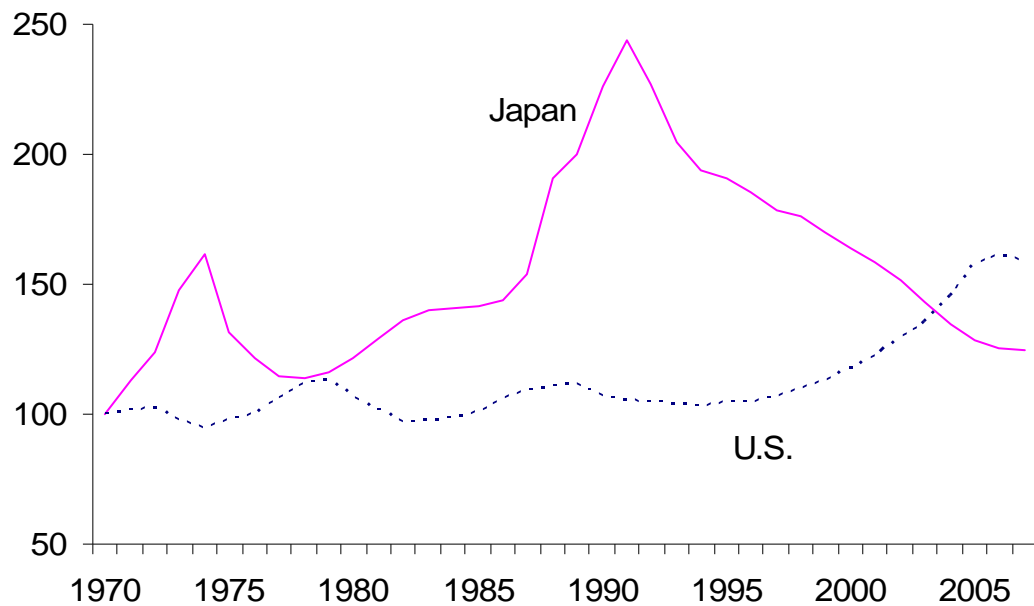


Figure 4

Japan and U.S. real (inflation adjusted) prices of residential real estate

Annual data 1970-2007, indexed = 100 in 1970

Sources: Bank of Japan, Government of Japan, Case-Shiller, OFHEO, U.S. Bureau of Labor Statistics



It may well be that homebuyers' demand for housing was boosted both by easier mortgage credit terms and conditions, as well as by a bubble mentality surrounding house prices. To the extent that homebuyers faced easier credit, they might regard their extra demand as being driven by fundamentals, in the same way that their demands would be increased by higher incomes and lower overall interest rates. Easier credit itself, however, may have partly or entirely stemmed from a bubble mentality among lenders. Lenders may have eased mortgage lending terms and conditions on the belief that house prices

would be higher in the future. Higher prices of the houses that served as collateral for their mortgage loans would, in turn, reduce the credit risks of their loans. If credit tightened as a “bond bubble” burst, then the quantity demanded, although due to a change in a fundamental factor from the perspective of homebuyers but actually stemming from a deflating bubble, would decline. In addition, it seems likely that considerable demand for housing was driven importantly by the expectations on the part of homebuyers of higher future house prices. The resulting price increases can be regarded as a house price bubble.

The emergence of two bubbles, one based in bond markets generally and one more tightly tied to homebuyers’ expectations of higher house prices in the near future, seems to have been the propellant for record-high real house prices in the U.S. Both bubbles have apparently burst, in that the terms and conditions for mortgage credit have been re-tightened and in that homebuyers no longer are confident that house prices will be significantly higher in the near future. The expansion and subsequent contraction of subprime lending are connected to the onset and deflation of these bond bubbles. Ongoing increases in house prices reduced the riskiness of subprime loans both to lenders and to borrowers. Falling prices, analogously, raised the probabilities that homeowners would default and that lenders would incur losses. The increases in default rates on home mortgages have been especially acute among subprime borrowers.

Figure 5 shows indexes of the real prices of commercial real estate in Japan and in the U.S. Again, we see that the rise in real prices of real estate was larger in Japan during its bubble period than in the U.S. since 2000. From 1985 through 1991, real commercial real estate prices in Japan rose by over 90 percent. That very large run-up in real prices of

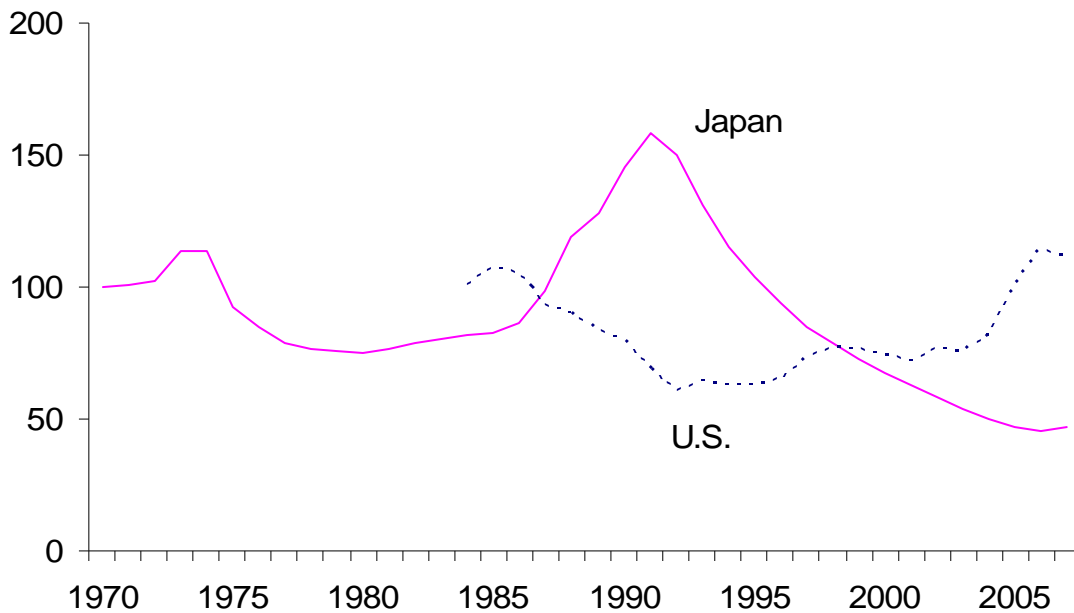
commercial real estate in Japan was followed by a very large, long-running decline. Part of that decline reflected the popping of the bubble and part likely reflected that the fundamental value of commercial real estate was lower as a result of the subpar performance of the Japanese economy more generally. Commercial real estate prices in the U.S. rose much less in recent years than they had in Japan during the asset price bubble of the late 1980s. From 2000 through 2006, real commercial real estate prices in the U.S. rose a little over 50 percent. By the end of 2007, the reductions in the real values of U.S. commercial real estate were not very large, though they may well continue through 2008 and for a time thereafter.

Figure 5

Japan and U.S. real (inflation adjusted) prices of commercial real estate

Annual data 1970-2007, indexed = 100 in 1970 for Japan and in 1984 for the U.S.

Sources: Bank of Japan, Government of Japan, Massachusetts Institute of Technology



The bursting of bubbles in Japan and in the U.S. has led to real house price declines. Given the low overall rate of inflation, those real declines have been achieved by nominal, or market, price declines. When inflation was high enough in the U.S., as in the early 1980s or even early 1990s, real declines in U.S. house prices were sometimes masked, in that market prices did not decline. The real declines now warranted in the U.S., given the low inflation rate, now require declines in market prices, as we have seen over the past year.

There is no reason why real or nominal prices should mechanically revert to any particular prior level or average. That adds to the difficulty of forecasting the amount of the decline in real house prices that is yet to come. The average of forecasts of the remaining declines in nominal house prices seems to be in the neighborhood of 10 percent.

Another indicator of whether house prices have been and are high is their ratio to incomes. Figure 6 shows annual price-to-income ratios for Japan and for the U.S. Such ratios are sometimes used as indicators of (un-) “affordability.” These ratios reinforce the perspective that house prices rose atypically relative to incomes, one of the fundamental factors of homebuyers’ demands. These ratios rose both in Japan in the late 1980s (and early 1970s) and in the U.S. after the 1990s.

Figure 7 shows another measure of the relative price of houses, the price-to-rent ratio, for Japan and for the U.S. As with the other measures, the price-to-rent ratio rose sharply and then fell following the asset price bubble in Japan and it rose steadily and achieved record high levels in the U.S. after 2000. Thus, price-to-income and price-to-

rent ratios reinforce the perspective gleaned from real house prices that real estate prices, both residential and commercial, rose less in the U.S. than they rose in Japan.

Figure 6

Japan and U.S. ratios of real estate prices to per capita income

Annual data 1970-2007, indexed = 100 in 1970

Sources: Bank of Japan, Government of Japan, Case-Shiller, OFHEO, U.S. Bureau of Economic Analysis, U.S. Census Bureau

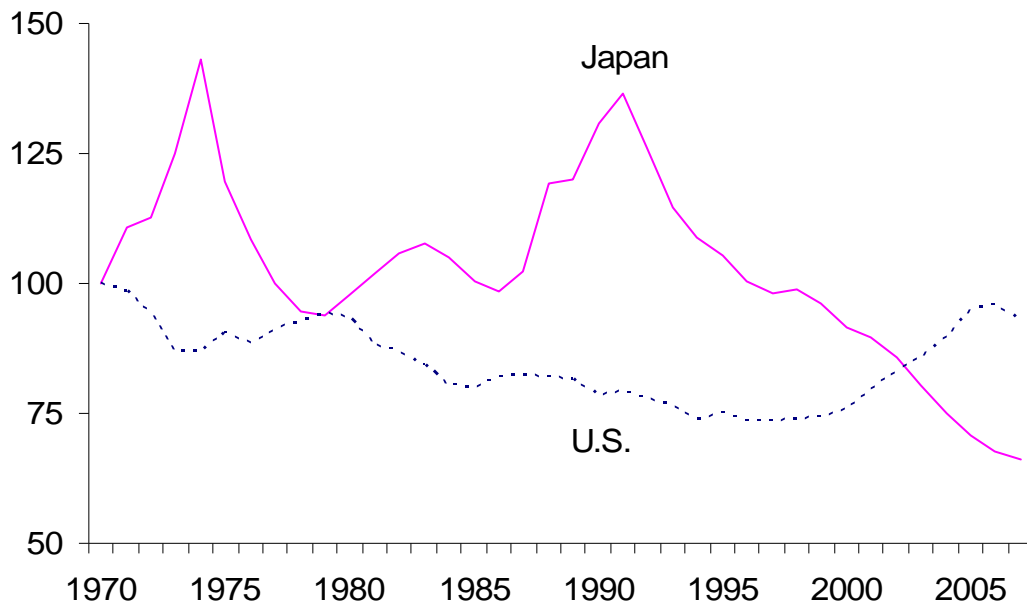
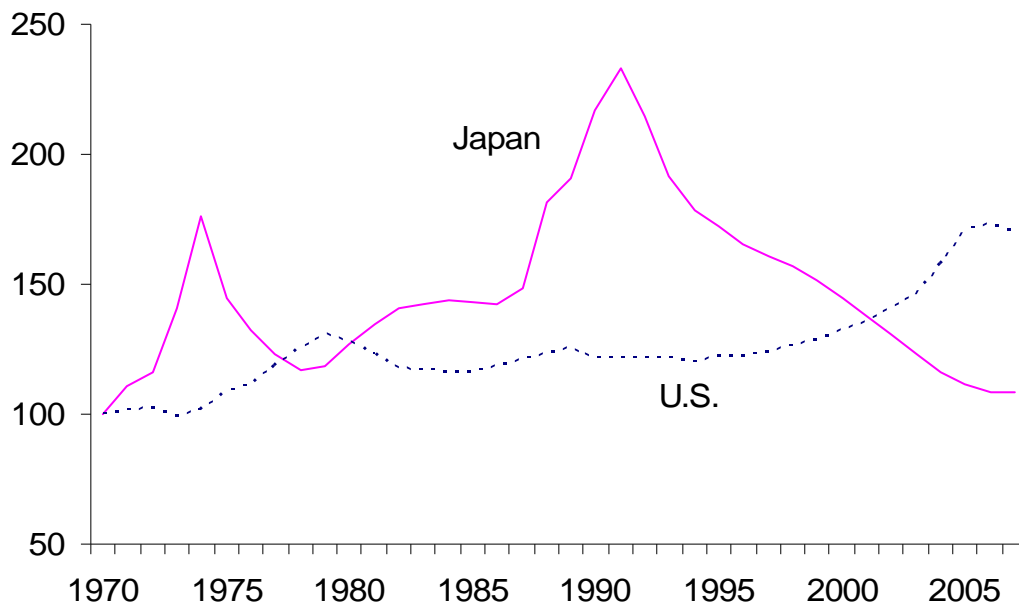


Figure 7

Japan and U.S. ratios of real estate prices to rents

Annual data, 1970-2007, indexed = 100 in 1970

Sources: Bank of Japan, Government of Japan, Case-Shiller, OFHEO, U.S. Bureau of Labor Statistics



1. Residential Construction

Interest in residential construction stems in part from its contribution to aggregate employment and GDP. Historically, residential construction has been one of the most unstable components of GDP. Figure 8 shows annual U.S. housing starts per capita and its 10-year moving average. The moving average series is meant to give some indication of the longer-term demand for additional houses, due for example to demographics and interest rates.

Since 2005, housing starts have declined dramatically, as shown in Figure 8. Wide swings in housing starts, employment, and profits were common in the residential construction industry. Some analysts viewed construction as being prone to “overbuilding,” after which construction activity slowed until the overbuilt homes were absorbed by the rebound in demand for housing. Figure 8 also shows that such declines in residential construction are not all that unusual in the U.S. and have never triggered a “lost decade.”

Wide swings in housing starts in the U.S. historically were attributed to fluctuations in credit conditions. Before the middle of the 1980s, many deposit and mortgage interest rates were regulated. Financial institutions were very limited in how they could respond to interest rate increases. Nor were there significant secondary markets for mortgages. As a consequence, homebuilding tended to swing precipitously as interest rates rose and fell. Indeed, it was the credit crunches in housing that largely stimulated secondary mortgage markets and instruments and propelled deregulation of interest rates and deposit accounts.

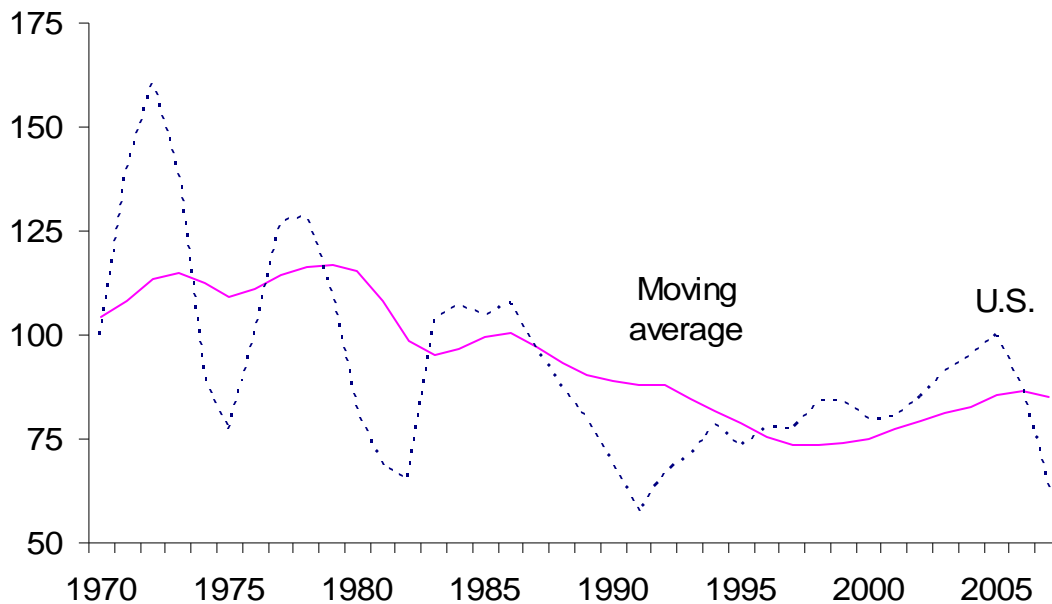
Since then, deregulation of interest rates and, more generally, advances in secondary mortgage markets and other factors have reduced the volatility of the supply of funds for mortgages and thereby stabilized residential construction (see Peek and Wilcox 2006). As a result, the credit-related cycles in residential construction, as shown in Figure 8, have been much smaller since the late 1980s.

Figure 8

U.S. housing starts per capita compared with its ten-year moving average

Annual data, 1970-2007, indexed = 100 in 1970

Sources: U.S. Census Bureau



The recent and ongoing declines in residential construction, as measured by housing starts in Figure 8, appear to be the steepest perhaps since the early 1980s. The recent declines in housing starts seem reminiscent in part of the credit-related contractions that were so common in housing until the last two decades. The tightening of mortgage credit at least partly accounts for the declines in residential construction.

Notable about credit-related crunches of past housing cycles have been the steepness both of the contractions, but also of the rebounds, of residential construction. Such patterns sometimes also suggest that changes in public policies that affect mortgage credit terms and conditions can also lead to changes in residential construction that are quite

large and rapid. In current circumstances, for example, loosening FHA program constraints and raising the GSE-conforming mortgage size limit could raise demand for houses considerably in some hard-hit and some expensive localities. Thus, steep declines in residential construction that stem from mortgage-credit crunches can be followed by quite robust rebounds in residential construction when the crunches are alleviated. Of course, other factors will still affect housing. Recovery in housing markets will also depend on positively on incomes and on population growth and negatively on interest rates and on the extent of any prior overbuilding.

B. Real Estate Is a Smaller Share of Total Assets in the U.S.

Not only did the U.S. have smaller real estate price increases recently than Japan did during its asset price bubble. Real estate also constituted a smaller share of total assets in the U.S. than it did in Japan. Thus, the same percentage decline in real estate prices had a smaller percentage impact on total U.S. assets than it had on Japanese total assets. As a consequence, the same percentage change in real estate prices might be expected to have a smaller impact on consumer spending in the U.S. than in Japan. To the extent that lending was also less predicated in the U.S. than in Japan on the values of real estate collateral, then a given decline in real estate prices would tend to have a smaller impact on the supply of loans in the U.S. than in Japan. A smaller contraction of loan supply would in turn suggest a smaller decline in GDP.

Empirical studies have generally found that consumer spending has responded at least as much to home equity wealth as to stock equity wealth (Wilcox 2007). Different datasets and methods produce differing estimates of the size of the effects, but a

consumption increase in the short run of \$0.02 per dollar of additional home equity wealth and a longer-run increase of \$0.06 would be about in the middle of the range of recent estimates (see Davis and Palumbo 2001, Dvornak and Kohler 2003, Carroll 2004, Ludwig and Slok 2004, Case, Quigley, and Shiller 2005, and Carroll et al. 2006).

Figure 9 shows the total market value of U.S. real estate assets as a percent of GDP. Data for U.S. real estate asset values in Figures 9, 10, and 12 are based on the values of real estate assets owned by U.S. households, non-profits, nonfinancial corporations, and noncorporate businesses. Beginning in the early 2000s, the ratio exceeded its prior highs, which were attained during the 1980s. Thus, the ratio has recently achieved its highest levels, of about 2.75.

Figure 10 shows the same U.S. ratio, as well as the ratio for Japan. Two aspects of Figure 10 are noteworthy. First, real estate assets are considerably larger shares of assets in Japan, where the ratio of real estate to GDP averaged about twice the size of the U.S. average ratio. Even in recent years, after Japanese real estate values had fallen very far and U.S. values had risen very far, the Japanese ratio still exceeded the U.S. ratio by more than 100 percentage points. Second, the rise and fall in the value of real estate assets in Japan, relative to its GDP, was far larger than the U.S. rise in recent years. The U.S. ratio rose about 50 percentage points in recent years relative to its longer-run average value. By comparison, the Japanese ratio rose about 200 percentage points. Thus, while the U.S. ratio rose to record levels for the U.S., the rise paled in comparison with the Japanese rise. Prior increases, of course, do not necessitate ensuing declines. But, to give a sense of proportion, note that the decline in real estate values in Japan from 1991 to 2006 has been worth 225 percent of annual GDP. If real estate values in the U.S. were

to fall from 2007 to their lowest level observed during the last few decades, the decline would only be of 75 percent of GDP.

Figure 9

Value of U.S. real estate assets as a percent of GDP

Annual data, 1970-2007

Sources: Federal Reserve, U.S. Bureau of Economic Analysis

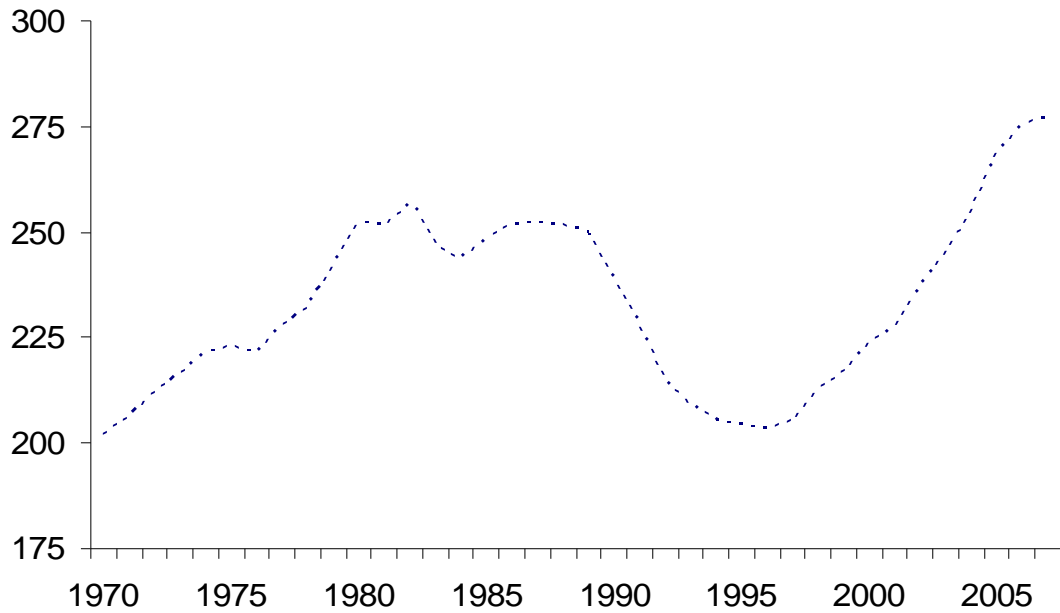
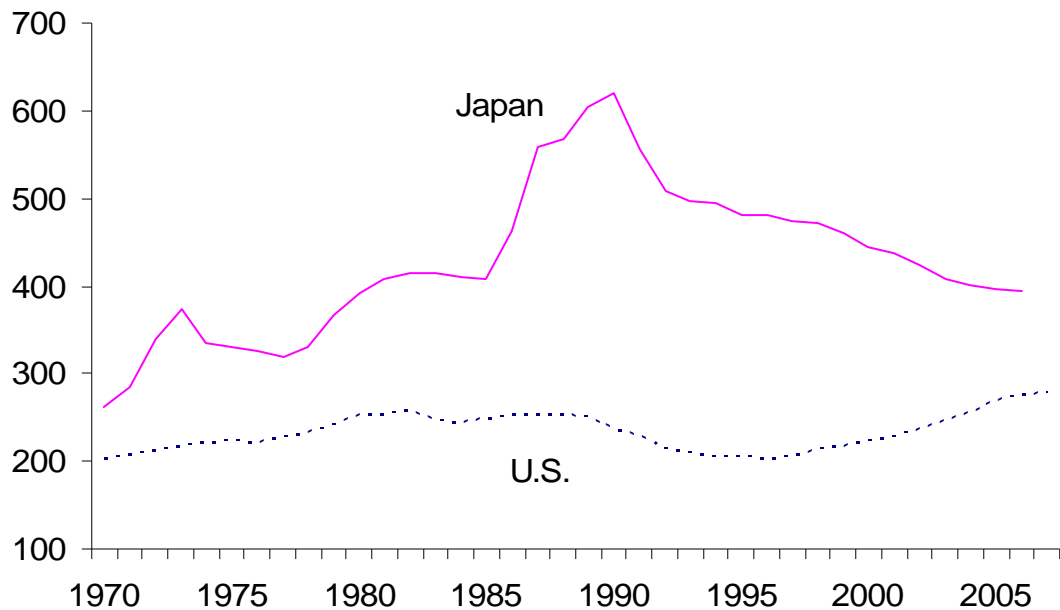


Figure 10

Japan and U.S. real estate asset values as a percent of GDP

Annual data, 1970-2007

Sources: Government of Japan, Federal Reserve, U.S. Bureau of Economic Analysis



Equities are another important component of total assets. Figures 11 and 12 show the total values of real estate assets and of equities (as a percentage of GDP) for Japan and for the U.S. Recall that assets in the form of equities typically have few liabilities associated with them and therefore equity assets nearly equal equity wealth or net worth in equities. Real estate assets often have large mortgage liabilities associated with them and therefore net worth in real estate or real estate wealth is a fraction, in the range of $\frac{1}{2}$ recently in the U.S., of real estate assets.

Figure 11 gives a sense of the pervasiveness of the asset price increases during the bubble (and then declines) in Japan. The peaks and ensuing declines of these two Japanese series roughly coincide in time. That is one reason that the Japanese episode in

the late 1980s is usually referred to as an “asset bubble”, instead of being referred to as a “real estate bubble” or “stock market bubble.”

Figure 12 shows that the U.S. has been more “diversified” in the sense that the values of these two asset classes, real estate and equities, have over this past period hardly been correlated at all. When the aggregate value of one of these assets (as a percentage of GDP) has been rising in value, the other has not, or has been falling. The sources of the differences in correlations across the U.S. and Japan are not obvious and may not persist. But, to date, it is worth noting that, over horizons measured in years, declines in real estate values in the U.S. have not been much correlated with declines in equity values.

Figure 11

Japan’s real estate asset values and equity values as a percent of GDP

Annual data, 1970-2007

Source: Government of Japan

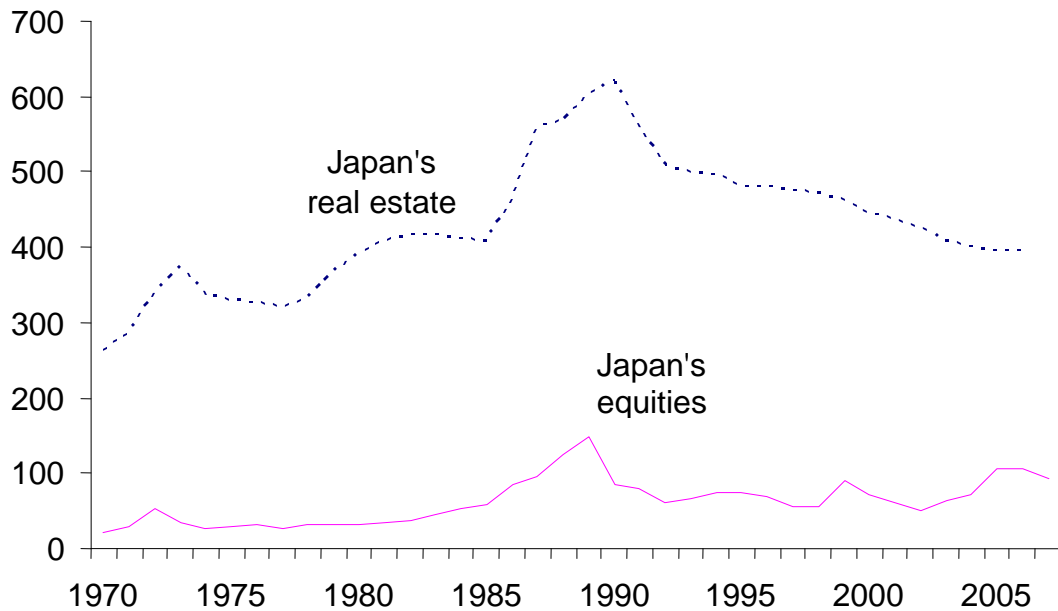
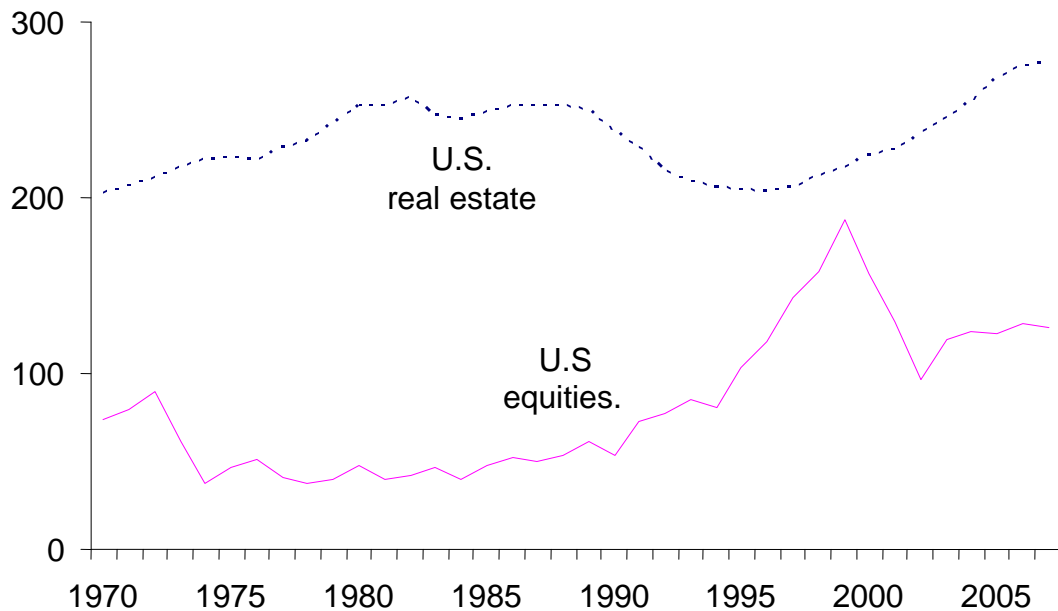


Figure 12

U.S. real estate asset values and equity values as a percent of GDP

Annual data, 1970-2007

Sources: Federal Reserve, U.S. Bureau of Economic Analysis



C. Smaller Decline in Equity Wealth in the U.S.

Research has long demonstrated that equity wealth affects consumer spending.

Business capital spending is also sometimes regarded as responding to the lower equity financing costs associated with higher equity prices.

Figure 13 shows the aggregate market values of equities in the U.S. and Japan, each as a percent of GDP. These are the same date that appeared in Figures 11 and 12.

Consistent with the greater financial intensities of industrial economies in recent decades, both series trended upward. Both series also show considerable fluctuations around those

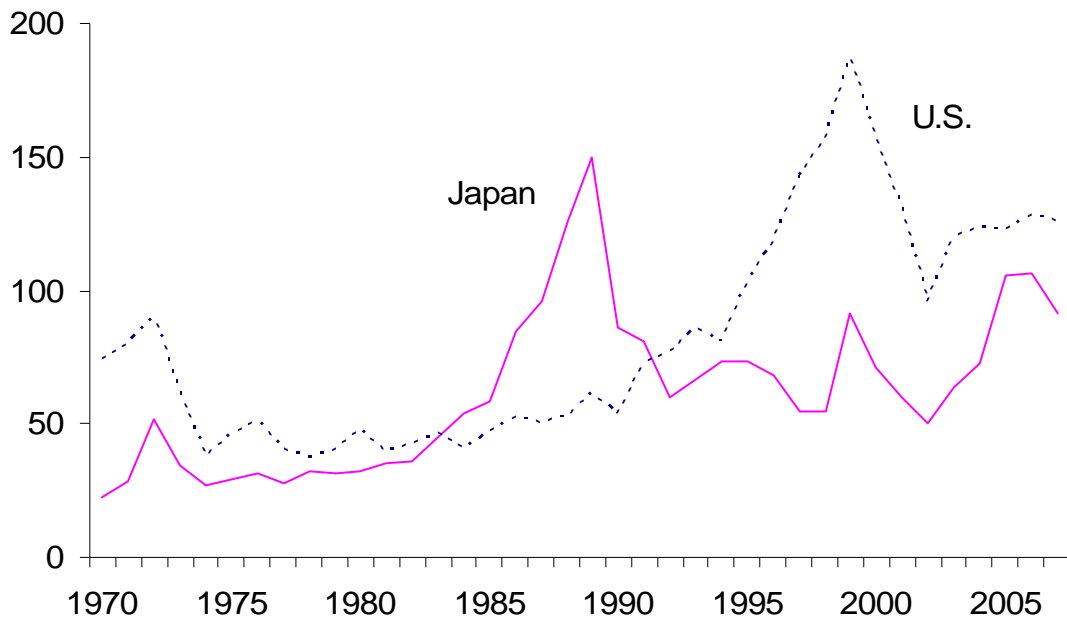
upward trends. The asset price bubble in Japan during the late 1980s is apparent, as is its quite rapid deflation after the 1980s. The NASDAQ-led surge in U.S. stock prices in the late 1990s, followed by a decline that was about the same size as that in Japan.

Figure 13

Equity values as a percent of GDP

Annual data, 1970-2007

Sources: Government of Japan, Federal Reserve, U.S. Bureau of Economic Analysis



Relative to the sizes of their economies, the decline in Japanese equities after the 1980s was somewhat larger than the equity decline in the U.S. after the 1990s. Thus, the rise and fall of equity values in Japan was somewhat larger than it was for the U.S.

A more notable difference, however, is that in the wake of its equity retreat after 2000, the U.S. had, not a decade-long slump, but, rather, a recession of average duration

and depth. Also germane to the current situation is that there is little suggestion in Figure 13 that the U.S. has recently been in an equities boom. The ratio of equity values to GDP in the U.S. has not risen a lot in recent years. Nor has it been far above its longer-term trend. And, although equity values have declined noticeably over the past year, the ratio has not sharply declined since the advent of troubles associated with residential mortgages in 2007. Thus, regardless of what other difficulties loom for the U.S. economy, there is little here to suggest a large, sudden decline in equity values from bubble-like levels.

D. Healthy Corporations at the Start of the Recession

1. U.S. Banks Had More Capital

Capital cushions banks. The more capital that banks have, the more that they are cushioned against insolvency and regulatory restrictions. The more capital that banks have, the less that they need to raise and the less that they are likely to restrict their supplies of credit to business and household borrowers.

Figure 14 shows the aggregate (book value of) equity capital-to-assets ratio for U.S. and Japanese banks. After being relatively capital-poor following the two U.S. recessions in the early 1980s, the combination of fast macroeconomic growth, strong profit performance in the financial sector generally, and regulatory stiffening of capital standards led to rising capital ratios at U.S. banks. By the middle of the 2000s, U.S. commercial banks and their bank holding companies had more capital than they had in either the 1990-1991 or the 2001 recessions. By the middle of the 2000s, U.S. banks also had far more capital than the Japanese banks had when the Japanese asset price bubble

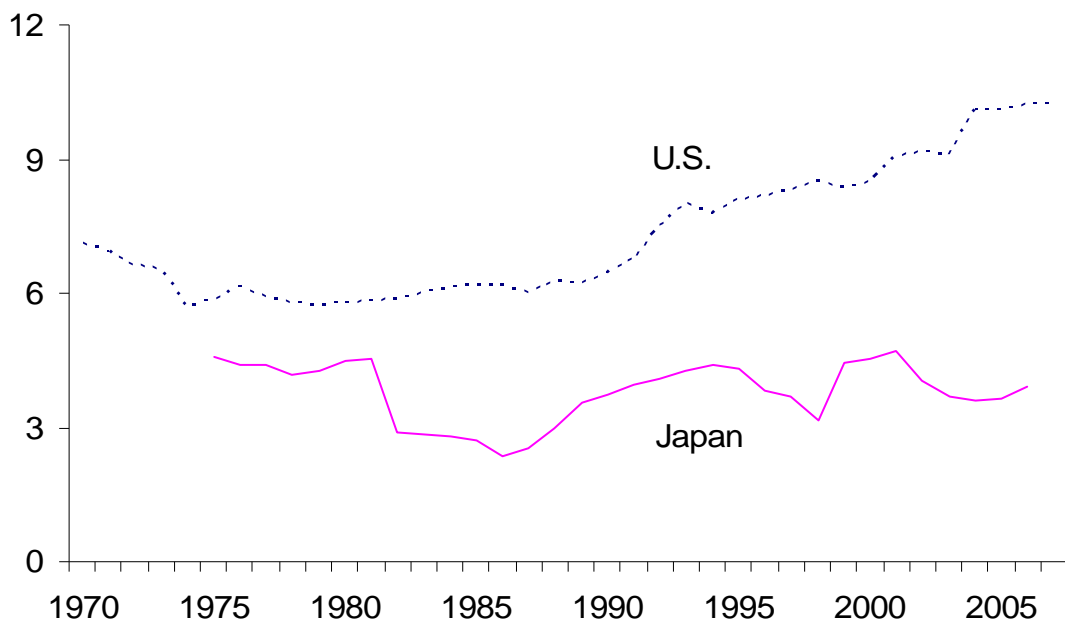
burst and their economy went into recession. A comparable equity to assets ratio for Japanese banks was about 4 percent in 1990. Thus, Japanese banks had a much thinner capital cushion to fall back on when troubles started than U.S. banks had then or have now.

Figure 14

Japan and U.S. bank equity to assets ratio (%)

Annual data, 1970-2007

Sources: FDIC, Government of Japan, Bank of Japan



Despite U.S. banks having had more capital around 1990 than Japanese banks had, loan losses then caused a “capital crunch.” When struck by the 1990-1991 recession and by losses on commercial real estate loans, U.S. banks were hard pressed to raise new capital and to maintain their supplies of credit to existing and new customers. The

contraction of supplies of credit from banks then exacerbated the 1990-91 downturn in the U.S. economy.

In 2007, by contrast, U.S. banks' were flush with capital, having aggregate equity capital ratios of about 10 percent. That large capital cushion was available to absorb banks' mortgage-related losses that have been reported over the past year. The larger capital cushion, to the extent that it also connoted larger economic net worth, also generally made it easier for banks to raise additional capital. Of course, some institutions suffered such large losses that additional capital was unavailable to them and their continuation might have become imperiled, or worse. But, in general, U.S. banks have been better cushioned recently against these adversities than they were in the past. As a consequence, the current adversities might well have smaller repercussions on banks' abilities and willingness to provide credit than past capital crunches have had. Nonetheless, in the current situation, it is worth noting that the sheer size of the mortgage-related losses might be so large that there will be detectable effects on banks' supplies of credit and on the U.S. economy in the near term.

The difficulties of individual banks raise a separate concern, one that has much been discussed recently in light of the Bear Stearns episode. The largest U.S. banks are very much interconnected. Liquidity or solvency issues somewhere in the connections between these institutions can spread. A concern for policymakers must be that an interruption, even short of a failure, in the operations or payment flows of a few large individual institutions, or even of one such institution, not cascade into liquidity or solvency problems for the banking and financial system more broadly. That concern

probably was an important consideration in the Federal Reserve's involvement in the takeover of Bear Stearns by JPMorgan Chase.

Having larger capital cushions reduces the likelihood of such eventualities. But, institutions vary in how close their capital ratios are to the average bank ratio, for example. They also vary in the extent of losses that they have had already and will have in the near future. Thus, as we discuss below, the Federal Reserve and other policymakers have sought ways to limit the systemic risks that the larger institutions, both banks and nonbanks, currently pose.

2. Nonfinancial Corporations Had More Cash than Debt

By 2007, U.S. businesses had endured only two, average-sized recessions over the prior 25 years. In recent years corporate profits have been at historically high levels. One effect of these prosperous years was to leave U.S. corporations with historically high levels of financial assets and only average levels of debt (relative to their total assets). Figure 15 shows that, since the late 1990s, in the aggregate U.S. nonfinancial corporations have had historically high ratios of financial assets to their debts. Mostly recently, that ratio has declined from its all-time high, recorded in 2005. (Because businesses are likely to have debt service obligations that are tied to the book rather than the market value of their debt and because most of their assets are of relatively short duration and are likely to provide cash flows that are more closely tied to their book values, we plot the ratio of the book values of businesses' financial assets and debt in Figure 15.)

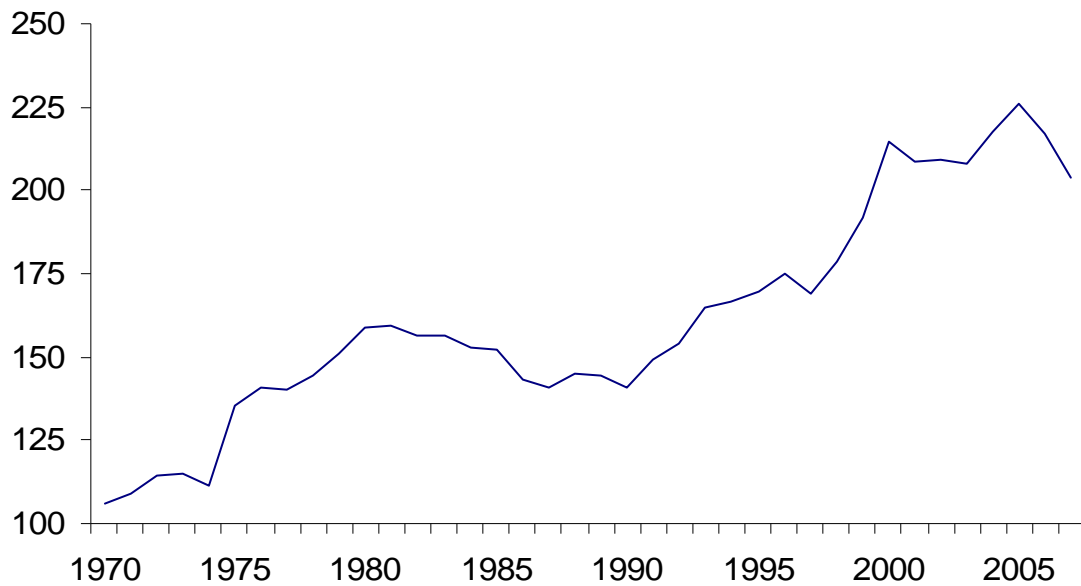
There is little doubt that a sizeable credit disruption will impinge importantly on U.S. businesses. But, their relatively cash-rich balance sheets will provide the business sector generally with some insulation from disruptions in financial markets and recession-related dips in profits and cash flows.

Figure 15

Ratio of financial assets to credit market debt owed by U.S. nonfinancial corporate businesses (%)

Annual data, 1970-2007

Sources: Federal Reserve



E. Current Macro Situation

The U.S. economy is now likely to be in a recession that began around the beginning of 2008. The unemployment rate has been rising, job growth has been negative, sales are weak, consumer confidence is low, and financial sector disruptions will cut production and employment further. Conventional wisdom now holds that that the U.S. recession probably will not be much longer or deeper than the average U.S. recession.

Figure 16 show recent actual and forecasted U.S. GDP growth rates. The forecasted rates shown in Figure 16 are the mean of the GDP forecasts collected by Consensus Forecasts. These forecasts are similar to those reported elsewhere. The average forecast, as recorded in the latest (mid-March 2008) survey of forecasters by the Wall Street Journal calls for real GDP to grow slowly, about 2 percent, in the second half of 2008, after approximately zero growth in the first half. The Blue Chip Consensus, reported by Congressional Budget Office (2008) in mid-February, calls for real GDP to grow by 1.6 percent during 2008 and to grow by 2.8 percent during 2009. That compares with an average, annual, U.S., real GDP growth rate of about 3 percent in 1997-2007 and a Congressional Budget Office forecast of average, annual, real GDP growth over the next five years (2008-2012) of 3 percent.

Figure 16

Real GDP growth (%)

Quarterly data, annualized rate, historical 2003-2007, forecasted 2008-2009

Sources: U.S. Bureau of Economic Analysis, Consensus Forecasts

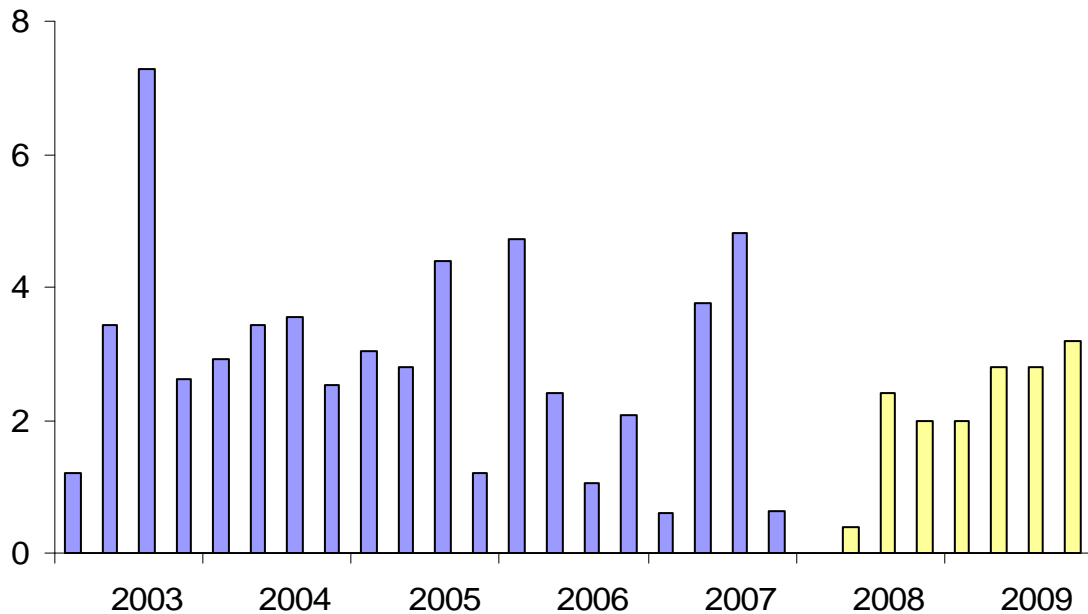


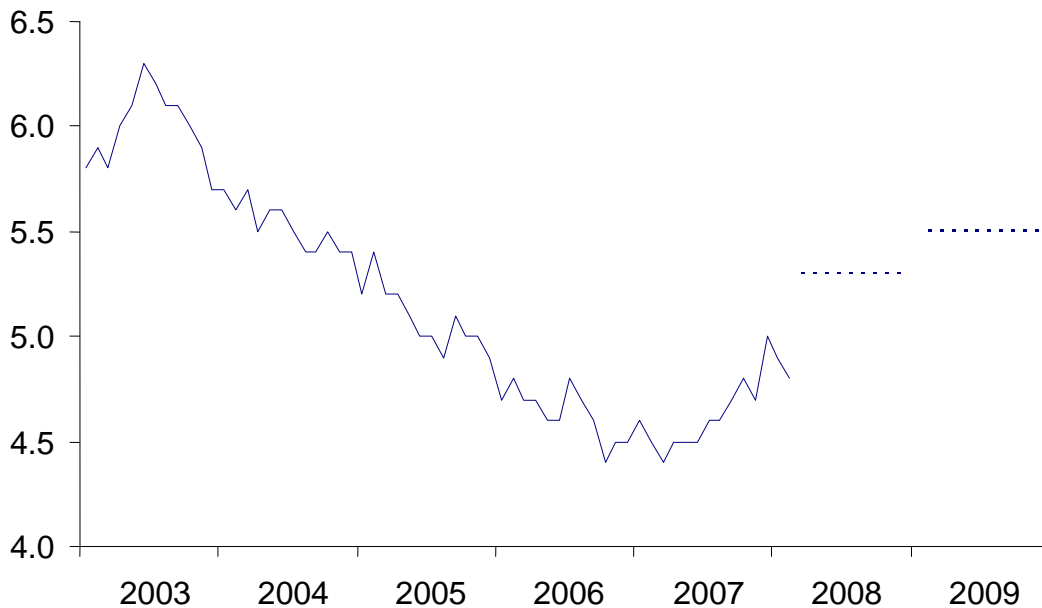
Figure 17 shows the actual U.S. unemployment rate and annual forecasts for 2008 and 2009. The forecasts for unemployment are the means of the forecasts collected by Consensus Forecasts. As it declines usually lag upswings in production, the unemployment rate will still likely be headed up, and perhaps be above 5 ½ percent, as the U.S. economy heads into 2009. That will leave a noticeable amount of slack in labor markets, where the longer-run equilibrium unemployment rate (or, NAIRU) is estimated by the Congressional Budget Office to be 4.8 percent.

Figure 17

U.S. unemployment rate (%)

Monthly data, historical 2003:1-2008:2, forecasted 2008:3-2009:12

Sources: U.S. Bureau of Labor Statistics, Consensus Forecasts



A recession is quite likely now underway in the U.S. Nearly all forecasts call for slow growth for 2008. The financial system is still disrupted and fragile. Consumers are discouraged. Taken together, these factors point toward the Fed probably cutting interest rates yet again this Spring. Indeed, the average forecast in the Wall Street Journal survey in mid-March called for a further cut to 2 percent by June. Futures markets currently suggest there is about an equally likely chance that the Fed will push rates below 2 percent by Summer.

Figure 18 shows that interest rates may begin to rise next year and perhaps even later this year. In that regard, the Bernanke-led Fed may well begin raising rates more quickly

than the Greenspan-led Fed would have. (In Figure 18, the monthly forecasts shown are based on the means of the quarterly forecasts for the yields on 3-month U.S. Treasury bills that were collected by Consensus Forecasts.) Once the real economy starts growing rapidly enough, or is forecasted to do so, and once the financial sector has stabilized, the Fed may embark on raising rates with some of the same aggressiveness that it has displayed in cutting rates in recent months.

One reason for raising rates relatively soon would be to convey that its recent easing not be misinterpreted as the Fed's being insufficiently mindful of the prospects and risks of higher future inflation. Some and perhaps most of the Fed policymakers are likely to be eager to convey to capital and to labor markets that Fed policy will contain inflation. Raising rates more and sooner will be an effective way to convey exactly that message.

Of course, at present, the Fed is acting to, at least partially, counter the economic forces that are predominantly on the side of depressing real GDP and the inflation rate. As the Fed does raise short term rates, longer term yields are also likely to rebound, perhaps as indicated in Figure 18. (In Figure 18, the forecasted yields shown for long-term Treasuries are based on the mean forecasts that Consensus Forecasts reported for the dates of June 2008 and March 2009.)

Substantial risks remain, however. The financial sector, and especially confidence in it, remains fragile. A large shock to the financial sector might hit at anytime and the repercussions on the economy of such a shock are hard to assess. Greenlaw, et al. (2008) have estimated that leveraged institutions (including banks) are likely to sustain mortgage-related losses in the neighborhood of \$200 billion. By their estimates, total losses on mortgages might be eventually in the range of \$400 billion. Given some

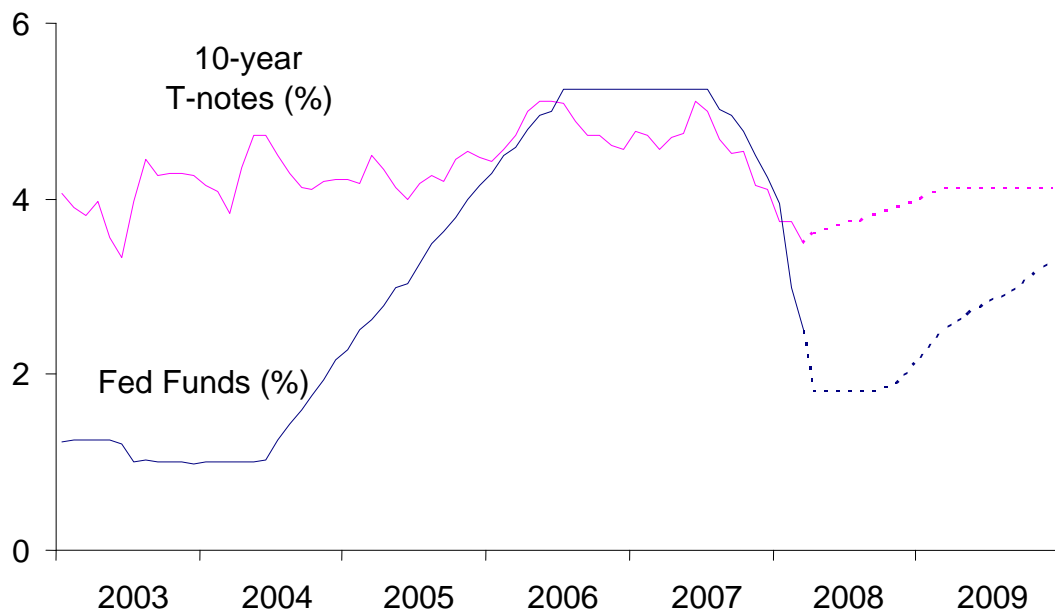
plausible estimates of lenders' reactions, based partly on banks' reactions in the past to loan losses and capital constrictions, they estimate that the economy could be faced with a reduction in the supply of credit of as much as \$2 trillion. Depending on whether the losses do turn out to be that large and depending on how severely they affect specific financial institutions or segments of the financial sector, the effects on the economy could be quite powerful.

Figure 18

U.S. nominal short-term (federal funds rate) and long-term (10-year U.S. Treasury note yield) interest rates

Monthly data, historical 2003:1-2008:3, forecasted 2008:4-2009:12

Sources: Federal Reserve, Consensus Forecasts



Recognition of those risks is partly what has prompted such rapid and vigorous responses of U.S. public policies already. Public policies also seem ready to respond as much as they can, and as much more as they feel is warranted in the eventuality of further adverse developments in housing, banking, or elsewhere.

In considerable part, the U.S. recession is expected to be tempered by the large and vigorous responses of both tax and monetary policies, by large and vigorous financial policies of the Federal Reserve, by housing market policies that ease constraints on government-related housing authorities, by a resilient financial sector, and by strengthening demand for exports, which are being boosted by a weakening dollar (in part resulting from Fed easing) and by the quite strong real growth in the rest of the world economy.

Further interest rates cuts are quite likely soon and can be implemented on a moment's notice. Other fiscal and regulatory responses might also be implemented, though not that quickly. Increasingly calls are heard for public sector intervention in residential mortgage markets. More bad news about both the housing and the financial sectors is likely; some more policy responses are almost as likely.

How these policies and conditions in the U.S. today differ from those of Japan in the 1990s is discussed in this and following sections of this report. As one example, Figure 19 shows the annual growth rate of world real GDP. When the more-export-dependent Japanese economy began to suffer around 1990, world real GDP growth, a prime factor in the demand for exports from Japan, was both low and falling. By contrast, recent world growth has been quite steady at quite robust rates. Strengthening economies outside the

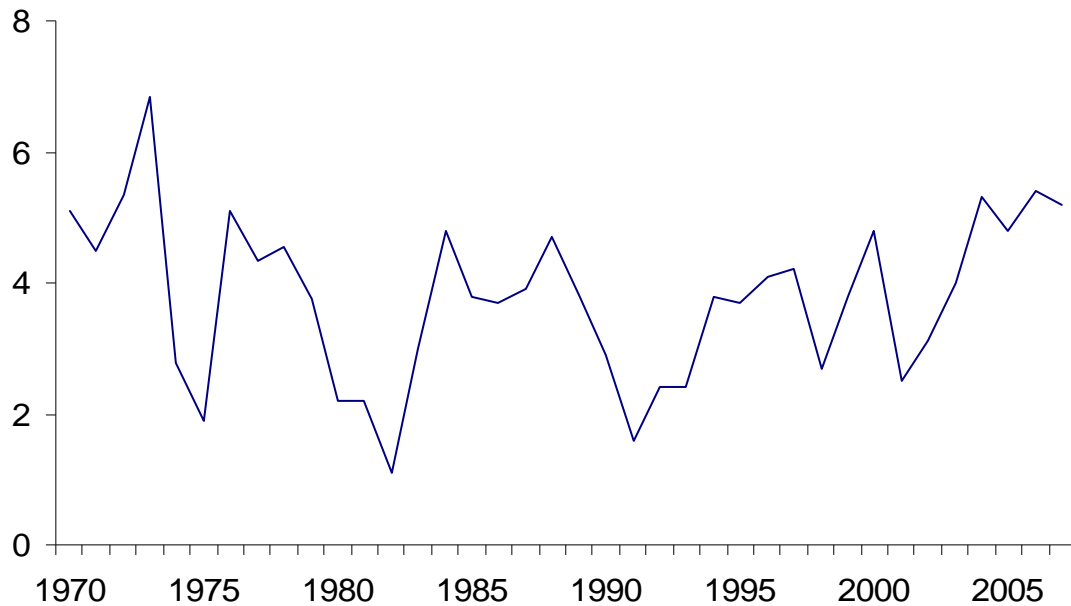
U.S. have been a source of additional demand for U.S. exports over the past few years and are expected to continue to support future export growth.

Figure 19

World real GDP growth (%)

Annual data, 1970-2007

Sources: International Monetary Fund



F. Bigger, Faster Reactions of the U.S. Financial System

1. U.S. Banks Recognized Bad Loans and Declared Losses Relatively Rapidly

During the 1990s, nonperforming loans (NPLs) and charge-offs at Japanese banks grew impressively slowly in response to the widely-recognized problems of borrowing businesses and the macroeconomy more broadly in Japan. Figure 20 shows that, despite

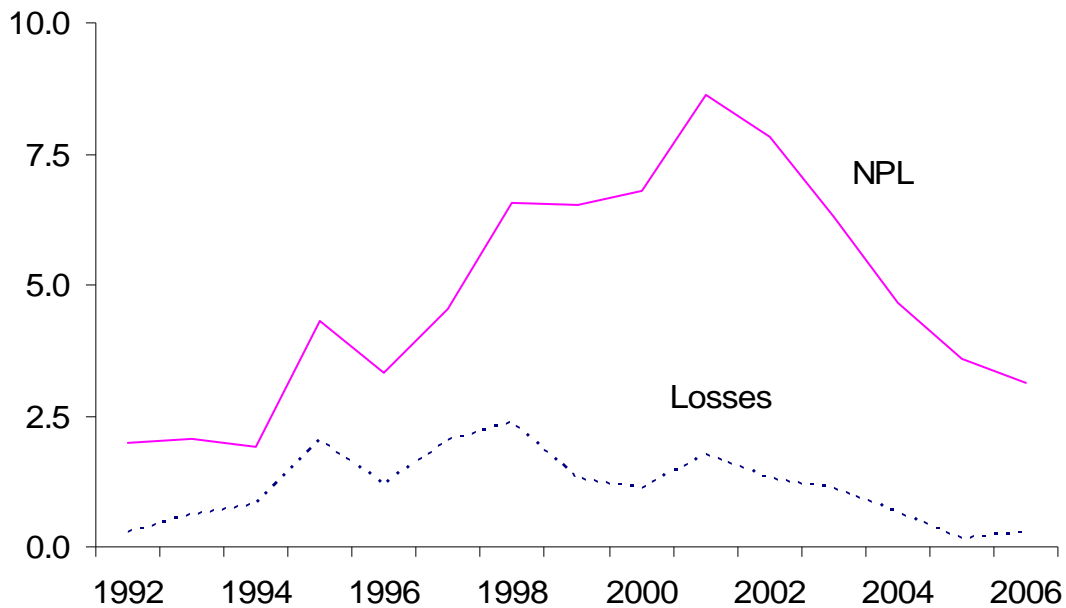
the ongoing problems in Japan beginning in about 1990, banks there reported few NPLs or loan losses until much later in the 1990s.

Figure 20

Japan's nonperforming loans (NPLs) and loan losses as a percent of loans

Annual data, 1992-2006

Source: Japan's Financial Services Agency



During the 1990s, many analysts were skeptical, to say the least, about the reported data from Japanese banks. (This skepticism was similar to that about the financial statements of U.S. thrift institutions during the 1980s.) In fact, Wilcox (2004) demonstrated that Japanese banks seemed to record more loan losses when their cash flows improved and thereby provided Japanese banks with the cash flows to cover larger loan losses. Huge volumes of loans have been reported and charged-off since 1990. But,

still, considerable suspicion remains that Japanese banks have large volumes of as-yet unreported losses lurking in their loan portfolios.

As Peek and Rosengren (2005) have convincingly demonstrated, Japanese banks have long been “evergreening” their loans, by extending credit to “zombie” businesses. One reason that some Japanese banks extended additional credit to such unhealthy borrowers may have been that they felt some obligation to continue lending because of their roles as main banks for such borrowers. The keiretsu system encouraged banks to sustain the operations of members of their keiretsus. In addition, banks were fearful that cutting off their economically-insolvent borrowers would thereby force the troubled borrowers into loan defaults. Such loan defaults would then likely force the banks, which themselves were in dire straits, to report losses on those loans. Such additional loan losses then would then further intensify the capital pressures imposed by regulators under the Basel Accord. As a consequence, Japanese banks, and especially the more troubled ones, continued to fund weak, existing businesses rather than new customers.

This evergreening of existing loans deflects credit from more worthy borrowers, enables inappropriate competition for other businesses, and delays some of the inevitable cleansing of the economy. Caballero, Hoshi and Kashyap (2007) concluded that, absent this catharsis, banks remain stuck with bad loans and the economy remains deprived of healthy competition and innovative, efficient, new businesses. (Motonishi and Yoshikawa (1999) concluded that the low profitability of new investments accounts for much of the weakness of the Japanese economy in the early 1990s. Hayashi and Prescott (2002) suggested that low productivity growth was an important factor in Japan’s lost decade.)

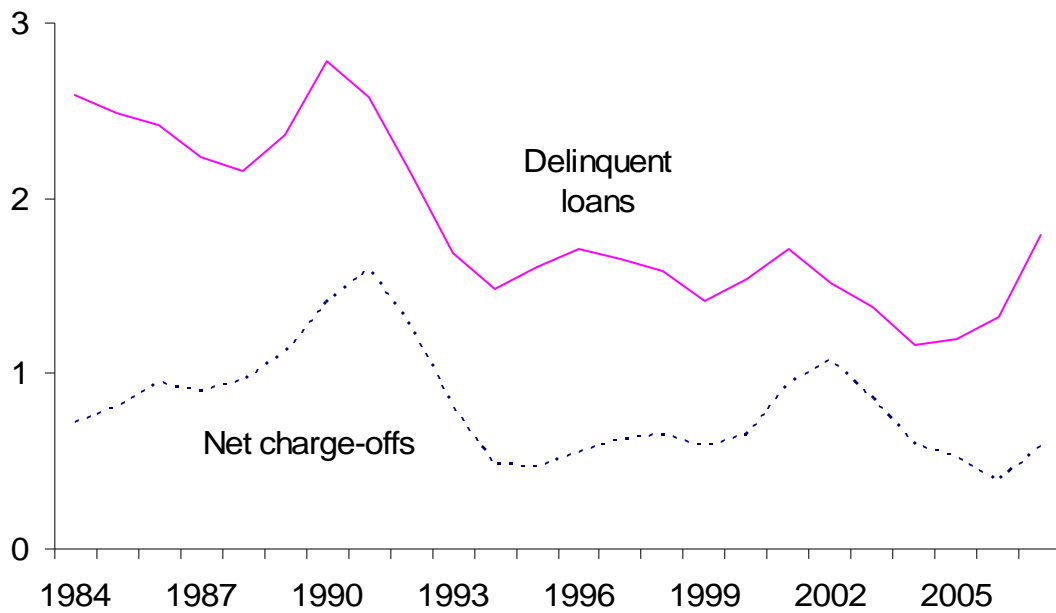
By contrast, more forthright accounting at U.S. banks produces faster and larger acknowledgements of loan problems. Figure 21 shows that U.S. banks tended to more rapidly acknowledge problem loans and declare losses, for example during the 1990-91 recession and commercial real estate downturn. The figure also shows that by the end of 2007, U.S. had already begun to accept the pain. In fact, noteworthy has been the nearly \$200 billion of losses that U.S. banks and other financial institutions have already booked in connection with residential real estate loans. No one expects that such losses have been exhausted. Greenlaw et al. (2008) estimate that such losses will eventually be in the range of \$400 billion.

Figure 21

U.S. delinquent loans and net charge-offs as a percent of loans

Annual data, 1984-2007

Source: FDIC



We have already seen one benefit of relatively rapid acknowledgement of credit problems. Before time and evergreening further undermine the solvency of financial institutions, relatively rapid acknowledgement of problem loans allows still-solvent banks to attract additional capital infusions. (In Japan, the government eventually felt obliged to inject many trillions of yen into the largest banks.) These early capital injections allow banks not only to survive, but also reduce the temptation to banks to evergreen existing loans to sick borrowers and allow them to continue to provide credit efficiently to new customers. (Greenlaw et al. (2008) calculated that, absent capital injections, \$400 billion of loan losses might reduce the supply of credit from banks and other leveraged institutions by about \$2 trillion.)

Thus, U.S. financial institutions have been willing and sometimes forced by relatively inflexible accounting standards to more quickly raise capital and to cut off credit to borrowers that are not sufficiently sound. As a result of these cathartic practices, more credit will more efficiently flow to more creditworthy borrowers over the next few years, to the overall benefit of lenders and to the U.S. macroeconomy as a whole.

G. Faster Reactions of U.S. Public Sector Policies

Changes in economic policies have been more rapid and responsive in the U.S. than in Japan. Fiscal, monetary, and bank regulatory policies each contributed to the relatively stronger performance and outlook for the U.S. economy.

1. Lessons from Experiences in Texas, New England, and Japan

An offsetting benefit of some painful experiences is that policymakers learn from them. U.S. policymakers saw the collateral damage on the real economy of credit disruptions that arose from banking sector problems in the past. Two such learning experiences came from the repercussions on the regional economies of Texas in the 1980s and New England in the 1990s due to their banks' difficulties. Fed Chairman Bernanke, in fact, published one of the first academic studies of those effects.

Another lesson was learned by U.S. policymakers, perhaps ironically, from the experience of Japan. Japanese economic and policy performance during the 1990s further confirmed U.S. views that credit disruptions could cause far-reaching difficulties for the economy. (Japan also convinced the U.S. that deflation was costly and should be guarded against.) Because of those experiences, the current policymakers in the U.S., not to mention academics and other analysts, are especially mindful and responsive in their recommendations and policy choices when faced with credit disruptions. They very much want to prevent such disruptions from emerging and their being propagated more widely throughout the economy. That partly explains the rapid, forceful, and broad-based counter-attack on the disruptions to financial markets that began in the summer of 2007.

2. Rapid Response of Fiscal Policy

One very re-assuring and surprising response to the financial disruptions was the fiscal stimulus agreed to by Congress and President Bush. All to the good were the speed of enactment, the aggregate size of the tax rebate, and a structure that directed most of the payments to those who are most likely to spend most.

Like the 2001 tax cuts, the current stimulus package was enacted quickly in the face of a weakening economy and is slated to send payments out soon thereafter. Also like the 2001 tax cuts, the current tax cut (in the form of a rebate) is very likely to help revive a U.S. economy that is in recession. To the extent that it differs from the 2001 tax cut, the current reduction is better targeted as a pro-consumption, anti-recession policy. These are but two recent examples of the typical U.S. pattern that discretionary fiscal policy changes have tended to be countercyclical and therefore output stabilizing (see Auerbach 2002).

Romer and Romer (2007) concluded that tax cuts clearly raise real GDP. They estimate that the eventual multiplier effect is likely to be in the range of 2-3. With a multiplier of that size, given that the current stimulus package rebates about 1 percent of GDP, then we might expect the economy to grow about 2-3 percent more than otherwise. That seems in line with some private-sector forecasts. For example, Moody's Economy.com (January 22, 2008) estimated that the stimulus package, which will put extra cash in the hands of consumers starting in May, would likely boost annualized GDP growth by about 1½ percent in the second half of 2008, lift employment by about 700,000 jobs, and lower the unemployment rate by ½ percentage point by the middle of 2009. Of course, in addition, it will enable some families to avoid home foreclosure and other financial disasters. The additional spending in 2008 will continue to reverberate into stronger spending in 2009 as well. The cumulative effects of the 2007 tax rebate then are likely to be in the range of the Romer and Romer (2007) estimates.

By contrast, Japan has been less adept at such countercyclical policies on average. The Japanese government historically has pursued policies that were less countercyclical

than those of the U.S. Kuttner and Posen (2002) conclude that “Japanese fiscal policy was contractionary over much of the 1990s...” The large, ignominious tax increase in 1997, which occurred while the economy of Japan was weak and then fell into recession in 1998, is one such example of a policy change that was not countercyclical. The Japanese government did cut taxes and boost public spending at times during the 1990s (see figure 22). The problem was that, early in the slump, by Kuttner and Posen’s estimates, the extra public spending was not very large and was often mostly offset by spending cuts soon thereafter. And changes in tax policies were sometimes stimulative, but at other times, contractionary, for the Japanese economy. Thus, fiscal policy in Japan during the 1990s was not applied consistently and vigorously as the Japanese economy headed into and endured its slump.

Figure 22

Japan's government expenditures and revenues as a percent of GDP

Annual data, 1970-2007

Source: Government of Japan

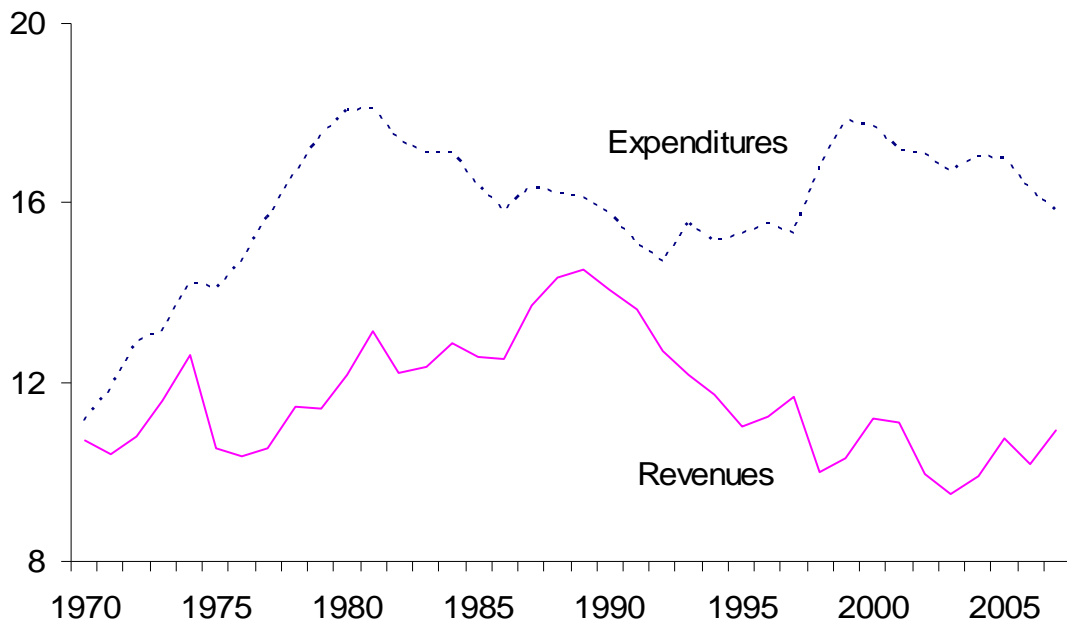


Figure 23 shows central government budget surpluses in Japan and in the U.S. The following Figure 24 shows that the full-employment (or cyclically-adjusted) deficit for the U.S. generally did rise with unemployment rates. (In Figure 24, we present deficits instead of surpluses (i.e., graphically inverted) to ease the comparisons between rising unemployment rates and deficits.) Thus, residents and investors are justified in having more confidence that U.S. fiscal policy will attenuate economic downturns in the U.S. more than they did in Japan during the 1990s.

Figure 23

Japan and U.S. government surplus (or deficit) as a percent of GDP

Annual data, 1970-2008, historical 1970-2007, forecasted 2008

Sources: Bank of Japan, Government of Japan, U.S. Treasury, U.S. Bureau of Economic

Analysis, Moody's Economy.com

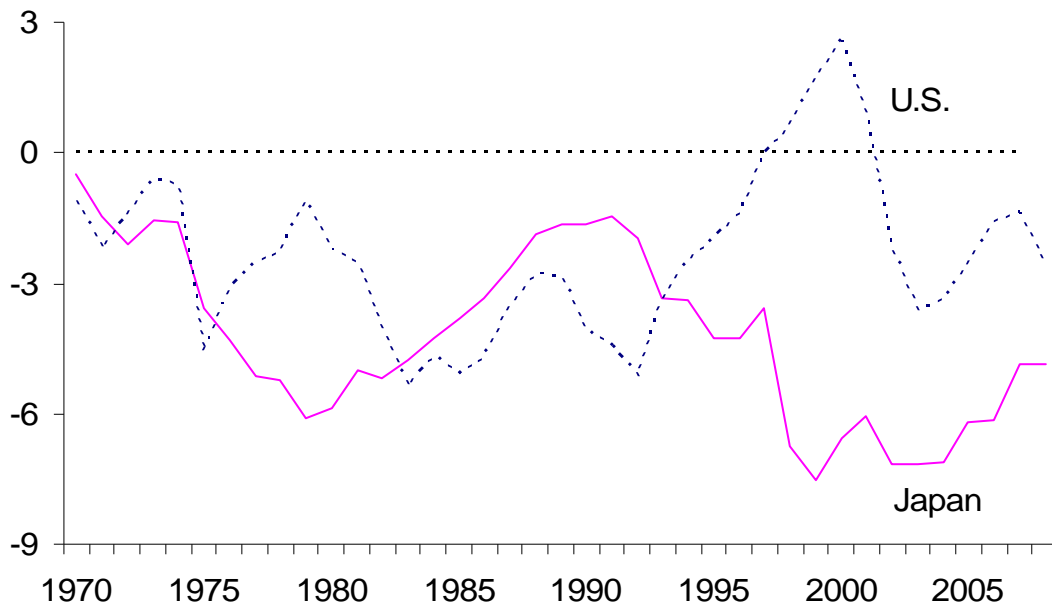
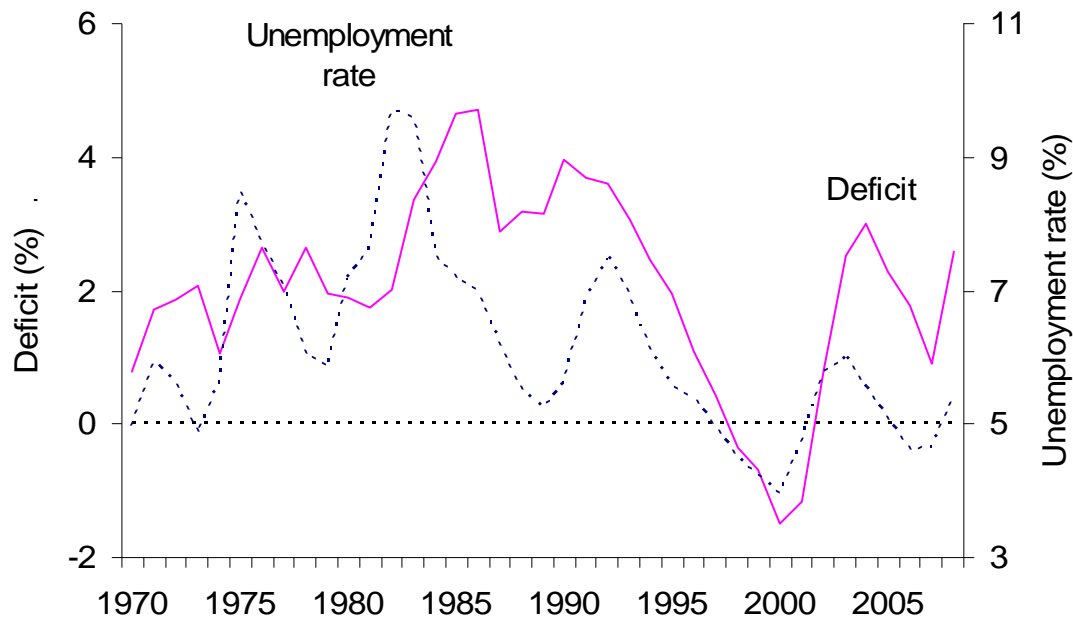


Figure 24

U.S. cyclically-adjusted deficit as a percent of GDP and unemployment rate (%)

Annual data, 1970-2008, historical 1970-2007, forecasted 2008

Sources: Congressional Budget Office, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, Moody's Economy.com



The deficits shown in Figure 23 more than doubled the ratio of Japanese government debt to GDP. Figure 25 shows government debt in Japan and in the U.S, relative to their GDPs. The U.S. government debt to GDP ratio has hovered around 60 percent for the past two decades. Despite some large tax cuts and resulting deficits, the overall health of the U.S. economy has made for high tax revenues and low safety net costs, such as those for unemployment insurance. By contrast, the weak performance of the Japanese economy has generated low tax revenues. Figure 22 (above) shows that government spending rose little in response to the long-running slump in Japan during the 1990s,

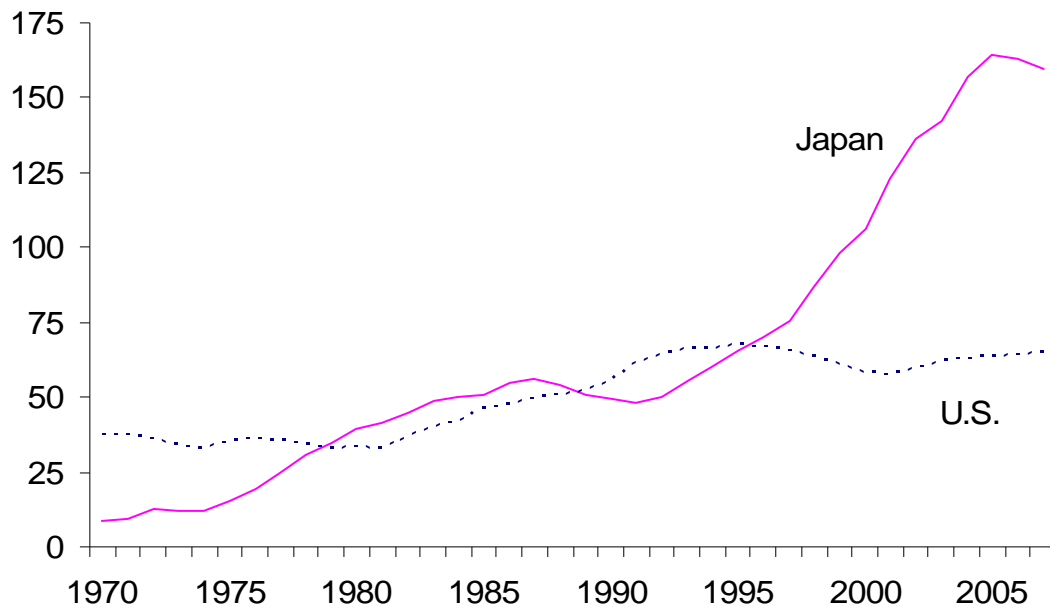
while tax revenues tended to fall, partly due to tax cuts and partly due to sluggish economic performance.

Figure 25

Japan and U.S. government debt as a percent of GDP

Annual data, 1970-2007

Sources: Government of Japan, U.S. Treasury, U.S. Bureau of Economic Analysis



A longer-term ramification of successful countercyclical fiscal and monetary policies is that economies that have had a healthy past are more likely to be in a position to deploy countercyclical policies when their macroeconomies are in distress. The higher revenues produced by stronger economic track records tend to hold down nations' debt ratios. To the extent that vigorous policy responses reinvigorate the economy, ensuing government deficits, both cyclical and structural, can be reduced.

On the other hand, if timid or absent fiscal policy allows further problems to develop in an economy, then cyclical deficits might well continue at quite high levels. Kuttner and Posen (2002) argue that much of the rise in the Japanese government debt-to-GDP ratio was endogenous, and not due to stimulative policy stances, having resulted from the declining tax revenues that accompany a weakening economy.

Coupled with some additional government spending, lower government revenues have made government deficits so large in Japan that the debt ratio has skyrocketed to over 1½ times as large as Japan's GDP. That debt load, despite its quite low interest rate burden so far, has tended to restrict Japan's ability to counteract macroeconomic weakness. Indeed, one argument made for raising taxes in 1997 in Japan, which led to the recession of 1998, was that the longer-run fiscal condition of the country required it.

By contrast, the relatively lower ratio of debt to GDP in the U.S. has provided it with more fiscal freedom to combat recessions. For example, in the current circumstance, no serious opposition to the 2008 stimulus package emerged in the U.S. as a result of its effect on the government debt ratio.

3. The Fed Has Been Aggressive, Flexible, and Innovative

Monetary Policy

Beginning in the summer of 2007, in connection with the downturn in housing construction and prices, financial markets in the U.S. were disrupted. Ever since, the Fed has been aggressively lowering the federal funds rate, so far by 300 basis points to 2.25 percent. It has cut the discount rate at which it loans to banks by even more, almost

entirely eliminating its previous penalty spread above the federal funds rate, having reduced the spread from 100 to 25 basis points.

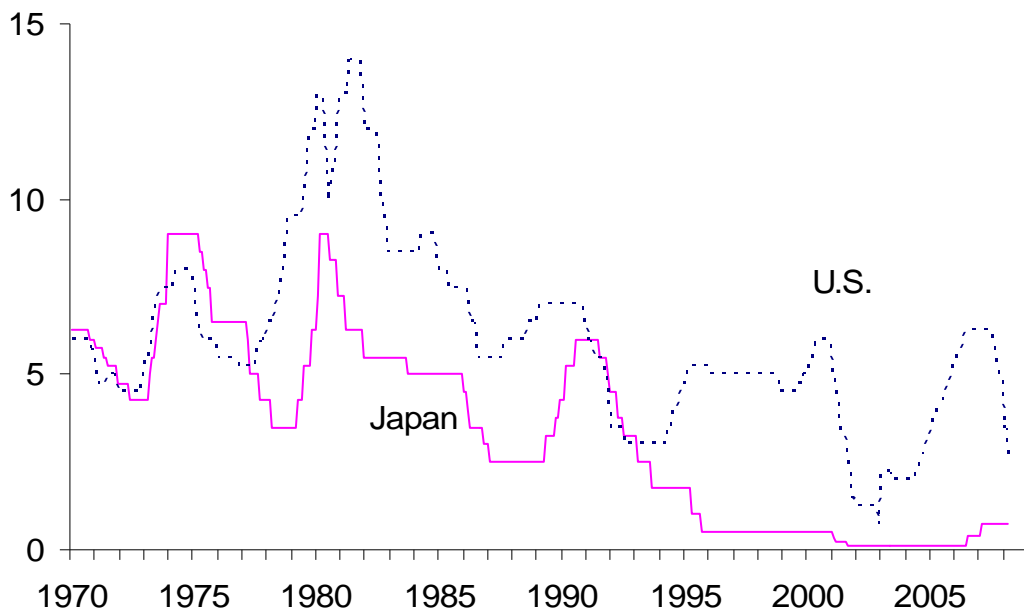
Figure 26 shows monthly data for policy interest rates for Japan and the U.S. since 1970. (This figure uses discount rates for both countries. Using the federal funds rate for the U.S. would paint a very similar picture.) Figure 26 suggests that the Bank of Japan began to cut interest rates in 1991 and then cut them rather steadily through the end of 1995. Note that the Japanese asset price bubble began bursting in about 1989.

Figure 26

Japan and U.S. monetary policy: discount rates

Monthly data, 1970:1-2008:3 (%)

Sources: Bank of Japan, Federal Reserve



By contrast to the prolonged period that the Bank of Japan typically took to cut rates, the Fed typically completed its cuts over shorter periods. The most recent cuts, under Fed Chairman Bernanke, also seem to be noticeably and constructively faster and larger than those that we might have expected under his predecessor, Alan Greenspan. Thus, the typically more vigorous U.S. monetary policy responses have probably been sped up in the current circumstance. These larger, faster responses further reduce the likelihood that the U.S. will have to endure a long financial and economic slump of the sort that gripped Japan.

The Fed's Innovative Financial Policies

Because financial disruptions can have extensive, adverse effects on the entire economy, the Fed has always been concerned with the effective operation of financial markets. By many accounts, the recent and ongoing “financial freeze” is the most severe in memory. To reduce the already apparent disruptions and reduce the likelihood of further, much more painful, financial and therefore economic repercussions, Bernanke's Fed has responded with energy and innovation.

In breaking with the Fed's past practices, the Bernanke Fed has shown its willingness to try novel approaches. It has also shown how aggressively it is willing to act in order to reduce the risks to the financial sector and therefore to the macroeconomy more broadly.

In response to the financial freeze that has gripped bond markets in particular, the Fed has implemented policy initiatives that are more targeted for those markets. The Fed had never used some of these policies in the past. Thus, the Fed has begun to auction funds for terms up to a month; has begun to lend Treasuries against mortgage-backed securities

(MBS); has, in effect for the first time ever, allowed non-bank securities market brokers and dealers to borrow at the discount window; and has essentially taken on, to help consummate its take-over by JPMorgan Chase, some risky MBS that had been held by Bear Stearns. Thus, the Fed has used its usual tool (the federal funds rate) and some highly unusual tools to try to reduce the adverse effects of the housing downturn on the overall economy. These energetic and innovative responses by the Fed reduce the likely size and duration of a U.S. recession in 2008.

H. The U.S. Is Not Likely Headed for Deflation

Having seen the deleterious effects of deflation on Japan, U.S. policymakers were, and are, very determined to avoid deflation in the U.S. The Japanese overall price inflation rate hovered in the 0-3 percent range until the middle of the 1990s, when it then fell to zero and then into negative territory (see Figure 27). From the late 1990s through early in the 2000s, steadily falling prices made it even more difficult for businesses' to repay their debts. The Bank of Japan had already pushed market rates effectively to zero. But, the continual decline in prices increased the real debt burdens of borrowers, essentially raising the real interest rates at which they were attempting to repay their debts.

Deflation, in that the overall price level would decline by any economically significant amount over a significant time period, now seems extremely unlikely to occur in the U.S. for the foreseeable future.

The bond market concurs. Figure 28 plots the nominal yields on the 10-year Treasury note. As during the macroeconomic slowdown and recession around 2000, more recently

the yields on Treasuries have declined. Figure 28 also plots the difference over time in the yield on 10-year Treasuries and the real yield on Treasury's 10-year inflation-indexed bond, the TIPS. That difference, which we refer to as inflation premium, consists of the market's expectations of the level of the inflation rate over the next 10 years plus whatever risk premium is required in the nominal bond to compensate for uncertainty about what that mean inflation rate might actually turn out to be. Presumably the vast majority of inflation premium consists of the expected future inflation rate.

In addition, Figure 28 shows that inflation premium has been and remains noticeably higher over the past five years than it was around the 2001 recession in the U.S. Thus, there has been little indication from bond pricing so far that deflation is now more likely – and, indeed, Figure 28 suggests that it is now probably no more likely than it was, on average, over the past ten years and is less likely than it was around the 2001 recession.

Nor does a nearer-term deflation seem very likely. Not shown here is data for inflation premium based on 5-year yields. At that horizon, inflation premium is quite similar to that embodied in 10-year yields.

Thus, a reasonable interpretation of yields is that capital markets are implicitly forecasting that the U.S. is likely to have an ongoing, positive inflation rate: Inflation seems poised to average in the range of two percent annually, which is not far from where it has been over the past decade and is a far cry from even a mild deflation.

The most commonly heard objection to the recent actions taken by the Fed may be the opposite – that they likely will fuel more inflation and raise the possibility of an asset price bubble. Indeed, the Fed's actions are likely to keep prices in general and price of

assets in particular above what they would have been without Fed actions. On net, in the current circumstances, those are among the net benefits of recent Fed actions.

Figure 27

Japan and U.S. consumer price inflation (CPI)

Annual data, 1970-2007, year-on-year percent rates of change

Sources: Government of Japan, U.S. Bureau of Labor Statistics

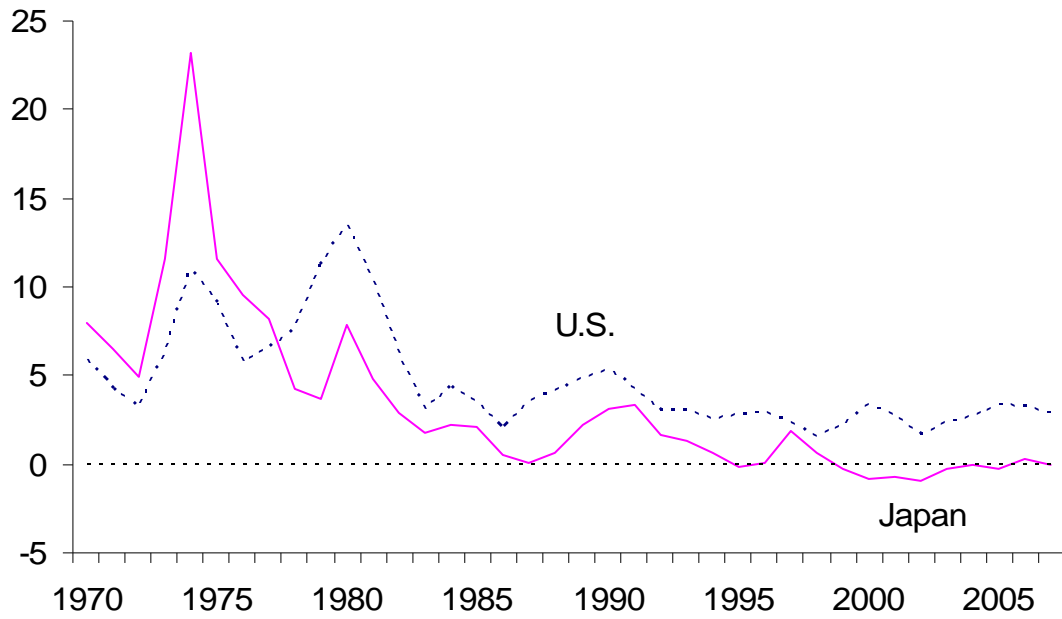


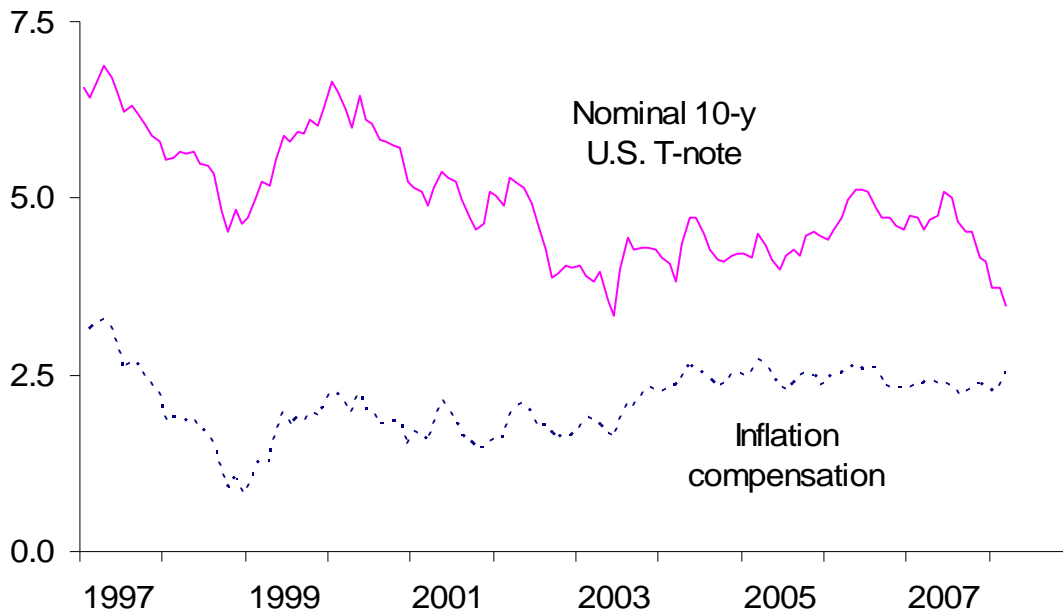
Figure 28

Nominal yields and inflation premium (%)

(Based on 10-year U.S. Treasury notes and Treasury Inflation-indexed bonds (TIPS))

Monthly data, 1997:2-2008:3.

Source: Federal Reserve



I. Faster Population Growth in the U.S.

The U.S. population has grown, and is expected to continue to grow, at a much faster rate than the population of Japan. Ongoing population growth steadily increases the demand for housing. To the extent that population grows faster, any excess supply of housing gets absorbed faster and the prices of houses rise more and sooner.

The slow recent growth and projected even slower future growth of the Japanese population deprives Japan of that source of housing demand. The resulting weaker demand, in turn, contributes to the long-running weakness of house prices in Japan.

Relative to Japan, the U.S. is expected to have considerable population growth over the next few years and over the next several decades. These growth rates are supported by the relatively young age structure of the current population and by the relatively large numbers and young age of immigrants that come to the U.S. annually.

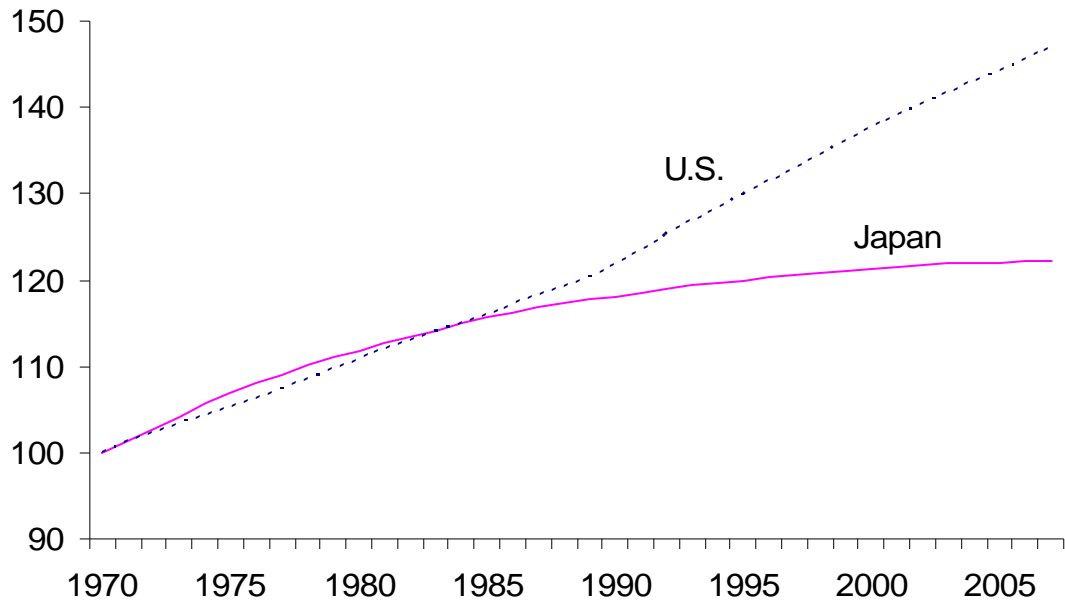
Figure 29 shows the growth in the sizes of the populations of the U.S. and Japan since 1970. While the Japanese population added only 1.3 percent to its population over the past decade, the U.S. population added a total of 10.6 percent. The addition of about 3 million U.S. residents each year adds substantially, reliably, and continually to the demand for housing. The ongoing increase in demand that arises from population growth will speed up the absorption of any excess supply of houses that were produced in recent years. The additional population will also help rid the housing market of whatever excess inventories of unsold homes remain.

Figure 29

Japan and U.S. populations

Annual data, 1970-2007, indexed = 100 in 1970

Sources: Government of Japan, U.S. Census Bureau



References

- Auerbach, A. 2002. "Is There a Role for Discretionary Fiscal Policy?" Presented at the Federal Reserve Bank of Kansas City Conference on Rethinking Stabilization Policy, Jackson Hole, WY, August 29-31.
- Caballero, R., T. Hoshi and A. Kashyap. 2007. "Zombie Lending and Depressed Restructuring in Japan." Unpublished manuscript. University of Chicago Graduate School of Business,
<http://faculty.chicagogsb.edu/anil.kashyap/research/Zombiejan2008fulldocument.pdf>,
American Economic Review, forthcoming.
- Carroll, C. 2004. "Housing Wealth and Consumption Expenditure." Unpublished manuscript. Johns Hopkins University,
<http://econ.jhu.edu/people/ccarroll/papers/FedHouseWealthv2.pdf>.
- Carroll, C., M. Otsuka and J. Slacalec. 2006. "How Large Is the Housing Wealth Effect? A New Approach." Unpublished manuscript. Johns Hopkins University,
<http://econ.jhu.edu/people/ccarroll/papers/COS-WealthEffects.pdf>.
- Case, K., J. Quigley, R. Shiller. 2005. "Comparing Wealth Effects: The Stock Market versus the Housing Market." *Advances in Macroeconomics* 15(1).
- Congressional Budget Office. 2008. Letter from the Director to U.S. Senator Conrad. February 15.

- Davis, M., and M. Palumbo. 2001. "A Primer on the Economics and Time Series Econometrics of Wealth Effects." Federal Reserve Board. Finance and Economics Discussion Paper No. 2001-09.
- Dvornak, N., and M. Kohler. 2003. "Housing Wealth, Stock Market Wealth and Consumption: A Panel Analysis for Australia." Reserve Bank of Australia. Research Discussion Paper 2003-07.
- The Economist. 2008. "Why Japan Keeps Failing." London, February 21.
- Greenlaw, D. J. Hatzius, A. Kashyap, and H. Shin. 2008. "Leveraged Losses: Lessons from the Mortgage Market Meltdown." US Monetary Policy Forum Conference.
- Hayashi, F. and E. Prescott. 2002. "The 1990s in Japan: A Lost Decade." *Review of Economic Dynamics* 5: 2006-235.
- Kuttner, K and A. Posen. 2002. *Journal of the Japanese and International Economies*. 16(4): 536-558.
- Ludwig, A. and T. Slok. 2004. "The Relationship Between Stock Prices, House Prices, and Consumption in OECD Countries." *Topics in Macroeconomics* 4(1): 1114-1114.
- Motonishi, T. and H. Yoshikawa. 1999. "Causes of the Long Stagnation of Japan during the 1990s: Financial or Real?" *Journal of the Japanese and International Economies*. 13: 181-200.
- Peek, J. and E. Rosengren. 2005. "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan." *The American Economic Review* 95(4): 1144-1166.

- Peek, J. and J. Wilcox. 2006. "Housing, Credit Constraints, and Macro Stability: The Secondary Mortgage Market and Reduced Cyclicalities of Residential Investment." *American Economic Review Papers and Proceedings* 96(2): 135-140.
- Romer, C and D. Romer. 2007. "The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Stocks." NBER Working Paper Series No. 13264.
- Wilcox, J. 2004. "Pro-cyclicalities, Banks' Reporting Discretion, and 'Safety in Similarity'" (with Pipat Leungnaruemitchai) in *The New Basel Accord*, edited by Benton E. Gup, South-Western Publishing, 151-175.
- Wilcox, J. 2007. "Forecasting Components of Consumption with Components of Consumer Sentiment." *Business Economics* 42(4): 22-32.
- Zandi, M. 2008. "Washington Throws the Economy a Rope." Moody's Economy.com, January 22.