



# US Outlook 2008: Navigating Stormy Seas

A Closer Look

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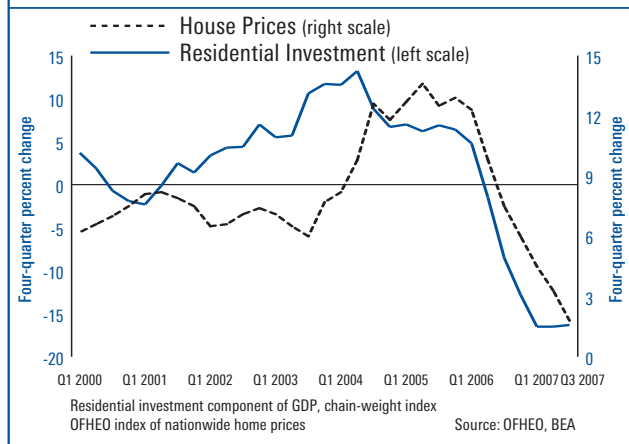


The US economy is struggling to cope with two powerful, related shocks: a severe downturn in the housing market, and a profound decline in risk appetites in financial markets. The latter was initially sparked by the crisis in sub-prime mortgages, but has metastasized into a broader-based tightening of credit conditions. How these shocks play out, and how they impact business and especially household spending, will largely determine how the US economy and financial markets fare in 2008.

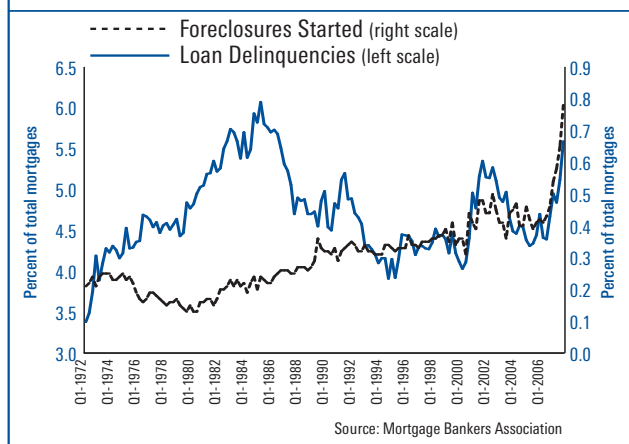
## The Housing Slump

Housing activity began to weaken in earnest in the spring of 2006. In the six quarters from Q2 2006 through Q3 2007 inclusive, real residential investment fell 18% at an annual rate, while housing starts dropped more than 40% cumulatively. Preliminary indicators suggest activity continued to recede in the final months of 2007. Over the same period, home prices have decelerated sharply. According to the OFHEO index, nationwide home prices declined in Q3 2007 for the first time in 13 years, and are up just 0.5% at an annual rate through the first three quarters of the year, after a nearly 13% average annual gain in 2004 and 2005. The S&P/Case-Shiller home price index—which includes more high-end units and is concentrated in more major urban areas—shows an even steeper deceleration. After rising at an average annual rate of 15% from the end of 2002 through the end of 2005, this index is down more than 5% annualized through the first three quarters of 2007. Delinquency rates on residential real estate loans, which were still near historic lows in early 2006, have quickly jumped to levels not far below their mid-1980s peaks, while foreclosures have risen to new historic highs. With the inventory of unsold homes bulging, and mortgage financing tighter, the housing market will likely remain weak in 2008.

**Chart 1: US Housing: Boom and Bust**



**Chart 2: Stresses in Residential Real Estate**

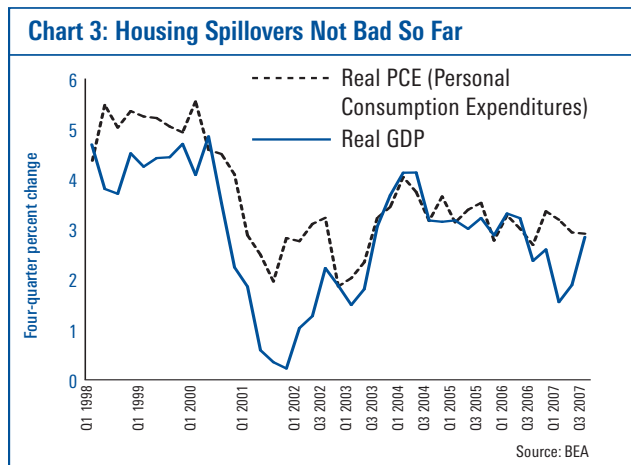


The plunge in residential investment has directly shaved about three-quarters of a percentage point off GDP growth since the spring of 2006. It would have been worse had housing been a bigger share of the economy. But even at the peak of the boom, residential investment comprised only about 6¼% of nominal GDP, and now it's below 4½%—too small by itself to derail the entire economy. The key to the outlook has always been what type of spillover effects the housing slump would have on aggregate demand, particularly household spending. It's not hard to imagine how such knock-on effects could work; the deceleration in house prices could make households feel poorer and less inclined to spend out of current income (the classic "wealth effect"), while also eroding their ability to extract equity from their homes and turn it into spending power (the "mortgage-equity-withdrawal (MEW)" effect). And

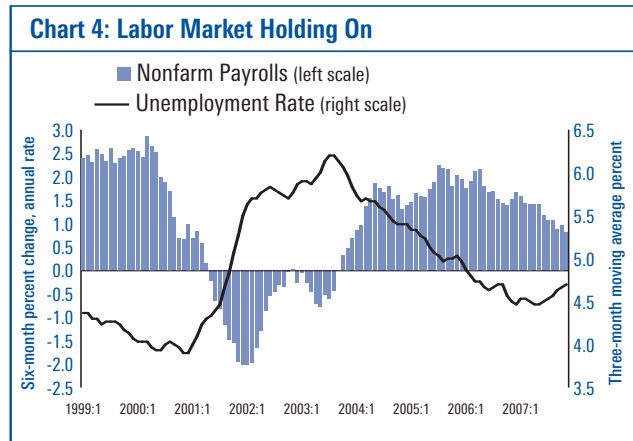
the correction in the housing market has been the catalyst for a generalized pullback in risk-taking in financial markets that has caused the cost and availability of credit to deteriorate not only for housing but for other household and business borrowing too.

### Spillovers from Housing: So Far, Not Too Bad

To date, the spillovers from the housing correction haven't been too bad. Real GDP advanced at nearly a 2½% annual rate over the six quarters ended in Q3 2007—below the 3½% of the three years prior to the housing correction, but not far from estimates of the economy's long-run potential, and impressive given the direct drag from declining residential investment. Consumer spending—the largest component of aggregate demand and the one potentially most vulnerable to knock-on effects from the housing slump—has slowed, but modestly. Real personal consumption increased at an average annual rate of 2.8% over the six quarters since the housing correction began, down moderately from the 3.4% clip of the previous three years. Consumers have been helped by ongoing improvements in their balance sheets. Despite the deceleration in house prices, the net worth of the household sector continued to increase through Q3 2007, though the pace of improvement has slowed. Household net worth is no longer rising faster than disposable income, as it did during the house price boom, but so far it hasn't fallen, as it did in the aftermath of the equity market collapse earlier this decade.



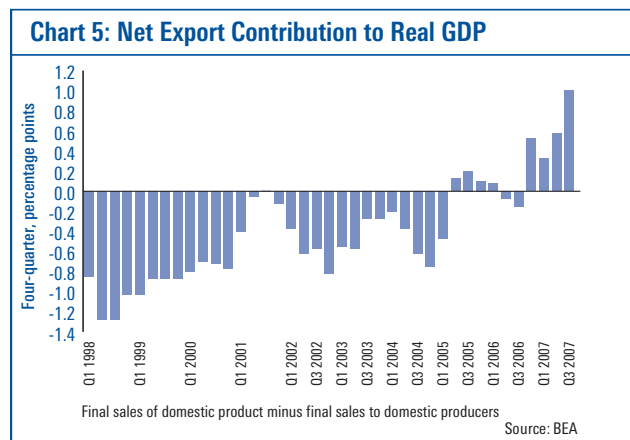
The labor market has remained generally supportive of consumer spending too, though less so than before the housing correction. The rate of net job creation has cooled to about a 1% annual rate in 2007, from a 2% clip in 2005 and 2006, and the unemployment rate—which was steadily falling from late 2003 through 2006—has edged up slightly this year, consistent with an economy that has decelerated from an above-trend to a slightly below-trend pace. Still, employment continues to expand, job openings remain near cyclical highs, the unemployment rate is low by historical standards, and wage-based income gains remain solid.



While the labor market has held on, other sectors of the economy have been providing a much-needed counterbalance to housing-related weakness. Real business investment rose at a 5% annualized rate in the six quarters ended in Q3 2007, despite a sluggish pace of equipment spending, because investment in nonresidential structures has surged, decoupling from the housing market's woes. Business spending on nonresidential structures was weak earlier this decade when housing was booming, but has recovered more recently, picking up some of the slack from the housing slump.

But the most powerful offset to the housing correction has come from the external sector. After years of persistently weighing on growth, net exports have turned around, adding a full percentage point to GDP growth in the four quarters ended in Q3 2007, countering the drag from residential investment. The cumulative decline in the US dollar over the past nearly six years—the Federal Reserve's real trade-weighted index of the US dollar is down almost 25% since its peak in early 2002—coupled with

firm domestic demand in many economies outside the US, has boosted exports while slowing import demand. Real exports have been growing faster than real imports for over two years, with the gap widening in the past year. In essence, some of the housing-related deceleration in US domestic demand has been transmitted abroad (via weaker US import demand), cushioning the drag on US output, while resilient foreign demand has helped bolster US exports, providing a much-needed spur to US production that has offset some of the housing weakness. The whole process has been aided by the declining US dollar. The global economy has essentially been rebalancing, becoming less dependent upon US domestic demand and increasingly reliant on demand in other regions, while the US economy itself has been rebalancing internally, less dependent upon housing and consumer spending, with increased impetus from net exports. The transition has not been seamless, but it has so far occurred without untoward disruption.



### Too Soon to Sound the “All Clear”

The jury is still out, though, on the ultimate spillover effects from the US housing slump, and whether they will eventually swamp all else, including the improvement in net exports. For starters, the housing correction is far from over. Although the pace of housing starts has been cut nearly in half since the peak of the boom, falling below levels seemingly consistent with underlying demographics, residential investment may not yet have bottomed. Further declines, or at least an extended period of sub-par housing investment, will likely be needed to clear the inventory of unsold homes, especially given the tightening

of mortgage financing conditions. So some residual drag from declining residential investment may persist in 2008.

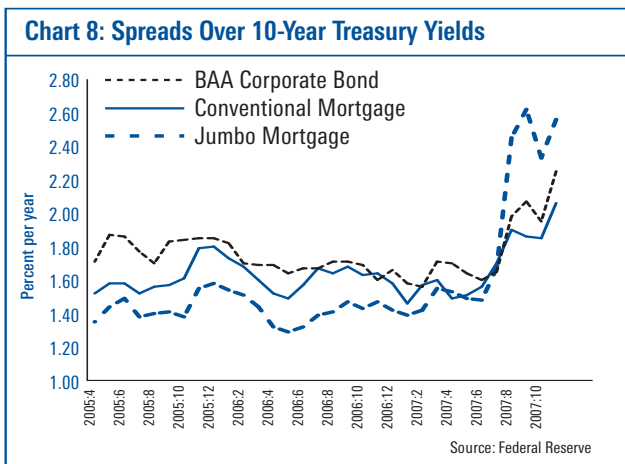
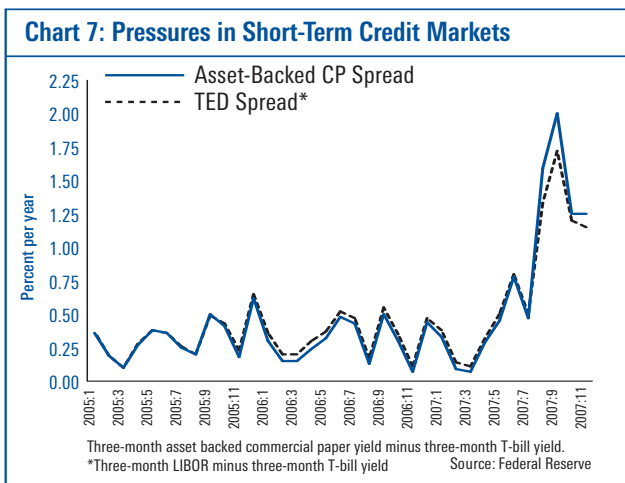
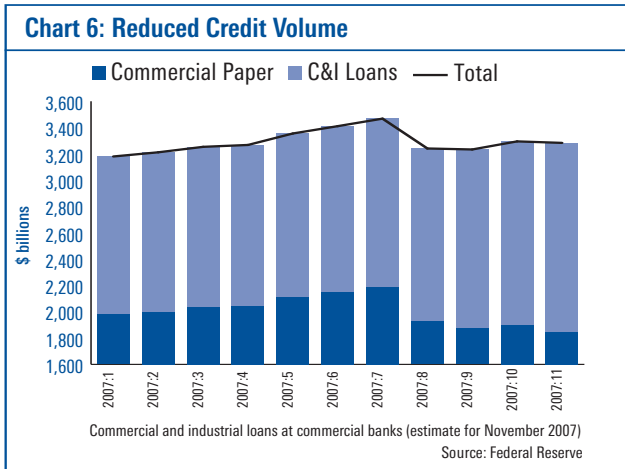
And the deceleration in house prices could still intensify. With a large inventory of unsold homes, tighter mortgage financing conditions, surveys showing consumers less willing to buy a home, and what appear to be still-stretched home valuations in some regions, home prices may weaken further, and at best are apt to remain sluggish for a long time so that rents and incomes can catch up to the outsized increases in prices during the boom. Although the weakening of house prices doesn't seem to have dampened consumer spending so far, that's not too surprising; households tend to adjust their spending and saving patterns slowly in response to changes in their perceived wealth.

Worse, the tightening of financial conditions is too recent to have had a discernable impact on economic activity. That drag is likely yet to come. Diminished risk appetites and tighter credit conditions began in sub-prime mortgages but have spread to other types of household and business credit and to other countries as well. Particularly hard hit has been asset-backed commercial paper, with outstanding issuance down 30% since August. The yield on these securities has risen sharply relative to comparable-maturity Treasuries, suggesting that the drop in volume is being driven primarily by reduced supply of credit, rather than by reduced demand. To some extent, banks are stepping into the breach and re-intermediating credits formerly channeled through the capital markets. Commercial and industrial loans on bank balance sheets have picked up, but not enough to offset the drop in commercial paper. Banks may be unwilling and/or unable to expand their balance sheets too aggressively given their own exposures to losses on credit products, and given the generalized climate of risk aversion. Federal Reserve surveys suggest banks have been tightening the terms and standards for lending to households and businesses, though in most cases not as aggressively (yet) as during the recession early this decade or the credit crunch of the early 1990s. Concerns about counterparty risk and potential exposure to credit losses continue to make banks reluctant to lend to each other, as evidenced by wide spreads of LIBOR over Treasury bill rates. Spreads of corporate bond rates and conventional mortgage rates over Treasury yields have widened about 50 basis points since the summer

(though they remain relatively narrow by historical standards), while spreads on jumbo mortgage rates have increased about 100 basis points. In short, the terms and availability of credit to many borrowers have deteriorated.

As if the economy didn't have enough to contend with, energy prices spiked up again this fall, posing a further risk to aggregate demand. Fortunately, prices have begun to recede more recently. And the US has weathered several jumps in energy prices in recent years without undue problems. But this is an especially inopportune time, when the economy is struggling to cope with so much else. Already, consumer confidence has slipped, likely reflecting the combined impacts of rising energy prices, the travails of the housing market, and tighter credit conditions.

Taken together, these shocks obviously increase the downside risks to the economy's near-term growth prospects. Indeed, the chances of a sharper, more prolonged period of sub-par growth, or even recession, have risen, especially since the tightening of financial conditions began this summer. The outlook is also less certain. It's hard to know when the dust will settle in credit markets and what financial conditions will look like when they do; it could still take months for investors to come to grips with how to value many mortgage- and credit-related securities, for rating agencies to complete their reappraisals, for financial intermediaries to disclose completely their exposures to these products, and for people to start taking risk again. So the cost and availability of many credits may remain somewhat compromised, in ways that are not easy to quantify. It's not just the rise in the cost of credit, but also how much non-price rationing of credit (tighter lending standards, reduced access to financing, etc.) will persist. Estimating the economic impact of these non-price terms is difficult; they're hard to embed in standard macroeconomic models, which typically use just a few market interest rates to capture overall financial conditions and are not well equipped to deal with shifts in non-price terms of credit.



## But It's Not All Gloom and Doom

Although there's plenty of uncertainty and downside risk to the outlook, there are reasons to be more sanguine. To begin, the spillovers from the housing slump may not be so dire. One reason is that nationwide home prices are unlikely to crash; some of the rise in house prices during the boom was a justified response to a decline in long-term real interest rates and possibly in the risk premium that people require to buy a home (which may have fallen

for the same reason that risk premiums on financial assets fell—because people came to perceive the business cycle, economic growth, and inflation to be less volatile). Lower real interest rates and a lower housing risk premium reduced the cost of home ownership per dollar of house price and enabled home prices to rise faster than rents, prices and incomes for awhile without stretching valuations or straining affordability. A number of recent studies have tried to estimate home ownership costs, and though estimates vary, they all agree that the cost of home ownership per dollar of house price declined earlier this decade, justifying some of the rise in home prices.<sup>1</sup> They also concur that things got carried away in the latter stages of the boom, but that housing did not become as overvalued as implied by metrics that fail to account for the decline in real interest rates and in the housing risk premium. These studies suggest that home prices probably need to fall, but moderately—perhaps 10% to 15% at most on the OFHEO nationwide index—to bring the cost of home ownership into better alignment with fundamentals.


That's much less than the collapse of equity prices earlier this decade (broad equity market indexes fell 40% to 50%). And near the peak of the equity market boom, households' exposure to the stock market was even a bit greater than their exposure to real estate today. At the end of 1999, households' stock market holdings were about 2½ times their annual disposable income; in Q3 2007, household real estate holdings were about 2¼ times annual disposable income. If consumers rode out the bursting of the equity bubble fairly well (savings rates barely rose), why shouldn't they be able to handle what will likely prove to be a much more modest drop in house prices?

A number of reasons come to mind. First, home ownership is more widespread; equity holdings tend to be concentrated more among the affluent, whose marginal propensity to consume (out of income and wealth) is typically lower. Home prices also tend to be less volatile than stock prices, so changes in housing wealth may be perceived to be more long-lasting, and hence have a

greater dollar for dollar impact on consumption than changes in stock market wealth. Then there's the mortgage-equity-withdrawal (MEW) effect, which many argue was a key route through which rising home prices stimulated consumption, by relaxing credit constraints on many households. With home prices flat to declining, the MEW spigot is effectively being squeezed, which some contend will weigh heavily on consumer spending. Further, the housing woes have spawned the tightening of credit terms and availability for consumers, which may further depress spending. Finally, in the aftermath of the equity market collapse, consumers benefited from tax cuts, declining real borrowing costs, and increases in other asset values, particularly house prices. Today, tax cuts are not on the table, real risk-free rates are falling but credit spreads are widening, and equity prices are not likely to provide a full offset to declining home prices.

Still, there are reasons to be less concerned. For one, it's not clear that rising house prices really add to the wealth of the economy as a whole, rather than merely re-distributing wealth across groups. Homeowners may feel wealthier if house prices rise, but would-be home buyers will feel less wealthy, as will renters, because they will expect their rents will eventually increase. And homeowners have to live somewhere; if they were to consume their added housing wealth (by borrowing or downsizing) they would leave their children worse off because their future housing costs have gone up. When equity prices rise, by contrast, no one is worse off, at least not in an absolute sense. Houses are different; they're not just an asset, they embody a stream of rental services that are consumed, at a cost. When house prices rise, the value of the asset goes up, but so does the implicit cost of rental services. Also, increases in equity prices may be more closely linked to expectations of future increases in the economy's productive potential and income-generating capacity, and hence might boost current consumption more (because households anticipate higher future income) than a rise in home prices, which is sometimes just the result of supply constraints in local markets.

<sup>1</sup>For recent studies of housing valuations, see, for example, "Assessing High House Prices: Bubbles, Fundamentals, and Misperception," Himmelberg, Charles, Christopher Mayer, and Todd Sinai, 2005, *NBER Working Paper 11643* (September). "U.S. House Prices: Not as Overvalued as Many Think," Feinman, Joshua, 2006, *Journal of Investing*, Vol. 15 Number 2 (Summer). "Recent House Price Developments: The Role of Fundamentals," OECD *Economic Outlook*, 2004, No. 75 (June). "A Trend and Variance Decomposition of the Rent-Price Ratio in Housing Markets," Campbell, Sean D., Morris A. Davis, Joshua Gallin, and Robert F. Martin, 2006, *Federal Reserve Board Working Paper* (April).



As for MEWs, there's little doubt that they've been huge in recent years, fueled by soaring house prices and financial innovations that have lowered the cost of extracting equity from a home. But that doesn't mean MEWs have been the cause of rapid consumer spending. ATM withdrawals are highly correlated with consumer spending too, but few believe they cause spending. If anything, the causality may run the other way; households decide to spend (perhaps in part because they feel wealthier from the appreciation of their homes), and then choose to extract equity from their homes (or make ATM withdrawals) as a way of facilitating that spending. That means MEWs should not be considered as an added boost to spending on top of the normal wealth effects from higher house prices (anymore than ATM withdrawals should be considered an added boost to spending on top of income growth). An exception might be for households who were credit constrained—who would have been unable to tap the liquidity needed to spend in the absence of MEWs. But that's likely a small share of overall households. Most households—especially those who had the biggest dollar appreciation of their property, and hence were likely to contribute most to boosting aggregate consumption—are unlikely to have been credit constrained.

Ultimately, though, the issue is an empirical one. Many studies have aimed to estimate the impact of changes in housing wealth on consumption, looking at both the US and international economies, using aggregate and micro data. Not surprisingly, the results are mixed.<sup>2</sup> On balance, there is no compelling evidence to overturn long-standing estimates that the long-run marginal propensity to consume out of housing wealth in the US is similar to that for equity wealth—about three to four cents on the dollar.<sup>3</sup> This suggests that a 10% to 15% drop in US house prices over, say, a two-year period, would trim consumer spending by only about half a percent per year, perhaps a bit more at the peak of the effect.<sup>4</sup> But there's considerable

uncertainty around this estimate, in part because there has not been sufficient variation in housing wealth to estimate the consumption elasticity with great precision. Also, these estimates don't take into account the tightening of credit conditions sparked by the housing crisis, which may weaken consumption further.

## How Vulnerable Are Consumers?

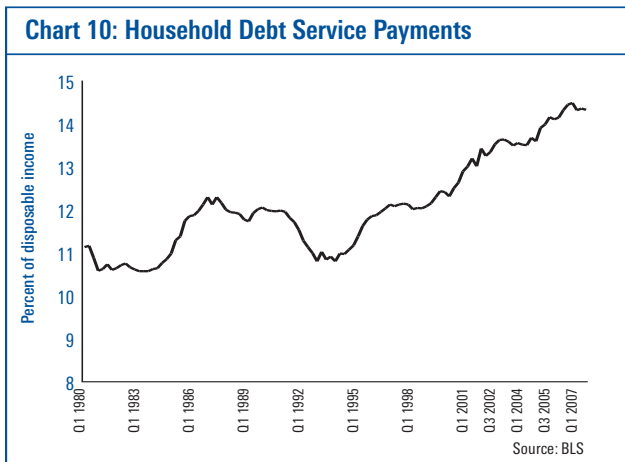
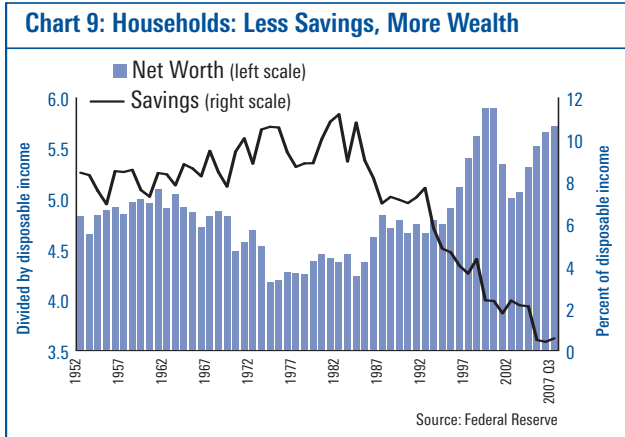
Standard estimates of the housing wealth effect also ignore what many argue is the perilous state of household finances. Personal savings have fallen substantially as a percent of disposable income over the past 10 to 15 years, while the ratio of household debt to personal income has almost doubled. The increase in debt has been so steep it has pushed up the percent of disposable income devoted to making debt payments—despite lower interest rates. But even as their debt has soared, households have become much wealthier because their assets have increased much more. Indeed, household net worth is up more than 2½ times since the mid-1990s, faster than the pace of income growth. The rapid rise in net worth has likely made households feel less need to save out of current income, and more comfortable assuming debt. Financial innovations have probably played a role too. Increased securitization of loans, improved assessment and pricing of risk, and more widespread use of credit derivatives have facilitated risk spreading, lowered the cost of credit, and made more credit available to more households, contributing to the debt buildup. A number of other factors—including the large baby boom cohort being in their prime borrowing years, the decline in real interest rates, reduced economic volatility, and higher expected future income in the aftermath of the productivity acceleration of the mid-1990s—may have contributed to the surge in debt as well, though evidence on these factors is mixed.<sup>5</sup>

<sup>2</sup>See, for example, "Housing Wealth Effects: Housing's Impact on Wealth Accumulation, Wealth Distribution and Consumer Spending," Belsky, E., and J. Prakken (2004), (Chicago: National Center for Real Estate Research). "How Large is the Housing Wealth Effect? A New Approach," Carroll, C., M. Otsuka, and J. Slacalek (2006), *NBER Working Paper* No. 12746 (Cambridge, Mass.: National Bureau of Economic Research, December). "Comparing Wealth Effects: The Stock Market Versus the Housing Market," Case, K.E., J.M. Quigley, and R.J. Shiller (2005), *Advances in Macroeconomics*, vol. 5 (no. 1). "House Prices and Economic Activity," Girouard, N., and S. Blondal (2001), OECD Economics Department Working Papers No. 279 (Paris: Organisation for Economic Cooperation and Development, January).

<sup>3</sup>"Housing and the Monetary Transmission Mechanism," Mishkin, Frederic S. (2007), Federal Reserve Board Working Paper (August).

<sup>4</sup>Mishkin, *ibid.*

<sup>5</sup>See "The Rise in U.S. Household Indebtedness: Causes and Consequences," Dynan, Karen E., and Donald Kohn, (2007), Reserve Bank of Australia Conference (August).



Still, many worry that the rise in indebtedness makes household spending more vulnerable to economic and financial shocks, like the ongoing housing correction and tightening of credit conditions. After all, a given percentage decline in house prices will cause a bigger drop in household wealth relative to income today than it would have when wealth-to-income ratios were smaller. So it could exert a bigger drag on consumption than in the past. Higher debt-service burdens may also make households more vulnerable to a drop in income and a rise in interest rates. Fortunately, though, shocks to income and interest rates tend to be offsetting. If the economy weakens, slowing income growth, interest rates usually decline, cushioning the blow to indebted households (provided the

shock is not to inflation expectations, which can weaken the economy while still pushing up nominal interest rates).

Households can also draw upon their increased wealth to help smooth consumption in the face of temporary downturns in income. Even households toward the lower end of the wealth-to-income distribution have experienced some increase in net worth relative to income in recent years, and hence have a greater wealth buffer than they had in the past.<sup>6</sup> And financial innovations that have made credit more accessible at lower cost should enable more households to borrow to tide them over if their income temporarily falters. Indeed, some argue that financial innovation has contributed to the well-documented smoothing of business cycles and economic volatility by improving the ability of households to use credit to smooth their consumption.<sup>7</sup> Ironically, some of the same financial innovations that may have spawned an increase in debt during boom times, reinforcing the spending spree, may increase the availability of debt in bad times, putting a floor under spending. This may be why studies have found that households with high debt-service payments do not appear more sensitive to income shocks—because they can borrow more readily to smooth those shocks, and because they have a bigger wealth cushion than comparably-indebted families had in the past. It may also help explain why the debt-asset ratio is a better predictor of debt delinquency than the debt-income ratio.<sup>8</sup> Households with low debt-asset ratios are better able to meet their credit obligations and cope with adverse income shocks, even if they have high debt-service payments. This is encouraging in the current circumstance since most households have had declines in their debt-asset ratios, even as their debt-income ratios have risen.

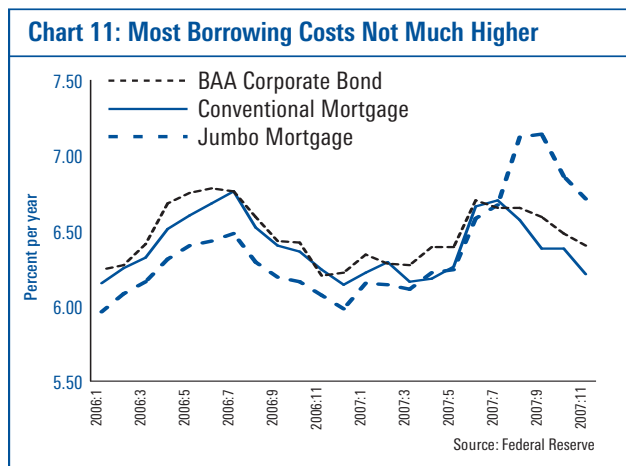
Even so, few doubt that debt use got excessive at the height of the housing boom, particularly for sub-prime borrowers, and that some households are vulnerable, especially given the recent tightening of credit conditions, which may limit their ability to borrow just when they might need to. Much of the widening of credit spreads, however, has been offset by a decline in risk-free interest

<sup>6</sup>Dynan and Kohn, *ibid.*

<sup>7</sup>“Can Financial Innovation Help to Explain the Reduced Volatility of Economic Activity?” Dynan, Karen E., Douglas W. Elmendorf, and Daniel E. Sichel (2006a), *Journal of Monetary Economics* 53 (January).

<sup>8</sup>Dynan and Kohn, *op. cit.*

rates; the Federal Reserve has cut the funds rate 100 basis points since the summer, and yields on most Treasury securities have fallen sharply as well, leaving the all-in cost of borrowing to most households not much higher than before the credit crisis began this summer—despite wider credit spreads.



The same is true for most businesses. Their access to certain types of credit may be more limited (both from the capital markets and banks), and corporate bond spreads are wider, but their all-in borrowing costs are not, because risk-free rates are lower. That's especially important because the corporate sector has to borrow again after several years of not having to tap the capital markets; profit growth has cooled from a blistering pace and internally-generated funds are no longer sufficient to finance all capital expenditures. But corporate finances are still generally healthy, certainly much better than during the economic downturn of 2001–2002, when businesses were pressured to slash capital spending and employment. By contrast, the corporate sector is less directly affected by a slump in residential investment.

## Help from Abroad


The external sector is also better able to offset some of the current moderation in domestic demand than it was during the downturn of the early years of the decade. That slump was caused by a global shock—a collapse in the worldwide IT industry, a precipitous correction in global equity markets, and a contraction in capital spending by

firms around the world. Also, many economies outside the US were in weaker positions to cope; developing Asia was still struggling to recover from the crisis of 1997–1998, Japan remained mired in its decade-long torpor, and Europe was battling structural weakness. Worse, the US dollar had been appreciating since the mid-1990s, making it tougher for US exporters to sell into what were already weak global markets, while encouraging US imports. The upshot was that net exports remained a drag on US growth even in the recession and slow-growth period of 2001–2002.

Today, the shock is primarily in US housing, which is a more domestic industry, with less direct global repercussions. To be sure, the tightening of credit conditions is global. But equity markets are holding up well around the world, and other economies are on sounder footing than they were earlier this decade. In fact, the world is coming off some of the strongest sustained growth on record, with more impetus coming from domestic demand in Europe, Japan, and developing Asia. Finally, the US dollar has been sliding for six years, reversing most of its rise from 1995–2001, which is strengthening the competitive position of US exporters while discouraging US imports. It is little wonder net exports have turned into a solid boost to US growth, and we expect that to persist, offsetting some of the housing-related weakness in domestic demand.

## Base-Case Outlook

Putting it all together, we continue to believe that the US economy is likely to muddle through—to skirt recession despite the combined impact of the housing correction and the credit crunch. It may be a close call, though, with growth particularly sluggish in Q4 2007 and at least into the first half of 2008, as the housing slump persists and as tighter credit conditions begin to bite. However, we continue to anticipate that the economy will gradually claw its way back toward trend-like growth by the latter part of 2008 and into 2009, as housing activity bottoms, as credit conditions stabilize and begin to improve, and as the impact of easier monetary policy (including what we expect to be about another 50 basis points of cuts in the funds rate by the spring of 2008), begins to be felt.



On the inflation front, headline figures are likely to recede as the recent jump in energy prices continues to unwind and as core rates of inflation remain generally in check, restrained by tame inflation expectations and by some easing of rates of resource utilization in response to ongoing sub-par economic growth. But underlying inflation may remain a bit sticky, toward the upper end of the Fed's desired range, as resource use doesn't ease that much given only modestly below-trend growth, as some residual pass-through of lagged energy price hikes lingers, and as import prices continue to edge up in response to the dollar's decline.

## **Risks**

There are considerable risks to this outlook, and we view those risks as somewhat asymmetric. If our central scenario doesn't pan out, there's a greater chance it's because the economy slips into a more prolonged period of sharply sub-par growth or even recession than that it quickly snaps back to above-trend growth. The main reasons are that the spillovers from the housing slump could prove more damaging than we anticipate, and the credit crunch could last longer and cut deeper. But the growth risks are not completely one-sided. The US economy has shown remarkable resiliency in the face of some powerful shocks in recent decades, and could do so yet again, especially given the strong fundamentals in economies outside the US. And there are still risks on the inflation front. In sum, there's no shortage of things to worry about in 2008.



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