

Housing from Boom to Bust

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At the same time the Dow Jones Industrial Average is hitting new record highs, national house prices are falling. The Dow has finally found its way back to its previous peak achieved soon after Y2K, while according to the Realtors, median existing prices are falling on a year-over-year basis for the first time since the early-1990s. The divergent stock and housing markets signal all that is right and wrong with the economy.¹

What is right is the stellar financial health of businesses. With only a few exceptions, including the domestic auto makers and sundry airlines and nondurable manufacturers, businesses are enjoying record profits and pristine balance sheets. They have all the financial firepower they need to continue investing and hiring strongly.

What is wrong is the overdone housing market. A small increase in interest rates has sent speculators running for the proverbial door and, because of the now lofty house prices, has undermined housing affordability, particularly for first-time homebuyers. Homebuilders have also put up too many new homes; a modest glut by broad historical standards, but an overhang that needs to be worked off before the market can right itself.

The economic fallout from the housing downturn will mount. Residential investment peaked at 6.3% of GDP at the end of last year, which save for a very brief period immediately after World War II was a record high,

and is nearly double the share at its nadir during the depths of the 1990-1991 recession. Simply returning to the historical average share of 4.75% would be a substantial drag.

The housing wealth effects are also significant. Households own \$20 trillion worth of housing, but only \$16 trillion in stocks. According to the Federal Reserve's Survey of Consumer Finance, less than one-half of families own stocks, and only one-fourth have holdings worth more than \$30,000. Well over two-thirds of households own their own home, and about one-half have homeowners' equity greater than \$30,000.

Housing's positive economic contribution was clear during the boom. At its apex in 2005, housing contributed just over a percentage point to real GDP growth via the surge in homebuilding and the positive housing wealth effects, accounting for approximately one-third of total growth during the year.

This outsized contribution has also been evident regionally. States that enjoyed a soaring housing market, such as California, Florida and the Northeast, have experienced job gains that have easily outpaced those in the rest of the country (see Chart 1).² Job growth is still nearly a percentage point greater in these states than elsewhere, and while these states account for 40% of the nation's total payroll, they have accounted for over two-thirds of its job growth during the current five-year-old expansion.

Housing is now quickly devolving into an economic millstone, subtracting

an expected one percentage point from growth during this year's second half and about as much in 2007. The downdraft in construction will weigh most heavily during the next several months, while the negative housing wealth and other secondary effects will become more pronounced next year.

Having said this, housing's problems are not expected to short-circuit the expansion. The housing downturn is more than half over, and the severity of the decline appears to be approaching its most intense point. Home sales are expected to decline for another three to six months, single-family housing starts for another six to nine months, and completions and house prices for nine to twelve more months.

Leading indicators of housing activity are tentatively signaling that the worst of the downturn is at hand. Purchase applications for mortgage loans, which lead home sales, are now only edging lower, and unsold inventories of new and existing homes, which lead construction and ultimately prices, appear close to peaking. Homebuilder sentiment as measured by the National Association of Homebuilders' monthly survey is still sliding, but it looks to be nearing a bottom.

Housing's afflictions will also not substantially infect the job market outside of housing-related industries. Flush businesses with ample financial resources will largely look through the housing-induced slowdown, assuming that it will be short-lived and having little to do with them, and continue to expand their payrolls. Businesses will not become more aggressive during this period, but are equally unlikely to pull back appreciably.

¹ Broader measures of stock prices, such as the S&P and Wilshire 5000, are still well below their previous highs, and other measures of house prices, such as the OFHEO repeat-sales house price index, are still growing, but they are signaling the same thing.

² The states included are Arizona, California, Delaware, Florida, Maryland, Minnesota, Nevada, the Northeast Census Division, Virginia, and Washington, D.C. Housing markets in these states have experienced close to double-digit per annum house-price growth during this expansion.

Chart 1: Strong Housing Market, Strong Economy

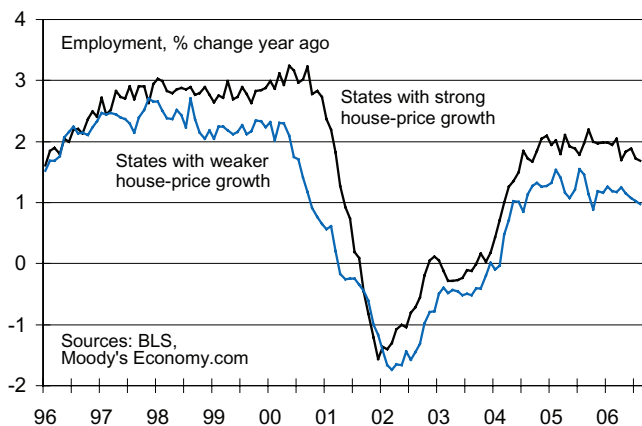
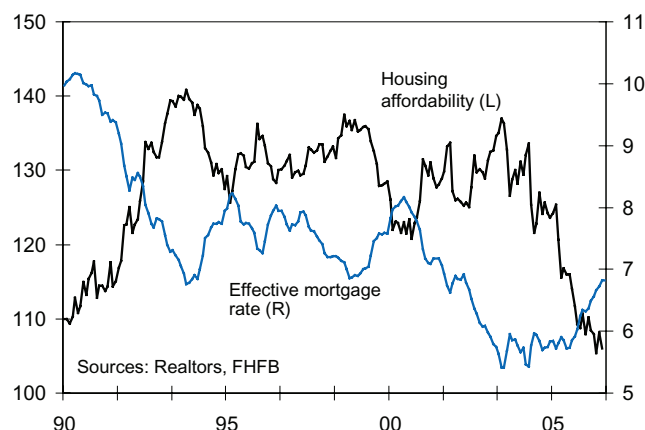


Chart 2: Housing Affordability Plunges



With continued job and compensation gains, consumers will remain sturdy spenders. The negative housing wealth effects will take a bite out of the most aggressive spending, but it will not undermine it.

Moreover, while mortgage delinquencies and foreclosures are rising, this is from record lows, and credit problems appear a long way from threatening well-capitalized commercial banks and thrifts or the confidence of global investors who have been avaricious buyers of mortgage securities. The financial system will become more circumspect in extending mortgage credit, at least in part on the behest of regulators, but it will not curtail it.³

As long as the broader economic fallout from housing is generally contained, the economic expansion will bend, but it will not break, and a record Dow will be justified.

There is of course a high degree of uncertainty surrounding this optimism. Motivating the Federal Reserve's decision to pause in its tightening cycle, despite above-target underlying inflation, is the difficulty policymakers are having gauging the severity of the housing decline, and to what extent housing's problems will spill over into the rest of the economy. Moreover, the optimism depends on the Federal Reserve remaining on hold or even easing policy somewhat in the coming year. If interest rates resume rising, for whatever reason, housing would be hit hard.

This article explores the evolving housing market downturn and its relationship with the broader economy. It identifies the factors that will determine the severity and length of the decline in housing activity, and considers the leading indicators that will provide the timeliest evidence that conditions are stabilizing. The article also lays out the key secondary economic effects from the weakening housing market and considers the prospects they become more substantial than anticipated, knocking the housing correction into a crash.

Housing affordability. The severity and length of the housing downturn will be determined in part by housing affordability. Before the housing market can find a bottom, plunging affordability must stabilize and even show some improvement.

The catalyst for the collapse in affordability and thus the housing downturn was the tightening in monetary policy between mid-2004 and earlier this year. The Federal Reserve steadily increased rates during this period, pushing the federal funds rate target up from 1% to its current 5.25%. Long-term rates ultimately rose in response, albeit much more modestly, with the yield on 10-year Treasury bonds rising from a low of 3.5% to closer to 5%. Rates on adjustable mortgages and fixed mortgage rates moved higher in sympathy, with fixed mortgage rates rising about 100 basis points and ARM rates rising 250 basis points.

Higher mortgage rates when mixed with very lofty house prices have undermined affordability. The Realtors affordability index has plunged to

near 100, meaning that the household earning the median income can afford to purchase just 100% of the median priced home at prevailing mortgage rates and terms (see Chart 2). This is the lowest level of affordability by this measure since the mid-1980s.

The collapse in affordability has been much more pronounced in those metro areas where house prices have increased the most. Miami is illustrative, with the metro area's affordability index falling by half from near 120 at the start of the decade to 60 today. Affordability in Las Vegas has caved from a high of over 130 to less than 70. Washington, D.C. affordability has dropped from a very affordable 160 to below 90.

Falling affordability has been particularly difficult for first-time homebuyers, given their generally lower incomes and savings. According to the Realtors, the affordability index for first-timers, which was as high as 90 earlier in the decade, has fallen to only 70; a 20-year low. Housing demand has been hit hard, as first-time buyers accounted for as much as one-half of home sales last year in many large markets across the country.

For a time, mortgage lenders were able to cushion the blow of tightening monetary policy on affordability by heavily marketing IO and option mortgages. The affordability of even these exotic loans has fallen sharply, however, as the Federal Reserve pushed short-term rates higher. Based on the Realtors affordability measure, a 1-year IO ARM loan with nothing down is now only marginally more affordable than a more traditional mortgage loan.

³ Regulators recently finalized guidance on exotic mortgage lending (see <http://www.federalreserve.gov/BoardDocs/Press/bcreg/2006/20060929/default.htm>). The guidance suggests regulators are increasingly nervous over potential credit problems.

Chart 3: Flippers Are Fleeing an Overvalued Market

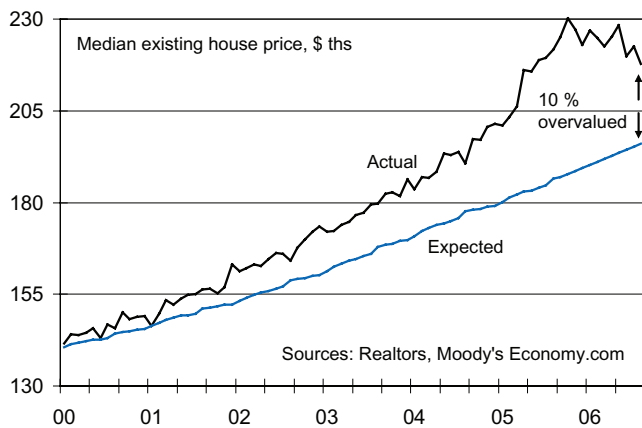
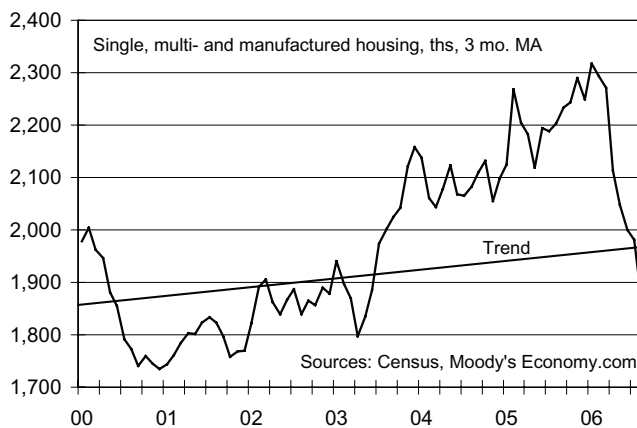


Chart 4: An Overhang of New Homes



While lenders remain aggressive, they are hard-pressed to extend their underwriting standards even further. Mortgage credit quality concerns are rising and regulators are growing increasingly nervous and thus vigilant in their oversight.

Fortunately, there are some early signs that affordability is near a nadir. House prices are now falling, the Federal Reserve appears to have completed its tightening cycle and long-term rates have recently edged lower, and incomes continue to post sturdy gains. The Realtors affordability index will not fall through 100 and, if recent trends persist, will even soon rise.

Fleeing flippers. Just how quickly housing investors exit the market will also affect the severity and length of the housing downturn.

Flippers, short-term investors looking to make a quick profit, and longer-term investors, those looking to hold onto their investments, are re-evaluating their strategies.⁴ Higher borrowing costs, more cautious lenders, and, most importantly, the realization that house prices are no longer headed higher have induced investors to stop buying and, if possible, to sell.

Even if investors were willing to look through the near-term weakening in housing values, it is difficult to justify such an investment as the cash or income return on housing has fallen

⁴ Even homeowners not planning to make a move or a second home purchase were dabbling in a form of speculation by expecting the extraordinary price gains of recent years to extend long into the future, and thus aggressively adding to and improving their homes.

sharply in recent years. As measured by the ratio of effective apartment rents to house prices, housing's cash yield has been cut nearly in half since the start of the decade. At under 7%, the yield is fast-approaching the over 5% yield on stocks, long-term bonds, and cash itself. At the start of the decade, in contrast, housing cash yields were in the double digits, while stock, bond and cash yields were in the low single digits.

The importance of investor demand to the market is evident in the HMDA mortgage originations data. These very comprehensive data show that the investor share of national purchase originations for single-family housing rose from 8.4% in 2001 to 13.8% in 2005.⁵ In some of the previously most active housing markets, the share surged even more to well over one-fourth of originations in Arizona, Florida and Nevada.

Flippers are now rapidly exiting the market and the speculative premium in house prices is being wrung out. House prices are still some 10% overvalued, but this is down substantially from closer to 15% at its peak (see Chart 3).⁶ Flippers remain resilient players in some markets, including Phoenix, Tucson, Tampa and

⁵ The HMDA data do not make a distinction between flippers and long-term investors. Other data from First American suggest that while housing demand has increased from both types of investors, flippers have accounted for the bulk of the increase.

⁶ The expected house price in Chart 3 is derived from an econometric model of national housing supply and demand, which accounts for a wide range of factors ranging from the user cost to job growth to construction costs. If the model captures the fundamental factors affecting supply and demand, then the difference between actual and expected house prices is a measure of the speculative premium in prices.

Orlando, but they too should soon succumb. The housing correction will abate only when investors are fully chastened.

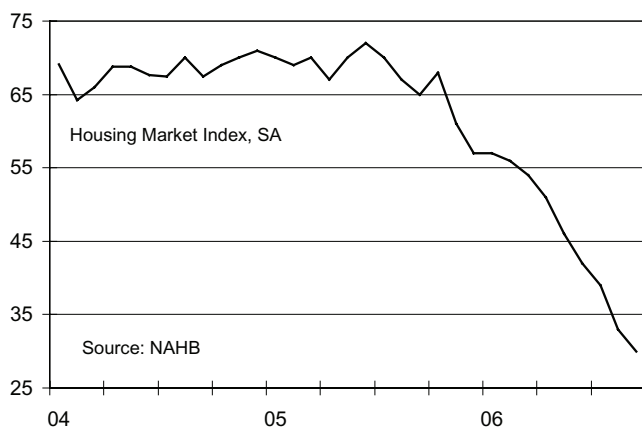
Overbuilding. Not only is the downturn in housing demand contributing to the housing correction, so too is a surfeit of new housing supply. The downturn will continue until this overhang is worked off.

New housing construction, including single- and multi-family starts and manufactured housing placements, has been extraordinary in recent years. Total new supply was well over 2 million units annualized between late 2003 and early this year. This is well above trend housing demand for new housing, which is composed of the sum of household formations, what is needed to replace the stock of homes that become obsolete each year, and second and vacation homes. Indeed, trend demand, while rising steadily given sturdy demographic underpinnings, is still below 2 million units annually (see Chart 4).

The gap between new housing supply and demand has thus been steadily widening and now stands at almost 500,000 units, equal to one-fourth of current annual supply. The overbuilding is evident in record high homeowner vacancy rates and stubbornly high near-record vacancy rates for rental units.

Overbuilding appears most pronounced in the Northeast and Midwest, and, somewhat surprisingly given robust household growth, in Florida. California, and to a lesser degree, the Pacific Northwest and the Mountain West also appear overbuilt, albeit less so.

Chart 5: The Housing Correction Has a Way to Run...



Builders have finally begun to address the overhang, slashing housing starts in recent months, and lowering current supply to well below trend demand. Just how aggressive builders are in reining in their construction in coming months will determine how quickly the oversupply is righted and construction is able to revive. At 1.75 million units of annual supply, which is the baseline outlook and a rate of construction builders appear set to achieve by year's end, supply and demand will return to balance by the summer of 2008.

Leading indicators. The leading indicators of housing activity definitively point to weaker conditions in the months ahead, but they tentatively suggest that the housing downturn is approaching a bottom.

That the housing correction has way to run is evident from the plunging National Association of Home Builders' diffusion index. The index measures builders' perceptions of current and expected buyer activity in the new home market. A reading below 50 indicates that more builders view conditions as poor than good. The index currently stands at 30, near the record low set in the depths of the 1990-1991 recession when single-family housing starts were half of what they are currently (see Chart 5). The only solace is that with builder sentiment now so poor, it is difficult to see how it could become much darker.

Inventories of unsold new and existing homes, which are an especially accurate barometer of future house prices and construction, have soared. There are currently close to 4 million

unsold homes, up from a steady 2.5 million as recently as the spring of 2005. With such bloated inventories, home sellers are under intense pressure to lower prices and homebuilders to cut construction. That unsold inventories dipped in August for the first time since inventories

began rising is a nascent sign that sellers have finally begun earnestly lowering prices and builders reducing production. If so, then inventories are cresting, and a bottom in the housing market is forming.

Indeed, the Mortgage Bankers Association's purchase applications index, which measures the volume of applications for mortgage loans to purchase a home and leads home sales, is stabilizing (see Chart 6). Applications fell sharply between the summer of 2005 and early this year, presaging the home sales decline to date. The more steady application volume since then suggests only modestly lower sales ahead.

This optimism is confirmed by the Realtors' pending home sales index. The index measures existing homes that are under a sales contract, and thus leads actual home sales, which are counted at closing. After a year of steady declines, pending sales have seemingly hit bottom.

Rate risk. Any optimism regarding the near-term housing outlook is predicated on the expectation that interest rates have peaked, at least through this year and next. Even a small further rise in rates would be hard for the housing market to bear.

The principal threat to stable interest rates is the potential for greater underlying inflation

than now anticipated. Underlying inflation has pushed higher since the beginning of the year and now stands well above the Federal Reserve's implicit target.

Core consumer price inflation, excluding volatile food and energy prices, is currently expanding at just below 3%. This compares to 1% at its nadir in late 2003 and its target of between 1.5% and 2.5%. The core consumer expenditure deflator is growing at well over 2%, compared to a low of just over 1% and a target of between 1% and 2%.

Moreover, the supports to the low inflation that have more or less prevailed during the past decade are weakening. For much of the decade, energy and other commodity prices were low, the dollar was strong and rising, and productivity growth was accelerating. Commodity prices are now high, the dollar has been falling and is likely to fall more, and productivity growth will at best hold its own.

Policymakers appear willing to tolerate inflation above their target and a less propitious inflation backdrop as long as inflation expectations remain anchored and prospects are that inflation will soon recede. Indeed, implied 10-year inflation expectations in Treasury inflation-protected securities remain near 2.5%, about where they were a year ago and the year before that.

These expectations feel very tenuous, however, and there is a palpable risk they become unfettered. The Federal Reserve would quickly respond by tightening policy further, sacrificing the housing market and near-term economic growth to ensure stable inflation and the economy's longer-term growth prospects.

Chart 6: ...But There Are Tentative Signs of a Bottom

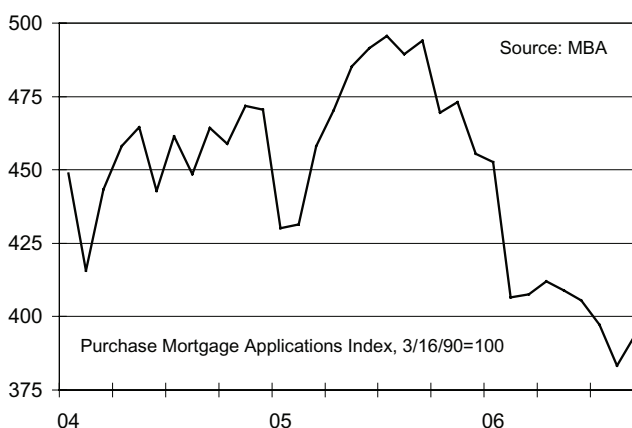
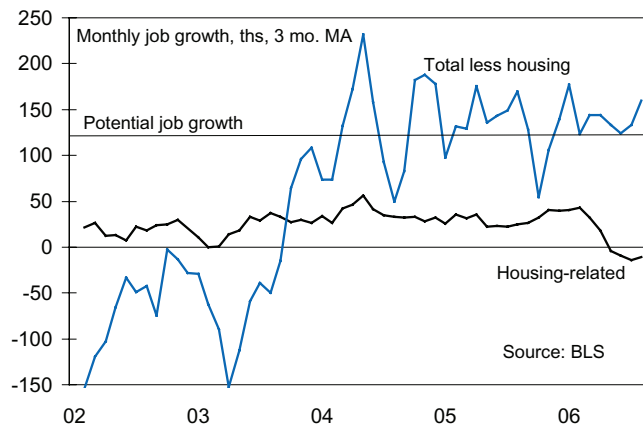


Chart 7: Housing-Related Jobs Decline



Housing-related jobs. The housing correction also threatens to unravel into a crash if the job market does not hold up as well as expected. Given that housing-related industries now account for such a large share of jobs and an even larger share of job growth, this is a measurable risk.

Nationwide, a record almost one in ten jobs is now in housing-related industries. Employment in these industries grew by an average of 30,000 per month during the three years ending this past spring, adding some 1.2 million jobs in total and accounting for almost one-fourth of all the payroll jobs created during the period. No other industry, save healthcare, has contributed as much to the strength of the job market.

The link between housing and jobs is even stronger in the previously most active housing markets across the country. Housing is particularly important to the job market along the west coast of Florida, where housing-related industries account for an astounding nearly one-fifth of all jobs. Other areas with notably outsized employment shares in housing include Arizona and Nevada, the New Jersey beach, and Myrtle Beach, SC.

With the recent sharp turn in housing activity, housing-related industries have begun shedding workers. Since March, the losses have averaged 10,000 per month, equal to 60,000 in total. This has already left a measurable imprint on overall employment trends. Average monthly job gains of 165,000 last year and early this year have recently slowed to monthly gains of 125,000. This slowing in trend employment growth has

thus been entirely due to housing.

Employment in industries outside of housing has so far been unaffected by housing's layoffs, and that is expected to largely continue (see Chart 7). Flush businesses with pristine balance sheets should be able and willing to look through housing's problems and any broader economic fallout and remain sturdy in their investment and hiring.

The risk is that they will not, particularly given that those working in housing are generally more highly compensated than those in other industries. Average hourly earnings in housing-related industries range as much as 50% above the economy-wide average, and those working in the heretofore booming industry have enjoyed record sales commissions and bonuses. The loss of this income could weigh heavily on consumer spending and thus broader activity, spooking otherwise financially healthy businesses to turn much more cautious.

Of course, this in turn could reverberate back onto housing demand. This negative self-reinforcing dynamic will be particularly potent in areas where housing activity was previously most active and its role in the economy larger.

MEW effect. A similar vicious cycle could be ignited by a more potent than anticipated negative housing wealth effect.

The wealth effect postulates that changes in household wealth measurably impact household spending. If household wealth is rising (falling), then households will spend more (less) out of their current income, and thus save less (more). The idea behind the wealth effect, simply put, is that if households become wealthier, it is not necessary for

them to save as much today as they are better prepared for their future financial needs. There is no longer the same need to save for such things as their children's college education or their own retirement.

There is a general consensus that the housing wealth effect is measurably greater than the stock wealth effect. Driving housing's more powerful wealth effect is the much broader and deeper ownership of homes than stocks. House prices have also proven to be less volatile than stock prices, so any house-price gain is thought to be more durable and thus safer to respond to.

There is also substantial evidence that the housing wealth effect has become even more potent in recent years. This has occurred through the heightened ability and willingness of homeowners to tap the equity in their homes through increased mortgage borrowing, or what has been labeled mortgage equity withdrawal or equity extraction. MEW occurs through home equity borrowing, cash-out refinancing and capital gain realizations. Much more of the cash raised via borrowing and refinancing is likely used to finance additional spending and is thus dubbed active MEW.⁷

Active MEW has soared during this decade, from some \$150 billion in 2000, according to work done by researchers at the Federal Reserve, to well over \$500 billion during the first half of this year (see Chart 8). Even after mortgage origination fees and closing costs, active MEW so far this year has been a whopping almost 5% of disposable income.

⁷ Capital gain realizations include cashing-out empty nesters who likely save the bulk of the capital gains from a home sale.

Chart 8: Housing Wealth Effect Is Set to Turn Negative

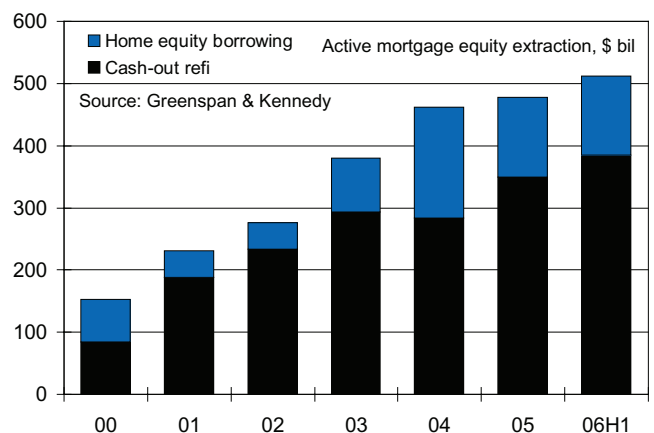
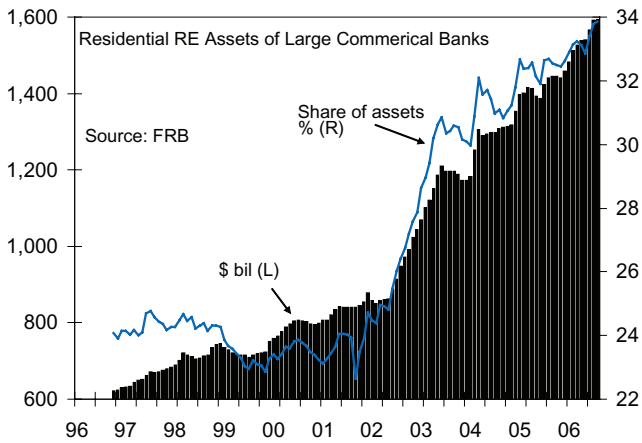


Chart 9: Banks Are Highly Dependent on Housing...



Since MEW is a new source of cash to many homeowners, it has powered much greater consumer spending than otherwise would have been the case. Historically, many lower and middle-income homeowners were liquidity-constrained and thus could not lift their spending even if they wanted to when house prices and their net worth increased. The unprecedented democratization of mortgage credit has allowed the housing wealth effect to finally be fully realized.

Due to the MEW-empowered wealth effect, consumer spending could be undermined as house prices and homeowners' equity weaken. The implications for the housing market and broader economy would be clear.

Financial fissure. Also threatening any optimism over the near-term housing outlook are eroding mortgage credit quality and the potential fallout on the banking system and global financial markets.

Banks and thrifts have become intimately linked to the housing market. The nation's large commercial banks now hold some \$1.6 trillion in housing-related assets, double their holdings just five years ago (see Chart 9).⁸ First mortgages on their balance sheets have increased some 50% during this period, mortgage backed securities have doubled, and home equity loans have more than tripled. In these five years, the share of their total assets tied to housing has ballooned from less than one-fourth to over one-third.

⁸ This is based on data collected by the Federal Reserve Board for the nation's nearly fifty largest commercial banks.

The nation's housing activity is also increasingly being financed by global investors via their booming demand for mortgage backed bonds. Foreign holdings of U.S. mortgage-backed debt have surged to over \$3.5 trillion, equal to 30% of the U.S. financial assets held by foreigners.⁹ Just a decade ago, foreign holdings of these securities amounted to a bit more than \$500 billion equal to 15% of their U.S. financial holdings (see Chart 10).

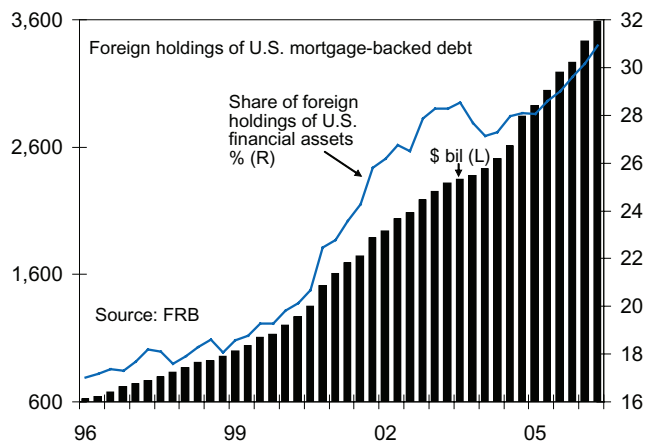
Global investors, flush with U.S. dollars earned in trade, have been attracted to U.S. mortgage-backed bonds given their extra yield over low-yielding Treasuries and their heretofore solid credit performance. Investment banks have also adeptly engineered these securities to make them seemingly better fit the risk tolerance and other idiosyncratic investment criteria of global investors, and the burgeoning number of hedge funds has provided a ready vehicle through which to make these investments.

It is unclear, however, how these new securities will perform as mortgage credit quality erodes, and it is also unclear whether global investors fully appreciate this. It is not difficult to imagine that global investors' heretofore insatiable appetite for U.S. mortgage-backed debt would quickly sour as their performance weakened.

There are reasons to be concerned that already weakening mortgage credit will soon erode measurably more given

⁹ This is based on data from the Federal Reserve's Flow of Funds and includes mortgage backed securities and GSE-issued debt owned by foreign investors.

Chart 10: ...As Is the Global Financial System



the heretofore surge in adjustable rate mortgage borrowing by lower-income new homeowners who have put little down on their homes. The most at-risk borrowers are those who took on ARMs during the past three years with little down who are either subprime or borrowed at a low initial teaser rate.¹⁰ This amounts to an estimated \$750 billion in mortgages outstanding, equal to almost 8% of all mortgage debt outstanding.

It is conceivable that an oft-cited benefit of the mortgage backed securities market, namely its ability to diffuse mortgage credit risk more widely, is also a drawback. Given that the risk is so diffuse, it is unclear to investors who is bearing the risk and to what degree. If even a single investor visibly stumbles when credit quality erodes, liquidity in the market could quickly evaporate. Other investors not knowing who is next to suffer may decide not to engage in any further transactions until the proverbial dust clears.

Under some scenarios, the problems in the mortgage-backed market would spill over into the rest of the U.S. fixed income and stock markets. Skittish global investors would propel bond yields higher and stock prices lower. The turmoil in U.S. financial markets would immediately reverberate around the world, engendering a global financial event.¹¹ The economic fallout

¹⁰ This is based on data from diversified mortgage company First American.

¹¹ There is historical precedent for this. The asset backed securities market froze in the wake of the Asian crisis and the collapse of Long-Term Capital Management in 1998. Liquidity was restored quickly, but only due to aggressive monetary easing and aggressive buying by Fannie Mae and Freddie Mac.

of this darker scenario could be very debilitating if the free flow of credit, so vital to a well-functioning housing market, is short-circuited.

Conclusions. How the unfolding housing downturn evolves has become the principal determinant of the near-term economic outlook. So far, the downturn is best characterized as a correction and not a crash, and while it is weighing heavily on broader economic growth, it has not undermined it. Moreover, odds are that this will remain the case, and the correction and its economic drag will fade by this time next year.

Behind this optimism is the view that the imbalances driving the housing correction are now righting themselves. The plunge in housing affordability appears over, housing speculators are fast-exiting the market,

and homebuilders are reining in their construction. It will take time for first-time homebuyers to return to the market, for housing to be properly valued, and for the overhang of unsold new homes to be worked off, but with the intensifying correction of recent months this seems more likely to take months, perhaps quarters, but not years.

The leading indicators of housing activity reinforce this outlook. The bleak assessment of homebuilders suggests that the correction is not nearly over, but the recently more stable mortgage applications suggest that a bottom is coming into sight.

This sanguine outlook is critically dependent on stable interest rates and that housing's problems do not significantly infect broader economic activity. So far, so good. Monetary policy remains on hold, and bond investors

remain convinced that underlying inflation will remain tethered. The job market outside of housing should remain sturdy given flush businesses, and those jobs will ensure that consumers will remain solid spenders even in the face of a significant negative housing wealth effect. The inevitable erosion in mortgage credit quality should also not upend the nation's well-capitalized banking system or roil resilient global capital markets.

This optimism must be tempered, however, by the realization that it is extraordinarily difficult to gauge just how sharply an asset market so dependent on sentiment, like the housing market, will adjust as that sentiment shifts. What is expected to be a measurable, but manageable, disruption to the economy could quickly devolve into a major problem.