Housing's Virtuous Cycle

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This has been one of the more difficult periods in the nation's economic history. During the past three years, the economy has lost 2% of its jobs, personal bankruptcy filings and mortgage foreclosure rates have surged to all-time highs, a record federal budget surplus has devolved into a record deficit, and the nation's trade and current deficits have ballooned to unprecedented size.

The period's travails are due in part to the boom times that preceded it. Investors and businesses were carried away by a wild-eyed euphoria, throwing massive amounts of capital at good and bad ideas. The bad ideas have ended up in bankruptcy court, while the good ideas are still working on how to effectively use all the resources that were showered upon them.

The economy has also suffered through a string of serious, arguably unprecedented, shocks. Events such as 9/11, the Afghanistan war, last summer's corporate accounting scandals, and the Iraq war have been particularly debilitating as households and businesses have no framework for understanding how to gauge the risks they represent.

Also weighing on the economy has been a restructuring global economy. Europe is adjusting to a more integrated economy with one currency, Russia and Central Asia are struggling with their newly minted market economies, Japan is slowly mending its banking system, and China and much of the rest of East Asia are moving massive numbers of workers from government to private sector jobs.

It is disconcerting to contemplate just how difficult the recent period would have been without the support provided by an unprecedented degree of monetary and fiscal stimulus. During the past three years, the federal funds rate has been lowered to a 40-year low, there have been three rounds of very large federal tax cuts, and federal spending has accelerated to a rate rarely experienced. Although policymakers could be faulted for how they used the resources at their disposal to jump-start the flagging economy, they cannot be faulted for not using all the resources at their disposal.[1]

The one bright light through it all has been the nation's housing and mortgage markets. Indeed, there have been no stronger markets anywhere in the global economy. Without the booming activity in these markets, the economy would still be mired near recession.

That the housing and mortgage markets have cushioned the severity of the economy's difficulties is without precedent. In every other downturn in the nation's economic history, these markets have served to substantially exacerbate the economy's problems. That these markets are currently performing counter-cyclical is due in part to a number of factors that are more or less unique to the current period. It is also due, however, to a long-running maturation of the housing finance system, in which the nation's housing and mortgage markets have been integrated with global capital markets via the rapidly growing and now very large mortgage backed securities market.

While the housing and mortgage markets are not likely to play the same counter-cyclical role in future business cycles, they will no longer play the oversized pro-cyclical role they have in recessions past. This article considers why.

Recent performance. Recent activity in the housing and mortgage markets is without precedent. Nowhere is the housing market's current strength more evident than in surging home sales, with total new and existing single-family sales so far this year running at well over an astonishing record 7 million unit annualized pace. This is nearly double the sales pace experienced during the early 1990s downturn.

Single-family homebuilding is also approaching the record pace set in the late 1970s when the large baby-boomer cohort was first entering into their home-buying ages. Since the beginning of the year, starts have been running at well over a 1.4 million unit annualized pace, compared to just half that a decade ago.

As a consequence of all the home buying and homebuilding, other measures of single-family housing activity are also breaking records. Homeownership rates have surged, with over 68% of households now owning their own home, compared to 64% as recently as the mid-1990s (see Chart 1). Homeownership has been rising for all major age and ethnic groups.

Strong housing demand is also fueling robust house price appreciation. Real house prices have risen more during the past three years than in any other three-year period on record.[2] The strongest gains have been in the northeast corridor, south Florida, and California where prices

[1] The principal beneficiaries of the tax cuts have been higher income and wealthy households, for example, whom are less likely to quickly spend any tax saving.

[2] This is measured by the year-over-year growth in the OFHEO house price index deflated by the core consumer expenditure price deflator.

Chart 1: Homeownership Soars

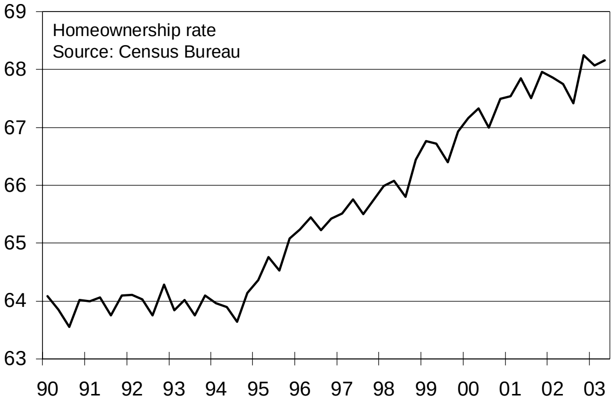
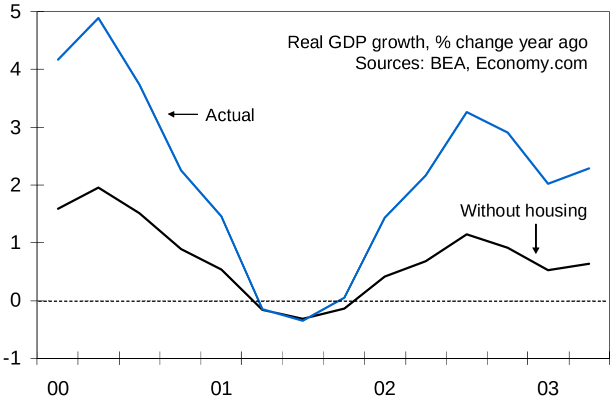


Chart 3: Housing's Oversized Contribution to Growth



have been increasing at a double-digit per annum pace.

The mortgage market has also been humming as a consequence of both booming home sales and house price growth and the heretofore super-heated refinancing market. Refi activity so far this year is on a $3 trillion pace (see Chart 2). If this pace were to continue through the remainder of the year, then close to one-half of all mortgage debt outstanding would be refinanced.

Economic contribution. The booming housing and mortgage markets have been instrumental in supporting the economy during its recent difficulties. Of the real GDP growth that has occurred since the start of the decade, fully two-thirds is due to expanding activity in these markets (see Chart 3).[3]

These markets have played just the opposite role in previous downturns. This can be simply seen by examining residential investment spending, which measures the value of new homebuilding, home improvement and remodeling. During the average post World War II downturn, such spending declined nearly one-third peak-to-trough (see Chart 4). Such spending rose more or less steadily throughout the recent downturn.

The principal conduits through which housing affects the broader economy include residential investment, purchases of home furnishings, and the wealth effect resulting from changing house prices and homeowners' equity. Changing house prices also impact local government property tax revenues and thus their tax and spending policies, and the balance sheet of financial intermediaries and thus their lending decisions.

While stronger homebuilding and spending on home improvement and furnishings have been important to the economy, housing's contribution to overall growth has been magnified through its influence on consumer spending decisions via its impact on household balance sheets. According to the Federal Reserve Board's Flow of Funds, households own close to $14 trillion worth of housing and have $8 trillion in homeowners' equity. The median amount of equity owned by homeowners is an estimated close to $50,000. Given the generally weak stock market, housing has once again become the largest asset in the household balance sheet (see Chart 5).

Changes in house prices and homeowners' equity have a significant impact on household net worth and thus on consumer spending via the wealth effect. The housing wealth effect works through its influence on consumer confidence and the ability and willingness of homeowners to raise cash through borrowing. Homeowners keep close tabs on home sales in their neighborhood to assess the value of their own homes. When values are rising,

[3] This result is based on simulation results using Economy.com's macroeconomic model system. Real GDP growth since Y2K has been 1.7% per annum. If the housing and mortgage markets had simply been neutral with respect to the economy during this period, then per annum real GDP growth would have only been 0.6%.

Chart 2: Surging Refinancing Activity

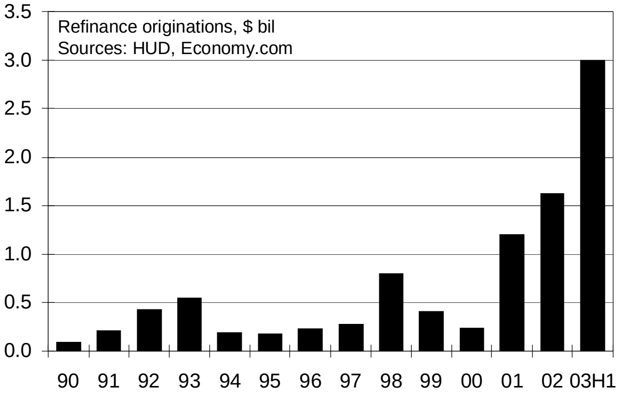


Chart 4: Historically Pro-Cyclical Housing

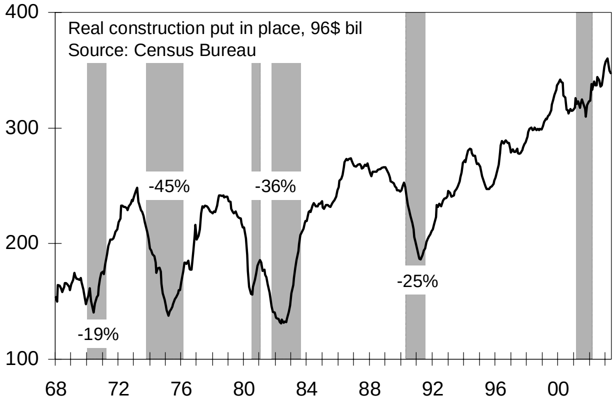


Chart 5: Housing Is Households' Key Asset

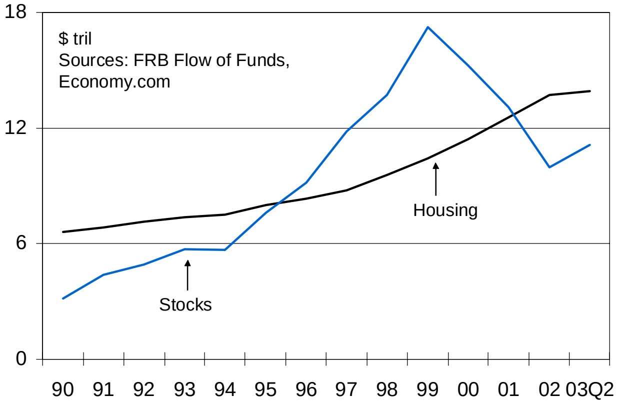
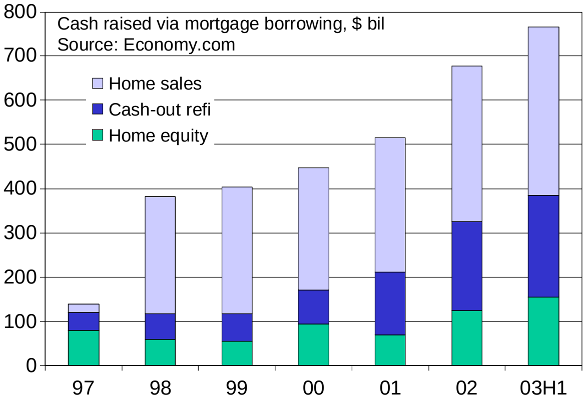


Chart 6: The Home Has Become a Cash Machine



homeowners undoubtedly feel wealthier, have more confidence and are thus more willing to spend.

The blow to consumers from weak stock prices has been at least partially offset by strong increases in house values and homeowners' equity. Since the turn of the decade the value of households' stockholdings have fallen by nearly $6 trillion, but the value of their housing has risen by an estimated $3.5 trillion.

Further cushioning the impact of the decline in overall household net worth is that housing is a much more important asset to more households than are stocks. While approximately one-half of families have some stockholdings, only one-fourth of families have holdings worth more than $25,000. More than two-thirds own their own home, and approximately one-half of families have homeowners' equity that is greater than $25,000.

Homeowners are also more willing and able to borrow to more freely finance their spending when house values and homeowners' equity are rising strongly. Households have raised an eye-popping $750 billion in cash so far this year through increased mortgage borrowing (see Chart 6). This compares to just under $700 billion in 2002 and $500 billion in 2001.

Households are raising cash via mortgage borrowing in three ways. The first is through booming home equity borrowing, including both lines of credit and second mortgages.[4] Outstanding home equity lines of credit at commercial banks, for example, have ballooned from $100 billion at the start of the decade to over $250 billion currently. The second is through home sales. Due to rapidly rising house prices, homeowners are able to sell their existing home, pay off the mortgage, make a downpayment on the purchase of another home, and still have cash left over. The third is through surging cash-out refinancings, in which homeowners significantly increase the size of their mortgage when refinancing. According to Freddie Mac, cash-outs have accounted for approximately one-half of refinancings in the recent boom.

Based on surveys conducted by the Federal Reserve and Fannie Mae, more than one-half of the cash being raised is being used to finance more spending. This includes everything from home improvement, to vehicle purchases, vacations, education, medical expenses, and given that many households are hard-pressed by the soft economy, even general living expenses. Much of this is additional spending that would likely not have occurred otherwise given that most homeowners taking cash out of their homes probably view the cash as a windfall and not as a substitute for other sources of cash or income.

Another close to one-third of the cash is being used to repay other higher cost credit card, other installment, and even second mortgage debt. When combined with the lower debt payments being enjoyed by those homeowners refinancing and not significantly increasing their mortgage balance, this is freeing up a significant amount of cash that is also supporting spending.

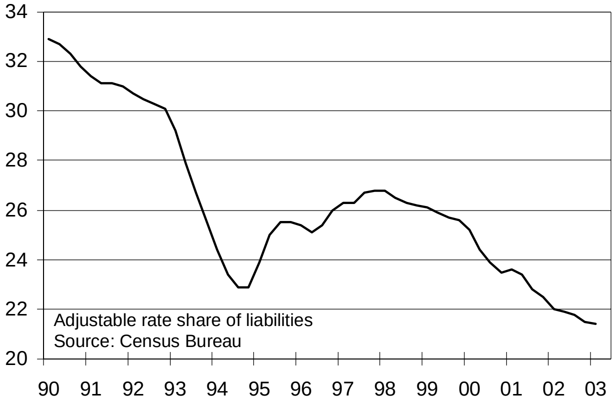
The remaining cash is being used to finance other investments, much of which is likely other real estate assets. This is thus further supporting housing demand, house price gains, and even more spending through the resulting lift to household net worth.

The current refinancing boom will also support the economy's longer-term performance as it allows mortgage borrowers to lock in very low long-term interest rates. The vast majority of those refinancing are taking down fixed rate loans. An estimated only one-fifth of all household liabilities, composed largely of mortgage and consumer installment debt, have interest rates that adjust within one year of a change in market interest rates. This compares to one-fourth of liabilities in the mid-1990s and one-third a decade ago (see Chart 7). Households are thus insulating themselves from the potential negative financial impact of rising interest rates, which will have key positive macroeconomic implications when rates ultimately do rise.

Changing housing market conditions also influence government revenue and outlays. A large part of the costs of the federal government's cleanup of failed thrifts and banks earlier in the 1990s¾ultimately estimated by the General Accounting Office to cost $500 billion¾can be traced to deteriorating real estate markets. Beleaguered state and local governments would be even harder-pressed if not for rising property values and thus strongly rising property tax revenues. Nearly one-fourth of state and local government receipts come from levies on business and household property, and in some major municipali-

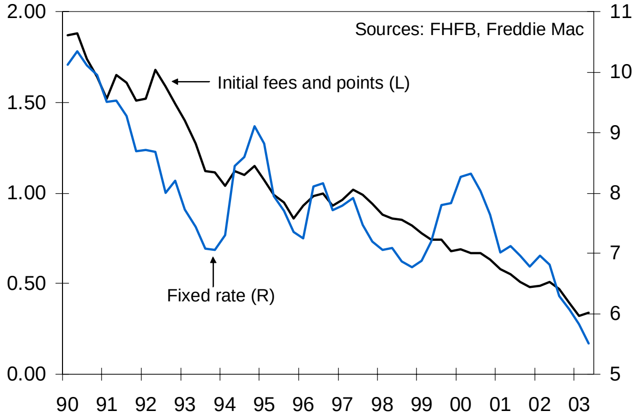
[4] The increase in home equity borrowing has been fueled in part by the growing popularity of 80-10-10 mortgages as a means to avoid mortgage insurance.

Chart 7: Locking in Long-Term Interest Rates



Adjustable rate share of liabilities
Source: Census Bureau

Chart 8: Plunging Mortgage Rates and Transaction Costs



Sources: FHFB, Freddie Mac

ties, property tax receipts account for over one-half of tax revenues.

Housing market conditions also influence the health of financial intermediaries. FDIC-insured institutions hold nearly one-third of their assets in single-family mortgages and mortgage-backed securities. Deteriorating credit quality in the residential loan portfolios of banks and thrifts in the early 1990s was a significant contributing factor to the credit crunch of that period. Improved residential loan portfolios in more recent years have contributed to greater profitability at intermediaries and thus easier credit standards and increased lending.

Temporary supports. Supporting the unprecedented performance of the housing and mortgage markets are a number of factors unique to this period. Most significant is the sharp decline in mortgage rates (see Chart 8). Fixed rates have been consistently near 40-year lows of 6%, compared to over 8% prior to the 2001 recession and double digits prior to the early 1990s downturn.

Mortgage rates are as low as they are primarily due to extraordinarily weak inflation. Core consumer price inflation is currently well below 2% compared to over 5% a decade ago. There is currently more concern among policymakers over further disinflation or even outright deflation, than with a significant acceleration in inflation.

Rapidly falling mortgage transaction costs also have been instrumental in supporting activity. Average fees and points on mortgage loans originated are close to 30 basis points. This compares to 100 basis points in the mid-1990s and 200 basis points a decade ago. The mortgage origination industry has been particularly effective in using information technology to lower its cost structure, with much of the benefits accruing to borrowers.

Tax law changes have also been favorable to housing. Capital gains taxes were eliminated in the late 1990s on homeowners' equity of less than $500,000 earned by households when selling their homes. Prior to this change, home-sellers were allowed only a one-time exclusion on capital gain taxes after the age of 65.[5]

Increasingly aggressive mortgage lending has also fueled activity. So-called subprime, affordable and high loan-to-value mortgage lending has surged during the past decade. Subprime loans, or loans to mortgage borrowers with blemished or no credit histories, have ballooned from essentially nothing a decade ago to some $800 billion currently, equal to one-seventh of all mortgage debt outstanding. Many households are being approved for mortgage loans that they would have been unable to obtain any credit at all just a few years ago.

Housing and mortgage markets have also benefited from the slide in stock prices. Households who have sold stocks in recent years, and have tired of low and falling returns on money market accounts, have been enticed to invest in housing. Given recent strong house price gains, the returns on housing investment appear particularly attractive, especially considering that a home is a highly leveraged investment for most homeowners.[6]

Heightened fears of terrorism and travel have also convinced households to travel less and stay closer to home, at least temporarily. This nesting is inducing households to purchase bigger homes and to spend more on home improvement and home entertainment.

Capital market ties. The strong performance of the housing and mortgage markets is also the result of their increasingly closer ties to global capital markets. This is occurring via the mortgage backed securities market, where bonds backed by the interest and principal payments made by mortgage borrowers are issued and traded. It is also occurring via the stock market, as an increasing share of the nation's homes is being built by large publicly traded national homebuilders.

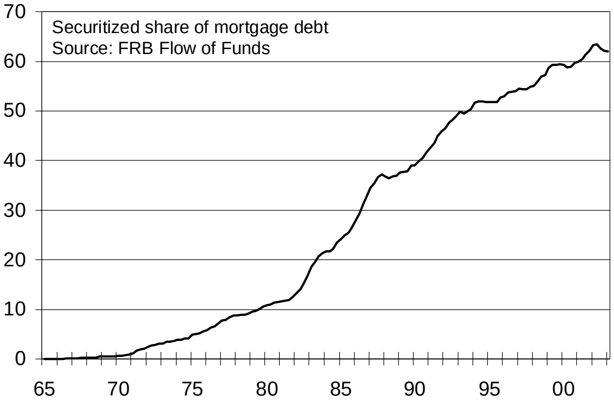
Historically, the primary source of funding for residential mortgages was depository institutions, including commercial banks, thrift institutions and credit unions. As recently as the mid-1980s, depositories held nearly two-thirds of residential mortgages.[7] Today, almost two-thirds of mortgages have been securitized. Owners of these mortgage backed securities include a wide array of investors from mutual funds to global financial institutions (see Chart 9).

[5] The reduction in marginal tax rates under the recent Bush tax cuts does lower the after-tax benefit of the mortgage interest deduction, however.

[6] The return to a homeowner enjoying annual house price appreciation of 5% with a mortgage equal to one-half the home's value, for example, is 10%.

[7] This is based on data from the Federal Reserve Board's Flow of Funds.

Chart 9: The Securitization of Mortgage Credit



This shift in the sources of mortgage funding has mitigated the ups and downs of the housing and mortgage markets. Depositories often found themselves constrained by inadequate capital and deposits during economic downturns, forcing them to restrict the availability of mortgage credit to borrowers. Housing activity thus weakened significantly, exacerbating the recession.[8] Given the wider array of global mortgage investors today, the availability of mortgage credit is no longer a question, only its price. Indeed, mortgage credit has become even more plentiful during the recent downturn, as mortgage investors believe them to be less risky than other assets.

The MBS market facilitates the provision of mortgage credit as it is particularly efficient at allocating the risks involved in extending such credit. Investors can more precisely take on the amount of prepayment and credit risk they are willing to take. Given that the MBS market is some $4 trillion deep, investors also face substantially less liquidity risk than when investing in other assets. The large market also reduces the costs of purchasing insurance or hedging the risks involved in an MBS investment. All of this is recognized by bank regulators, who require depositories to hold more capital against a mortgage than an MBS.

The more efficient risk sharing and diversified investor base provided by the MBS market have also fostered the development of a plethora of mortgage products. Examples include adjustable rate mortgage loans with a multitude of adjustment periods and interest rates, subprime mortgage loans, affordable loans and high LTV loans. The explosion of these mortgage products in recent years has, in turn, provided many households access to mortgage credit for the first time.

Fostering the links between the housing and mortgage markets and the global capital makers is the growing share of home construction done by large publicly traded homebuilding companies. One-fourth of single-family homes constructed this year will be by such companies, up from less than one-tenth of homes a decade ago. The nation's five largest public homebuilders, including D.R. Horton, Pulte, Lennar, Centex and KB Homes, account for one-sixth of all single-family home construction. In metro areas as varied as Denver, Austin, San Antonio, Sacramento, Las Vegas and Phoenix, public builders account for over one-half of such construction.

The growing shift in home construction from small private to large public builders should in theory also dampen the vagaries of the housing and mortgage market cycle. Public builders are highly dependent on the equity market for their funding, and equity investors are highly sensitive to changing market fundamentals.[9] Equity investors will send homebuilders' stocks lower at the first sign that fundamentals are weakening. The resulting higher cost of capital will induce builders to rein in their construction, mitigating housing booms and subsequent busts. Larger builders with more resources also presumably have more and better information regarding housing fundamentals and, thus, are less likely to overbuild.

Comeuppance, no collapse. After a decade of steadily improving conditions, the housing and mortgage markets are poised to soon weaken. The long-running decline in mortgage rates appears to be largely over, transaction costs can fall only so much further, lenders are beginning to struggle with the greater credit problems prompted by their aggressive lending, the stock market has firmed and will eventually rebound more fully, and barring further terrorism, fears of travel will fade.

The catalyst for any weakening in housing and mortgage markets will be higher mortgage rates. Even a small increase in rates is expected to have a substantial impact on these markets. This is already evident in the dramatic impact the recent increase in fixed rates has had on refinancing activity. According to the Mortgage Bankers Association, refi applications have been more than halved in just the past few weeks. At the current prevailing fixed rate of 6.25%, an estimated 40% of mortgage borrowers can profitably refi.[10] When fixed rates were closer to 5.25% earlier in the summer, nearly all borrowers could refi profitably. At a 7% fixed rate, however, very few borrowers will be able to do so.

The higher fixed rates have not had a discernible impact on housing demand, at least not yet, but fixed rates closer to 7% will. Even a small further increase in rates will have a large impact on demand due to the substantial forward homebuying that has occurred in recent years. Given how propitious a time it has been to purchase a home, many renter households have become homeowners, and many homeowners have traded-up inordinately quickly.

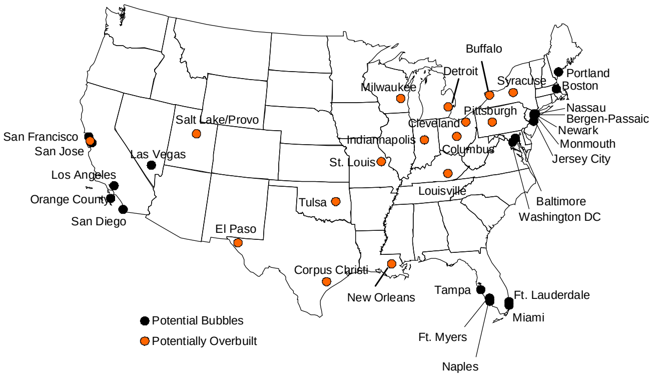
The magnitude of this forward buying can be estimated using econometric relationships, in which new and existing home sales are modeled as a function of the long-term determinants of housing demand. These include the long-run growth in household incomes

[8] This was most pronounced prior to the deregulation of deposit rates in the early 1980s. Depositories experienced a substantial loss of deposits when market interest rates rose above the rates they could pay their depositors. This disintermediation forced the depositors to significantly curtail their lending.

[9] Public homebuilders also rely on other sources for funding, including depository institutions. These other creditors also take their cues when setting underwriting standards and loan terms from the equity market, however.

[10] This assumes that a mortgage borrower can profitably refinance if the interest savings on the refi are sufficient to pay for the transaction costs involved in the refi within one year.

Chart 10: At Risk Housing Markets



and net worth, the age and ethnic composition of the population, and the return on housing relative to stocks, bonds and cash. Based on this model, new and existing sales should currently total close to just over 6 million units.[11] Thus, there have been approximately 1 million more home sales than anticipated since Y2K. This spent-up demand will quickly become a significant weight on sales with even a modest rise in rates.

Housing demand will weaken most in the parts of the country where to date it has been strongest, namely in the Northeast corridor, south Florida, and in California. There is compelling evidence that housing demand in these areas has been juiced-up even further due to outright speculation (see Chart 10). Speculation infects already strong housing markets when homebuyers begin to buy in part simply in the belief that strong recent house price gains will continue well into the future, or at least long enough to allow for a tidy profit.[12] Housing activity and house prices suffer disproportionately when the fundamentals supporting the market, such as low mortgage rates, shift and speculators are caught short and forced to sell into a weakening market.

Reinforcing any weakening in housing activity will be highly vigilant mortgage lenders. Currently aggressive lenders are seemingly poised to substantially tighten their underwriting standards at the first indication of a softening housing market. Lenders are well aware of how softer house prices rapidly translate into eroding mortgage credit quality from their current experience in much of the Midwest, South, and Mountain West, where housing markets have not been as buoyant. According to the Mortgage Bankers Association, mortgage foreclosure rates are already at record highs and rising quickly in places such as Ohio, South Carolina and Utah. The virtuous cycle of better housing conditions begetting more aggressive lending, and thus even better housing conditions, is swiftly running its course.

Any rise in mortgage rates will likely be accompanied by rising stock prices, putting added pressure on housing demand as households re-think their recent investment decisions. Prompting any sustained rise in rates will be a broadly improving economy, which implies stronger corporate profits and higher stock prices. Households that have in recent years shifted their investment portfolios away from stocks in favor of housing investments will resume their stock buying. Indeed this has already begun to happen, as flows to stock mutual funds have turned positive again for the first time since the equity market faltered soon after Y2K.

While the housing and mortgage markets will cool, they will not collapse. Given the prospects for low inflation well into this decade, any rise in mortgage rates will be modest. A 7% fixed rate seems entirely possible sometime in the next year, but rates much above 8% for any length of time anytime soon seem unlikely.

Even more important is the relative balance between physical housing supply and demand. Homebuilding, including single and multifamily home construction and mobile home placements, has risen strongly in recent years, but has only recently begun to outpace broad housing demand, including household formations, obsolescence, and second and vacation homes. An estimated 1.85 million housing units must be constructed each year to meet demand, comprised of 1.25 million new households, 400,000 obsolete units, and 200,000 in second and vacation homes.[13] Despite surging single-family home construction, mobile home placements have foundered, and thus total housing supply has pushed over 1.85 million units only since this time last year.

There is a growing list of metro areas with overbuilt markets, but they are largely concentrated in the Midwest and South and are generally smaller markets (see Chart 10). The most notable exception is the Bay Area of California, which is both overbuilt, as is clear from high and rapidly rising rental vacancy rates, and appears speculative.

Any downturn in the housing and mortgage markets will also be cushioned by its links to the capital markets. While mortgage credit is sure to become less ample, forcing some potential homebuyers from the market, it will continue to flow freely as most mortgage backed investors have likely insured or hedged at least part of their heightened credit and liquidity risks. Large publicly traded builders will also rein in their building, but any pullback will be modest, in part because they have more deftly managed their unsold inventories and have more financial resources at their disposal.[14]

Conclusions. The housing and mortgage markets have played an instrumental counter-cyclical role in the recent economic downturn. Without these booming markets, the broader economy would still be flirting with recession. These markets will also continue to play a counter-cyclical role in the months ahead. As the broader economy revives more fully, the resulting modestly higher mortgage rates will result in substantially weaker conditions, particularly in the Northeast corridor, South Florida and California.

[11] Details of the model are available upon request.

[12] These dynamics are thoroughly discussed in "House Price Bubbles," Regional Financial Review, August 2002.

[13] This is described in "Housing in the Long Run," Regional Financial Review, March 2002.

[14] Inventories of unsold new homes have recently risen to nearly 350,000 units according to Census, up from less than the mid-1990s low of less than 300,000. This is still well below the amount of unsold inventory that has prevailed prior to every other downturn in the past 30 years. Unsold inventories are also at a record low relative to the current sales rates.

While the housing and mortgage markets will experience a comeuppance, they will not collapse. Any rise in rates is sure to be modest due to prospects for continued low inflation. More importantly, the expanding links between housing and mortgage markets and global capital markets will ensure that credit will continue to flow to national homebuilders and mortgage borrowers.

In the next business cycle, the housing and mortgage markets will likely return to playing their pro-cyclical role, although even then that role will never be the same.