

HOUSING AFTER THE FALL:  
REASSESSING THE FUTURE OF THE AMERICAN DREAM

*The Homebuilding Industry\**

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# 1 The Homebuilding Industry: How Did We Get Here?

Traditionally, the U.S. homebuilding industry consisted of many small, localized firms that were dependent upon local and regional banks for financing. Prior to World War II, single-family homebuilding was the province of small firms that produced homes on contract for lot owners. At that time, demand for single-family homes was limited by the lack of affordable financing. However, changes to the U.S. residential financing system during the Great Depression as well as the pent-up demand for housing created during World War II, altered the landscape for the homebuilding industry.

After World War II, home builders expanded operations to meet the pent-up demand for housing. The most successful of the pre-war small builders rapidly increased their size and output. As these firms grew, they assumed the functions of traditional land developers and home builders. In the process, they become known as “Merchant Builders.”<sup>1</sup>

The merchant builders brought economies of scale to the homebuilding process enabling them to dominate production in the lower- and mid-priced market segment. For example, Eichler (1982) reports that between 1950 and 1960 large builders maintained a constant cost per square foot while wages rates doubled.<sup>2</sup> In the face of these economies of scale, smaller home builders retreated to the higher-priced custom market.

The late 1960s and 1970s saw the movement of the largest merchant builders to public company status. For these firms, tapping the public capital markets opened new sources of equity and debt financing. As a result of these movements, the homebuilding industry essentially broke into three segments: large public home builders, smaller but still large private home builders, and very small home builders. For the most part, the large-scale private and public home builders operate as merchant builders – buying land, developing lots (or subdivisions), and building homes.<sup>3</sup> To illustrate how the largest home builders altered their production model, Figure 1 shows the number of homes delivered each year (level) and the ratio of the homes delivered to the number of building lots owned or controlled (percentage) for the large, public home builders tracked by SNL RealEstate. Figure 1 reveals that between 2000 and 2005, the largest builders steadily increased their housing

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<sup>1</sup>Eichler (1982)

<sup>2</sup>Ibid., page 272.

<sup>3</sup>NVR Inc. is the exception to this trend as they have limited land acquisition.

production from approximately 163,000 units to almost 347,000 units. However, at the same time, these same builders began acquiring massive land positions such that the ratio of homes delivered to lots in inventory steadily declined. For example, in 2000 the 163,000 units delivered represented 29 percent of their buildable lots. By 2005, these builders had more than doubled production to 347,000 units yet this production level represented only 14.5 percent of their building lots. Thus, it is clear that the largest, public builders engaged in a systematic land banking program between 2000 and 2005 to feed their production machine. At the other end of the spectrum, the small home builders operate in the traditional way – acquiring developed lots and constructing houses.

Since the 1950s, the U.S. economy has encountered numerous periods of financial expansions and contractions. As a leading consumer good, housing is not immune to the effects of these economic cycles. Furthermore, the effect of cyclical contractions in the economy does not fall uniformly across all home builders. For example, Ambrose and Peek (2008) document that larger, public home builders are able to utilize their access to financing via the public capital market to take market share from the smaller, private home builders that rely on bank credit. As a result, during periods of financial dislocations, such as the current financial crisis, it is expected that the home builders will suffer with the largest builders contracting operations while the smallest builders, who are shut off from capital completely, will disappear.

What is interesting about the current financial crisis is that it was caused by a housing bubble that spread to the broader capital markets. As a result, it is not clear that the relationship between the change in builder market shares and bank health identified by Ambrose and Peek (2008) for previous recessions will carry over to the current financial crisis.

Thus, the purpose of this paper is to examine the homebuilding industry in light of the current financial crisis and to offer some insights into the future of the housing industry. Toward this goal, I focus on the role of financing for home builders. In section 2, I review the role of bank credit for small builders and in section 3 I discuss the importance of the capital markets to large builders. Section 4 follows with a discussion of the current financial crisis and section 5 discusses the impact of the financial crisis on large home builders. Finally, section 6 concludes with some comments on the future for home builders.

## 2 Financing for Small Home Builders: Local Bank Credit

The traditional small, localized home builder depends upon local or regional banks for financing. Bank financing provides the working capital necessary to purchase building lots and pay suppliers and subcontractors. As Ambrose and Peek (2008) point out, the reliance on bank credit has both advantages and disadvantages.

Banks specialize in the collection and processing of information; they help reduce the asymmetric information problem inherent between lenders (investors) and borrowers. This specialization in information processing leads to the development of lending relationships with small and mid-size firms. As a result, smaller firms tend to rely more on bank lending for financing than larger firms that have direct access to investors through the capital markets.

However, bank financing comes at a cost. One of the disadvantages of relationship lending for small home builders is that they may become “bank dependent.” That is, they can become locked-in to their current bank and find it difficult to replace existing credit due to the difficulty in establishing new banking relationships. Furthermore, the dependence of small firms on local banks creates credit risk when adverse shocks occur to the banking system.<sup>4</sup>

Unfortunately, the reliance on local banks for financing makes many builders susceptible to periodic credit contractions. More often than not, these periods of bank credit crunches coincide with general economic slowdowns that erode demand for new housing units, exacerbating the problems faced by the smaller builders.

A growing body of evidence now shows that a reduction in bank lending during a credit crisis can have serious effects on the real estate sector. For example, Peek and Rosengren (1996) show that troubled banks substantially reduce their real estate lending and Hancock and Wilcox (1997) note weak local bank health is correlated with a deterioration in local real estate activity. The link between bank health and real estate activity is not limited to U.S. banks. Peek and Rosengren (2000) found a similar pattern between local real estate lending and Japanese bank health in the early 1990s in the locations where the Japanese banks had been active lenders. The evidence from these studies suggests that bank lending to small builders will decline significantly during the

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<sup>4</sup>For example, Peek and Rosengren (1998) and Hancock and Wilcox (1998) examined the effects of bank consolidations and bank capital crunches on lending to small businesses. These studies show that reductions in lending due to uncertainty in the banking sector falls most heavily on smaller firms.

current recession.

### 3 Financing for Large Home Builders: Capital Markets

As evident in Figure 2, large (public and private) home builders dramatically increased their overall share of the homebuilding market during the 2004-2006 bubble period. Figure 2 shows the market shares of the 100 largest (public and private) home builders, where market share is defined as the total number of single-family completions per year divided by the yearly building permits. By 2005, the largest home builders accounted for over 50 percent of U.S. home production. It is a remarkable feat that a traditionally, highly localized industry with low barriers to entry came to be dominated by a relatively small number of firms. For example, the homebuilding industry currently comprises approximately 180,000 firms, yet the 100 largest firms account for 50 percent of production.<sup>5</sup>

Ambrose and Peek (2008) argue that one of the reasons spurring large, public home builder growth is their access to capital via the public capital markets. For example, Figure 3 shows the annual total capital (debt and equity) raised by public home builders between 2000 and 2008.<sup>6</sup> It is interesting to note that during the housing bubble years (2002 to 2005), the public home builders financed their production and growth in market share primarily through the issuance of debt. During that period, debt accounted for over 90 percent of home builder capital issuance. Then, in 2006 as the housing market began to implode and the credit markets began to freeze, home builders turned to equity offerings to finance their activities. However, even in 2008 during the worst market for credit since the Great Depression, the largest public home builders continued to issue new debt and equity. Thus, at a time when bank lending to small builders has all but disappeared, the large, public builders continue to have access to capital.

The reliance on public capital markets during the current credit crunch is consistent with public builder actions during previous downturns. For example, Ambrose and Peek (2008) report that following the 1990/1991 recession and bank capital crunch, “public home builders were able to raise equity capital totaling over 1% of their current market capitalization and public debt totaling over 2% of market capitalization. Since these totals exclude funds raised to purchase other home

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<sup>5</sup>See IBISWorld Industry Report (September 9, 2008), *single-family Home Building in the US: 23321* for statistics on the home building industry.

<sup>6</sup>Figure 3 reports the capital offering activity of the 23 large public home builders tracked in the SNL RealEstate.

builders (merger and acquisition activity), the funds represent working capital that could be used for land acquisition and development activities.”<sup>7</sup>

To demonstrate the effect of access to capital for public home builders on the industry, Figure 4 segments the market shares reported in Figure 2 into large, public builders and large, private builders. The two series reveal that from the late 1980s through the recent housing bubble, the public home builders gained market share at the expense of private home builders. As Ambrose and Peek (2008) pointed out, “the most striking feature of the private market share series is the sustained decline from 1988 to 1993 that coincides with the period of widespread bank failures experienced in the United States, often referred to as the bank capital crunch period, when many banks were forced to reduce their lending in order to raise their capital ratios.”<sup>8</sup> Over this same period, the public home builders dramatically increased their market share, presumably at the expense of the credit constrained private builders. In the next section, I turn to the 2006-2007 period and explore the impact of the current financial crisis.

## 4 The Current Financial Crisis

With the benefit of 20/20 hindsight, it is clear that the current financial crisis began with an exceptional bubble in the U.S. housing market. From 2000 to 2005, the average U.S. housing market experienced over 5 percent annual appreciation rates. Even more dramatically, many areas in California, Florida, Nevada, Arizona, and cities in the Northeastern parts of the U.S. experienced growth rates over 20 percent per year. For example, Figures 5 and 6 show the S&P/Case-Shiller national composite and 20 city composite home price indexes and yearly price change, respectively. These figures clearly reveal the dramatic price run-up from 2000 through 2005 and subsequent crash starting in 2006.

Following the peak in home prices, housing starts and sales declined significantly as buyers fled the market. The dramatic fall in housing starts and sales is clearly revealed in Figures 7 and 8. Focusing on the level of housing production, Figure 7 shows the dramatic increase in housing production during the 2000 to 2005 bubble period followed by the quick reaction to falling home prices in 2006 and 2007. It is interesting to compare the differences in housing production between

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<sup>7</sup>Ambrose and Peek (2008), page 666.

<sup>8</sup>Ambrose and Peek (2008), page 671.

the 1990/1991 recession and the current crisis. During the previous recession, housing starts and sales declined but at a relatively slow rate. However, during the current crisis, the decline in home production is on an order of magnitude larger. Figure 8 shows the annual percentage growth in housing units sold and clearly reveals the effects of bursting housing bubble as buyers left the market in 2006 and 2007.

The current financial crisis has had a significant impact on the banking sector. For example, Figure 9 shows the ratio of nonperforming loans to total loans for large banks (assets greater than \$15 billion) and small banks (assets between \$100 million and \$300 million). Unlike the previous recession in 2001, both large and small banks are seeing an increase in the percentage of nonperforming loans. Furthermore, as the financial crisis spread throughout the banking sector, lending at all levels virtually stopped by 2007. The Federal government is attempting to encourage new bank lending through the use of Troubled Assets Relief Program (TARP) funds, however, it may be too late for many small builders. For example, Corkery (2009) reports that many small builders have entered bankruptcy as a result of lost bank financing. The most recent example is the February 2, 2009 Chapter 11 filing of St. Lawrence Homes Inc. The Raleigh, NC builder cited “tightening of borrowing requirements placed upon its sources of operating credit” as one of the factors that led it to seek bankruptcy protection.<sup>9</sup> To the extent that bank lending continues to remain curtailed, additional bankruptcy filings among the smaller builders is expected.<sup>10</sup>

## 5 Large Builders and the Financial Crisis

The end of the housing bubble starting in 2006 led to a fundamental crisis in the financial market as rising defaults on dubious loans to sub-prime borrowers began to call into question the values of securitization deals.<sup>11</sup> While exploring the linkages between sub-prime mortgages and the financial crisis is beyond the scope of this paper, it is important to note that the decline in the U.S. housing market that began in 2006 has impacted all areas of the global financial system. Thus, unlike previous crises, virtually all areas of the capital markets have been impacted during the current

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<sup>9</sup>See St. Lawrence Homes Inc. press release “St. Lawrence Homes Files for Reorganization” (February 2, 2009) available at <http://www.broadstreethomes.com/news.aspx>.

<sup>10</sup>The Blog “the state of the homebuilding industry” (<http://stateofhomebuilding.blogspot.com/>) contains a running commentary on home builder bankruptcies.

<sup>11</sup>See Brunnermeier (2009) for a discussion of the current financial crisis and its relation to the subprime mortgage market.

financial crisis. As a result, almost all home builders have been affected. It is not surprising then that the largest home builders have dramatically cut production in the face of rising cancelation rates and price reductions. For example, Standard and Poor's reports that D.R. Horton had cancelation rates above 30 percent in 2007 and 2008 while KB Home reported cancelation rates above 50 percent.<sup>12</sup> Even the high end of the housing market is not immune to the financial crisis. For example, Toll Brothers Inc., specializing in the higher price range of the market, reported cancelation rates of 26 percent and 25 percent in 2007 and 2008, respectively.<sup>13</sup>

Close inspection of Figure 2 suggests that the current financial crisis may be unlike previous credit crunches as the share of housing production provided by the large (public and private) builders declined in 2007. Large builder market share declined from 51.9 percent in 2006 to 50.2 percent in 2007. However, turning to Figure 4, we see that the decline in large builder market shares results from the rapid reduction in *public* home builder production. Between 2006 and 2007, the public home builder production declined 30 percent while the large private builder production declined 25 percent. Since production in the overall market declined approximately 26 percent during this year, the relative production share of large private builders increased. Thus, on a proportional basis, it appears that the large public builders reacted faster to the housing crisis by curtailing production at a faster rate than the large private builders.

The downturn in the housing market also impacted undeveloped land (the major input factor for home builders.) As discussed above, since 2000 the large public home builders began acquiring significant land holdings, effectively taking on the land developer role as well as the home builder role. For example, between 2000 and 2005, the 23 large public home builders tracked by SNL RealEstate increased their land holdings by 328 percent.<sup>14</sup> However, those large land holdings became a liability as the housing bubble burst. Since 2006, Leon (2008) reports that the 13 largest publicly traded home builders wrote off a cumulative \$23.5 billion in land investments. Thus, the crash of the housing bubble has clearly impacted the largest of the home builders and is reflected in the capital markets. To understand why the public home builders reacted more quickly, we need to examine the impact of the capital markets on these firms.

During the recent housing boom, the stocks of public home builders enjoyed a massive increase

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<sup>12</sup>See Leon (2008).

<sup>13</sup>Source: SNL RealEstate

<sup>14</sup>Source: SNL RealEstate



in value relative to the overall stock market. For example, Figure 10 shows the performance of the S&P Homebuilding Index and the S&P 500 Stock Index from 2000 to 2008. We see that the S&P Homebuilding Index increased over 600 percent between 2000 and 2005 corresponding to the massive increase in the housing market. In comparison, the overall stock market as reflected in the S&P 500 index actually declined in value during this period.

However, starting in 2005, prior to the peak of the housing market in 2006, stocks in the public home builders began to decline. In fact, Figure 10 shows that the S&P Homebuilding Index dropped 55.5 percent in 2007, and by 2008, the index had given up most of the gains from the boom period (2001-2006). The public home builders also faced significant declines in the debt markets during this period. As evident in Figure 3, public home builder access to debt financing significantly declined in 2006 and 2007. For example, from 2005 to 2006 debt issued by the largest home builders declined 47 percent. Then, as the magnitude of the financial crisis became apparent debt issuance by large home builders declined a further 94 percent. It is interesting to note that the sell off in home builder stocks and curtailment in debt placement preceded the peak in the housing market. Clearly the capital market was sending a negative signal to the public builders about the future prospects for the housing industry well before the peak in the housing market was widely recognized.

Although it is difficult to draw conclusions based on a one-year change, Figure 4 shows that the public home builders lost market share to private home builders in 2007. However, the small decline in market share in 2007 suggests that perhaps the largest home builders were better able to recognize the coming severity of the housing market crash and curtailed production faster than the smaller home builders. In effect, the feedback received from the public capital markets via declining stock prices forced the largest home builders to quickly alter course as the market deteriorated.

One of the criticisms often leveled at the large, public builders is that they dramatically overshot the market and created an excess supply of housing units during the housing bubble. For example, Figure 11 shows the demand and supply for housing as estimated by the Credit-Suisse housing model.<sup>15</sup> The figure clearly indicates that during the housing bubble period (2001 through 2005), housing supply production vastly exceeded growth in housing demand as modeled by traditional demographic factors. However, as seen in Table 1, the criticism that large, public builders are

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<sup>15</sup>See Oppenheim, Dahl, and Lane (2008).

to blame is only partly true. During the first part of the housing bubble years, the large, public builders did increase production at a substantial pace. For example, between 2000 and 2004, the public builders production increased 9.4 percent per year. In contrast, the total market demand (represented by the total U.S. sales) increased 8.2 percent per year and the private builder production increased only 7.9 percent per year. However, between 2004 and 2006, the public builder production increase slowed to 7.4 percent per year while the private builder production increased to 13.9 percent per year. Thus, while the public builders did substantially increase their production levels during the housing bubble, it does appear that they were sensitive to the slowing market and scaled back their production pace at the peak of the market.

## 6 Implications for the Future

The current financial crisis has created significant hurdles for the homebuilding industry and the short-term outlook is not very promising. For example, Figure 12 shows the rising vacancy rate for single-family homes in the U.S. Since the peak of the housing bubble in 2005, the vacancy rate has increased significantly and now approaches 14 percent. Furthermore, recent data indicates that approximately 4.2 million single-family homes were listed for sale at the end of November, representing about 11 months of inventory.<sup>16</sup> Much of the inventory of unsold homes represents properties acquired by banks through mortgage foreclosures. Clearly this level of unsold homes represents excess inventory that will need to clear the market before large-scale housing production becomes profitable again.

As expected in a weak housing market, home builders have reacted by curtailing construction. For example, housing starts in 2007 fell 40 percent to 617,000 and analysts predict that starts will continue to fall in 2009 to about 441,000 – a 75 percent decline from the 2005 peak of 1.7 million starts.<sup>17</sup> Obviously, curtailments in housing production of this magnitude will eventually impact housing supply. For example, Oppenheim, Dahl, and Lane (2008) suggest that a “normal” demand for housing in 2009 and 2010 will be approximately 1.6 million units per year.<sup>18</sup> Thus, if housing production does fall to approximately 441,000 in 2009, then the housing industry will underbuild

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<sup>16</sup>See Hagerty (2008).

<sup>17</sup>See Carlton, J. “Builders Predict More Housing Pain,” *Wall Street Journal*, (January 21, 2009) pg. A6.

<sup>18</sup>Oppenheim, Dahl, and Lane (2008), page 8.

the market by about 1.1 million units in 2009. Assuming market conditions stabilize at current levels and demand remains “normal”, then it will take approximately 2 years (until 2011) to reduce the current housing inventory overhang to an equilibrium level of 6 months supply. Thus, the short-term prospects for home builders do not look promising.

However, the crisis also provides opportunities for the large, public home builders to continue to dominate the smaller builders as the trends and forces outlined in Ambrose and Peek (2008) continue to operate. The large, public home builders have a number of advantages over smaller builders that will remain when the crisis is over.

First, large builders enjoy a significant production cost advantage. For example, Rybczynski (2007) reports that large production builders such as Ryan (NVR) have a 50 percent cost advantage over smaller builders.<sup>19</sup> NVR is able to achieve this cost advantage through the prefabrication of most housing components, thus allowing it to enjoy significant economies of scale. To gain a greater appreciation for the production scale of large builders, consider that at the peak of the housing boom in 2006, NVR sold over 15,000 homes. In comparison, the median “large” builder tracked by the *Professional Builder 400 Giants* produced only 470 homes. In other words, the 7th largest builder in 2006 produced over 31 times the number of homes built by the median “large” builder.<sup>20</sup>

This difference in production capacity generates tremendous scale economy advantages over smaller builders, allowing larger builders to continue to cut prices and take market shares. For example, Toll Brothers, Inc. recently announced that it would finance purchases of its homes with 30-year, fixed-rate mortgages with contract rates of 3.99 percent (representing an approximately \$46,000 price cut on a \$417,000 mortgage with market rates at 5 percent – or a 9 percent price discount on a home financed with an 80 percent loan-to-value mortgage).<sup>21</sup> In addition, Corkery (2009) reports that D.R. Horton is maintaining margins by reducing construction costs and by capitalizing on the financial troubles of smaller builders to obtain low-cost land and subdivision lots. Given that few small builders have the profit margins that would allow them to compete with such large price discounts, I expect large builders to continue to take market share from the smaller builders.

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<sup>19</sup>See Rybczynski (2007), page 202.

<sup>20</sup>According to Professional Builder, Lennar Corporation was the largest builder in 2007 with 49,568 closings. (<http://www.housingzone.com/giants.html?year=2007>)

<sup>21</sup>This program was announced on January 22, 2009.

Second, public firms are exposed to the discipline of the capital markets. At the peak of the housing bubble, the capital market anticipated the housing market decline and imposed lower stock market valuations and higher spreads in the debt market on the public builders; these actions forced the public builders to retrench their production activities at a faster pace than their private counterparts. Furthermore, to the extent that bank lending lags the general economic recovery, then whenever housing market conditions improve, public builder access to capital via the equity and debt capital markets will allow them to ramp up production faster than their bank dependent counterparts. Thus, well capitalized public builders with sufficient cash positions will emerge during the coming recovery with the ability to take market share from their weaker competitors. Of course, identifying the “well capitalized” builders that are expected to survive is not easy.

Third, land availability continues to be a major constraint on large builder growth prospects. As discussed above, many large builders chased higher returns by taking on the land developer role during the housing boom. We can anticipate that during the next recovery and expansion, large builders may return to the land development business in order to obtain the lots necessary to fuel their operations. In addition, general societal migration trends continue to suggest that large builders will return to the land developer role in the future. For example, U.S. population migration patterns continue to favor the Sun Belt and Western states where large land tracts are readily available. The availability of large land tracts is necessary for builders to realize their economies of scale production model. Since the relative climate and economic attractiveness of Sun Belt and Western states continues to dominate Northern states, housing demand in these areas should recover quickly during the next recovery. As a result, we should observe large builders concentrating their development activities in these regions.

Clearly the fortunes of the home builders are tied to housing demand. Thus, any future prospects for builders rest upon the ability to stabilize the housing market and return demand to normal. The current problem facing housing demand is one of affordability and deflation. With respect to affordability, Figure 13 shows the ratio of the median new home price to the median household income as well as the National Association of Home Builders Housing Opportunity Index. The price-to-income ratio reveals that new home prices increased from the long-run average of 4 times income to over 5 times income during the housing bubble, indicating that additional price reductions are necessary to return to the long-run trend. Furthermore, the housing opportunity

index also reveals that during the bubble years, affordability declined to the point where only 40 percent of the population could afford the median priced home. In the financial climate today, mortgage interest rates are at historic lows. Thus, the affordability problem will have to be addressed through significant future housing price declines. As a result, until price levels return to long-run fundamental levels, expectations are that housing demand will remain low.

Amidst this backdrop, a number of proposals have been suggested for stabilizing the housing market. Not to be left out, the National Association of Home Builders has weighed in on the crisis and proposes that the Federal Government use the remaining TARP funds to stem the increasing number of foreclosures through the targeted loan modification program being pursued by the FDIC.<sup>22</sup> NAHB also proposes stimulating demand through the use of home buyer tax credits and subsidized mortgage rates. In essence, the NAHB proposals seek to correct two perceived problems: (1) stimulating buyers to return to the market, and (2) reducing the inventory overhang resulting from foreclosures on existing mortgages.

With respect to the first problem, stimulating buyers to return to the market, it is not clear that potential buyers actually need stimulation. Current mortgage rates are at historic lows and mortgage credit is widely available, albeit only for borrowers with an established record of successful debt management (high credit quality) and sufficient downpayment resources. Yet, these are exactly the buyers that should be in the market, not borrowers without sufficient downpayment resources or proven track records of successfully managing their previous debts. Recall, one of the causes that led to the current crisis was over stimulation of the housing market through the use of ‘novel’ mortgage products for buyers of dubious credit quality. Furthermore, as noted above (see Figure 13), national housing prices are still above long-run fundamentals (as reflected in the price-to-income ratio.) As a result, efforts to slow the decline in housing prices will only prolong the housing crisis. Thus, it is not clear that prudent public policy should enable a return to a market where less than qualified buyers are encouraged to participate in the housing market.

With respect to the second problem, eliminating the inventory overhang resulting from future foreclosures through loan modifications does not go far enough. As recent evidence indicates, the FDIC modification program may not be all that successful. For example, data from the Office of the Comptroller of the Currency and the Office of Thrift Supervision for the first half of 2008

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<sup>22</sup>See “Builders Testify Before Congress On Use Of TARP Funds,” [http://www.nahb.org/news\\_details.aspx?newsID=8507](http://www.nahb.org/news_details.aspx?newsID=8507)

indicates that over half of homeowners who had their mortgage modified were already behind on their modified mortgages.<sup>23</sup> The reason these loan modifications have not been successful is that further declines in housing prices after the loan modification have resulted in additional negative equity. Academics have long recognized the option features embedded in mortgage contracts and noted that borrowers default when the value of their house is less than the present value of the mortgage debt and the potential for future price appreciation is low. Thus, without substantial principle write-downs, the current loan modification programs will continue to have limited success.

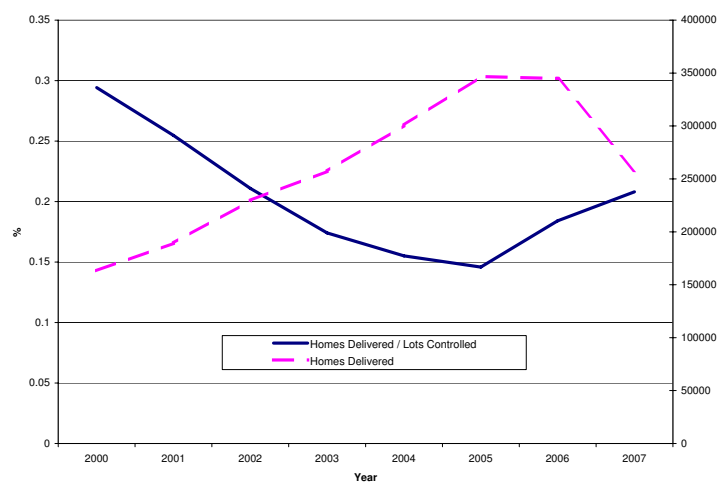
In response to the proposals for stimulating the housing industry, perhaps the prudent (however unpopular) reaction should be to “Just Say No.” In a market-based economy, capital will flow to the most efficient uses and government targeting of specific industries will only prolong and promote economic inefficiencies. As discussed above, large builders reacted to the housing crisis by slowing production and shoring up their balance sheets. As a result, these builders have positioned themselves to take market share from their weaker competitors during the next recovery. This is exactly the outcome desired in a market economy that rewards efficient competitors and penalizes the inefficient. With respect to the very small, custom builders, many many not survive the current crisis. However, the fundamental structure of the homebuilding industry has not changed. The industry continues to have low barriers to entry and when the economy improves, small builders will return to fill the emerging demand for custom homes. Thus, rather than target the housing industry for special treatment (through mortgage interest rate subsidies or homebuyer tax credits), we should seek broader economic reforms (such as broad based tax reductions) that allow consumers (through the market) to determine the industries that are best able to survive in the future.

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<sup>23</sup>See Simon (2008).

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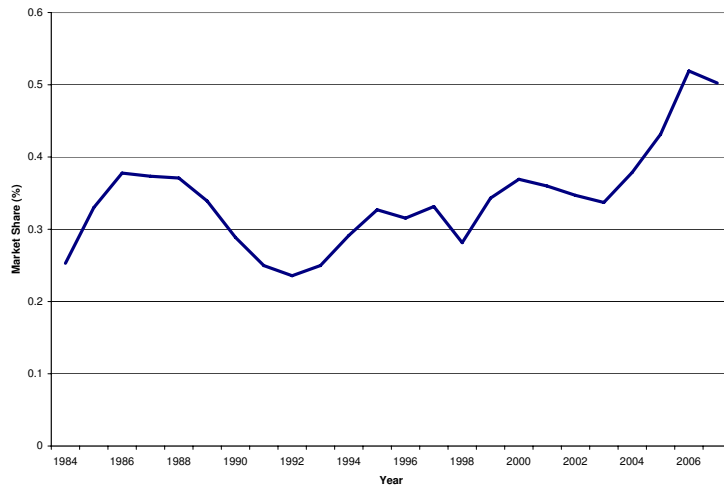
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Source: SNL RealEstate

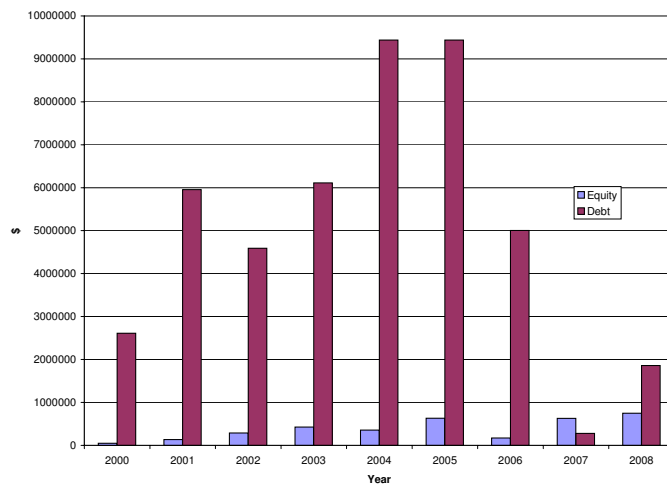
Figure 1: Large Public Home builder Production





Source: Hanley-Wood *Builder*

Figure 2: Large Home builder Market Share



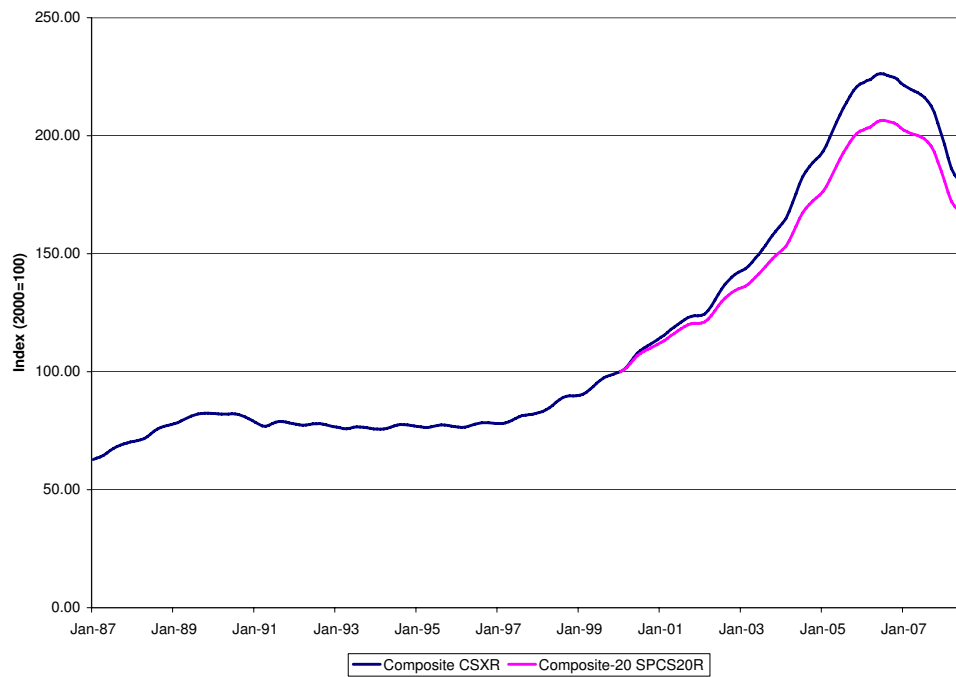
Source: SNL RealEstate

Figure 3: Public Home builders Capital Issues



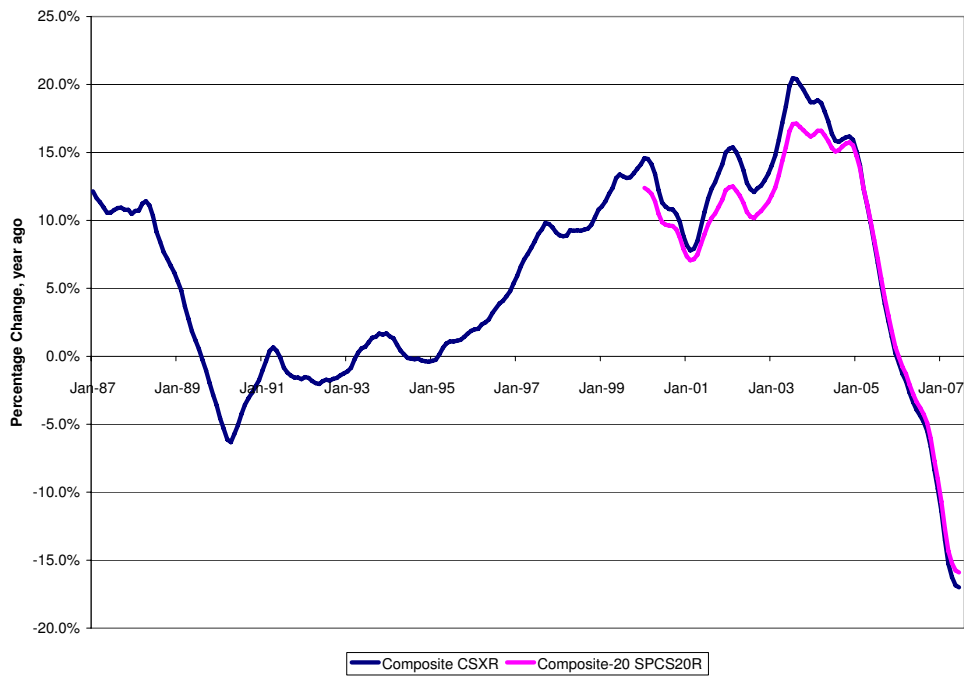
Source: Hanley-Wood *Builder*

Figure 4: Large Public and Private Home builder Market Shares



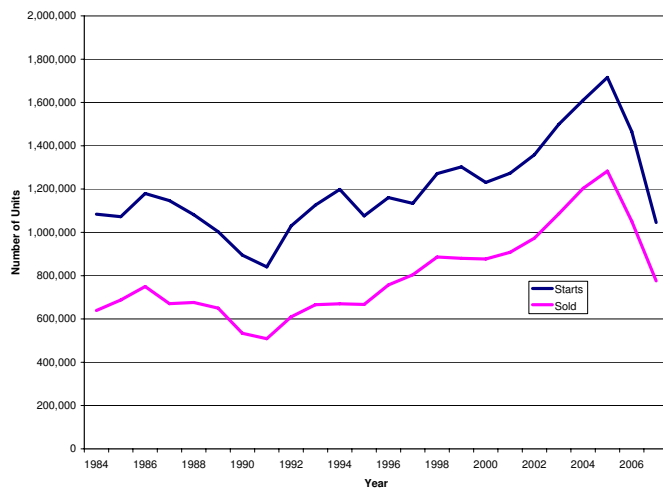
Source: [www.standardandpoors.com](http://www.standardandpoors.com)

Figure 5: SP / Case-Shiller Home Price Indices – January 1987 to July 2008



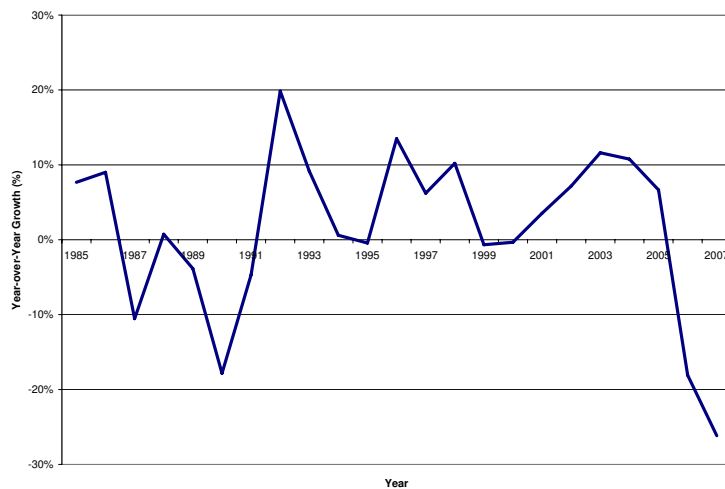
Source: [www.standardandpoors.com](http://www.standardandpoors.com)

Figure 6: **SP / Case-Shiller Home Price Indices – January 1987 to July 2008: Year-Over-Year Price Change**



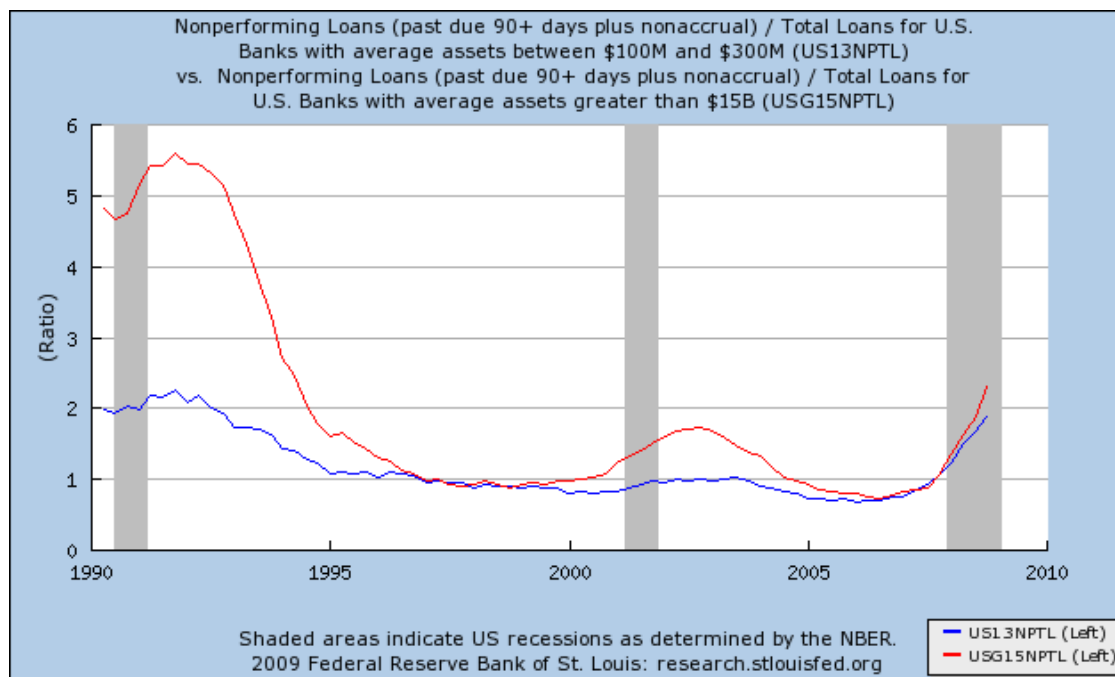
Source: National Association of Home Builders and Hanley-Wood *Builder*

Figure 7: **Annual Housing Single-Family Starts and Sold**



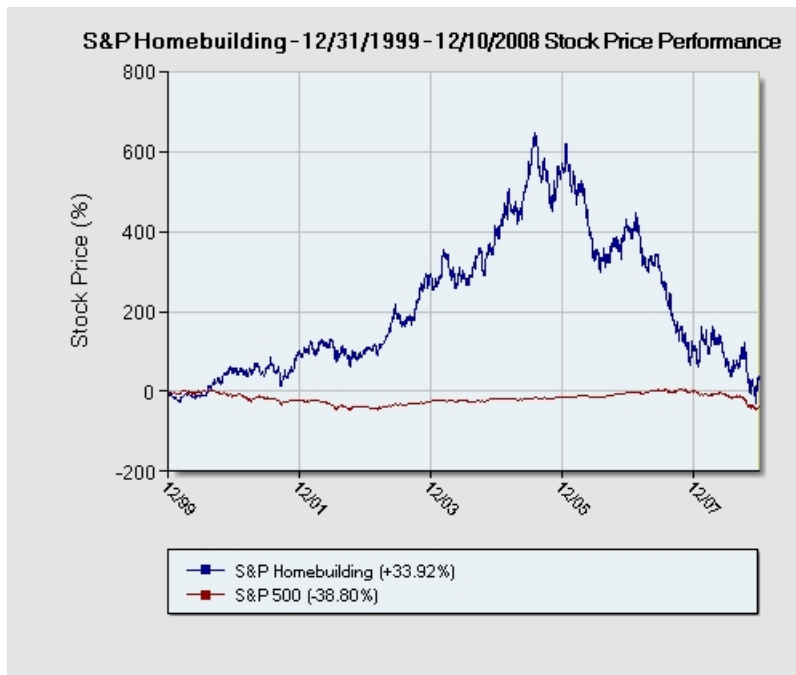
Source: National Association of Home Builders and Hanley-Wood *Builder*

Figure 8: **Annual Growth Rate in Houses Sold**



Source: Federal Reserve Bank of St. Louis

Figure 9: **Ratio of Nonperforming Loans to Total Loans for Large and Small U.S. Banks**



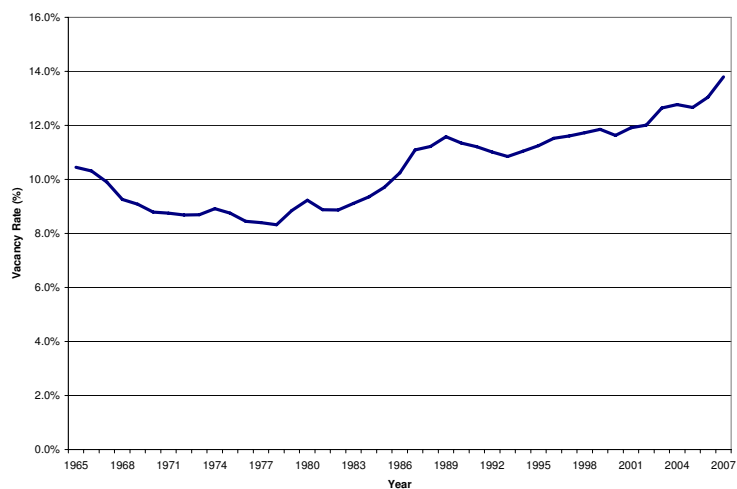
Source: SNL RealEstate

Figure 10: **Home builder Returns**



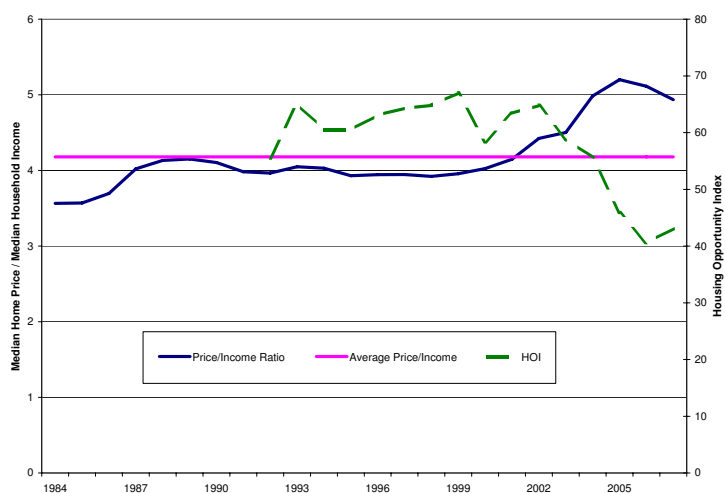
Source: Credit Suisse Homebuilding Sector Review, December 1, 2008

Figure 11: **Estimated Supply and Demand for Housing**



Source: U.S. Census Bureau

Figure 12: Annual Vacancy Rate in Single-Family Housing



Source: U.S. Census Bureau

Figure 13: Measures of Housing Affordability

Table 1: **Annual Housing Production for Large-Public Builders, Large-Private Builders, and Total Units Sold**

Year	Closings		US
	Public	Private	Sold
1999	195,889	106,031	880,000
2000	221,674	102,159	877,000
2001	221,065	105,650	908,000
2002	236,142	101,465	973,000
2003	247,754	118,319	1,086,000
2004	317,356	138,268	1,203,000
2005	368,216	185,402	1,283,000
2006	366,205	179,341	1,051,000
2007	256,123	133,779	776,000

Note: This table reports the annual housing production,