

Economics Group

Special Commentary

Mark Vitner, Senior Economist
mark.vitner@wellsfargo.com • (704) 383-5635
Joe Seydl, Economic Analyst
joseph.seydl@wellsfargo.com • (704) 715-1488

Vacancies and The Housing Recovery: We Still Have Quite a Way to Go

Introduction

The recent string of positive reports on the housing market has raised hopes that 2012 might finally be the year in which the housing recovery truly begins. Unfortunately, we believe these hopes are a bit premature. A true national recovery in home sales and new home construction will not begin until a significant portion of the excess supply of housing is cleared from the market. As such, the key to forecasting when a self-sustaining housing recovery will begin is to understand how much longer it will likely take to clear out a significant portion of the excess supply of vacant housing units currently on the market as well as units hanging over the market in the so-called “shadow inventory.” In addition to understanding inventories, other factors that need to be quantified and understood include the anticipated housing turnover rate, the amount of housing removed from the housing stock by obsolescence, fires and natural disasters, and the pace of household formation.

In this report, we analyze a number of different measures related to vacancies in the housing market. While home prices may finally reach a bottom in 2012, prices will likely not rebound nationally in a significant way anytime soon, so long as vacancy levels remain elevated. By our estimates, housing vacancies will likely remain historically elevated until at least the latter part of the decade, restraining home price appreciation over the same period. In other words, the days when home prices increase at or above the general rate of inflation are still a long way off for many regions across the country.

Trends in Homeownership: Which Survey to Use?

There are many different metrics to consider when estimating the magnitude of the past decade’s housing bubble. Data for the U.S. homeownership rate provide a crude glimpse at how much more desirable owning a home became for Americans. The most commonly used data for the U.S. homeownership rate come from a quarterly survey called the Housing Vacancy Survey (HVS), released by U.S. Census Bureau. According to that survey data, the homeownership rate increased from around 64 percent in the middle of the 1990s to more than 69 percent in the middle of the 2000s (**Figure 1**). This increase in the homeownership rate represented an increase of more than 11 million owner-occupied housing units across the country.

There are many different metrics to consider when estimating the magnitude of the past decade’s housing bubble.



Figure 1

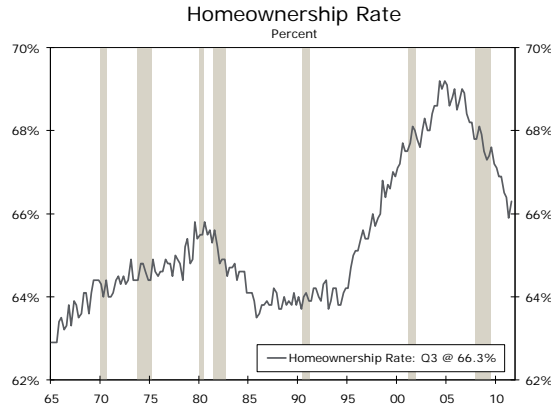
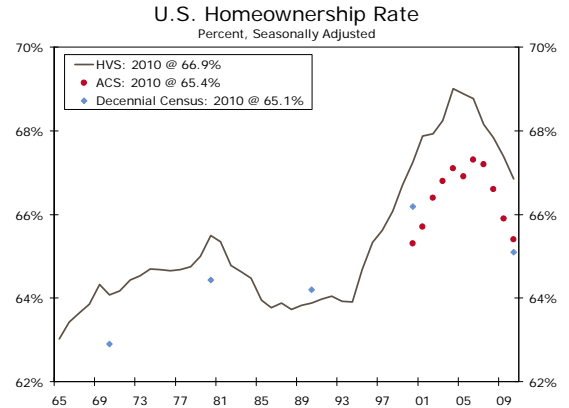


Figure 2



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Estimates for the homeownership rate are provided through three different surveys.

Estimates for the U.S. homeownership rate are also provided through two other surveys that are released less frequently and that are also conducted by the U.S. Census Bureau. These two surveys are the American Community Survey (ACS), which is an annual survey that began in 2000, and the United States Census, which is a decennial census with a history of data dating back to the 18th Century. The ACS and the United States Census both consider a much larger sample size than does the HVS; for example, the 2010 Census was sent out to around 120 million housing units and the 2010 ACS selected nearly 3 million addresses for its sample, compared to a sample size of only about 72,000 housing units in the HVS. Therefore, we would expect to observe sampling differences between all three surveys. **Figure 2** shows that these errors are quite large when considering the homeownership rate.

According to the HVS, the homeownership rate in 2010 was at 66.9 percent. This compares to homeownership rates published in the 2010 ACS and the 2010 Census of 65.4 percent and 65.1 percent, respectively. As **Figure 2** shows, homeownership rates published in the ACS throughout the 2000s and in the 2000 Census were also lower than comparable rates published in the HVS during the same period. Given that the historical data for the homeownership rate are roughly consistent between the ACS and the decennial census—which, again, comprise a much larger sample size than does the HVS—it can be inferred that the HVS may have been overstating the degree of homeownership in the United States. In other words, the differences between homeownership rates shown in **Figure 2** indicate that last decade’s housing bubble was perhaps not as large as the HVS would lead one to believe.

Homeownership may not be the best measure to consider when estimating the degree to which the housing market became overbuilt in the last decade.

Homeownership, however, may not be the best measure to consider when estimating the degree to which the housing market became overbuilt in the last decade. According to the data shown in **Figure 2** from the ACS and the decennial census, it appears that the homeownership rate has fallen back down to historically normal levels, although hardly anyone would classify the housing market as “normal” right now. This may be due to the loose association between the homeownership rate and homeownership. The proliferation of alternative mortgage products during the height of the housing boom meant that many people moved into the ranks of “homeowners,” even though they had little, no or even negative equity in their homes. As a result, the surge and subsequent drop in homeownership may be less reliable than widely thought. To get a better idea of how long it will likely take for the housing market to normalize, one must consider the degree to which the housing stock became oversupplied last decade, as well as how quickly the excess supply of vacant housing units is currently being reduced. For that, we now turn our analysis toward examining trends in housing vacancies.

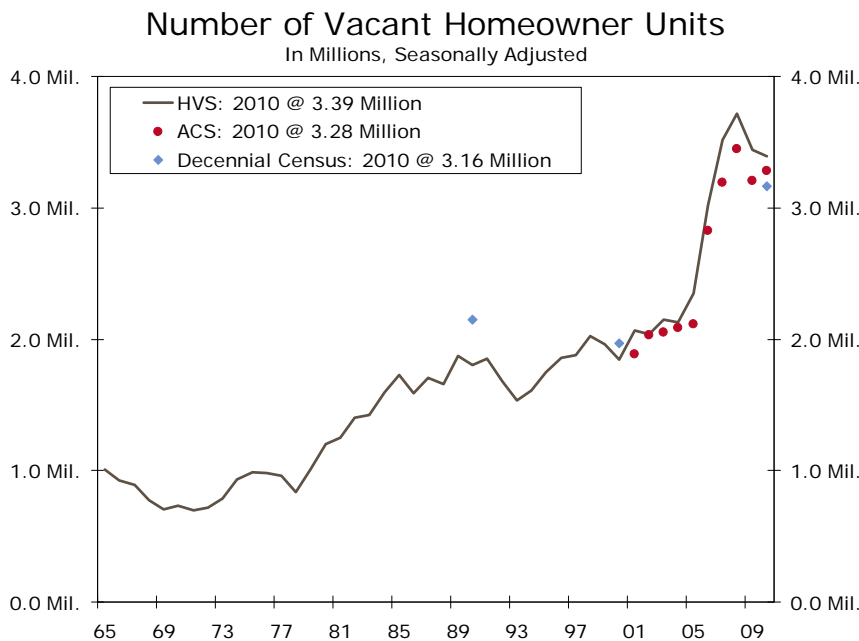
Estimating Vacancies and Turnover Rates

The HVS, ACS and decennial census each release data relating to the number of vacant homeowner units in the residential real estate market. Estimates for the number of vacant units in the market can be found by multiplying the homeowner vacancy rate times the total housing stock at any given point. **Figure 3** shows this calculation for each of our three considered surveys. Whereas the HVS appeared to be significantly overestimating the degree of homeownership in the United States, estimates for the number of vacant homeowner units on the market are roughly consistent throughout each survey. For 2010, the HVS showed that there were about 3.39 million vacant homeowner units on the market, compared to estimates of 3.28 million and 3.16 million vacant units from the ACS and the decennial census, respectively. So the HVS may be overestimating the number of vacant homeowner units on the market, but the degree of overestimation is not very large, representing only about 230,000 homeowner units of difference between the HVS and the decennial census for 2010.

We believe that the significantly high number of vacancies in the residential real estate market is one of the largest impediments preventing a true recovery.

The number of vacant homeowner units in the market has come down since 2008, as **Figure 3** depicts; however, vacancies still remain well above their longer-term historical trend. We believe that the significantly high number of vacancies in the residential real estate market is one of the largest impediments preventing a true recovery in construction activity and in home prices.

Figure 3



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

Using the housing turnover rate, which is simply the number of existing home sales divided by the total housing stock, as well as assumptions for the number of distressed sales as a percentage of total existing sales, we can get an idea of how long it will likely take for the number of vacant homeowner units to fall back down to their longer-term historical trend. **Figure 4** and **Figure 5** show historical trends for the housing turnover rate and for distressed sales as a percentage of total existing sales.

Figure 4

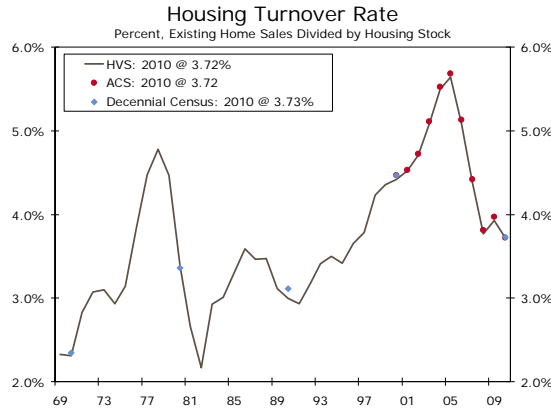
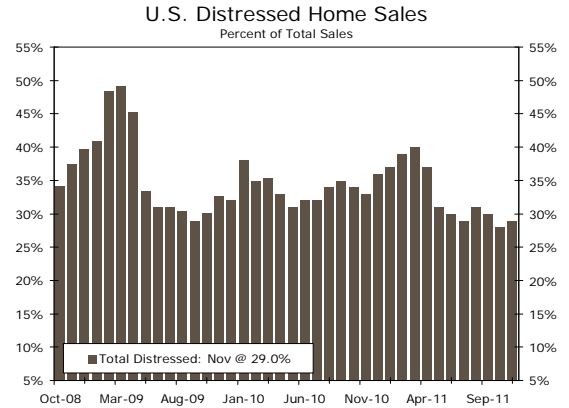


Figure 5



Source: U.S. Department of Commerce, National Association of Realtors and Wells Fargo Securities, LLC

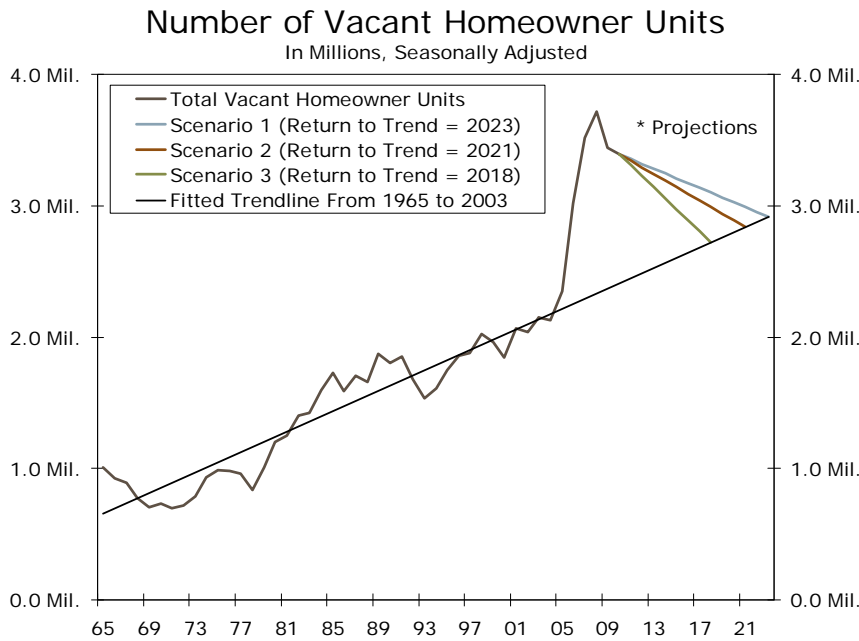
The housing turnover rate is broadly consistent across the HVS, ACS and decennial census. Housing turnover increased significantly during the boom years in the 2000s, primarily driven by speculative buying by investors as well as by homeowners. More recently, the housing turnover rate has fallen, reflecting less overall existing sales and continued growth in the total housing stock. Not including the past decade’s housing bubble, the housing turnover rate averaged around 3.4 percent from 1970 to 2000.

Distressed sales as a percentage of total existing home sales picked up dramatically following the housing bubble bust and the steep slide in home prices.

Distressed sales as a percentage of total existing home sales picked up dramatically following the housing bubble bust and the steep slide in home prices, which drove millions of homeowners into a negative equity position. In fact, during the Spring 2009 home buying season, distressed sales accounted for nearly 50 percent of total existing home sales. More recently, however, distressed sales as a percentage of total sales have fallen to under 30 percent. This drop in distressed sales activity reflects long-lingering litigation issues surrounding mortgage servicing, which have slowed the pace of foreclosure proceedings. Slow foreclosure proceedings have been especially concentrated in many judicial foreclosure procedure states, such as Florida and New Jersey.

Since the discrepancies with regard to homeowner vacancies and housing turnover between the HVS, the ACS and the decennial census are minor, we believe the HVS data are a reasonably good measure to use when determining the length of time it will likely take for vacancies to normalize. **Figure 6** shows three different scenarios in which homeowner vacancies return to their longer-term historical trend. The assumptions used for each scenario concerning housing turnover and distressed sales are shown in the table below **Figure 6**.

Figure 6



	Scenario 1	Scenario 2	Scenario 3
Existing Home Sales Turnover Rate	3.7%	4.0%	5.0%
Distressed Sales as a Percentage of Total Sales	33.0%	40.0%	45.0%
When Vacancies Return to Trend	2023	2021	2018

Source: U.S. Department of Commerce, National Assoc. of Realtors and Wells Fargo Securities, LLC

Scenario 1 uses the current housing turnover rate and the average share that distressed sales comprised for 2011—basically if things stay exactly the way they were in 2011. With these assumptions, the number of homeowner vacancies would not return to trend until 2023. Scenario 2 assumes that the housing turnover rate increases modestly to 4 percent and that distressed sales pick up to comprise 40 percent of total existing sales, which is close to the share of total sales that distressed sales comprised in the first quarter of 2011. Under the assumptions for Scenario 2, vacancies would not return to trend until 2021. Finally, Scenario 3 assumes that the housing turnover rate picks up significantly to 5 percent and that distressed sales rise to 45 percent of total existing sales. Under the assumptions for Scenario 3, vacancies would not return to trend until 2018. In other words, even if the market becomes more fluid and distressed transactions pick up significantly, our third scenario shows that the point at which vacancies would normalize is still a long way off.

A few things should be noted about these vacancy projections. The first is that these projections do not suggest that the national housing market will remain mired in a slump until the end of the decade. Rather, they simply show that homeowner vacancies will likely remain higher than usual until the end of the decade, which means that prices will remain under pressure in the near-term. In turn, weak home prices may force appraisals and mortgage underwriting to remain on the conservative side for some time. Gains in construction activity and in home prices will still likely take place, however, even with higher-than-normal vacancies, as new household formation occurs in regions where economic growth is the strongest. Such areas could include many of the tech and energy hotspots that have seen gains in recent quarters, including San Jose, Boston and Houston. Everything else equal, though, higher-than-normal vacancies will likely put a cap on construction and price appreciation in the areas in which vacancies are most highly concentrated, including

The point at which vacancies will normalize is still likely a long way off.

Homeowner vacancies will likely remain higher than usual until the end of the decade.

many coastal markets such as Florida and Southern California as well as overbuilt Sunbelt markets such as Atlanta, Phoenix and Las Vegas.

Another point that we should make is that these projections exclude several factors that will likely have indeterminate effects, including the large number of homeowners who are severely delinquent on their mortgage payments—many of whose homes will likely end up vacant at some point—the increased number of homes being demolished due to dilapidation and the rate of household formation in the years ahead. The next section addresses these very important factors.

Shadow Inventory, Housing Destruction and Household Formation

The so called “shadow inventory,” or the number of homes tied to mortgages that have recently entered the foreclosure process, are in a severely delinquent credit position or are real estate owned (REO) by lenders, could have noticeable effects in terms of prolonging the time it takes for the excess supply of existing homes in the market to normalize. While, according to the HVS, there are currently about 3.2 million vacant homeowner units in the market, the shadow inventory of homes that will likely end up vacant at some point in the not-so-distant future should, in theory, be added to the current vacant housing supply.

Estimating shadow inventory levels is not an easy task.

Estimating shadow inventory levels, however, is not an easy task. Bloomberg LP produces a quarterly estimate of shadow inventory, using data from the Mortgage Banker’s Association. According to Bloomberg, the shadow inventory of loans in the third quarter stood at 4.3 million (Figure 7). CoreLogic also produces a quarterly estimate of shadow inventory. According to CoreLogic’s estimate, the shadow inventory of loans in the third quarter was 1.6 million (Figure 8). Finally, some researchers have even produced shadow inventory estimates as high as 10 million loans.¹ We are extremely leery of these higher estimates.

Figure 7

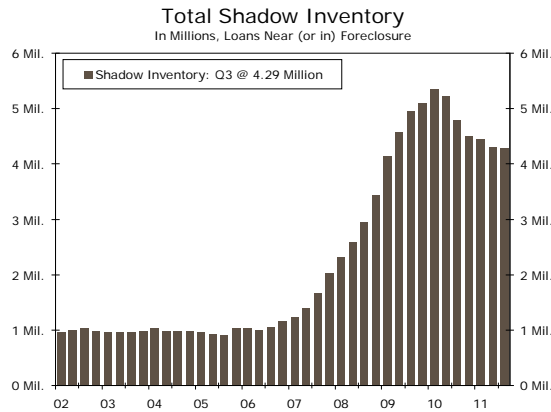
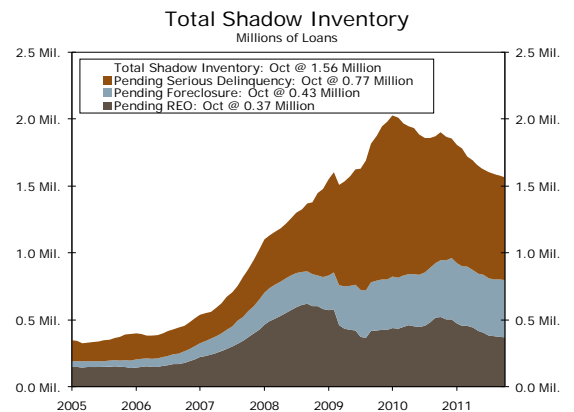


Figure 8



Source: Bloomberg LP, MBA, CoreLogic and Wells Fargo Securities, LLC

Some of the higher estimates of shadow inventory, in our opinion, are likely double counting.

Shadow inventory estimates are typically calculated by summing up the number of loans that are severely delinquent, those that are already in the process of foreclosure or those that are REO. For each of these components, one would consider only those loans that are currently tied to homes that are unlisted for sale. The general thought process, then, is that such loans have a high probability of being listed for sale—either through a foreclosure, REO or short sale—at some point in the near future. Some of the higher estimates of shadow inventory, in our opinion, however, are likely double counting the number of loans that are severely delinquent and already in the process of foreclosure or already REO. Furthermore, counting complications can arise depending on which roll rates (or cure rates) are assumed for loans transitioning from a severely delinquent

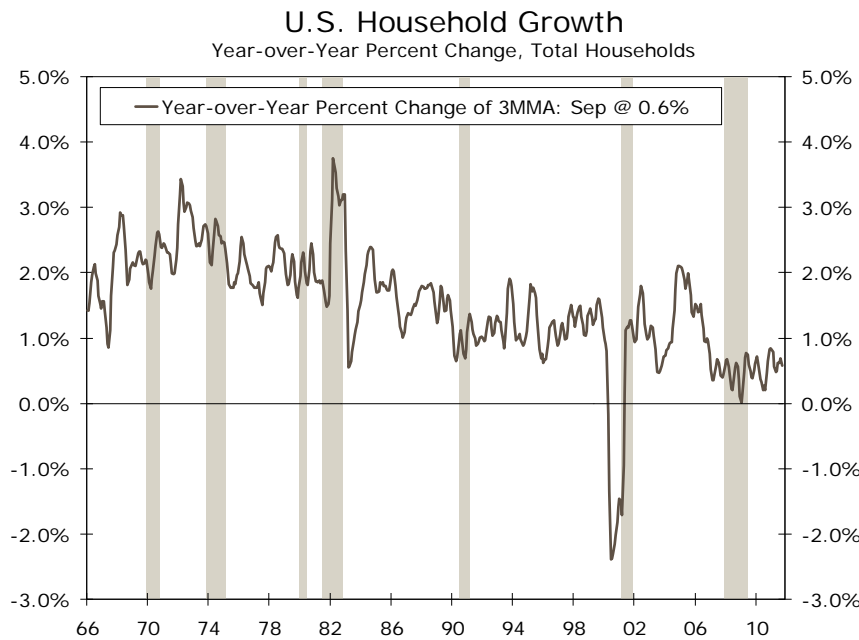
¹ Whelan, Robbie. (Nov. 11, 2011). How Many Homes Are in Trouble? The Wall Street Journal. <http://blogs.wsj.com/developments/2011/11/11/how-many-homes-are-in-trouble/>.

stage to a foreclosure or REO stage.² After reviewing CoreLogic’s methodology for calculating shadow inventory, we believe that their lower measure of around 1.6 million loans is probably an accurate depiction of the number of homes that will likely end up vacant and for sale in the near future. The issue with every shadow inventory measure, however, relates to the timing of when the shadow inventory of homes will actually hit the market. Many homes included in the shadow inventory could end up vacant and for sale in the next few quarters, while many may not make it to the market for another few years. In addition, the shadow inventory of homes is not a static measure. If economic conditions deteriorate and growth slows or even turns negative—which could happen, especially if the European debt crisis intensifies—the shadow inventory will likely increase, as more workers lose their jobs and fall behind on their mortgage payments.

If economic conditions deteriorate, the shadow inventory could increase.

As the shadow inventory of homes reaches the market in the next few years, this will likely push out our vacancy normalization projections shown in the previous section. One factor that could have the opposite effect, however, concerns the rate of household formation in the United States. The growth in household formation has slowed considerably since the recession ended (**Figure 9**), possibly reflecting the severe unemployment among younger cohorts. That said, if the current rate of household formation were to continue for the foreseeable future, this would reduce the excess supply of vacant homes on the market by roughly 225,000 units per year, which would offset some of the pickup in vacancies expected when homes in the shadow inventory eventually hit the market.

Figure 9



Source: U.S. Department of Commerce and Wells Fargo Securities, LLC

The other factor that needs to be considered relates to housing destruction. From 1995 to 2003, according to the U.S. Department of Housing and Urban Development, homes lost through demolition or disaster averaged roughly 380,000 per year. Since 2007, the destruction rate has picked up to an average of around 560,000 units destroyed per year. Everything else equal, a faster pace of housing destruction would serve to reduce the excess supply of vacant housing units on the market more quickly.

² The roll rate refers to the rate at which a mortgage is expected to transition from being in a severely delinquent stage to a foreclosure or REO stage. Conversely, the cure rate refers to the rate at which a delinquent mortgage is expected to be repaid or brought current.

To be fair, however, if we are to consider the effects that housing destruction would have on vacancies, we should also consider the effects that housing construction would have on vacancies. According to the Census, housing units under construction show up as vacant housing units in the survey data, so new construction activity would have the effect of increasing the number of vacant homeowner units in the market. Single-family housing starts are still running at historically low levels. In fact, 2011 was the weakest year on record for single-family housing start. We are looking for a 5 percent rise in single family starts in 2012, which will leave starts at historic lows. But even low levels of construction will limit the reduction in vacancies.

Putting It All Together

Working with our Structured Products Research Group, we have attempted to put together all of these moving parts and to forecast when the excess supply of homeowner units will likely normalize. Our assumptions are as follows:

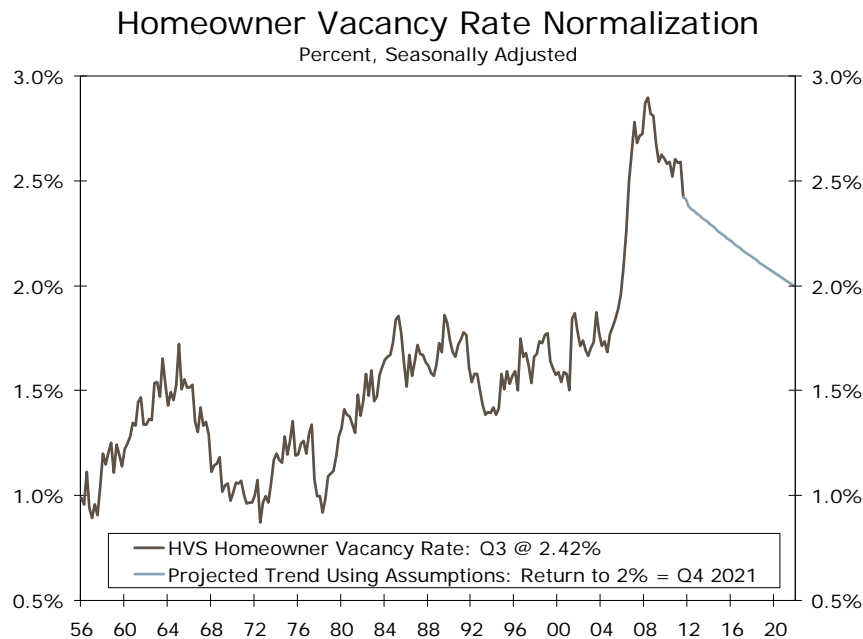
- 1) We assume that the homeowner vacancy rate needs to normalize to 2 percent. The homeowner vacancy rate currently sits at around 2.4 percent. In the 10 years prior to the housing bubble, the homeowner vacancy rate averaged around 1.65 percent. With some rise in second and vacation home-owning preferences, however, it seems reasonable that the longer-run homeowner vacancy rate will remain above its longer-run average.
- 2) We assume that the homeownership rate normalizes to 64 percent. The homeownership rate has fallen from above 69 percent in 2005 to 66.3 percent as of the third quarter. The homeownership rate will likely continue to fall, but 64 percent seems like a reasonable floor, especially considering that the average homeownership rate in the three decades prior to the 2000s was slightly above 64 percent.
- 3) We use CoreLogic's shadow inventory estimate of 1.6 million homes that will eventually end up vacant and for sale.
- 4) We use Moody's longer-run forecast for household formation, which shows the number of U.S. households growing at an average rate of roughly 1 percent over the next 10 years.
- 5) We assume that single-family housing starts continue at their current pace of roughly 450,000 units started per year, which is a generously low assumption, considering that most forecasters expect single-family housing construction to pick up in the coming years.
- 6) We assume that housing destruction totals roughly 425,000 units per year, which is the average annual pace of housing destruction from 1995 to 2009, according to the U.S. Department of Housing and Urban Development.

Higher-than-normal vacancies will likely continue to restrain construction activity and home price appreciation at least until the end of the decade.

Combining all of these assumptions, we find that the homeowner vacancy rate will likely not normalize to 2 percent until sometime in 2021 (**Figure 10**).³ This projection is in line with the projections presented earlier, when we considered the housing turnover rate as well as assumptions for distressed sales. It should also be noted, though, that the differences between the HVS, ACS and decennial census could be biasing this vacancy rate projection. If vacancies are actually lower than what is depicted in the HVS, then the supply overhang could normalize sooner. Nevertheless, the bottom line is that it appears as though the housing market is a long ways off from reaching a balance between supply and demand. Higher-than-normal vacancies will likely continue to restrain construction activity and home price appreciation at least until the end of the decade. If we had known that the hangover from last decade's housing boom would last this long, chances are that somebody would have taken away the punch bowl and turned off the lights to the party much sooner. Unfortunately, that never happened.

³ For a detailed explanation of how we arrived at this result, please see the Appendix.

Figure 10



Source: U.S. Department of Commerce, Moody's, CoreLogic, HUD and Wells Fargo Securities, LLC

Summary, Conclusions and Implications

We have discussed many of the challenges relating to the housing recovery. This past decade's epic housing boom produced an enormous amount of excess vacant homes, which will likely continue to push out a true self-sustaining recovery in housing through the end of the decade. With so many vacant homes hanging over the market, prices will remain subdued, which will tend to keep appraisals and mortgage underwriting on the conservative side. In some ways, the renewed vigilance on valuations and credit approvals is the exact opposite of what was seen a decade ago, when valuations became unduly inflated and credit flowed much too easily. The net result is also, in many ways, the polar opposite of what was seen then.

While we see a long road ahead for the housing recovery, we also envision a continued, steady improvement for home sales, new home construction and housing values. All housing markets are not alike, and much of the overbuilding, overleveraging of home mortgages and credit issues are concentrated only in a handful of markets. Some regions will recover ahead of others, and opportunities for builders, developers and investors will still clearly exist in this environment.

The surprisingly long time period required to bring the housing market back into balance also carries significant implications for the overall economy and should serve as a rallying call to policymakers to develop policies to help accelerate the recovery process. Some of the more important implications of the drawn out recovery process are that resources are likely to continue to flow out of the homebuilding sector and that more households are likely to remain renters for longer periods of time than what we have seen in recent years. The apartment market is already benefitting from this trend, and homebuilders and firms that produce and sell household items, such as building products, household furnishings and furniture, are suffering. Many of these businesses will need to reposition their business models to serve and benefit from a larger pool of renters and a smaller pool of homeowners.

Policymakers will also need to take a hard look at ways to clarify and speed up the drawdown of vacant homes on the market and those homes that are hanging over the market. There has been talk of selling large blocks of foreclosed homes held by Fannie Mae and Freddie Mac to investors under the stipulation that these homes would then be placed for rent. Such moves would have a

positive effect on appraisals and mortgage underwriting, as they would remove some questions as to how much vacant and for-sale inventory is currently hanging over the market. Other policies aimed at addressing some of the issues surrounding the large number of homeowners with negative equity could also provide a lift to housing turnover and help speed up the recovery process.

Appendix

As of the third quarter, according to the HVS, the total housing stock was 132,353,000. With a homeowner vacancy rate in the third quarter of 2.42 percent, this implies that there were 3,205,555 vacant homeowner units in the market—i.e., $(132,353,000)(2.42\%) \approx 3,205,555$. With the assumption that the homeowner vacancy rate needs to normalize to 2.0 percent, this implies that there were 558,495 excess vacant homeowner units in the market—i.e., $3,205,555 - (132,353,000)(2.0\%) \approx 558,495$. After adding in the 1.6 million units of Q3 shadow inventory calculated by CoreLogic, this means that roughly 2,158,495 homeowner units will need to be absorbed before vacancies return to a normal level.

These 2,158,495 homeowner units will be reduced per quarter, t , by the following expression:

$$rH + D - S$$

Where,

r = The homeownership rate

H = The number of households formed per quarter

D = The number of homes destroyed per quarter

S = The number of single-family homes built per quarter

Then, putting this logic together leads to the following equation:

$$2,158,495 - t[rH + D - S] = 0$$

Therefore, using the assumptions outlined in our report and solving for t , we find that $t = 41$. This result implies that the homeowner vacancy rate will not normalize to 2.0 percent until 41 quarters have passed, or until Q4 2021.

Wells Fargo Securities, LLC Economics Group

Diane Schumaker-Krieg	Global Head of Research & Economics	(704) 715-8437 (212) 214-5070	diane.schumaker@wellsfargo.com
John E. Silvia, Ph.D.	Chief Economist	(704) 374-7034	john.silvia@wellsfargo.com
Mark Vitner	Senior Economist	(704) 383-5635	mark.vitner@wellsfargo.com
Jay Bryson, Ph.D.	Global Economist	(704) 383-3518	jay.bryson@wellsfargo.com
Scott Anderson, Ph.D.	Senior Economist	(612) 667-9281	scott.a.anderson@wellsfargo.com
Eugenio Aleman, Ph.D.	Senior Economist	(704) 715-0314	eugenio.j.aleman@wellsfargo.com
Sam Bullard	Senior Economist	(704) 383-7372	sam.bullard@wellsfargo.com
Anika Khan	Economist	(704) 715-0575	anika.khan@wellsfargo.com
Azhar Iqbal	Econometrician	(704) 383-6805	azhar.iqbal@wellsfargo.com
Ed Kashmarek	Economist	(612) 667-0479	ed.kashmarek@wellsfargo.com
Tim Quinlan	Economist	(704) 374-4407	tim.quinlan@wellsfargo.com
Michael A. Brown	Economist	(704) 715-0569	michael.a.brown@wellsfargo.com
Joe Seydl	Economic Analyst	(704) 715-1488	joseph.seydl@wellsfargo.com
Sarah Watt	Economic Analyst	(704) 374-7142	sarah.watt@wellsfargo.com
Kaylyn Swankoski	Economic Analyst	(704) 715-0526	kaylyn.swankoski@wellsfargo.com

Wells Fargo Securities Economics Group publications are produced by Wells Fargo Securities, LLC, a U.S broker-dealer registered with the U.S. Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the Securities Investor Protection Corp. Wells Fargo Securities, LLC, distributes these publications directly and through subsidiaries including, but not limited to, Wells Fargo & Company, Wells Fargo Bank N.A., Wells Fargo Advisors, LLC, Wells Fargo Securities International Limited, Wells Fargo Securities Asia Limited and Wells Fargo Securities (Japan) Co. Limited. The information and opinions herein are for general information use only. Wells Fargo Securities, LLC does not guarantee their accuracy or completeness, nor does Wells Fargo Securities, LLC assume any liability for any loss that may result from the reliance by any person upon any such information or opinions. Such information and opinions are subject to change without notice, are for general information only and are not intended as an offer or solicitation with respect to the purchase or sales of any security or as personalized investment advice. Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a wholly owned subsidiary of Wells Fargo & Company © 2012 Wells Fargo Securities, LLC.

SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE

