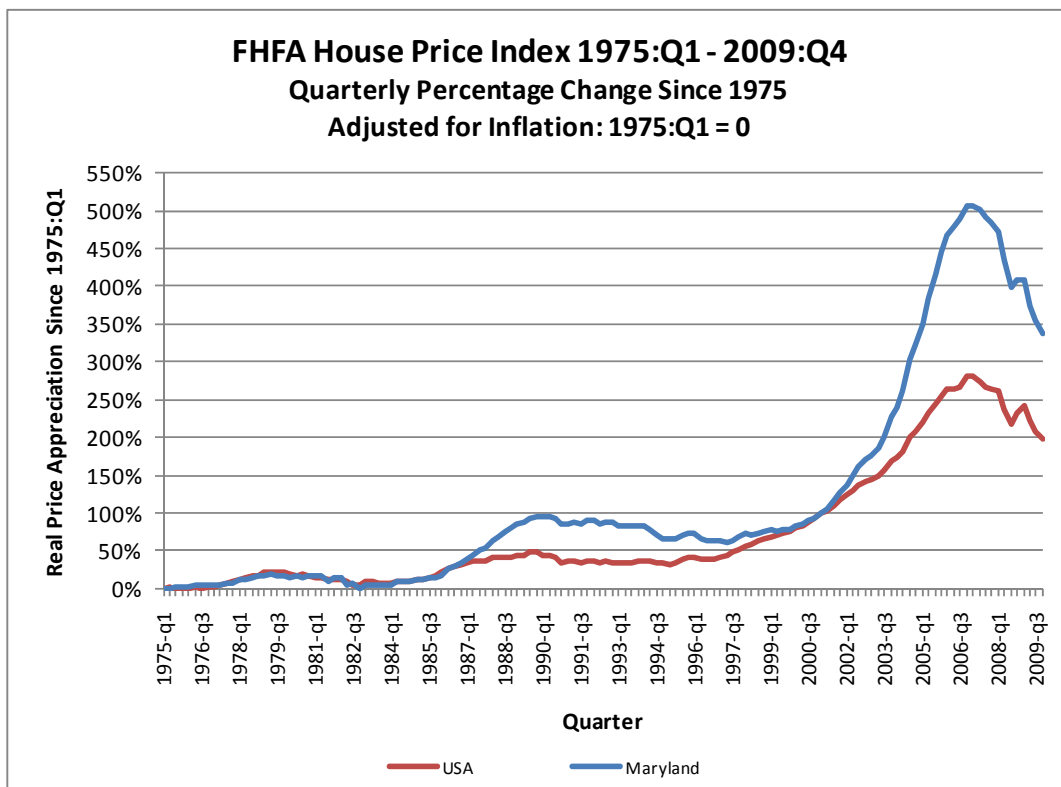


The House Price Index (HPI) for All Conventional Mortgages in Maryland, 1975 – 2009

Decrease in Existing Home Values Continues in Maryland and the U.S.

After an historical run-up in housing prices that peaked in the first quarter of 2007, valuations of existing single-family homes in Maryland that were either purchased or refinanced with conforming mortgage loans¹ have now fallen by 23.7 percent when accounting for inflation,² according to the Federal Home Finance Agency’s All Transactions House Price Index for the fourth quarter of 2009.³ Still, even after this drop, housing prices in Maryland are about where they were in the second quarter of 2004, and remain 60.4 percent above where they were at the beginning of 2000. Nationally, housing valuations decreased 16.1 percent after their peak (also in the first quarter of 2007) and are now roughly equal to third quarter 2004 valuations. On average, national single-family detached home prices are 25.6 percent higher than in 2000.



Source: Quarterly House Price Index, Fourth Quarter 2009, Federal Housing Finance Agency, 2010

¹ According to the FHFA, “Fannie Mae and Freddie Mac are restricted by law to purchasing single-family mortgages with origination balances below a specific amount, known as the “conforming loan limit.” Loans that conform to the limits set by FHFA can be purchased by government-sponsored enterprises (GSEs) such as Fannie Mae and Freddie Mac. These are the only loans tracked by the House Price Index. See page 6 for more information.

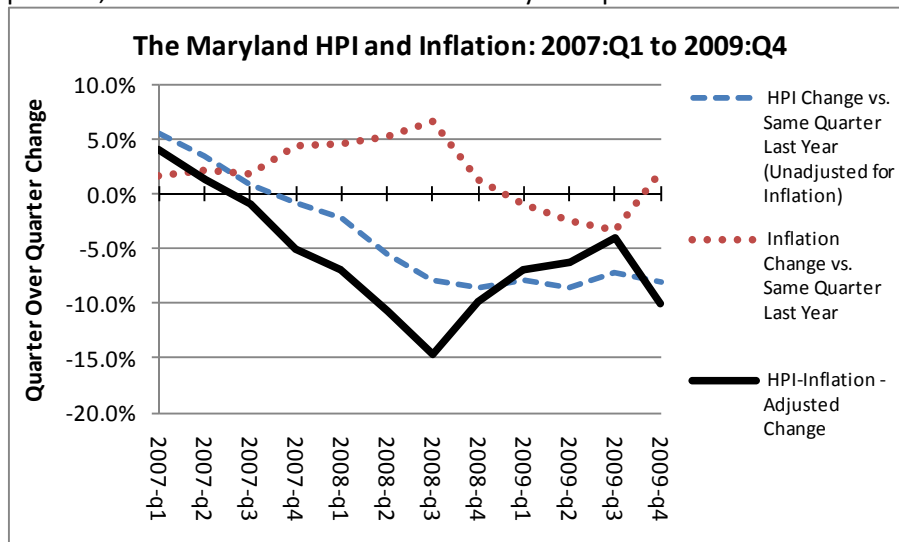
² Adjusted for inflation to 2009:Q4 using the Consumer Price Index’s series CUUR0000SA0L2 from the U.S. Bureau of Labor Statistics as described in question 17 of the HPI FAQ, <http://www.fhfa.gov/Default.aspx?Page=196>.

³ This data tracks the valuation of existing single-family homes over time for which two mortgages were originated and subsequently purchased by Freddie Mac or Fannie Mae since July 1975. Mortgages may be for purchases of housing units or for refinancing of existing mortgages. See page 7 for a more complete explanation.

Rapid Rise and Fall

Like the rest of the country, Maryland experienced a significant rise in housing unit valuations from the late 1990s to the mid-2000's. This is the latest and largest in a series of housing value booms and busts that have affected Maryland for the last 35 years. According to the House Price Index (HPI) published by the Federal Home Finance Agency (FHFA), the inflation-adjusted valuation of existing single-family detached homes in Maryland increased 506.8 percent from the first quarter of 1975 (the start of the data series) to the first quarter of 2007, with almost all of this gain since mid-1997. While this most recent cycle of increasing home valuations started in the second quarter of 1997, it truly accelerated after the first quarter of 2001, when home values had finally regained what they had lost after the last appreciation cycle ended in the first quarter of 1992.

Current price appreciation peaked in the first quarter of 2007 for both Maryland and the U.S., with the real gain for Maryland since 1975 (506.8%) far surpassing the national gain (281.1%) (See [Table 1](#)). Since 2007:Q1, the value of Maryland's existing single-family detached housing units has depreciated 23.7 percent, while national values have fallen by 16.1 percent. While the inflation-adjusted HPI data for



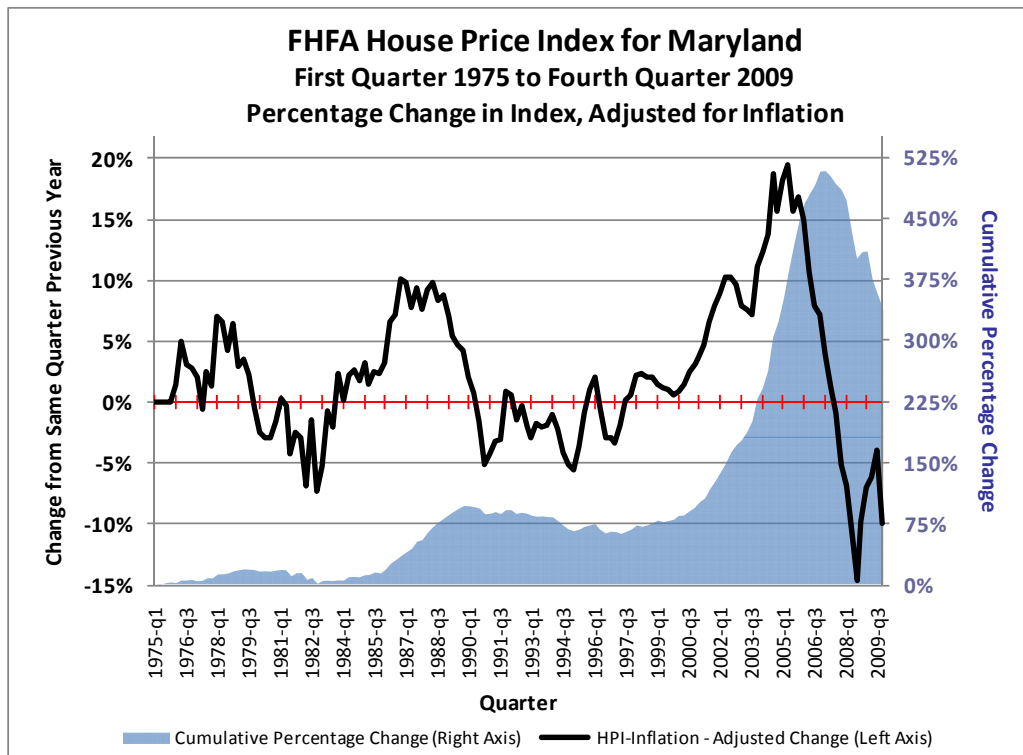
Maryland showed diminishing price depreciation from 2008:Q4 to 2009:Q1, it was caused by variations in quarterly inflation rates (increases caused by the run-up in oil prices in mid-2008 and decreases caused by their subsequent fall in late 2008 and the concurrent economic slowdown). As

the chart to the left shows, the All Transactions House Price Index (HPI) has generally declined since 2007:Q1, while inflation spiked to a 6.7 percent quarter-over-quarter change in the third quarter of 2008. Since then, the rate of inflation has slowed and even turned into deflation in the first three quarters of 2009. Note that the HPI is adjusted using a special version of the consumer price index that excludes the cost of housing (the U.S. city average CPI for all items less shelter, series ID# CUUR0000SA0L2). This insures that the inflation adjustment is not including the price change in housing itself.

Previous Booms and Busts

Looking at the All Transactions HPI's quarter-over-quarter change rate (which compares a quarter to the same quarter in the previous year) shows a strong pattern of booms and busts in housing price appreciation in Maryland. In the mid-to-late 1970's, housing prices generally appreciated on a quarter-

over-quarter basis, peaking at a 7.0 percent rate between 1977:Q1 and 1978:Q1 after adjusting for inflation. This led to a peak cumulative percentage increase of 18.3 percent from 1975:Q1 to 1979:Q2, after which real prices began to depreciate. This period of depreciation lasted 14 quarters, reaching a nadir of a 7.3 percent quarter-over quarter decline from 1981:Q4 to 1982:Q4. By the end of this period of depreciation in 1982:Q4, home values had lost most of their cumulative 18.3 percent appreciation, being worth only 0.7 percent more than they were in 1975:Q1. In other words, an average single-family house that was valued at \$100,000⁴ in 1975:Q1 would have been valued at \$ 118,304 at the 1979:Q2 peak and then reduced in value to \$100,681 by 1982:Q4.



Source: Quarterly House Price Index, Fourth Quarter 2009, Federal Housing Finance Agency, 2010

By 1983:Q1, this depreciation trend had generally reversed and housing values grew positively for the next 30 quarters, peaking at a 10.2 percent quarter-over-quarter growth rate from 1985:Q4 to 1986:Q4. By 1989:Q4, price appreciation rates had begun to slow again, and this period of value appreciation ended with a cumulative increase of 96.0 percent over 1975:Q1. At this point, the theoretical \$100,000 single family detached house in 1975 would have been valued at \$195,985 in real dollars after accounting for inflation.

After this peak, quarter-over-quarter growth turned sharply negative by 1990:Q4, reaching a low of -5.6 percent. Home valuations depreciated in twenty-four of the 30 quarters from 1990:Q1 to 1997:Q2, which essentially brought cumulative house price appreciation back to where it had been in 1988:Q1. Even with this moderate loss in house price appreciation, existing single-family detached homes in Maryland had still kept most of the value gained during the 1983:Q1 to 1989:Q4 period of price

⁴ All dollar figures are in inflation-adjusted (constant) dollars, adjusted to 2009:Q4 (2009:Q4=100).

appreciation, retaining 61.8 percent of the value gained since 1975:Q1, meaning that the \$100,000 house in 1975 was now valued at \$161,794.

Ten Years of Value Appreciation

The second quarter of 1997 represented another trough, and price appreciation once again turned positive by the third quarter of 1997. For the next 39 quarters Maryland saw the most consistent increase in housing price appreciation since the start of this data series in 1975:Q1. By 2001:Q4 quarterly price appreciation rates hit 8.0 percent, exceeding the highest rate seen from 1975 to 1978, and in 2002:Q3 appreciation rates hit 10.3 percent, exceeding the peak rate in the 1983 to 1990 period. From 2002:Q2 to 2007:Q2, 13 of 21 quarters showed quarter-over-quarter price appreciation rates in the double digits, peaking at a 19.4 percent price appreciation rate between 2004:Q2 and 2005:Q2. This sustained period of high growth rates pushed cumulative house price appreciation to the 2007:Q1 peak of 506.8 percent over 1975:Q1. In other words, the theoretical \$100,000 house in 1975:Q1 would have been valued at \$606,755 by 2007:Q1, after adjusting for inflation.

Value Appreciation Peak and Current Decline

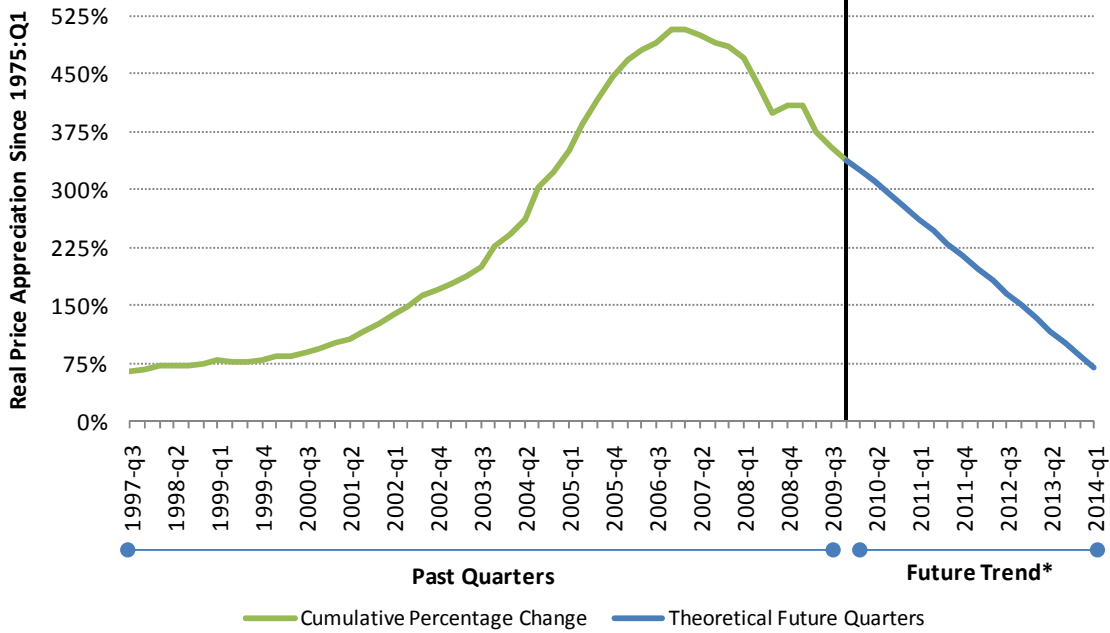
By 2007:Q2 this sustained period of high price appreciation was over, and had started turning into a period of rapid price depreciation. By 2008:Q1, quarter over quarter depreciation rates had exceeded the largest declines in the 1990 to 1997 period (-6.9% in 2008:Q1 vs -5.6% in 1995:Q1) and by 2008:Q2 they had exceeded the largest depreciation rates in the 1980 to 1983 period (-10.7% in 2008:Q2 vs -7.3% in 1982:Q4) and had marked the most rapid rate of quarter over quarter depreciation in Maryland during this time series. By 2008:Q3, inflation-adjusted quarter-over-quarter house price depreciation for single family homes in Maryland had set a new low, falling to -14.6 percent (-7.9% current HPI home price depreciation plus a 6.7% consumer price inflation rate), the lowest rate ever recorded for Maryland in the HPI data.

By 2008:Q4 this rapid rate of depreciation had decreased slightly to -9.8 percent due to a lessening of inflation (-8.5 percent HPI depreciation plus only 1.4 percent inflation), and by 2009:Q2 it had decreased again to -6.2 percent due to non-shelter price deflation from 2008:Q2 to 2009:Q2 of -2.4 percent which reduced the real value of the 8.6 percent decrease in the HPI. In 2009:Q3, the HPI index depreciation rate hit -7.3 percent, but consumer price deflation of 3.3 percent from 2008:Q3 to 2009:Q3 moderated that decrease to only -4.0 percent in real dollar terms. However, by the most recent quarter deflation had turned back to inflation, and depreciation increased to 10 percent (-8.1 percent home price depreciation plus 1.9 percent inflation).

By 2009:Q4, cumulative home price appreciation from 1975:Q1 had decreased from the 2007:Q1 high of 506.8 percent to 337.4 percent. That theoretical \$100,000 house from 1975:Q1 would now be worth \$437,356, a reduction of \$169,399 (-27.9%) from the all-time peak just over two years earlier. Based on an extrapolation of the rate of decline in value since the peak, were home price depreciation to continue unabated, existing single-family detached homes would lose all of the real price appreciation that they have gained since 1997:Q2 by 2014:Q1.

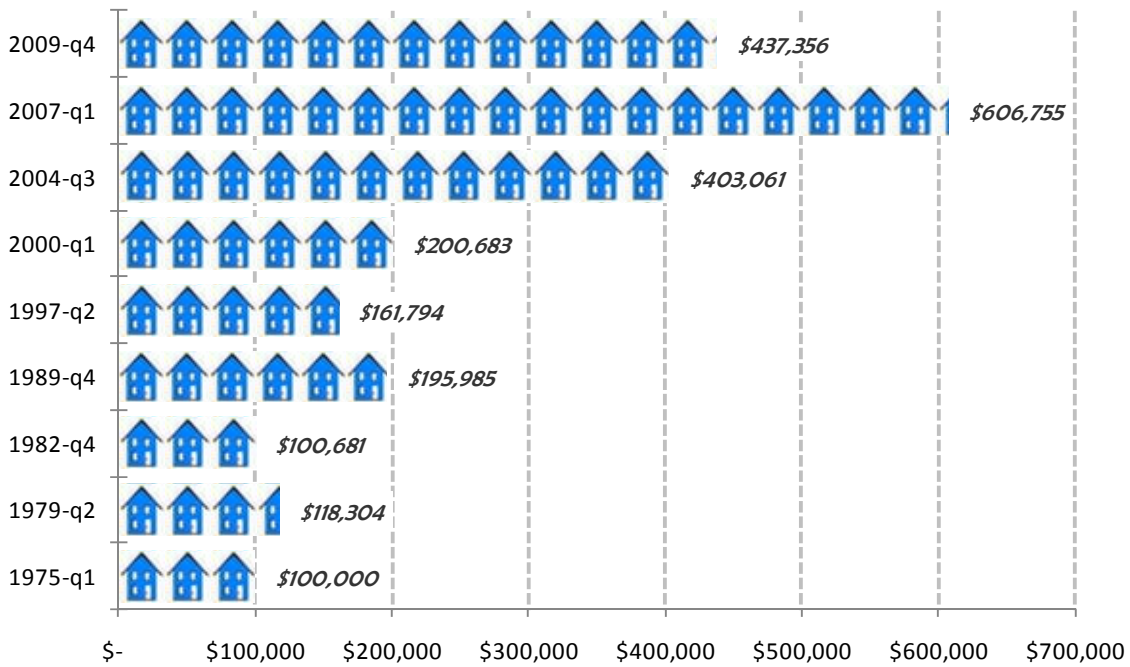
For more information, contact James Palma at jpalma@mdp.state.md.us.

Past and Theoretical Future Price Appreciation Trends



* Calculated using the regression equation Future Quarter (Y) = -0.161(Quarter number after 2006:Q4) + 5.351

Example Single-Family Detached Home Price in Maryland, 1975:Q1 to 2009:Q4 (Inflation-Adjusted, 2009:Q4 = 100)



Source: Quarterly House Price Index, Fourth Quarter 2009, Federal Housing Finance Agency, 2010, Author Calculations

About GSE Conforming Mortgage Loans

Both the Purchase Only House Price Index (HPI) and the All Transactions House Price Index are calculated from information gathered from the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Both Fannie Mae and Freddie Mac are government-sponsored enterprises (GSEs), and are limited by law as to the value of the mortgages that they can purchase from mortgage originators (such as banks and other mortgage lenders). Mortgages that can be purchased by the GSEs are known as conforming conventional mortgages, as they conform to the rules set by Congress for purchase by the GSEs.

This means that other types of mortgages are not included in the HPI calculation. Single-family homes financed by government insured loans (such as VA loans) and those financed by mortgages whose value exceeds the conforming loan threshold (known as jumbo loans) are not included in the HPI. Also, because the HPI only measures single family units, loans for all attached homes, townhomes and condominiums are excluded whether these loans are conforming or not.

Obtaining a conforming loan can be problematic in areas with expensive housing, as even a modest single-family house may require a mortgage that is too large to conform to GSE regulations. In 2008, the FHFA recognized this issue and implemented different maximum levels for “high-cost” counties across the United States.⁵ Previously, the only deviations from the national conforming loan limit were for high costs states like Alaska and Hawaii. Current 2010 conforming loan limits for Maryland jurisdictions are listed below.

Conforming Loan Limits for Single Family Homes in High Cost Jurisdictions in Maryland, 2010

Metropolitan Statistical Area / Jurisdiction	Conforming Loan Limit
Baltimore-Towson (Metropolitan Area) Component Jurisdictions: Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's Counties, Baltimore City	\$560,000
Easton (Micropolitan Area) Component Jurisdictions: Talbot County	\$443,750
Ocean Pines (Micropolitan Area) Component Jurisdictions: Worcester County	\$437,500
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD (Metropolitan Area) Component Jurisdictions (MD): Cecil County	\$420,000
Washington-Arlington-Alexandria, DC-VA-MD-WV (Metropolitan Area) Component Jurisdictions (MD): Calvert, Charles, Frederick, Montgomery, and Prince George's Counties	\$729,750
Garrett County	\$437,500
All Other Jurisdictions	\$417,000

Source: Federal Home Finance Agency

⁵ The conforming loan limit in “general” cost counties across the lower 48 states has been \$417,000 since 2006. Before 2008, no conforming mortgage in any county in the lower 48 states could exceed this value.

About the FHFA's All Transactions House Price Index (HPI)

The All Transactions House Price Index (HPI) is a data series formerly published by the Office of Housing Enterprise Oversight (OFHEO) and now published by the Federal Housing Finance Agency (FHFA), a government agency responsible for overseeing the actions of the Federal National Mortgage Association (FNMA), commonly known as Fannie Mae, and the Federal Home Loan Mortgage Corporation (FHLMC), commonly known as Freddie Mac.⁶ According to the FHFA, “The HPI for each geographic area is estimated using repeated observations of housing values for individual single-family residential properties on which at least two mortgages were originated and subsequently purchased by either Freddie Mac or Fannie Mae since January 1975.”⁷ Data from these two sources cover 40 percent of all mortgages issued in the U.S. Restricting the index to existing housing sales helps to control for the effect that differing housing types and characteristics might have on the data.⁸ To remove the effects that inflation has on home prices, the HPI was adjusted for inflation using the Bureau of Labor Statistics’ Consumer Price Index “All Items Less Shelter” series.⁹

As this data is published for states and many Metropolitan Statistical Areas (MSAs) within the U.S., it is useful for tracking housing price trends on the state and local level. One fault with this data set is that it only tracks single-family detached housing, which in Maryland only comprises 52 percent of all housing units (61 percent in the U.S. as a whole). Another is that it doesn’t capture the price effects that newly-built homes may have on the housing market until after they have been sold and resold. Even with these faults, the HPI is useful as it supplies consistent data across the U.S. for tracking home price appreciation trends over a 34 year period.

Number of Housing Units by Units in Structure, Maryland, 3-Year 2005-2007 Estimate

	Estimate	Margin of Error	Percentage	Margin of Error
Total housing units	2,296,973	+/-290	100.0%	
1-unit, detached	1,188,547	+/-5,418	51.7%	+/-0.2%
1-unit, attached	483,342	+/-4,804	21.0%	+/-0.2%
2 units	43,419	+/-2,364	1.9%	+/-0.1%
3 or 4 units	56,672	+/-2,496	2.5%	+/-0.1%
5 to 9 units	126,125	+/-3,502	5.5%	+/-0.2%
10 to 19 units	189,099	+/-3,623	8.2%	+/-0.2%
20 or more units	168,771	+/-3,148	7.3%	+/-0.1%
Mobile home	40,826	+/-1,936	1.8%	+/-0.1%
Boat, RV, van, etc.	172	+/-103	0.0%	+/-0.0%

Source: 2005-2007 American Community Survey 3-Year Estimates

⁶ The Federal Housing Finance Agency (FHFA) was created on July 30, 2008 through a legislative merger of the Office of Federal Housing Enterprise Oversight (OFHEO), the Federal Housing Finance Board (FHFB) and the U.S. Department of Housing and Urban Development (HUD) government-sponsored enterprise (GSE) mission team. FHFA regulates Fannie Mae, Freddie Mac and the 12 Federal Home Loan Banks.

⁷ http://www.fhfa.gov/webfiles/896/hpi_tech.pdf.

⁸ For more information, see http://www.fhfa.gov/webfiles/896/hpi_tech.pdf.

⁹ Adjusted using series ID# CUUR0000SA0L2 as described in question 17 of the HPI FAQ, available at <http://www.fhfa.gov/Default.aspx?Page=196>.

This data set is also related to, but is not the same as, the S&P/Case-Shiller® Home Price Indices published by Standard & Poors. There are four major differences between the S&P/Case-Shiller® Index and FHFA's All Transactions Home Price Index. First, S&P/Case-Shiller® uses only purchase prices to calibrate their index, while FHFA's All Transactions HPI uses both purchase prices and refinance appraisals.¹⁰ Second, S&P/Case-Shiller uses selling prices recorded at county assessor's and recorder's offices, while FHFA uses data from conforming, conventional mortgages provided by Fannie Mae and Freddie Mac. Third, S&P/Case-Shiller® "value-weights" its index, meaning that more expensive homes have more influence on the index, while FHFA weights all home prices equally. Finally, S&P/Case-Shiller® does not cover 13 states, while FHFA data covers all 50 states. The FHFA created a detailed report that covers the similarities and differences between the two indexes, available at <http://www.fhfa.gov/webfiles/1163/OFHEOSPCS12008.pdf>.

¹⁰ FHFA has a separate index, the Purchase Only HPI, that uses only purchase price data. That index is discussed in the report *The House Price Index (HPI) for Purchase-Only Conventional Mortgage Transactions in Maryland, 1991 – 2009*, also on this website.