Preface

This Federal Housing Finance Agency (FHFA) research paper reviews developments in the housing sector and mortgage markets in the United States in 2011. The paper is part of FHFA’s ongoing effort to enhance public understanding of the nation’s housing finance system. The paper was prepared by Andrew Leventis, Valerie Smith, Jesse Weiher, and Ken Lam of the Office of Policy Development and Research under the supervision of Robert S. Seiler, Jr. Peter Alex, Hanna Nguyen, Colleen Yeskovich, and Alison Wardle provided research assistance.

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Housing and Mortgage Markets in 2011

Summary

The U.S. economy continued to show signs of improvement in 2011. Economic growth, as measured by real gross domestic product (GDP), was positive throughout the year. Inflation, as measured by the consumer price index (CPI), accelerated, but only slightly. Most market interest rates declined further. Financial market liquidity improved as well, and credit spreads remained close to their levels before the onset of the financial crisis in 2008. Labor market conditions continued to improve. The unemployment rate improved to 8.5 percent at the end of 2011, from 9.4 percent the year before. However, while improved, the unemployment rate remained high by historical standards.

Conditions in the housing sector remained weak in 2011. House prices continued to decline in some markets and rose modestly in others. Delinquency rates for single-family mortgages fell but remained higher than normal, whereas delinquency rates for commercial/multifamily loans declined. Foreclosure starts also declined but remained worrisomely high. Housing starts and sales came in lower than the year-ago period. The homeownership rate continued to fall, despite historically low mortgage interest rates and rising household incomes. Home affordability reached a new high.

Single-family mortgage originations declined again in 2011, primarily reflecting a slower pace of refinancing. Originations of government-insured mortgages fell sharply, and the private mortgage insurance sector continued to show signs of recovery. The multifamily mortgage market continued on the road to recovery.

Mortgage purchases and issuance of mortgage-backed securities (MBS) by Fannie Mae and Freddie Mac (the Enterprises) declined in 2011 along with the drop in mortgage originations, but the Enterprises continued to dominate conventional mortgage lending markets. Government agencies were once again the dominant issuers of single-family MBS as private-label issuance volume fell to its lowest level in decades. Issuance of multifamily MBS was up sharply to a level not seen in years. Lending by the Federal Home Loan Banks (FHLBanks) continued to fall due to both the decline in mortgage lending activity and the availability of alternative sources of financing.

Developments in the Broader Economy

The U.S. economy continued to recover slowly in 2011 from the severe recession that ended in mid-2009. Core Inflation remained low. Financial markets gained strength, and financial market liquidity improved. Job growth remained weak, however, and unemployment remained high. The Federal Reserve continued its quantitative easing efforts, which helped to bolster financial market liquidity and keep interest rates very low.
Economy Expands and Consumers Deleverage, but Recovery Remains Jobless; Financial Conditions Improve

Economic growth was less vigorous in 2011 than in 2010. Real gross domestic product grew by 1.7 percent, down from 3 percent in the previous year. Most sectors of the economy expanded at a slower rate than in 2010, and residential fixed investment continued to fall. Households continued to pay down debt accumulated before the financial crisis. Total consumer debt fell by $237 billion, which was less than the $680 billion drop in 2010, reflecting a continued decline in mortgage debt (Figure 1). The reduction in consumer debt in 2011 was due more to write-offs of defaulted loans than to net repayment by consumers of their debt obligations. Furthermore, more than $551 billion in consumer loans became seriously delinquent (past due for more than 90 days) during the year. That amount was lower than in 2010, when there were more than $756 billion in new serious delinquencies.

![Figure 1](image)

**Figure 1**

**Consumer Debt by Loan Type**

Source: Federal Reserve Bank of New York

During 2011, unemployment was unusually high for this stage of an economic recovery. The unemployment rate ranged from 4.1 to 3.5 percentage points higher than the 5 percent rate just before the start of the recession in December 2007. After other recessions in the period since World War II, the unemployment rate was never that far above the pre-recession level for that long afterward (Figure 2). The labor force participation rate fell to 63.8 percent at the end of 2011 from 64.1 percent at year-end 2010. That rate has declined steadily since its peak in July 1997 of 68.1 percent, and the decline has lessened the unemployment rate.
Financial market performance reflected the modest pace of the recovery in 2011. The performance of domestic stock indexes was mixed, with the S&P 500 falling 1 percent and the Dow Jones Industrial Average rising 5 percent for the year. Credit spreads in financial markets widened slightly relative to the previous year. The spread between the three-month London Interbank Offered Rate (LIBOR) and the three-month Treasury bill rate ranged from 15 to 56 basis points. That spread was generally higher than in 2010, when it ranged from 9 to 47 basis points, but still well below spreads in the fourth quarter of 2008 (Figure 3).

Source: U.S. Census Bureau and National Bureau of Economic Research
Interest Rates Remain Low, Prices Rebound in Response to Federal Reserve Actions

To provide liquidity and stimulate aggregate demand, the Federal Reserve kept the federal funds target rate between 0 and 25 basis points for all of 2011 and continued its policy of quantitative easing through purchases of U.S. Treasury securities; MBS guaranteed by Fannie Mae and Freddie Mac and Ginnie Mae; and, to a lesser extent, long-term debt issued by government-sponsored enterprises (GSEs). At the end of 2010, the Federal Reserve held $1.0 trillion in Treasuries and $1.0 trillion in Enterprise and Ginnie Mae MBS. The Federal Reserve continued to purchase Treasuries throughout 2011, but steadily decreased its holdings of MBS until mid-December, when it again began purchasing MBS. By the end of 2011, the Federal Reserve held over $1.7 trillion in Treasury securities—more than at any point in 2010 (Figure 4)—and nearly $850 billion in MBS.
As measured by the Consumer Price Index (CPI), the general price level, excluding food and energy, rose 2.2 percent in 2011. That was an increase from 2010, when that index rose only 0.8 percent (Figure 5). Although general price inflation was higher in 2011 than in 2010, it was still low relative to the average 12-month change in the CPI from 1958 to 2011 of 3.9 percent.
The Federal Reserve’s actions kept interest rates very low in 2011. The quarterly average yield on the one-year Constant Maturity Treasury (CMT) was 13 basis points in the first quarter of 2011 and 12 basis points for the next three quarters. Long-term interest rates fell in the first quarter, rose in the second quarter, and then fell in the third and fourth quarters. The yield on the 10-year CMT ended the fourth quarter at 1.89 percent, 141 basis points lower than in the fourth quarter of 2010. Because long-term interest rates fell more than short-term rates in 2011, the Treasury yield curve flattened over the course of the year (Figure 6).

![Figure 6](Treasury Yield Curve in 2010 and 2011.png)

Source: Federal Reserve System

**Mortgage Rates Fall**

Mortgage interest rates, which generally have followed the trend of long-term Treasury rates, fell in 2011. According to Freddie Mac’s Primary Mortgage Market Survey (PMMS), the average commitment rate on 30-year fixed-rate mortgages (FRMs) fell from 4.80 percent in January to a record low in December of 3.95 percent, 91 basis points lower than at year-end 2010 (Figure 7). For the year, the 30-year FRM commitment rate averaged 4.44 percent, 25 basis points below the average for the previous year. The average commitment rate on one-year Treasury-indexed adjustable-rate mortgages (ARMS) decreased in 2010 (Figure 8). For the year, the one-year ARM commitment rate averaged 2.75 percent, 40 basis points lower than the year before.
The spread between commitment rates on FRMs and ARMs held relatively stable throughout the first seven months of 2011, at about one and one-half percentage points (Figure 8). However, the FRM-ARM spread fell to 117 basis points in December, as FRM commitment rates fell while ARM commitment rates were stable.

Source: Freddie Mac’s Primary Mortgage Market Survey
Housing Market Developments

The housing market generally was in a healing mode in 2011. Almost all housing market indicators remained far from historical norms, but some signs of improvement were evident. Those improvements were supported in no small part by extraordinarily low interest rates and further intensification of already-significant government efforts to aid homeowners in financial distress. Notable bright spots during the year included declines in mortgage delinquencies, shrinking inventories of homes available for sale, and rises in construction activity for multifamily properties.

Home Values Decline Further

For the nation as a whole, home prices continued to drop in 2011. The price weakness exhibited in the latter half of 2010, following the expiration of certain homebuyer tax credits, continued, as the Federal Housing Finance Agency (FHFA) purchase-only House Price Index (HPI) fell 2.9 percent between December 2010 and December 2011 (Figure 9). Other house price metrics showed similar weakness. The S&P/Case-Shiller 20-city composite index, which reflects a weighted average of trends in 20 large cities across the country, evidenced a 3.4 percent decline over the same December 2010-to-December 2011 interval.

Source: FHFA and Standard and Poor’s
Price changes varied significantly across the country, with some areas actually posting small gains for the year and others suffering further declines from already-depressed price levels. Generally, the strongest markets were in the middle of the country (Figure 10). Most of those states had very modest unemployment rates, in some cases because of significant employment gains in the oil and natural gas industries. Market weakness was most pronounced in the far West and select areas in the Midwest and along the East coast. Between the fourth quarters of 2010 and 2011, prices fell by four percent or more in eleven states. Although the declines represented the continuation of deep and lengthy housing busts in several of those states, they reflected newer weakness in other, less-beleaguered states. Although Nevada had the largest decline, Washington, Rhode Island, Delaware, Illinois, and New Jersey all saw prices drop by more than 5 percent.

Despite the house price declines, renting homes generally became more expensive. The home price-to-rent ratio, a commonly cited measure of the cost of buying homes relative to the cost of renting, fell 3.2 percent in 2011, slightly less than the 4.1 percent decline in 2010 (Figure 11). The decline in the ratio means that purchasing a home became relatively more affordable than renting during the year. The affordability of homes has been improving steadily since home values peaked in the mid-2000s, and by the end of 2011 relative affordability was at levels not seen since 1999.
An alternative metric of home affordability that focuses on the costs of buying homes relative to household incomes conveys a similar message about 2011. The Housing Affordability Index (HAI) published by the National Association of Realtors measures the ratio of median household income to the income that would be necessary to finance a median-priced home. That ratio, which rises when property values or mortgage rates fall, increased from already elevated levels in 2011. In the fourth quarter of 2010, the index was at 182.5, meaning that the median household had 82.5 percent more income than was necessary to finance a median-valued home (Figure 12). By the fourth quarter of 2011, as a result of declines in home prices and mortgage rates, the index had risen to 195.7. That was the greatest affordability level ever recorded in the forty-year coverage period of the data series. During the housing boom, the HAI was as low as 103.
Negative Equity Rates Drift Lower

According to data published by CoreLogic, the overall share of mortgaged homes having negative equity—the home’s value was less than the outstanding loan balance—dipped slightly in 2011. In the fourth quarter of 2010, the share of mortgaged properties with negative equity (sometimes described as “underwater” homes) was estimated to be 23.1 percent. Four quarters later, by the end of 2011, the share was 22.8 percent.

Although the negative equity share for the nation as a whole fell, several states experienced sizeable increases. Interestingly, those states that already had high negative equity shares at the beginning of 2011 generally saw the greatest increases during the year. For example, Nevada’s negative equity share rose 4.3 percentage points from 61.1 percent in the fourth quarter of 2010 to 65.4 percent in the final quarter of 2011 (Figure 13). California, Michigan, Arizona and Florida—the states with the next highest rates of negative equity going into 2011—saw increases of 1.5 to 3.1 percentage points in their respective shares. As Figure 10 above indicates, each of those five states experienced house price declines in 2011. By contrast, the vast majority of states with middling negative equity shares at the beginning of 2011 saw improvements.
On the surface, the notion that home prices declined over the course of 2011 while negative equity shares dipped in most areas may seem counterintuitive. That result is possible because, during the year, many new loans were originated. Most of the fresh loans entering the sample presumably had positive equity and, thus, their inclusion acted to decrease the overall share of mortgages with negative equity. Also at work was the fact that a significant number of mortgages with negative equity were terminated, often through foreclosure, during the year. Overall, after factoring in those effects as well as changes in home prices, CoreLogic found that roughly 20,000 more mortgaged homes were underwater in the fourth quarter of 2011 than in the fourth quarter of 2010. Because the total number of mortgaged properties in the country grew by more than 800,000, however, the overall share of properties with negative equity dropped during the year.

Source: CoreLogic
Real Estate Sales Volumes Remain Stable

The sales rates for existing and new homes remained relatively constant throughout 2011. While 2010 saw sharp fluctuations caused by the expiration of certain homebuyer tax credits, the pace of sales in 2011 fluctuated within extraordinarily tight bands. For existing homes, the seasonally adjusted annualized rate of sales varied between 4.1 and 4.4 million units, and new homes generally sold at a pace of between 280 and 340 thousand units (Figure 14). Sales volume was held down by relatively weak demand from first-time homebuyers (see Box A).

Source: Census Bureau and National Association of Realtors
Box A: Sales to First-Time Homebuyers in 2011

In 2011, one-third of existing home sales had a purchaser that was a first-time homebuyer, according to the National Association of Realtors. The percentage ranged from 29 to 36 percent during the year (Figure A-1), and reflected a decrease from the prior two years.

Source: National Association of Realtors

One cause of lower demand in 2011 was the absence of new homebuyer tax credits. In 2008, 2009, and early 2010, the Congress provided federal tax credits of between $7,500 and $8,000 to “new” homebuyers—individuals who had not owned a home in the preceding three years. Although the Congress extended other tax credits to existing homeowners during those years, the program was shorter-lived and the credits provided were lower. Thus, for new homebuyers the relative benefits of purchasing homes were elevated from 2008 to early 2010 relative to last year.

The presence of the tax credits likely served to “bring forward” sales to new homebuyers. The share of transactions going to first-time homebuyers generally exceeded 40 percent in 2009 and early 2010, but immediately plummeted to around 30 percent when the tax credits expired in mid-2010 (Figure A-1). The share remained at that low level in 2011, suggesting that many first-time homebuyers who would have bought 2011 were induced to buy earlier because of the tax incentives.
With continued home price weakness and elevated mortgage delinquency rates throughout 2011, distressed sales—which include sales of real-estate-owned (REO) properties and short sales—accounted for a sizeable share of real estate transactions during the year. According to data from CoreLogic, on average 28 percent of 2011 sales were estimated to be in distress, up slightly from 27 percent in 2010 (Figure 15). Consistent with seasonal patterns evidenced in 2009 and 2010, the first three months of 2011 posted higher rates of distressed sales than the remainder of the year. More than 30 percent of transactions were distressed in first quarter of 2011, while in subsequent months the distressed share ranged from 25 percent to 29 percent.

![Figure 15](image)

Source: CoreLogic

**Weakness Persists in Single-Family Construction Activity; Further Strengthening Evident in Multifamily**

Building activity for single-family houses (properties with one to four units) was extraordinarily low in 2011. The last two months of the year saw some signs of growth, but in the preceding months, the pace of sales was near historic lows. On average, the annualized rate of housing starts during the year was about 433,000 units, down from 472,000 in 2010 and far below the 1-2 million range typical between 1959 and 2007 (Figure 16).
In contrast to the lackluster single-family market, construction activity for multifamily properties (those with five or more units) showed significant improvement in 2011. While the annualized rate of housing starts for multifamily properties averaged 102,000 units in 2010, the average pace in 2011 was 165,000, with a generally upward trajectory. In the second half of the year, the pace of construction quickened to an annualized rate of about 185,000.

**Real Estate Inventories Shrink**

The very low rates of construction activity for single-family dwellings over the last few years have meant that little new housing supply has entered the market. At the same time, household formation, though weak, has been positive in recent years. In 2011 that combination began to shrink the inventory of homes available for sale. In the second half of the year, the inventory of existing for-sale properties, as measured in months of supply—that is, the number of properties for sale divided by the rate of sales—fell from 9.3 months to 6.4 months (Figure 17). The rate of home sales remained relatively constant over that period, and, thus, the decline in the months-of-supply metric was attributable to a reduction in the actual number of properties for sale. According to the National Association of Realtors, roughly 2.3 million properties were for sale in December, down significantly from 3.0 million in August.
In the current market environment, properties that are listed for sale represent only part of the total potential market supply, which also includes shadow inventory—homes whose borrowers are seriously delinquent on their payments or that are already in the foreclosure process and, thus, are likely to be sold in short sales or out of lenders’ or investors’ portfolios of REO. Like the visible inventory, the shadow inventory fell in 2011. According to CoreLogic, which calculates shadow inventory as the sum of properties in REO portfolios or backing loans in the foreclosure process or that are seriously delinquent, the shadow inventory exceeded 2 million homes in late 2010, but declined to about 1.6 million homes at the end of 2011.

Vacancy Rates Slide

Excluding rentals, the fraction of homes that were vacant in 2011 fell slightly from 2010 levels. The share of empty properties fell from an average of 2.57 percent in 2010 to 2.45 percent in 2011 (Figure 18). Although still substantially above the 1-2 percent range that was typical during the housing boom, the 2.45 percent vacancy rate was significantly lower than the peak rates in 2008, when nearly 3 percent of non-rental homes were vacant.

Source: Census Bureau
For rental properties, the 2011 vacancy rate ranged from between 9.2 and 9.7 percent, roughly in line with the rate from the fourth quarter of 2010. Consistent with data suggesting that rental markets tightened somewhat in 2011, that point range was well below the double-digit range predominant in 2008 and 2009.

**Mortgage Delinquency Rates Ease, Remain Concentrated in Certain States**

Continuing a trend that has been apparent since late 2009, rates of single-family mortgage delinquency fell in 2011. The origination of new, higher-quality loans and the termination through foreclosure of many delinquent mortgages contributed to lower delinquency rates. The delinquency rate for all single-family loans declined from 8.6 percent to 7.7 percent between the fourth quarters of 2010 and 2011 (Figure 19). The delinquency rate for prime loans fell from 6.3 percent to 5.3 percent, and the subprime delinquency rate declined from 27.4 percent to 24.4 percent.
In contrast, the performance of mortgages insured by the Federal Housing Administration (FHA) did not improve in 2011. Although the FHA delinquency rate did fall somewhat in the first half of the year, a sharp uptick in that rate occurred in the second half, more than offsetting the earlier decline. For the fourth quarter, the FHA delinquency rate was at 9.0 percent, more than a percentage point above the rate for the second quarter. The fourth-quarter rate was within one-half of a percentage point of the peak rate of 9.4 percent posted in the fourth quarter of 2009. The different behavior of FHA delinquency rates reflects the concentration in FHA’s portfolio of mortgages originated since the onset of the crisis; by 2011, those loans were entering their peak default risk years.

The geographic distribution of serious mortgage delinquencies remained heavily concentrated in certain states in 2011. The four states with the greatest rates of serious mortgage delinquency had rates that were markedly above those in other states. According to Mortgage Bankers Association estimates for the fourth quarter, the four highest-delinquency states—Florida, Nevada, New Jersey, and Illinois—had rates of between 10.9 and 18.4 percent (Figure 20). Except for Nevada, those states have particularly slow foreclosure processes. The range for the next four highest-delinquency states was between 8.3 and 9.2 percent. Several states, including some with significant mining and oil extraction industries, had very low mortgage delinquency rates in 2011. States in the West North Central part of the country, including Montana, the Dakotas, Wyoming, and Nebraska, posted fourth quarter rates of serious mortgage delinquency of 3.3 percent or less. Similarly, Alaska’s fourth quarter rate was a healthy 2.4 percent.
While still elevated, delinquency rates fell substantially on a year-over-year basis in several states in 2011. Between the fourth quarters of 2010 and 2011, the rate of serious mortgage delinquency fell by more than one percentage point in seven states. Improvement was particularly substantial in four states that were hit hard by the housing market bust: Arizona, California, Michigan, and Nevada. In all of those states, the serious delinquency rate fell by more than two percentage points in 2011. Mortgage performance deteriorated in only a few states. The largest increases in serious delinquency rates were in Vermont (up 0.7 percentage points) and New Jersey (up 1.2 percentage points).

![Map of Serious Delinquency Rate by State](image)

Source: Mortgage Bankers Association National Delinquency Survey 2011Q4

Foreclosure activity remained at elevated levels throughout the country in 2011, but foreclosure starts remained well below peak levels. Mortgage modification initiatives, improved loan performance, and lingering legal issues surrounding the foreclosure process likely accounted for the lower level of starts. As a share of outstanding subprime mortgages, the proportion of loans that went into foreclosure varied from 2.8 to 3.3 percent in the four quarters of 2011, roughly in the same range as in 2010, but well below the rates in 2008 and 2009, the high points of foreclosure activity. For prime loans, an average of 0.8 percent of outstanding mortgages went into foreclosure in each quarter of 2011 (Figure 21). That rate represents a small decline vis-à-vis the 2010 average rate of about 1.0 percent.
Mortgage Modifications Decline

According to data released by the mortgage industry group HOPE NOW, a total of 1.05 million homeowners received permanent modifications of their delinquent mortgages in 2011. That represented a 40 percent decline from the 1.76 million loan modifications completed in 2010. Among all loan modifications, approximately 34 percent were made through the Home Affordable Modification Program (HAMP), up from 29 percent in 2010 (Box B provides detail on HAMP modification activity in 2011).
Box B: The Home Affordable Modification Program in 2011

Launched in February 2009 as part of the Administration’s efforts to stabilize the housing market and avoid unnecessary foreclosures, the Home Affordable Modification Program (HAMP) offers eligible homeowners opportunities to work with lenders and servicers to modify the terms of their mortgages to make the payments more affordable.

A HAMP loan modification reduces a homeowner’s monthly mortgage payment to 31 percent of his verified gross (pre-tax) income. To create an affordable payment, the servicer modifies the loan in the following steps: (1) a reduction in the interest rate to as low as two percent, (2) an extension of the term to up to 40 years, and (3) principal forbearance. A portion of the principal can also be forgiven, although that is optional on the part of the servicer. Qualified homeowners must complete a trial period of three to four months to show they will be able to make their reduced payments on time before their loan modification may become permanent.

Through December 2011, about 1.7 million homeowners had entered HAMP trial periods, up 20 percent from the end of 2010. A total of 933,327 borrowers had permanently modified their mortgages, representing a 61 percent increase from year-end 2010. New trial modifications averaged about 23,000 per month and new permanent modifications 28,000 per month in the second half of 2011. Over the course of the year, the volume of active permanent modifications increased as active trials were converted to permanent status, so that trial volume continued to decline. At year-end 2011, the cumulative estimated reduction in monthly mortgage payments for homeowners with permanent modifications exceeded $10.5 billion, up from $4.5 billion one year before. The median monthly savings was $531 as of December 2011—37 percent of the median monthly payment before modification—and both figures were comparable to those reported for the end of 2010.

At the end of 2011, almost all active permanent modifications involved interest rate reductions. In addition, term extension and principal forbearance had been used in 59 percent and over 30 percent, respectively, of modifications completed to date. According to the Office of the Comptroller of the Currency, homeowners that received HAMP permanent modifications continued to exhibit lower redefault rates than all borrowers who received modifications. Twelve months after receiving permanent modifications, less than 16 percent of homeowners have missed three consecutive payments.

HAMP modifications carried out by Fannie Mae and Freddie Mac accounted for about half of overall HAMP volume in 2011. Both Enterprises have also been aggressively carrying out their own loan modifications and other home retention actions for homeowners determined ineligible for HAMP and related programs. During 2011, the Enterprises completed a total of 322,108 loan modifications, down 44 percent from the 2010 volume. HAMP modifications comprised 57 percent of all modifications completed by the Enterprises in 2011, up from 49 percent in 2010.
The remaining 64 percent of loan modifications in 2011 were proprietary modifications performed by lenders, guarantors, and the Federal Housing Administration (FHA) on loans deemed ineligible for HAMP. About 82 percent of such modifications were fixed-rate modifications with an initial fixed-interest rate period of five years or more. Modifications that involved a reduction of the principal and interest payments accounted for 80 percent of all proprietary modifications in 2011. Both figures were comparable to those reported for 2010. Modifications with a reduction in principal and interest payments of 10 percent or more represented 63 percent of modifications in 2011, up from 59 percent in 2010.

Homeownership Rate Slides Further

A number of factors were in place in 2011 that, all else equal, would have improved the national homeownership rate: home prices fell, rents increased, and there was significant pent-up demand carried over from prior years. Despite those factors, the homeownership rate continued to decline during the year. By the fourth quarter, the homeownership rate—defined as the share of non-vacant housing units occupied by homeowners—fell to 66.0 percent (Figure 22). That was ½ of a percentage point below the rate in the fourth quarter of 2010 and fully 3.2 percentage points below the all-time high posted in the fourth quarter of 2004.

![Homeownership Rate in the U.S.](image)

Source: Census Bureau
Multifamily Market Continues to Rebound

Strong demand for apartments and pricing momentum from 2010 led to higher multifamily property prices in 2011, although price growth was less robust than in the previous year. A commonly-cited metric of price movements for apartment buildings valued at $2.5 million or more, the Moody’s/Real Commercial Property Price Index (CPPI), rose 4 percent between the fourth quarters of 2010 and 2011 (Figure 23). That increase followed an 11.8 price rise in the preceding four quarters. As of the fourth quarter of 2011, apartment building prices were up 24.5 percent from their low point in the second quarter of 2009. That large increase contrasts sharply with the single-family market, where home prices have fallen by more than 8 percent over the same interval.

![Figure 23: Prices for Apartment Buildings 2000-2011](image)

The demand for apartments remained robust in 2011. Increasing new supply caused the share of unfurnished apartments rented within three months of completion to fall from 2010 levels, but that share was still well above values in prior years. In 2011, roughly 59 percent of newly completed unfurnished apartments were rented within 3 months (Figure 24). Although well below the extraordinary 61 percent logged in 2010, the 2011 proportion was still above the 50-54 percent range that characterized the rental market in 2007-2009.
The performance of commercial and multifamily mortgages improved in 2011. After rising several-fold between 2008 and 2010, delinquency rates fell for commercial/multifamily loans held by all investor types, according to estimates published by the Mortgage Bankers Association (MBA), likely as a result of an improving macroeconomy and increases in apartment rental rates. Defining delinquency to including mortgages that were more than 60 days late and those in the foreclosure process, Fannie Mae’s multifamily delinquency rate was 0.59 percent in the fourth quarter of 2011, down from 0.71 percent four quarters before (Figure 25). Also under that definition of delinquency, Freddie Mac’s multifamily delinquency rate fell from 0.26 percent to 0.22 percent. Banks and life Insurance companies saw similar declines in proportional terms. Even loans financed with commercial MBS (CMBS)—the investor group that experienced the most modest improvement in loan performance—saw measurable declines in delinquency rates.
Developments in the Primary Mortgage Market

High unemployment, continued tight lending conditions and uncertainty about house prices, and a slight drop in refinancing activity resulted in a further decline in single-family mortgage lending in 2011, despite low mortgage rates. The government-insured segment of the origination market showed a slight contraction, but there was improvement in the non-agency jumbo market and in new business written by private mortgage insurers. Historically low interest rates helped to keep the volume of mortgage refinancing high, which again drove single-family lending activity. Multifamily originations continued their rebound. Continued declining home prices reduced housing equity and equity extractions for homeowners refinancing their mortgages. Despite widening spreads, borrowers continued to choose overwhelmingly fixed-rate mortgages (FRMs) over adjustable-rate mortgages (ARMs). The broker channel share of originations market shrunk further.

Single-Family Mortgage Originations Fall Sharply

Despite historically low mortgage interest rates, originations of single-family mortgages declined sharply in 2011. According to Inside Mortgage Finance Publications, single-family originations fell 17 percent to $1,350 billion, the lowest level in a decade (Figure 26). The decrease was due mainly to a near 20 percent decline in the volume of refinance lending from 2010 to 2011.
Conventional/conforming mortgages—those that meet Enterprise underwriting and purchase eligibility criteria—continued to dominate single-family lending in 2011, accounting for approximately two-thirds of originations, although volume was approximately 18 percent less than in 2010 (Figure 27). The government-guaranteed segment of the mortgage market accounted for 21 percent of originations, down from 23 percent the year before. The decline reflects a reduction in Federal Housing Administration (FHA) endorsements, which fell nearly a third from their dollar volume in 2010. Mortgages guaranteed by the Department of Veterans Affairs (VA) accounted for six percent of single-family lending, up from four percent the year before.

Source: Inside Mortgage Finance
Private mortgage insurers increased their business volume again in 2011. According to Inside Mortgage Finance Publications, net new insurance of conventional loans written by those firms rose approximately 25 percent to $87 billion. That represented about seven percent of total single-family mortgage originations, up from four percent in 2010. Insurance in force for those firms currently writing mortgage insurance totaled $703 billion at the end of 2011.

Activity in the home equity lending and nonprime mortgage markets remained subdued in 2011, but the non-agency jumbo market continued to show signs of recovery. Non-agency jumbo lending totaled $118 billion and accounted for 8.7 percent of mortgages originated in the year, up from 6.4 percent in 2010. According to Inside Mortgage Finance Publications, originations of agency jumbo loans—single-family mortgages that have principal balances above the national conforming loan limit but are eligible for Enterprise acquisition because the properties are in designated “high-cost” areas—held steady in 2011 at about $85 billion. Beginning in the fourth quarter of 2011, the maximum loan limits for “high-cost” areas fell from $729,750 to $625,500 for Enterprise-acquired loans but remained at the higher amount for FHA-insured mortgages (see Box C).
In 2007, the conforming loan limit—the maximum size of single-family mortgages eligible for purchase by Fannie Mae and Freddie Mac—was $417,000 in the contiguous United States. At a statutorily-defined 87 percent of the Enterprise loan limit, the maximum loan amount for a mortgage insured by the Federal Housing Administration (FHA) was $362,790.

In order to ease stresses on the jumbo mortgage market, in early 2008 Congress temporarily raised the Enterprise and FHA loan limits in the Economic Stimulus Act of 2008 (ESA). The limits were to be a function of local median home values, but could be as high $729,750 in the contiguous United States. The temporary limits for both Enterprise and FHA loans were based on the same formula and would be the same in most “high-cost” areas.

As the temporary ESA limits were set to expire in 2009, in mid-2008 the Housing and Economic Recovery Act (HERA) set forth a “permanent” formula that would apply to loans acquired after the expiration of the temporary limits. The maximum loan limit under the HERA formula was $625,500 in the contiguous U.S. for both Enterprise-acquired and FHA-insured mortgages.

Although the slightly-more-modest HERA limits took effect in early 2009, Congress soon temporarily returned the Enterprise and FHA limits to their ESA levels. Those temporary limits, in fact, were further extended into 2010 and 2011 in subsequent legislative measures.

The legislation that extended the higher ESA limits into 2011 only did so for loans originated in fiscal year 2011. As the federal government’s fiscal year extends through September, the extension meant that—without further Congressional intervention—the higher loan limits would expire on September 30th. The slightly-lower HERA limits would apply to loans originated after September 30th.

After significant deliberation, Congress ultimately allowed the Enterprise loan limits to fall to the levels set in HERA. Accordingly, in the fourth quarter of 2011, the maximum conforming mortgage amount fell in roughly 250 counties in the United States. In many of those counties, the limit fell from $729,750 to $625,500.

Although Congress allowed the Enterprise loan limits to decline, it kept the limits on mortgages endorsed by FHA at the higher level. Thus, after September 30th, FHA loan limits were higher than Enterprise limits in high-cost areas. For example, in Los Angeles, the FHA limit was $729,750 whereas the Enterprise loan limit was $625,500. The higher FHA limits represented a significant departure from the historical norm, which was that FHA limits were well below the Enterprise limits.
Historically low mortgage rates continued to drive refinancing activity in 2011, which again drove single-family originations. The refinance share of originations fell slightly to 65 percent. Many borrowers had refinanced previously, and limited homeowner equity and the tightening of lending standards since 2007 prevented others from refinancing. The refinance share of single-family lending in 2011 exceeded the average of 56 percent for the decade that ended in 2009 (Figure 28).

Applications for mortgages to purchase homes remained well below pre-crisis levels in 2011 and were even below levels in early 2010 (Figure 29). The weakness of purchase-money lending reflected uncertainty about home prices and the job market.

Source: Inside Mortgage Finance publications
Homeowner Equity Continues to Shrink

Homeowner equity continued to fall in 2011. According to the Federal Reserve’s flow of funds accounts, at the end of 2005 equity in household real estate totaled $13.2 trillion, which represented nearly 60 percent of the value of that real estate. By the end of 2011, homeowner equity had fallen by more than one-half of the 2005 level to $6.5 trillion, which represented 39.9 percent of the value of household real estate. Between 2010 and 2011, household real estate equity fell 2.6 percent (to $16.6 trillion), while mortgage debt outstanding fell 2.3 percent (to $9.9 trillion). That resulted in a year-over-year decline in household equity of 3.1 percent (Figure 30).
Adjustable-Rate Share of Applications Remains in Single-Digits

Applications for single-family mortgages with adjustable rates rose slightly in 2011. According to Freddie Mac’s PMMS, applications for single-family ARMs represented over six percent of all applications in 2011 (Figure 31). As noted above, spreads between commitment rates on fixed- and adjustable-rate mortgages widened in 2011, even though fixed rates fell below four percent in the last quarter of the year. Historically low fixed rates provided strong incentives for borrowers to lock in those rates.
According to Freddie Mac survey results, the 5/1 hybrid ARM continued to be the most popular adjustable-rate loan product offered by lenders, followed by the 3/1 and 7/1 hybrid ARMs. Homebuyers continued to shy away from traditional 1-year ARMs because of the potential for larger payments if future short-term interest rates are significantly higher.

**Credit Quality of Purchase-Money Originations Suggests Easing in Credit Standards**

The terms of conventional fixed-rate mortgages originated in 2011 suggest some easing in lenders’ lending requirements. According to FHFA’s Monthly Interest Rate Survey (MIRS), the average loan-to-value (LTV) ratio of single-family conventional fixed-rate, purchase-money mortgages rose four percent in 2011 to about 77 percent. At the same time, the proportion of such loans with LTV ratios greater than 90 percent jumped by two-thirds to 15 percent (Figure 32).
Mortgage Lending and Servicing Become Slightly Less Concentrated

Although very large banks dominated residential mortgage finance again in 2011, the origination and servicing markets become a bit less concentrated. According to Inside Mortgage Finance publications, the top 25 lenders’ share of originations declined from 89.1 percent in 2010 to 86.6 percent in 2011 (Figure 33). The top ten originators decreased their share of originations a little more, from 75.6 percent in 2010 to 72.6 percent in 2011. Larger still was the decline in the share of the top five originators, which decreased from 63.7 percent to 59.1 percent. Of the largest banks, Bank of America showed the biggest decline in originations in 2011—49 percent. Residential mortgages originated by the top five lenders fell 20 percent in 2011 to a total $798 billion from about $1 trillion the year before. Excluding Bank of America, originations among the top four lenders declined less than eight percent in 2011.
Similar to the production side of residential mortgage finance, certain very large banks decreased their mortgage servicing operations in 2011. Between 2007 and 2010, the market share of the top five mortgage servicers had increased from 36 percent to 58 percent, according to Inside Mortgage Finance publications (Figure 34). Also during that period, the market share of the top three mortgage servicers rose from 25 percent to 49 percent. However, in 2011, the market share of the top five servicers dropped to 55 percent and the share of the top three servicers fell to 46 percent. Some mid-tier and community banks, correspondingly, showed sizable increases in their servicing business in 2011.
While mortgage lenders continue to rely on multiple channels of production to originate single-family loans, the broker channel has become increasingly less popular. According to Inside Mortgage Finance publications, the broker share of originations fell for the sixth consecutive year, to nine percent of loans originated in 2011, down from 12 percent in 2010 and less than one-third of the share held in 2005 (Figure 35). The retail share of originations rose from 54.7 percent in 2010 to 57.2 percent in 2011. The share of loans acquired from correspondents (lenders that close loans in their own name and sell them) held steady at about one-third of all lending.

Source: Inside Mortgage Finance
Multifamily Lending Continues to Recover

Multifamily mortgage originations rose for the second consecutive year in 2011. According to data compiled by the Mortgage Bankers Association (MBA), originations of multifamily loans, which had declined about two-thirds between 2007 and 2009, increased 31 percent in 2010 and over 14 percent in 2011, to a preliminary estimate of $77 billion in the latter year (Figure 36). Fannie Mae and Freddie Mac provided considerable liquidity to the recovering multifamily sector, as did FHA. In fiscal year 2011, which extended through the third quarter, FHA endorsed 1,143 apartment loans totaling $11.6 billion. The comparable figures for fiscal year 2010 were 661 and $5.1 billion, respectively. Wells Fargo was the top originator of multifamily loans in 2011, providing funding for more than 40 percent of originations. Contributing to the growth of multifamily lending were low mortgage interest rates, improving apartment-sector economics, and the return of traditional lenders that had curtailed activity during the recession.
Secondary Mortgage Market Developments

The decline in activity in the primary market for single-family mortgages carried over into the secondary market in 2011. Fannie Mae and Freddie Mac both experienced double-digit drops in their issuance of single-family mortgage-backed securities (MBS). Ginnie Mae’s single-family issuance volume fell as well. However, the three were very active in the multifamily secondary market in 2011, and their issuance of multifamily MBS rebounded.

Single-Family MBS Issuance Declines; Multifamily Issuance Surges

Following activity in the primary mortgage market, issuance of MBS backed by single-family mortgages fell 17 percent in 2011 to $1.2 trillion, the lowest level since 2000 (Figure 37). Although governmental entities overwhelmingly dominated mortgage securitization in 2011, their issuance declined sharply. Fannie Mae showed the smallest decline (8.2 percent), while Freddie Mac and Ginnie Mae issuances were down about 20 percent. For the third consecutive year, private-label issuers remained virtually inactive. Private-label MBS issuance, which peaked in 2005 at approximately $1.2 trillion, was less than one-half 2010’s level and accounted for approximately two percent of total MBS issued in the U.S. in 2011.

Enterprise issuance of multi-class securities, mostly Real Estate Mortgage Investment Conduits (REMICs) declined in 2011, due to lower activity at Fannie Mae. Freddie Mac showed an increase in its multiclass issuance of 22 percent to $167 billion, whereas issuance at Fannie Mae declined 22 percent to $139 billion. According to Inside Mortgage Finance publications, Ginnie Mae REMIC issuance volume was down over 40 percent in 2011 to about $101 billion.
Approximately 83 percent of the estimated $1,350 billion of mortgages originated in 2011 were securitized (Figure 38). According to Inside Mortgage Finance publications, 93 percent of conforming loans and virtually all FHA/VA mortgages were securitized. However, less than one percent of prime jumbo loans were securitized.

Unlike single-family secondary market activity, issuance of MBS backed by multifamily mortgages rose sharply in 2012, as both Fannie Mae and Freddie Mac set issuance records. Fannie Mae issuance increased 29 percent to $34 billion. Freddie Mac’s issuance was up 52 percent to $12.6 billion. Issuance of MBS backed by multifamily loans by private entities showed signs of recovery as well but fell well behind pre-crisis levels (Figure 39). Based on MBA’s preliminary estimates of originations, Enterprise multifamily issuance as a share of multifamily originations increased again in 2011 to 60 percent, up from about 51 percent the year before.
The high volume of FHA multifamily endorsements in 2011, to be discussed below, translated into higher multifamily MBS guaranteed by Ginnie Mae during the year. According to data compiled by the Securities Industry and Financial Markets Association (SIFMA), Ginnie Mae’s multifamily MBS outstanding increased by $8.3 billion in 2011, to $60.5 billion.
Enterprises’ Mortgage Purchase Volume Declines

Following the pattern in single-family mortgages originated in 2011, both Fannie Mae and Freddie Mac reduced their purchases of single-family loans. Combined Enterprise purchases of single-family mortgages declined about 12 percent to about $879 billion (Figure 40). Freddie Mac’s purchases totaled $321 billion in 2011, down 17 percent to the lowest level since 2000. Fannie Mae’s purchases were $558 billion, down eight percent to the lowest level since 2006.

Source: Fannie Mae and Freddie Mac

Enterprise multifamily purchases increased in 2011 by more than 36 percent, to about $44 billion. That was the first increase since 2007, and the largest purchase volume since 2008. Fannie Mae provided $24 billion of multifamily financing in 2011, an increase of 40 percent from $17 billion in the previous year. Freddie Mac’s multifamily purchases increased to $20 billion from $15 billion in 2010. Combined Enterprise purchases of multifamily mortgages represented about 58 percent of multifamily originations in 2011 (based on the MBA’s preliminary estimates, shown in Figure 35 above), up from 47 percent the year before (Figure 41).
Credit Quality of Enterprise Single-Family Purchases Shows Little Change

After a period of tightening of underwriting standards leading up to and following the onset of the housing market crash, indicators of the credit quality of loans purchased by Fannie Mae and Freddie Mac have stabilized in recent years. Between 2003 and 2007, the weighted average loan-to-value (LTV) ratio of single-family mortgages purchased by Fannie Mae rose from 68 percent to 76 percent (Figure 41). That ratio fell to 67 percent in 2009 and rose a percentage point between 2010 and 2011. At Freddie Mac, the average LTV ratio rose from 68 percent to 74 percent between 2003 and 2007, declined to 66 percent in 2009, and was at that level in 2011, down one percentage point from 2010.

The borrower credit scores, calculated using models developed by Fair Isaac Corporation (FICO), of mortgages acquired by Fannie Mae and Freddie Mac declined between 2003 and 2007 and rose toward the end of the decade (Figure 42). The weighted average FICO score of loans purchased by Fannie Mae during the first period declined from 721 to 716, rose sharply in 2008 to 736 percent, and has been mostly stable thereafter at about 762. At Freddie Mac, the average FICO score decreased from 729 in 2003 to 718 in 2007, rose to 734 in 2008, and was generally stable between 2009 and 2011.
The proportion of single-family mortgages with high LTV ratios purchased by each Enterprise rose in 2011 (Figure 43). The share of loans with LTV ratios greater than 90 percent purchased by Fannie Mae rose to nine percent, up from seven percent in 2010. The proportion for Freddie Mac in 2011 increased to ten percent from four percent the year before.

The share of refinance mortgages purchased by the Enterprises decreased in 2011. In addition, continued shrinkage of the equity of many homeowners reduced the cash-out share of the refinance loans the Enterprises purchased. Fannie Mae’s refinance share of purchases decreased slightly to 76 percent, down from 78 percent in 2011. Cash-out refinancings accounted for 22 percent of refinance loans purchased by that Enterprise, compared with 26 percent the year before. Freddie Mac’s refinance share of purchases fell to 78 percent; the refinance share was 59 percent in 2008. Cash-out refinancings accounted for 23 percent of that Enterprise’s refinance mortgages purchased in 2011, compared to 26 percent the year before.

Source: Fannie Mae and Freddie Mac
Figure 43
Average LTV Ratios of Enterprise Single-Family Purchases and Percentage of Purchases with LTV > 90 Percent

Source: Fannie Mae and Freddie Mac

Total Residential Mortgage Debt Outstanding Falls Further

Total residential mortgage debt outstanding fell again in 2011, to $11.1 trillion, the lowest level since before the financial crisis began. That decline was driven by a two percent drop in single-family mortgage debt, to $10.3 trillion, the fourth consecutive annual decline. Write-offs due to foreclosures, short sales, and loan modifications all likely contributed to the decline in single-family mortgage debt outstanding. On the other hand, multifamily debt outstanding rose in 2011, albeit slightly—by less than one percent. At year’s end, multifamily debt outstanding totaled $840 billion and represented 7.6 percent of total residential debt outstanding, up from 7.4 percent the year before and 6.3 percent before the onset of the financial crisis.

Each Enterprise’s total mortgage book of business—mortgage assets held for investment plus MBS held by others—fell in 2011. Fannie Mae’s total book of business declined more than one percent to $3.2 trillion, slightly more than the previous year. The decline in that Enterprise’s book of business reflects the shedding of mortgage assets held for investment pursuant to the Treasury Senior Preferred Stock Purchase Agreements (PSPAs). Freddie Mac’s total book of business declined 4.1 percent, compared to a drop of 3.8 percent the prior year, to approximately $2.1 trillion. The decline in that Enterprise’s book of business reflects decreases both in the volume of mortgage assets held for investment and in the volume of MBS held by third parties. Notwithstanding their falling books of business, Fannie Mae and Freddie Mac continued to hold and guarantee a significant portion of the nation’s outstanding residential mortgage debt, approximately 47 percent at the end of 2011 (Figure 44).
Fannie Mae, Freddie Mac, and Ginnie Mae, along with other governmental entities, continued to be the largest group of investors in multifamily mortgage debt. Those entities and life insurers were the only groups to show an increase in multifamily investment in 2011. ABS issuers showed the largest decline in investment in multifamily mortgage debt, in both relative and absolute terms (see Figure 45).
Enterprises Continue to Reduce Mortgage Asset Holdings

At year-end 2011, each Enterprise’s PSPA with the Department of the Treasury required that, starting on December 31, 2010 and each year thereafter for as long as the Enterprise is subject to the PSPA, the Enterprise reduce its mortgage assets to 90 percent of the level of those assets it was allowed to hold as of the end of the previous year until the maximum size of the assets reaches $250 billion. The PSPAs allow Fannie Mae and Freddie Mac each to hold a maximum of $900 billion of mortgage assets as of the end of 2009 and $810 billion and $729 billion of mortgage assets as of the end of 2010 and 2011, respectively. In August 2012, the PSPAs were amended to require a faster reduction.

During 2011, Fannie Mae decreased its holding of mortgage investment assets by more than 10 percent to $708 billion. The decrease occurred in all asset groups—whole loans, Enterprise and Ginnie Mae mortgage securities, and private-label mortgage securities. The largest decline occurred in agency securities—primarily Fannie Mae’s own securities—followed by private-label securities (e.g., MBS backed by subprime and Alt-A loans). Whole loans continued to account for more than one-half of the Enterprise’s holdings. As of year’s end 2011, Fannie Mae’s holdings of mortgage assets were below the level required by the PSPA.

In 2011, Freddie Mac reduced its holding of mortgage assets more than 6 percent to $653 billion. Unlike Fannie Mae, the decrease in mortgage assets occurred in only two asset groups—agency and private-label mortgage securities. Freddie Mac’s holdings of whole loans increased eight percent and accounted for 39 percent of total holdings, up from 34 percent the year before. At year’s end, Freddie Mac’s holdings of mortgage assets were below the required limit of $729 billion (Figure 46).

![Figure 46: Enterprise Mortgage Asset Holdings (Billions)](chart)

Source: Fannie Mae and Freddie Mac
The Mortgage Securities Market Shrinks Further

The single-family mortgage securities market contracted again in 2011 by approximately three percent to $6.4 trillion, for mostly the same reasons as residential outstanding mortgage debt. Outstanding private-label MBS had peaked in 2007 at about $2.2 trillion, representing at that time about one-third of the U.S. mortgage securities market. Private-label securities declined 17 percent in 2009, over 17 percent in 2010, and 15 percent in 2011 to $1.1 trillion. The private-label share of the MBS market fell to about 17 percent in 2011. Outstanding Enterprise and Ginnie Mae MBS declined about two percent in 2010 but was generally flat in 2011 at about $5.3 trillion.

In addition to the decline in outstanding single-family MBS, 2011 saw a further concentration of the holdings of those securities by depository institutions. Banks and thrifts continued to increase their investment in mortgage securities, likely purchasing securities that the Enterprises would otherwise have held. That group’s share of outstanding MBS increased to more than 24 percent in 2011, up from about 22 percent the year before. The combined holdings of the Federal Reserve and the U.S. Treasury declined to 13.5 percent of total single-family MBS outstanding. Mutual funds saw their share of those securities declined to 12.8 percent. The continued run- and sell-off of mortgage assets by Fannie Mae and Freddie Mac last year caused their share of the market to fall to less than 10 percent, down from over 30 percent in 2003 (Figure 47).

![Figure 47 Share of Mortgage-Related Securities Held by Investors](image)

Source: Inside Mortgage Finance Publications
Federal Home Loan Bank Lending Activity Continued to Decline

The combined balance sheet of the Federal Home Loan Banks (FHLBanks) shrunk further in 2011. Combined assets fell about 13 percent. FHLBank advances outstanding fell by a similar amount, to $418 billion—less than one-half the 2008 year-end level. A major source of liquidity to the mortgage market at the height of the credit crisis, the FHLBanks continued to experience a decline in advance demand from member institutions in 2011. The decline in member demand reflects the high level of liquidity in the mortgage market as well as high levels of deposits and low loan demand. At year’s end, advances represented about 55 percent of total FHLBank assets, the same as at the end of the prior year but well below the year-end 2008 level (Figure 48). In addition to advances, MBS, and liquid investments, the FHLBanks also hold a portfolio of whole loans, primarily conventional single-family loans, which they purchase from their members through the Mortgage Purchase Program (MPP) or the Mortgage Partnership Finance (MPF) program. Mortgages consist. The FHLBanks’ combined portfolio of mortgage loans as of year-end totaled $53.5 billion, which was about one-half the level held at the end of 2005. At year’s end, mortgage loans represented less than seven percent of the FHLBanks’ combined total assets, compared to more than 10 percent at the end of 2005.

![Figure 48: Composition of FHLBank Assets](image)

Source: Federal Home Loan Banks Office of Finance