FANNIE MAE AND FREDDIE MAC SINGLE-FAMILY GUARANTEE FEES IN 2010 AND 2011

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EXECUTIVE SUMMARY

Fannie Mae and Freddie Mac ("the Enterprises") buy single-family mortgages from mortgage companies, commercial banks, credit unions, and other financial institutions. In most cases, a lender receives mortgage-backed securities (MBS) in exchange for the loans. Each Enterprise guarantees the payment of principal and interest on its MBS and charges a fee for providing that guarantee. The guarantee fee covers projected credit losses from borrower defaults over the life of the loans, administrative costs, and a return on capital. Lender guarantee fee payments generally take the form of ongoing monthly payments and frequently also include an upfront payment at the time of Enterprise loan acquisition. A lender typically passes through to the borrower the cost of an upfront fee in the form of a slightly higher interest rate on the mortgage, since borrowers tend to choose not to pay points. Ongoing fees are also included in the interest rate charged to the borrower. Therefore, as a practical matter, whether the Enterprises charge guarantee fees to lenders as ongoing fees or upfront fees typically makes no difference to borrowers.

Section 1601 of the Housing and Economic Recovery Act of 2008 (HERA) requires the Federal Housing Finance Agency (FHFA) to conduct an ongoing study of the guarantee fees charged by Fannie Mae and Freddie Mac and to submit annual reports to Congress, based on aggregated data collected from the Enterprises, regarding the amount of such fees and the criteria used by the Enterprises to determine them. This report, the fourth prepared by FHFA in fulfillment of Section 1601, covers guarantee fees charged by the Enterprises in 2010 and 2011.[1] The report focuses on fees charged by the Enterprises for guaranteeing conventional single-family mortgages—loans that are not insured or guaranteed by the federal government and that finance properties with four or fewer residential units.

Following Enterprise practice, the report uses economic concepts and model-based projections, rather than financial results reported in conformance with Generally Accepted Accounting Principles (GAAP), to analyze the single-family guarantee fees charged by Fannie Mae and Freddie Mac. To analyze the guarantee fees it charges, each Enterprise estimates the cash it expects to collect and expend over the estimated life of the mortgages. Estimated cash inflows and outflows are converted into annualized rates expressed in terms of basis points of outstanding loan principal. One basis point is equal to $1/100^{th}$ of one percent. The estimated total guarantee fee associated with a transaction is equal to the sum of the ongoing fee collected over the life of the mortgage and the annualized equivalent of any upfront fee.

The difference or gap between a transaction's estimated total guarantee fee and estimated cost (including expected outflows and target return on required capital) provides a measure of the expected profitability of the transaction. A negative gap does not mean that an Enterprise expected it would incur a loss, but simply that it did not expect to earn its target rate of return. The estimated

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[1] The earlier reports covering guarantee fees charged by the Enterprises in 2007-2008, 2008-2009, and 2009-2010 can be found at http://www.fhfa.gov/webfiles/14700/GFees72009.pdf, http://fhfa.gov/webfiles/15918/GFEEJuly2010F.pdf, and http://www.fhfa.gov/webfiles/22642/2011GFeeReportFinal.pdf.

gap is very dependent on each Enterprise's proprietary costing model[2] and the assumptions used. The estimates of guarantee fees and gaps provided in this report reflect Enterprise estimates based on the models in place at the time of loan acquisition and represent the Enterprises' forward-looking views at that time. Whereas each Enterprise's model includes a number of assumptions, the key ones are the target return on capital, the level and volatility of future interest rates, and expected house price appreciation. The models and their assumptions have changed over time.

Fannie Mae and Freddie Mac consider many factors in determining the guarantee fees they charge, including the estimated cost of guaranteeing specific mortgages derived from their costing models, competitive conditions in the market for bearing mortgage credit risk, the relative pricing of each Enterprise's MBS, the Enterprises' public mission, and return-on-capital targets. No set formula exists for weighing those factors. Instead, each Enterprise weighs them differently and works toward its view of a balanced outcome in line with market conditions and company goals.

The Enterprises' credit risk evaluations take into account changing historical data, market developments, and the Enterprises' own forecasts. Credit losses were at historic lows when house price appreciation accelerated rapidly in 2002 through 2005. However, it has become clear that the industry as a whole underpriced mortgage credit risk significantly in those years as well as in 2006 and 2007. The Enterprises began to correct that underpricing in the fourth quarter of 2007, when they separately announced increases in upfront guarantee fees beginning in March 2008. Each Enterprise's pricing changes sought to align fees charged more closely with its model estimates of cost.

In March 2008, each Enterprise implemented an upfront adverse market charge of 25 basis points that was intended to protect against the heightened credit risk posed by deteriorating housing market conditions. That charge was equivalent to an ongoing guarantee fee of about five basis points on average. Also in March 2008, each Enterprise introduced additional upfront fees based on loan-to-value (LTV) ratios, credit scores, and other risk factors. In contrast to the multiple changes in guarantee fee pricing implemented in 2008, changes in 2010 and 2011 were much less extensive.

In February 2009, the Obama Administration introduced the Making Home Affordable Program, designed to stabilize the housing market and help struggling homeowners get relief and avoid foreclosure. One component of that initiative was the Home Affordable Refinance Program (HARP), which gives homeowners with high LTV ratio mortgages owned or backing MBS guaranteed by Fannie Mae or Freddie Mac an opportunity to refinance into loans with more affordable monthly payments. The objective of HARP is to give homeowners who have shown a commitment to paying their mortgage, but whose properties have fallen in value, the opportunity to get into a new mortgage with better terms. HARP allows borrowers who are current but whose loans have current LTV ratios above 80 percent to refinance without obtaining new or additional mortgage insurance coverage. In October 2011, FHFA and the Enterprises announced HARP 2.0, which expanded HARP eligibility and reduced both upfront fees and lender representations and warranties in an effort to reach more homeowners. The first deliveries of loans made eligible by the

[2] Each model uses cash flow simulations to estimate cost based on loan attributes that affect performance (e.g., borrower credit score, loan-to-value ratio) and projected market conditions. To estimate required capital, each model simulates the cost of guaranteeing the loan under stressful economic conditions.

HARP 2.0 changes occurred in early 2012 and, therefore, are not reflected in the data analyzed in this report. In December 2011, Congress passed the Temporary Payroll Tax Cut Continuation Act of 2011, which required the Enterprises to raise guarantee fees by 10 basis points. That increase was implemented in April 2012 and, therefore, is also not reflected.

Homeowners whose mortgage rates are higher than the current market rate and refinance through HARP receive an immediate reduction in their payments. Homeowners with adjustable-rate mortgages who refinance to a fixed-rate loan may experience higher payments, but they benefit from a more stable, predictable monthly payment and will no longer face the risk of future payment increases due to rising interest rates. Some HARP borrowers choose to refinance from 30-year loans into 15-year loans to benefit from a faster payoff.

Under data collection procedures established by FHFA, in accordance with Section 1601 of HERA, Fannie Mae and Freddie Mac submit loan group data to the agency for every quarter. For each lender, the Enterprises provide guarantee fee data by loan type. For each loan type, the data are segmented into different categories based on LTV ratios, loan purpose, and borrower credit scores calculated using models developed by Fair Isaac Corporation (FICO) and supplied to the Enterprises by loan sellers. The study population of mortgages used to prepare this report represents 98 percent and 97 percent, respectively, of the unpaid principal balance of all single-family mortgages the Enterprises acquired in 2010 and 2011. In addition to the loan group data, the Enterprises provided loan-level data necessary to support additional analysis of HARP mortgages and other, similar flexible refinance loans. Based on analysis of the available data, FHFA has made the following findings:

1. Although Fannie Mae and Freddie Mac consider model-derived estimates of cost in determining their single-family guarantee fees, their pricing often subsidizes their guarantees on some mortgages, using higher returns that they expect to earn on guarantees of other loans. In 2011, as in previous years studied by FHFA, that cross-subsidization in single-family guarantee fees charged by each Enterprise was evident across product types, credit score categories, and LTV ratio categories. There were cross-subsidies from mortgages that posed lower credit risk, on average, to loans that posed higher credit risk. The greatest estimated subsidies generally went to the highest-risk mortgages. However, because the share of higher-risk loans acquired was low in 2009, 2010, and 2011, the overall cross-subsidization was substantially less than in either 2007 or 2008.

2. The average total guarantee fee charged by Fannie Mae and Freddie Mac on single-family mortgages in the study population increased from 26 basis points in 2010 to 28 basis points in 2011. When HARP and flexible refinance loans are excluded in order to focus on mortgages eligible under the Enterprises' standard underwriting guidelines ("standard loans"), the average total guarantee fee increased from 24 basis points in 2010 to 26 basis points in 2011. That change reflects increases in both the average ongoing fee and the average upfront fee.

- The average ongoing fee on a standard loan increased one basis point, from 14 basis points to 15 basis points, reflecting increases in the fees charged some lenders resulting from renegotiation of expiring contracts.

- The average upfront fee on a standard loan (as measured in estimated annualized revenue) increased two basis points, from 10 basis points to 12 basis points. That change reflected increases in upfront fees announced in late 2010 that became fully effective in 2011 as well as changes in the credit risk profile.

3. The credit profile of mortgages in the study population was not greatly changed in 2011. Thirty-year fixed-rate loans comprised a smaller share of acquisitions in 2011 than in 2010, with larger shares of 15-year fixed-rate mortgages, other fixed-rate loans (primarily those with 20-year and 25-year terms) and adjustable-rate mortgages (ARMs). The distribution of borrower credit scores was nearly unchanged. The distribution of LTV ratios shifted slightly towards loans with lower down payments.

4. After rapid growth of HARP mortgages in 2009 and 2010, the share of HARP loans declined from 11 percent of the study population in 2010 to 10 percent in 2011. As noted above, HARP 2.0 changes are not reflected in the data analyzed in this report. Jumbo conforming loans remained steady at 10 percent of the study population, while cash-out refinances declined from 20 to 17 percent.[3]

5. Trends in the average total guarantee fees charged by the Enterprises varied for different types of standard mortgages in 2011. Guarantee fees increased for standard 30-year fixed-rate loans but were nearly unchanged for standard 15-year fixed-rate loans and ARMs.

6. Estimated guarantee fee gaps improved in 2011 for standard 30-year fixed-rate loans and ARMs, while standard 15-year fixed-rate loans showed a small decline in fee gap. The estimated costs for standard fixed-rate products increased slightly, while costs for standard ARM costs decreased. Each Enterprise's estimated cost for standard ARMs in 2011 was below that for standard 30-year fixed-rate mortgages. Standard 15-year fixed-rate loans continued to have the lowest estimated costs.

7. The share of standard mortgages in the study population used for home purchases and rate-term refinances increased in 2011, while the share of cash-out refinances declined. Average guarantee fees and estimated fee gaps increased for loans in all three loan-purpose categories.

[3] Jumbo conforming loans are mortgages that are eligible for Fannie Mae and Freddie Mac to acquire, but whose balances exceed the baseline U.S. conforming loan limit of $417,000.

8. Single-family guarantee fees charged by the Enterprises for standard mortgages increased modestly for each of the top two credit-score categories in 2011. Guarantee fees on standard loans to borrowers with credit scores of less than 660 remained the same. The estimated guarantee fee gaps on standard mortgages improved in each credit-score category and became positive for loans to borrowers with credit scores of less than 660 for the first time in the five-year study period.

9. The distribution of standard mortgages by LTV ratio category shifted somewhat towards loans with lower down payments in 2011. Average guarantee fees charged by the Enterprises on standard loans increased for every LTV ratio category, reflecting the full-year impact of increases in upfront fees announced in late 2010, as well as increases in guarantee fees achieved through contract renegotiations with individual lenders. The fee increases were increasingly large as the categories reflected lower borrower equity. However, since HARP and flexible refinance mortgages were excluded from this analysis, the shares of loans in the higher LTV ratio categories were low, with only four percent of standard loans having LTV ratio greater than 90 percent.

10. The estimated guarantee fee gaps for standard mortgages improved slightly in 2011 for all LTV ratio categories, with the largest improvements occurring for standard loans with the lowest down payments. Standard loans with LTV ratios greater than 80 percent continued to have negative fee gaps, although they were less negative than in 2010.

11. HARP and flexible refinance mortgages, which together comprised 12 percent of the study population in both 2010 and 2011, have benefitted the Enterprises by increasing guarantee fee revenue and improving their economic position and have given borrowers who are current on their mortgage an opportunity to refinance into a lower interest rate or a more stable loan product.

    - In each of the two years, HARP and flexible refinance borrowers who refinanced from a 30-year fixed-rate mortgage into another loan of the same type reduced their interest rates by about 120 basis points on average. The loans' lower monthly payments and/or more stable product type reduce Enterprise credit risk.

    - FHFA currently expects that the additional guarantee fees collected on HARP and flexible refinance mortgages, together with the guarantee fees collected on the original loans that are refinanced, will on average, cover projected Enterprise credit expenses and administrative costs.

12. A significant share of the single-family mortgages acquired by each Enterprise comes from a small group of large lenders. Loans acquired from the top five lenders combined accounted for 61 percent and 60 percent of the Enterprises' combined business volume in 2010 and 2011, respectively. Only eight percent

and seven percent of the Enterprises' combined business volume in 2010 and 2011, respectively, came from lenders with ranking below the top 100.

13. Average guarantee fees on standard mortgages acquired by Fannie Mae and Freddie Mac increased modestly in 2011 for each of five acquisition-volume groups of lenders analyzed by FHFA.

    - Average upfront fees paid by lenders in each group increased by between one and two basis points from 2010, reflecting the full-year effect of pricing changes announced in late 2010.

    - Average ongoing fees rose slightly for most acquisition-volume groups. The difference between the average ongoing fees paid by lenders in the extra-small-volume and the extra-large-volume groups was essentially unchanged between 2010 and 2011.

14. Quarterly data for 2011 indicate that the average guarantee fees Fannie Mae and Freddie Mac charged on standard single-family mortgages increased for nearly all five acquisition-volume groups between the first and the fourth quarters of that year.

    - The increases were generally higher for larger-volume lenders than for smaller-volume ones. Average upfront fees rose by between one and three basis points, with the largest increases occurring for lenders in the largest-volume groups.

    - As the Enterprises renegotiated expiring contracts in 2011, they increased ongoing fees more for large-volume lenders. Between the first and fourth quarters, average ongoing fees increased by two basis points for the extra-large-volume group and declined by less than one-half of one basis point for the extra-small-volume group. As a result, the difference between the average ongoing fees paid by lenders in those two groups declined from nine basis points in the first quarter to seven basis points in the fourth.

15. Estimated guarantee fee gaps rose for lenders in each acquisition-volume group in 2011, as they have consistently since 2008, but the increases were smaller in 2011 than in the two previous years. The estimated fee gap remained the largest for lenders in the extra-small-volume group in 2011, but the difference between the gaps for that group and for the extra-large-volume groups declined slightly from 2010. Quarterly data indicate that the difference between the fee gaps for lenders in the two groups declined by three basis points between the first and fourth quarters of 2011.

INTRODUCTION

Section 1601 of the Housing and Economic Recovery Act of 2008 (HERA)[4] requires the Federal Housing Finance Agency (FHFA) to conduct an ongoing study of the guarantee fees charged by Fannie Mae and Freddie Mac ("the Enterprises") and to submit annual reports to Congress, based on aggregated data collected from the Enterprises, regarding the amount of such fees and the criteria used by the Enterprises to determine them. The section requires that each report identify and analyze:

1. The total revenue earned by the Enterprises from guarantee fees;
2. The total costs incurred by the Enterprises for providing guarantees;
3. The factors the Enterprises considered in determining the amount of the guarantee fees charged;
4. The average guarantee fee charged by the Enterprises;
5. An analysis of any increase or decrease in guarantee fees from the preceding year;
6. A breakdown of the revenue and costs associated with providing guarantees, based on product type and risk classifications; and
7. A breakdown of guarantee fees charged based on asset size of the originator and the number of loans sold or transferred to an Enterprise.

This report, the fourth prepared by FHFA in fulfillment of Section 1601, covers guarantee fees charged by the Enterprises in 2010 and 2011. FHFA's ongoing study focuses and reports on fees charged by the Enterprises for guaranteeing conventional single-family mortgages—loans that are not insured or guaranteed by the federal government and that finance properties with four or fewer residential units.

Section 1601 states that the Director of FHFA is not required or authorized to publicly disclose information that is confidential or proprietary. To avoid public disclosure of protected information, and to focus more on broad trends in Enterprise practice and less on the specific behavior of each Enterprise, this report presents Enterprise data on a combined basis and discloses certain information in a more limited manner.

THE SINGLE-FAMILY MORTGAGE GUARANTEE BUSINESS

Fannie Mae and Freddie Mac acquire single-family mortgages from mortgage companies, commercial banks, credit unions, and other financial institutions. Lenders may exchange loans for mortgage-backed securities (MBS) backed by those mortgages or sell whole loans for cash proceeds.[5] When lenders receive MBS in exchange for their loans, they may hold them as an investment or sell them in the capital markets. The Enterprises also issue MBS backed by pools of loans acquired from multiple lenders.

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[4] Housing and Economic Recovery Act of 2008, Public Law 110-289, 122 Stat 2654 (2008).

[5] Fannie Mae refers to the single-class mortgage-related securities that it has guaranteed as "mortgage-backed securities" (MBS), whereas Freddie Mac calls such securities that it has guaranteed "Participation Certificates" (PCs). This report refers to both as "MBS."

Each Enterprise guarantees the payment of principal and interest on its MBS and charges a fee for providing that guarantee. The guarantee fee covers projected credit losses from borrower defaults over the life of the loans, administrative costs, float income (or expense), and a return on capital.[6] Lender guarantee fee payments generally take the form of an ongoing monthly payment stream, which is derived from the interest paid on the loans, and frequently also include an upfront payment at the time of Enterprise loan acquisition. A lender typically passes through to the borrower the cost of an upfront fee in the form of a slightly higher interest rate on the loan, since borrowers tend to choose not to pay points. Therefore, as a practical matter, whether the Enterprises charge guarantee fees to lenders as ongoing fees or upfront charges typically has no impact on borrowers.

Some lenders sell single-family mortgages outright to the Enterprises for cash. The cash price paid by an Enterprise depends on the required yield of the loan, which includes an implicit guarantee fee. Larger lenders primarily swap loans for MBS. However, smaller lenders choose primarily to sell whole loans for cash, since those lenders typically lack the volume and capacity to utilize the swap program. Whole loans may be held in portfolio by an Enterprise or pooled into MBS and sold into the market.

Financial Performance of the Business in 2010 and 2011

Each Enterprise's recent financial reports provide information on the performance of its single-family mortgage guarantee business. That performance reflects income and expenses on mortgages acquired and guaranteed over many years. Table 1 displays the performance of each Enterprise's single-family guarantee business in 2010 and 2011.[7] The information in the table is generally excerpted from the Annual Reports on Form 10-K that the Enterprises file with the Securities and Exchange Commission (SEC). Those reports are prepared in conformance with Generally Accepted Accounting Principles (GAAP). However, GAAP permits different reporting methods and each Enterprise measures the performance of the single-family guarantee business in a manner that is consistent with the way it manages the business. Thus, as is true for the comparison of financial statements of any two companies, individual line items in the financial reports may not be fully comparable across Enterprises.

The primary sources of revenue for the single-family guarantee business are guarantee fee revenue and net interest income, whereas the primary expenses are credit-related and administrative expenses. Each Enterprise currently continues to experience net losses in its single-family guarantee business. Each Enterprise's net loss fell in 2011, primarily as a result of a decline in non-performing loans. Fannie Mae reflects the reversal of contractual interest due on non-performing loans as a component of net interest income, whereas Freddie Mac charges most of those amounts to credit-related expenses. Fannie Mae's net loss was smaller in 2011 due to a substantial decrease in net interest expense, a modest increase in guarantee fee income, and a slight decrease in administrative and other expenses. Freddie Mac's more substantial improvement was due primarily to a large reduction in credit-related expenses.

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[6] Fannie Mae uses the term "guaranty fee," whereas Freddie Mac uses the term "management and guarantee fee." This report refers to both fees as "guarantee fees."

[7] Totals in this and other tables in this report may not add due to rounding.

Table 1
Financial Performance of the Single-Family Guarantee Business, 2010 and 2011
($ in millions)

Fannie Mae[1]

	2010	2011
Revenue		
Guarantee Fee Income[2]	$ 7,206	$ 7,507
Net Interest Income (Expense)[3]	$ (5,386)	$ (2,411)
Total Revenues	$ 1,820	$ 5,096
Expenses		
Credit-Related Expenses	$ 26,420	$ 27,218
Administrative and Other Expenses	$ 2,080	$ 1,819
Total Expenses	$ 28,500	$ 29,037
Net Income (Loss)	$ (26,680)	$ (23,941)
Other Performance Data		
Average Book of Business[4]	$ 2,873,779	$ 2,864,919
Average Effective Guarantee Fee Rate (basis points)	25.1	26.2

Freddie Mac[1]

	2010	2011
Revenue		
Guarantee Fee Income[2]	$ 3,635	$ 3,647
Net Interest Income (Expense)	$ 72	$ (23)
Total Revenues	$ 3,707	$ 3,624
Expenses		
Credit-Related Expenses[3]	$ 19,461	$ 12,890
Administrative and Other Expenses	$ 502	$ 734
Total Expenses	$ 19,963	$ 13,624
Net Income (Loss)	$ (16,256)	$ (10,000)
Other Performance Data		
Average Book of Business[4]	$ 1,861,000	$ 1,801,000
Average Effective Guarantee Fee Rate (basis points)	19.5	20.2

(1) The data sources are the respective SEC Form 10-Ks for the years ended December 31, 2010 and December 31, 2011. For the purposes of the presentation above, relevant information has been extracted and in certain cases reclassified to minimize the number of financial statement categories.
(2) Includes explicit fees earned on mortgage securities guaranteed by each Enterprise and implicit guarantee fees earned on whole mortgages held by each Enterprise in its investment portfolio.
(3) In 2010, Fannie Mae began reflecting the reversal of contractual interest due on non-performing loans as a component of net interest income. Freddie Mac charges most of those amounts to credit-related expenses.
(4) Includes guarantees on both securitized and non-securitized loans.

On the revenue side, total revenues more than doubled at Fannie Mae and fell slightly at Freddie Mac in 2011. Both Enterprises reported modestly higher guarantee fee income. Fannie Mae's increase was due to a rise in the amortization of upfront fees, reflecting the impact of higher upfront fees charged on the Enterprise's recent acquisitions. Freddie Mac's increase in guarantee fee income, which was much smaller than Fannie Mae's, was also due primarily to increased amortization of upfront fees. That gain was offset by lower income from ongoing guarantee fees due to a lower average book of business.

Net interest income was negative for both Enterprises in 2011. Fannie Mae's net interest loss declined, primarily as a result of a significant decrease in interest income not recognized on loans in nonaccrual status, which fell during 2011 as a result of loan workouts. Freddie Mac's net interest income changed from slightly positive in 2010 to slightly negative in 2011, as recoveries on previously nonperforming mortgages purchased out of MBS pools declined.

On the expense side, credit-related expenses were slightly higher for Fannie Mae and significantly lower for Freddie Mac in 2011. The improvement at Freddie Mac reflected the higher credit quality of mortgages acquired recently as well as a decline in the rate at which delinquent loans transition into being seriously delinquent or are modified. Administrative expenses fell at Fannie Mae and increased at Freddie Mac.

Each Enterprise's average book of business decreased slightly in 2011. The average effective guarantee rate increased at each Enterprise, reflecting the increases in guarantee fees implemented since 2008.

Framework for Analyzing Guarantee Fees

This report follows Enterprise practice in using economic concepts and model-based projections, rather than the financial results reported in Table 1 or other figures prepared in conformance with GAAP, to analyze the single-family guarantee fees charged by the Enterprises. To help set the guarantee fees it charges, each Enterprise estimates the cash it expects to collect and expend over the estimated life of the mortgages. Estimated cash inflows and outflows are converted into annualized rates expressed in terms of basis points of outstanding loan principal. One basis point is equal to 1/100th of one percent. The difference or gap between a transaction's estimated fee and estimated cost (including expected outflows and target rate of return on required capital) provides a measure of the expected profitability of the transaction.

Estimated Fee = annualized projected cash inflows, in basis points

Estimated Cost = annualized projected cash outflows and return on capital, in basis points

Estimated Gap = estimated fee minus estimated cost, in basis points

Such analysis may be done at any level of aggregation. When analyzing groups of mortgages, the estimated annualized fee and cost associated with each loan may be weighted by its unpaid principal balance (UPB). Thus, a loan with a higher UPB will affect the weighted average fee or cost of a group of mortgages more than a lower-balance loan.

As noted, guarantee fee payments from lenders generally take the form of ongoing monthly payments, and typically also include an upfront payment at the time of Enterprise loan acquisition. Enterprise practice, employed in this report, is to combine both types of payments into the estimated guarantee fee. To do so, the upfront payment is annualized into an ongoing fee equivalent, based on projected prepayments, and added to the ongoing fee, where both are expressed in basis points of a mortgage's UPB, to provide an estimated total guarantee fee. FHFA calculated the estimated annualized upfront payments by dividing them by the present value multiples (PVMs) of the mortgages estimated by the Enterprise at the time of acquisition.[8] Thus, if an Enterprise received an upfront payment equal to one percent of a mortgage's UPB and estimated the PVM of the loan to be four, the equivalent annualized fee is 25 basis points. If the ongoing fee on that mortgage is 15 basis points, then the estimated total guarantee fee is 40 basis points. Differences in estimated total guarantee fees for different years are due in part to differences in estimated PVMs.

Each Enterprise uses its own proprietary costing model to estimate the cost components. Cost includes the annualized projected credit losses, projected float income (or expense), the estimated cost of maintaining capital necessary to support the loan, and a constant for general and administrative (G&A) expenses. The G&A expenses and target return on capital are model inputs rather than calculations.

The estimated fee gap is the difference between the estimated total guarantee fee and the estimated cost. The estimated fee gap is zero when an Enterprise expects to earn its target rate of return on capital on average across the forecasted simulations generated by its internal costing model. A negative or positive estimated gap means the Enterprise expects to earn below or above its target rate of return, respectively. Whereas negative gaps that are lower (closer to zero) are still generally expected to be cash-flow positive, larger negative gaps may be indicative of transactions that are expected to generate a loss. *The estimates of total guarantee fees and fee gaps provided in this report reflect Fannie Mae and Freddie Mac estimates based on models in place at the time of loan acquisition and represent Enterprise forward-looking views at that time.*

Factors the Enterprises Consider in Determining Guarantee Fees

Fannie Mae and Freddie Mac consider many factors in determining the guarantee fees they charge, including the estimated cost of guaranteeing specific mortgages, competitive conditions in the market for bearing mortgage credit risk, regulatory requirements, the relative pricing of each Enterprise's MBS, the Enterprises' public mission, and return-on-capital targets. No set formula exists for weighing those factors. Instead, each Enterprise weighs them differently and works towards its view of a balanced outcome in line with market conditions and company goals.

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[8] An upfront fee is quoted in price (as a percent of the loan principal), whereas an ongoing fee is quoted in yield (in basis points of the loan principal). Each Enterprise estimates a PVM that is used to convert the upfront, one-time charge to a yield equivalent; that is, it estimates the multiplier necessary to convert a payment received each year over the life of the loan to a payment received just once at the beginning. The PVM of a mortgage increases with its expected life, which is a function of estimated prepayments.

Estimated Cost

A key input into each Enterprise's pricing decisions is the "estimated cost" derived from its internal costing models. Those models use cash flow simulations to estimate cost based on loan attributes that affect performance (e.g., loan-to-value (LTV) ratio, borrower credit score, and loan purpose) and projected market conditions (i.e., house prices and interest rates along a large number of potential paths).

The models utilize four cost components: expected credit losses, a risk premium, G&A expenses, and net float income or expense. The risk premium is essentially the cost of capital, which is determined both by the Enterprise's target rate of return on capital and by the estimated level of capital required to support the mortgage. To estimate required capital, the models simulate the costs of guaranteeing the loan under stressful economic conditions.

Each Enterprise sets its own target rate of return on capital. Once the rate is set, the Enterprise uses that rate to estimate the costs of all acquisitions regardless of the characteristics of specific mortgages. However, the characteristics of a mortgage, which include attributes of the borrower and the property, determine the amount of capital estimated as necessary to support that loan. Mortgages expected to have higher default rates require more capital, to which the uniform target rate is applied to estimate the risk premium component of the total cost of the guarantee.[9]

The capital required for each loan estimated by an Enterprise's internal costing model has not been linked directly to regulatory capital requirements or to equity measured according to GAAP, nor has FHFA approved either Enterprise's model. Rather, required capital is a model-generated amount used as a pricing construct. Each Enterprise's model determines the capital required for each loan, against which a uniform target rate of return is applied.

Assumptions about G&A expenses are inputs to the costing models, and are based primarily on cost allocations and estimates by each Enterprise's management. Float income or expense is derived from the models, and based primarily on contractually specified remittance requirements and expectations of future interest rates and prepayment levels.

To estimate credit losses, float income or expense, and required capital, Enterprise models use simulations of future economic environments, each of which is represented by an interest rate path and a set of mean house price paths for different localities. Along each path, behavioral models of mortgage performance are used to estimate normal loan amortization, prepayments, defaults, losses given default, recoveries from private mortgage insurance (MI), and recoveries from lenders in the case of recourse, indemnification, or other credit enhancements. Future interest rates are the main driver of projected prepayments, whereas future house prices are the key factor affecting projected credit losses.

[9] For example, assume an Enterprise estimates that two mortgages require capital equal to one percent and three percent of their respective loan balances each year. If the target return on capital is 10 percent, then the total estimated costs of guaranteeing those loans would include risk premia of 10 basis points and 30 basis points, respectively, of the loan balances.

The models are built around a few key assumptions that make material differences in the estimated cost of guaranteeing a mortgage. In addition to mean house price appreciation, which varies by geographic area in the short and long term, those assumptions include:

- House price volatility,
- Stress paths, and
- The target rate of return on capital.

The stress paths that each Enterprise's costing models assumes are not as severe as the housing downturn experienced since 2006. More severe models would assume lower housing values or greater house price volatility. The models also target a rate of return on capital that is likely lower than what many private investors would require. If each Enterprise was subject to the capital standards applicable to fully private firms or set a higher target rate of return commensurate with what private investors would likely require, the outputs of its costing model would reflect higher estimated costs on the loans it acquired.

The main characteristics that determine the estimated cost of guaranteeing a single-family mortgage, in addition to macroeconomic variables, are:

- Borrower credit score,
- LTV ratio and mortgage insurance coverage,
- Loan purpose (e.g. purchase, cash-out refinance),
- Borrower documentation,
- Occupancy status (e.g. owner-occupied, investor-owned),
- Product type (e.g. 30-year fixed-rate mortgage),
- Mortgage interest rate,
- Property type,
- Origination channel, and
- Borrower debt-to-income ratio.

Competitive Environment

Through the single-family credit guarantee business, the Enterprises compete with each other and with other financial institutions and government agencies that assume the credit risk of single-family mortgages. Historically, the Enterprises' most important competitors have been depository institutions that hold some of the loans they originate in their investment portfolios, and to a lesser degree, the Federal Housing Administration (FHA), which focuses on insuring loans with high LTV ratios made to borrowers with high debt-to-income ratios.

During the mortgage credit boom that extended through the first half of 2007, the Enterprises also faced considerable competition from issuers of private-label MBS. Those issuers were often able to charge less than the Enterprises or depositories to bear the credit risk of subprime, Alternative-A (Alt-A), and other nontraditional mortgages, as relatively low levels of credit enhancement were required to obtain investment-grade credit ratings for those securities. The Enterprises were also major investors in tranches of private-label MBS that carried triple-A credit ratings. During the second half of 2007 and 2008, the market for private-label MBS collapsed, lenders and private mortgage insurers tightened their underwriting standards, depositories became less willing to invest in single-family mortgages, and FHA greatly expanded its volume of new insurance written. Factors driving FHA's expansion were an increase in the size of the mortgages eligible for FHA insurance, changes in the Enterprises' and private mortgage insurers' prices and credit terms, and an increased preference of some investors for the full federal backing of MBS guaranteed by the Government National Mortgage Association (Ginnie Mae), the issuance of which provides long-term financing for nearly all FHA-insured loans.

The credit quality of single-family mortgages acquired by the Enterprises has improved since 2009, reflecting changes in the eligibility standards of the Enterprises and private mortgage insurers and the continued availability of FHA insurance for loans with higher LTV ratios and lower credit scores, both of which reduced Enterprise acquisitions of such loans. The Enterprises also increased their acquisition of refinance mortgages beginning in 2009. Generally, refinance mortgages have a stronger credit profile than purchase mortgages, so long as borrowers do not take cash out. Included among the refinance loans acquired since 2009 were ones taken out to refinance mortgages previously owned or guaranteed by Freddie Mac or Fannie Mae.

Programs That Support Borrowers Seeking to Refinance

During 2009, the Obama Administration introduced a comprehensive Financial Stability Plan to help protect and support the U.S. housing and mortgage markets and stabilize financial markets. As part of that plan, the Administration announced and implemented the Making Home Affordable program, which is intended to provide assistance to homeowners and prevent foreclosures. The Making Home Affordable program includes the Home Affordable Refinance Program (HARP), under which each Enterprise acquires loans made to refinance mortgages that it owns or that back MBS it has guaranteed. The objective of HARP is to provide access to low-cost refinancing for homeowners who are current on their mortgages and whose properties have fallen in value. The expectation is that refinancing their mortgages will put such borrowers in a better position by reducing their monthly payments or moving them from a loan that poses more risk (such as an interest-only or short-term adjustable-rate mortgage (ARM)) to a loan with more stable payments. During most of 2011, the program had the following eligibility requirements:

- The mortgage is already owned by the Enterprise or backs one of its guaranteed MBS;
- At application, the homeowner is current on the loan;
- The property is occupied by the owner;
- The amount owed on the first mortgage does not exceed 125 percent of the current market value of the property;
- Any existing mortgage insurance remains in force at the level of coverage on the refinanced loan;
- The borrower has the capacity to pay the new monthly payment;
- The refinance improves the long-term affordability of the loan; and
- The holder of any second mortgage must agree to remain in the junior lien position.

On October 24, 2011, FHFA and the Enterprises announced HARP 2.0, which expanded HARP eligibility in an effort to reach more homeowners. The changes to the program's terms eliminated upfront fees for borrowers who refinance into shorter-term mortgages, lowered upfront fees for other borrowers, and removed the requirement that the loan amount for fixed-rate mortgages not exceed 125 percent of the property's current market value. The first deliveries of loans made eligible by the HARP 2.0 changes occurred in early 2012 and, therefore, are not reflected in the data analyzed in this report.

Each Enterprise administers HARP as part of a broader program—Refi Plus at Fannie Mae and Relief Refinance at Freddie Mac—that facilitates the refinancing of single-family mortgages on which the Enterprise already holds the credit risk. Each program enables borrowers to benefit from mortgage insurance flexibilities, pricing concessions, and process efficiencies. In addition to HARP refinances, each program encompasses refinances for borrowers who are not eligible for HARP but have an acceptable payment history and would be eligible for a standard refinance as well as a small number of other borrowers who would not be eligible for a standard refinance.

Other Factors

In addition to estimated costs and the competitive environment, the Enterprises consider a number of other factors in determining the single-family guarantee fees they charge. Those factors include the mandates of safety and soundness, regulatory affordable housing goals, pricing guidance from FHFA as conservator, and their charter obligations.

Each Enterprise's credit risk evaluations take into account changing historical data, market developments, and its own forecasts. Credit losses were at historic lows when house price appreciation accelerated rapidly in 2002 through 2005. However, it has become clear that the industry as a whole underpriced single-family mortgage credit risk significantly in that period, as well as in 2006 and 2007. The Enterprises' costing models contributed to that underpricing, which the Enterprises began to correct in the fourth quarter of 2007, when they separately announced increases in guarantee fees beginning in March 2008.

The financial strength or ability of lenders to meet their contractual obligations is an implicit factor in guarantee fee negotiations. Lenders provide representations and warranties on loans they deliver to the Enterprises and, in the event of a failure to fulfill those agreements, are required to repurchase loans upon an Enterprise's request. Compliance by lenders with the Enterprises' underwriting and acquisition standards is important to the Enterprises' business models.

At the time of pricing, the Enterprises expect all but a small portion of their guarantee transactions to generate a positive rate of return over the life of the loans. However, the Enterprises may enter into transactions with lower expected returns than is typical in order to achieve regulatory affordable housing goals (as required by law), fulfill their public mission, or to retain a lender's business. The Enterprises also may adjust their guarantee fees to reflect differences between the market prices for Fannie Mae and Freddie Mac MBS, since those differences affect the all-in value to the lender of exchanging mortgages for either Enterprise's MBS. Freddie Mac has often charged lower guarantee fees to compensate lenders for the lower pricing of its MBS, relative to Fannie Mae's, in the capital markets.

The Enterprises also consider and make tradeoffs among their objectives when making decisions about guarantee fees. Examples of such objectives include ensuring adequate revenue to cover default losses, which favors upfront fees over ongoing fees; having a relatively simple fee structure; charging risk-based fees for specific loan, property, and borrower characteristics, which discourages adverse selection by lenders; and maintaining a diversified customer base.

National and Lender-Level Pricing of Mortgages Delivered on a Flow Basis

Fannie Mae and Freddie Mac acquire single-family mortgages, whether financed with MBS or held in the investment portfolio, through either the flow or bulk transaction channels. On loans delivered on a flow basis, the Enterprises enter into contracts that specify guarantee fees for a lender's future delivery of loans with agreed-upon risk profiles over a set time period. In a bulk transaction, a lender offers to sell a defined set of mortgages, and the Enterprise has the opportunity to review those loans for eligibility and pricing prior to delivery. Guarantee fees on bulk acquisitions are negotiated on an individual transaction basis. Bulk acquisitions, which fell steadily from 2007 through 2010, continued to fall from two percent of the total UPB acquired in 2010 to less than one percent in 2011. Seasoned loans accounted for nearly all of the mortgages acquired through bulk transactions in 2011.

The guarantee fees that Fannie Mae and Freddie Mac each charge on mortgages delivered on a flow basis reflect a combination of prices that each Enterprise independently sets nationally for all lenders and prices that each independently negotiates with specific lenders. National pricing typically takes the form of upfront fees based on specific features of a loan or property (e.g., cash-out refinance loans, investment properties, or multiple-unit properties).[10]

Prior to 2008, Fannie Mae and Freddie Mac typically used national pricing for a very limited group of risk features such as mortgages with subordinate financing and loans on investor-owned and multiple-unit properties. In the fourth quarter of 2007, each Enterprise announced an expansion of national pricing that it implemented in March 2008. Each Enterprise introduced an upfront adverse market charge of 25 basis points intended to protect against the heightened credit risk posed by deteriorating housing market conditions. Also in March 2008, each Enterprise introduced varied upfront fees based on LTV ratios and credit scores. Later in 2008, the Enterprises updated those upfront fees in response to their respective views of worsening forecasted house price trends and higher forecasted losses for new mortgage acquisitions. The new or changed pricing affected cash-out refinance mortgages, investor-owned properties, multiple-unit properties, loans with subordinate financing, condominiums, and jumbo conforming mortgages, among other categories. After 2008, each Enterprise generally maintained the upfront fees implemented in that year with limited changes for specific risk attributes.

Model-derived estimates of expected default losses are very sensitive to the product type and LTV ratio of the mortgage and the borrower's credit score. As expected credit losses increase, so does the guarantee fee an Enterprise must charge to earn its target rate of return. In 2008, as credit risk was re-priced throughout the mortgage market, the Enterprises sought to align their credit policies and prices more closely with their estimates of cost, which increased as credit conditions

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[10] See https://www.efanniemae.com/sf/refmaterials/llpa/pdf/llpamatrix.pdf and http://www.freddiemac.com/singlefamily/pdf/ex19.pdf

deteriorated. Increases in upfront fees were a major part of that effort. In the second half of 2008, each Enterprise announced that it would increase its adverse market charge to 50 basis points, but later cancelled that increase. In 2009, the Enterprises each implemented additional increases in upfront fees previously announced in 2008, but few new changes in upfront fees were implemented during the year. In late 2010, each Enterprise announced fee increases for most loans with LTV ratios greater than 70 percent, but the changes were not effective until early 2011.

For many of the larger lenders that deliver a significant volume of single-family mortgages each year, the respective Enterprises negotiate a mortgage delivery contract for a specified term to ensure that those lenders will deliver a minimum level of guarantee business at a predetermined guarantee fee rate. Those lender-level prices generally take the form of ongoing guarantee fees. Contracts typically specify ongoing guarantee fees by product type (e.g., 30-year fixed-rate loans, 15-year fixed-rate mortgages, and loans with interest-only features) and can also include custom charges, such as additional ongoing fees for specific risk characteristics. The ongoing fees apply to mortgages delivered during a specified contract term that meet the eligibility terms of the Enterprises' guides and other terms specific to an Enterprise's relationship with the lender. In prior years, the largest lenders typically entered into semi-annual or annual contracts, whereas ongoing guarantee fees established for smaller customers may have had shorter terms and allowed for more frequent changes of the terms. Recent contracts often included shorter pricing terms and greater pricing flexibility. Many factors influence the ongoing guarantee fees charged specific lenders, including:

- The term of the commitment contract;
- The expected profile of the mortgages delivered;
- Commitments to deliver certain types and amounts of loans;
- Regulatory housing goals;
- The financial strength of the lender;
- The Enterprise's costs to transact business with the lender;
- The competitive landscape at the time of negotiation;
- The expected contribution of the lender's deliveries to the liquidity of the Enterprise's MBS; and
- The prepayment speeds of loans delivered by the lender.

ANALYSIS OF GUARANTEE FEES CHARGED IN 2010 AND 2011

Under data collection procedures established by FHFA in accordance with Section 1601 of HERA, the Enterprises submit loan group data to the agency on a quarterly basis. For each lender, the Enterprises provide guarantee fee data by loan type. For each loan type, the data are segmented into different categories based on LTV ratios and borrower credit scores.[11] This section uses data on single-family mortgages delivered in 2010 and 2011 to analyze the average guarantee fee charged by the Enterprises in those years as well as how the fees they charged varied by product type, loan

[11] In each quarter, for each lender, product type, LTV ratio, and credit score combination, each Enterprise provides FHFA with the unpaid principal balance of the mortgages it acquired in that quarter and the weighted average estimated upfront and ongoing fees it charged on those loans. The Enterprise also provides its costing model's estimate of the guarantee fee it would have had to charge in order to expect to earn its target rate of return on the mortgages.

purpose, risk classifications, and the volume of mortgages delivered by lenders. To put the data in context, information on guarantee fees charged by the Enterprises in 2007, 2008, and 2009 is also presented.[12] The analysis uses the economic concepts summarized above rather than accounting data prepared in conformance with GAAP. To avoid public disclosure of protected information, the analysis presents Enterprise data on a combined basis and discloses certain information in a more limited manner.

The majority of single-family mortgages acquired by Fannie Mae and Freddie Mac in 2010 and 2011 were eligible under their standard underwriting guidelines and are referred to in this report as “standard loans.” In addition to those mortgages, the Enterprises acquired a significant volume of loans under HARP as well as a small volume of other mortgages eligible under flexible refinance programs that have the same objective as HARP and have similarly relaxed underwriting standards.[13] In this report, guarantee fees charged on standard loans are analyzed separately from guarantee fees charged on HARP and other flexible refinance mortgages.

This section begins by providing the study population and acquisition profile of all single-family mortgages acquired by the Enterprises on a combined basis and then uses data on standard loans to analyze changes in the average guarantee fee charged in 2010 and 2011 and the variation in guarantee fees by product type, loan purpose, and risk classification. That allows the presentation of comparable data on all loans acquired in 2007 and 2008 and standard loans acquired in 2009, 2010, and 2011. A separate analysis examines guarantee fees on HARP and flexible refinance mortgages acquired in 2009, 2010, and 2011 and provides evidence of how those loans have benefitted borrowers and the Enterprises. The section ends with an analysis of the variation of guarantee fees by lender delivery volume based on data on standard loan acquisitions for all five years.

Study Population

FHFA has excluded mortgages acquired through bulk transactions from its ongoing study of Enterprise single-family guarantee fees, since those loans are not representative of the Enterprises’ credit guarantee business as a whole. The agency has also excluded certain atypical mortgages delivered on a flow basis, such as reverse mortgages, loans secured by manufactured housing, government-insured or -guaranteed mortgages, and second liens. Those exclusions represent a small share of the total single-family guarantee business. Table 2 shows the volume of single-family mortgages acquired by the Enterprises in 2009 through 2011, the data exclusions, and the UPB and number of loans in the study population for those years. The table also provides information on the share of standard mortgages, HARP loans, and flexible refinance mortgages in the study population in each year.

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[12] Prior year data presented in this report may not always match data for the same year in previous FHFA reports due to lender updates and other revisions of data by the Enterprises.

[13] This report defines a “flexible refinance” as a loan acquired under Fannie Mae’s Refi Plus or Freddie Mac’s Relief Refi program after the start date of HARP (April 2009) that was not eligible for a standard refinance and has one or more of the following characteristics: 1) the home is an investor property or second home and the LTV ratio exceeds 75 percent; 2) the property has two to four units and the LTV ratio is greater than 75 percent and less than 80 percent; 3) the borrower’s credit score is less than 620; or 4) the combined LTV ratio exceeds 97 percent.

Table 2
Study Population, 2009-2011
(Includes Standard, HARP, and Flexible Refinance Loans)

	2009				2010				2011			
	Dollars in Millions	% of Total	Number of Loans	% of Total	Dollars in Millions	% of Total	Number of Loans	% of Total	Dollars in Millions	% of Total	Number of Loans	% of Total
Total Single Family Purchases	$1,172,560	100%	5,425,556	100%	$984,804	100%	4,594,074	100%	$879,448	100%	4,187,340	100%
Exclusions												
All Bulk	$31,149	3%	175,864	3%	$11,319	1%	83,223	2%	$3,427	0%	23,057	1%
Some Flow	$18,715	2%	114,480	2%	$12,557	1%	62,180	1%	$14,871	2%	82,892	2%
Total	$49,864	4%	290,344	5%	$23,875	2%	145,403	3%	$18,298	2%	105,949	3%
Study Population	$1,122,696	96%	5,135,212	95%	$960,928	98%	4,448,671	97%	$861,150	98%	4,081,391	97%
Loan Groups												
Standard	$1,072,539	91%	4,924,895	91%	$847,824	86%	3,963,913	86%	$758,559	86%	3,604,024	86%
HARP	$46,017	4%	190,658	4%	$101,436	10%	429,096	9%	$87,203	10%	397,278	9%
Flexible Refinance	$4,141	0%	19,659	0%	$11,668	1%	55,662	1%	$15,388	2%	80,089	2%

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Acquisition Profile

Tables 3 and 4 show key credit risk characteristics of the single-family mortgages in the study population in 2007 through 2011. During the five-year period, 30-year fixed-rate mortgages comprised a declining share of acquisitions, whereas 15-year fixed-rate loans comprised an increasing share (see Table 3). Adjustable rate mortgages (ARMs) increased from 2010 to 2011, rising to seven percent of acquisitions, a level last seen in 2008. The distribution of borrower credit scores improved significantly from 2007 to 2009 but has been nearly unchanged in the last two years. The distribution of LTV ratios shifted towards lower LTV ratio loans between 2007 and 2009, after which the trend reversed. In 2011 there was a small increase in the share of loans with LTV ratios above 90 percent, as the share of HARP and flexible refinance loans increased, and a small decrease in the share of mortgages with lower LTV ratios.

The share of Enterprise single-family acquisitions with risk layering—multiple characteristics that increase the credit risk of the mortgage—continued to be significant in 2011 due to the continued high volumes of HARP and flexible refinance loans. The HARP and flexible refinance combined share of acquisitions remained at 12 percent. HARP and flexible refinance mortgages, even though they are designed to reduce credit risk, are defined to involve risk layering because they typically have high LTV ratios and carry less MI protection than standard loans with comparable LTV ratios. The share of jumbo conforming loans remained at 10 percent in 2011. Refinances with cash out continued to decline, dropping to 17 percent. The shares of investor mortgages and loans on condominiums and cooperatives were unchanged.

Table 3
Product Type and Risk Class Profile, Study Population, 2007-2011
(Includes Standard, HARP, and Flexible Refinance Loans)
(share of total unpaid principal balance)

Product Type	**2007**	**2008**	**2009**	**2010**	**2011**	**Change from 2010**
Fixed-Rate 30-year Mortgages	83	80	80	66	61	-5
Fixed-Rate 15-year Mortgages	5	10	14	22	25	3
Other Fixed-Rate Mortgages	3	3	4	6	7	1
Adjustable-Rate Mortgages	8	7	2	6	7	1
	100	100	100	100	100	
Loan Purpose						
Purchase	50	42	20	25	26	1
Regular Refinance	18	28	51	53	55	2
Cash-Out Refinance	31	30	29	22	19	-3
	100	100	100	100	100	
Credit Score						
>=720	55	68	85	84	84	-1
660-719	28	24	13	13	14	0
<660	17	8	2	2	2	0
	100	100	100	100	100	
Loan-to-Value Ratio						
0-70 Percent	31	38	49	46	45	-1
70.1-80 Percent	45	40	40	38	37	-1
80.1 - 90 Percent	9	12	7	9	9	0
>90 Percent	15	10	4	8	10	2
	100	100	100	100	100	

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Average Guarantee Fees on Standard Mortgages

Figure 1 compares the estimated average guarantee fees charged by Fannie Mae and Freddie Mac on single-family mortgages delivered on a flow basis in 2007 through 2011. The estimates for 2007 and 2008 are for all loans and for 2009 through 2011 are for standard loans. The figure shows the estimated average upfront fee, annualized in basis points, separately from the average ongoing fee. As indicated in the figure, the average total guarantee fee for standard loans increased from 24 basis points in 2010 to 26 basis points in 2011. If HARP and flexible refinance loans had been included in the results for 2010 and 2011, the total fees would have been 26 basis points and 28 basis points, respectively. The increase in charged fees reflects the full-year effect of increases in national pricing initiated in late 2010, increases in ongoing fees negotiated with individual lenders, and, to a

Table 4
Risk Layering Profile, Study Population, 2007-2011[1]
(Includes Standard, HARP, and Flexible Refinance Loans)
(share of total unpaid principal balance)

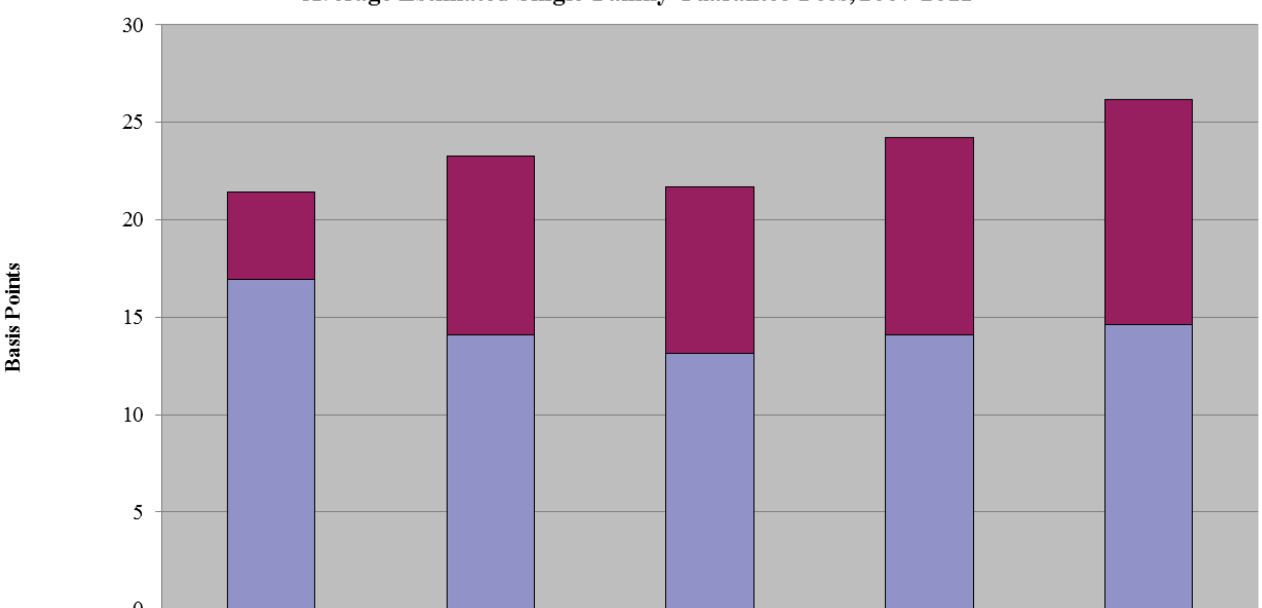
Risk Layering	2007	2008	2009	2010	2011	Change from 2010
HARP Refinances	0	0	4	11	10	(0)
Flexible Refinances	0	0	0	1	2	1
Jumbo Conforming Loans	0	2	7	10	10	0
Refinances with Cash Out	31	30	27	20	17	(3)
Investor Loans	4	6	2	4	6	2
Condominiums and Cooperatives	11	10	7	8	8	0

(1) Some loans have multiple characteristics.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

lesser extent, changes in the acquisition profile. Additionally, each Enterprise estimated a slightly lower average PVM, to reflect faster expected future prepayment speeds, which increased the annualized value of upfront fees charged in 2011.

Figure 1
Average Estimated Single-Family Guarantee Fees, 2007-2011



	2007	2008	2009 Standard	2010 Standard	2011 Standard
Total	21	23	22	24	26
Upfront Fee	4	9	9	10	12
Ongoing Fee	17	14	13	14	15

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

From 2010 to 2011, the average ongoing fee for standard mortgages increased by one basis point, from 14 to 15 basis points, reflecting increases in the fees charged to some lenders resulting from renegotiation of expiring contracts. The average upfront fee increased two basis points, from 10 to 12 basis points. The increases in upfront fees on loans with LTV ratios above 70 percent announced in late 2010 contributed to the latter increase. The downward effect on upfront fees of a higher share of 15-year fixed-rate mortgages, on which upfront fees are lower on average, was partially offset by the effect of more ARMs, which have fees higher than those imposed on 30-year fixed-rate loans. As in 2009 and 2010, some loans acquired in 2011 received a 25 basis point fee credit due to superior credit quality, which fully offset the adverse market upfront charge implemented in 2008.

Variation in Fees on Standard Mortgages by Product Type, Loan Purpose, and Risk Classifications

Mortgage guarantee costs depend on the type of mortgage and the characteristics of the loan, the borrower, and the property. Recognizing that sensitivity, Section 1601 of HERA requires FHFA to report on Enterprise revenue and costs associated with providing guarantees by product type and risk classifications. This section of the report does so by grouping mortgages in the study population into three product type categories, three loan purpose categories, three credit score categories, and four LTV ratio categories. Those categories indicate how Enterprise guarantee fees varied along four dimensions that greatly influence expected default losses.

Within each category, revenue is measured by the Enterprises' average estimated total guarantee fee. Cost is not shown directly, but information about cost can be inferred from figures showing the gap between the average estimated guarantee fee and the average estimated cost. The estimated gap, rather than the estimated cost, is shown to allow the reader to see the expected relative profitability of guaranteeing mortgages in the different categories. In the figures in this section, the gap is presented with the numerical scale removed, but with the zero line shown. That approach reveals where mortgages in each category were expected, on a weighted-average basis across all loans acquired by the two Enterprises in that category, to earn more than the acquiring Enterprise's target rate of return (positive gap), or less than that target (negative gap). The numerical scales were removed from the figures that depict gaps to protect confidential and proprietary data, consistent with Section 1601 of HERA.

As noted, one of the key assumptions of each Enterprise's costing model is its target rate of return on required capital. Each Enterprise's target rate of return in 2011 was consistent with its 2010 level. The modeled cost estimates for each product type, loan purpose, credit score, and LTV ratio category are influenced by changes in the acquisition profile within that category, which are not captured by the single dimension analysis. For example, one product type category may have had a higher concentration of loans with lower credit scores. Therefore, smaller changes in estimated cost are less meaningful than larger changes.

Product Type

Most single-family mortgages acquired by the Enterprises are 30-year fixed-rate loans. However, as shown in Table 5, from 2010 to 2011 the share of standard mortgages that were 15-year fixed-rate loans increased from 24 percent to 27 percent, and the share of ARMs increased from six percent to eight percent. The share of 30-year fixed-rate loans continued to decline, dropping from 64 percent in 2010 to 58 percent in 2011. Fixed-rate loans with terms other than 30 or 15 years accounted for seven percent of the standard loan acquisitions in 2011, up from six percent in 2010 and between three to four percent in previous years. Historically, 15-year fixed-rate loans have had the lowest rate of credit losses among those product types. The average guarantee fee charged by the Enterprises on standard mortgages in 2011 increased for 30-year fixed-rate loans but was nearly unchanged for 15-year fixed-rate loans and ARMs (see Figure 2).[14]

Table 5
Single-Family Acquisitions by Product Type, 2007-2011[(1)]
(share of total unpaid principal balance)

	Fixed 30-yr	Fixed 15-yr	All ARM
2007	83%	5%	8%
2008	80%	10%	7%
2009 Standard	80%	15%	2%
2010 Standard	64%	24%	6%
2011 Standard	58%	27%	8%
Change from 2010	-5%	3%	2%

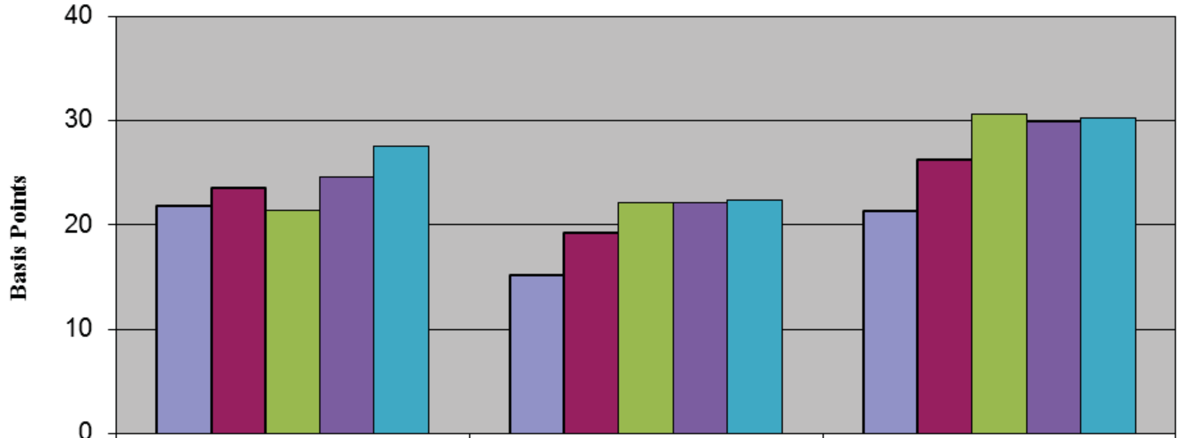
(1) Based on study population for 2007-2008 and standard loans for 2009-2011. Years do not total to 100% because of other types of fixed-rate mortgages not shown in this table.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Estimated costs in 2011 were slightly higher for standard fixed-rate loans and slightly lower for ARMs. More than 90 percent of ARMs acquired in 2010 and 2011 were five- or seven-year loans with one-year initial rate-adjustment periods (5/1 and 7/1 ARMs). The underwriting for those product types has improved since the start of the financial crisis. As in 2010, each Enterprise's estimated cost for standard ARMs was below that for standard 30-year fixed-rate mortgages. Standard fixed-rate, 15-year loans continued to have the lowest estimated costs. The shorter term and accompanying higher payments on this product type tend to attract borrowers with stronger credit profiles and higher property equity, and the estimated costs also reflect the benefit of the more rapid equity buildup due to a shorter amortization period. The net effect of the similar credit profile in 2011 compared to 2010, higher charged fees, and a smaller increase in modeled costs was to improve the estimated average guarantee fee gaps for the standard 30-year fixed-rate and ARM categories (see Figure 3). Since each Enterprise was more gap positive on 15-year fixed-rate and ARM products than 30-year fixed-rate loans in 2011, each benefited from the shift in acquisition volume to the former two products.

[14] "Other Fixed-Rate Mortgages" is omitted from Figures 2 and 3 because that category includes loans with very different terms and the overall purchase volume is small.

Figure 2
Estimated Single-Family Guarantee Fee by Product Type, 2007-2011



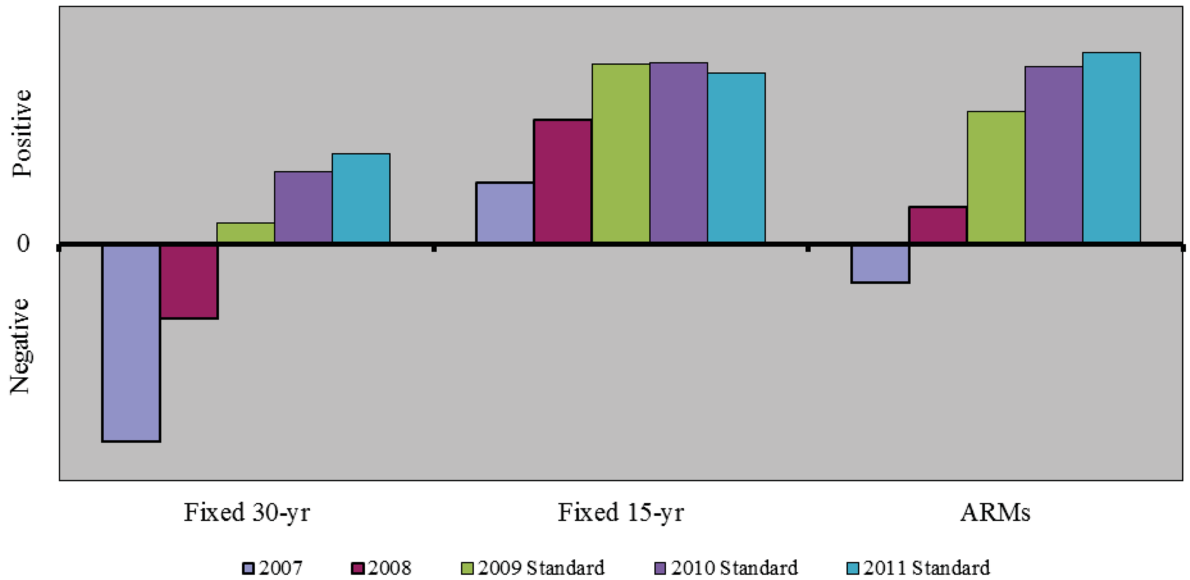
	Fixed 30-yr	Fixed 15-yr	ARMs
2007	22	15	21
2008	24	19	26
2009 Standard	21	22	31
2010 Standard	25	22	30
2011 Standard	28	22	30

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Loan Purpose

In recent years, the purposes of standard single-family mortgages acquired by the Enterprises have changed significantly. As Table 6 shows, in 2007 half of all standard loans were for home purchases. Cash-out refinances made up the next largest category, at 31 percent. Refinances in which the borrower obtained a lower interest rate or shorter loan term were only 18 percent of standard acquisitions. In the wake of the 2008 financial crisis, a combination of falling home prices, a collapse in home sales, declining interest rates, and tighter underwriting standards led to changes in this mix. By 2009 purchases accounted for only 20 percent of acquisitions. In the last two years, that category has recovered somewhat to make up 26 percent of standard acquisitions in 2011, up slightly from 2010. The share of cash-out refinances has fallen steadily since 2007 and made up 19 percent of standard acquisitions in 2011, down from 22 percent in the previous year. The share of rate-term refinances, after increasing rapidly from 2007 to 2009, has grown more slowly since then, reaching 55 percent of standard loans in 2011, up from 53 percent in 2010.

Figure 3
Estimated Single-Family Guarantee Fee Gap by Product Type, 2007-2011



Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

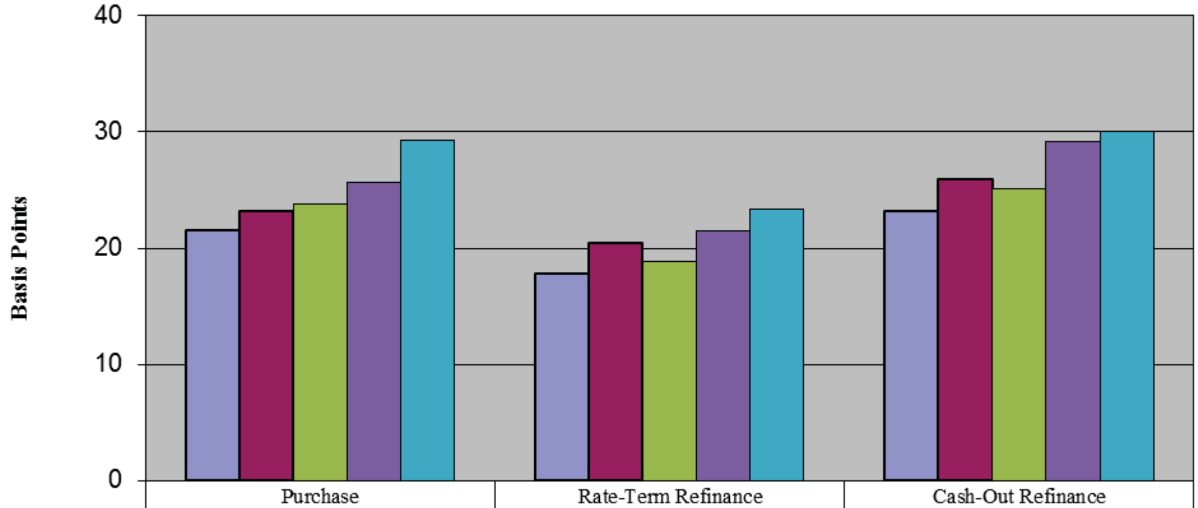
Table 6
Single-Family Acquisitions by Loan Purpose, 2007-2011[1]
(share of total unpaid principal balance)

	Purchase	Rate-Term Refinance	Cash-Out Refinance
2007	50%	18%	31%
2008	42%	28%	30%
2009 Standard	20%	51%	29%
2010 Standard	25%	53%	22%
2011 Standard	26%	55%	19%
Change from 2010	1%	2%	-3%

(1) Based on study population for 2007-2008 and standard loans for 2009-2011. Years do not total to 100% because of loans with other purposes not shown in this table.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Figure 4
Estimated Single-Family Guarantee Fee by Loan Purpose, 2007-2011

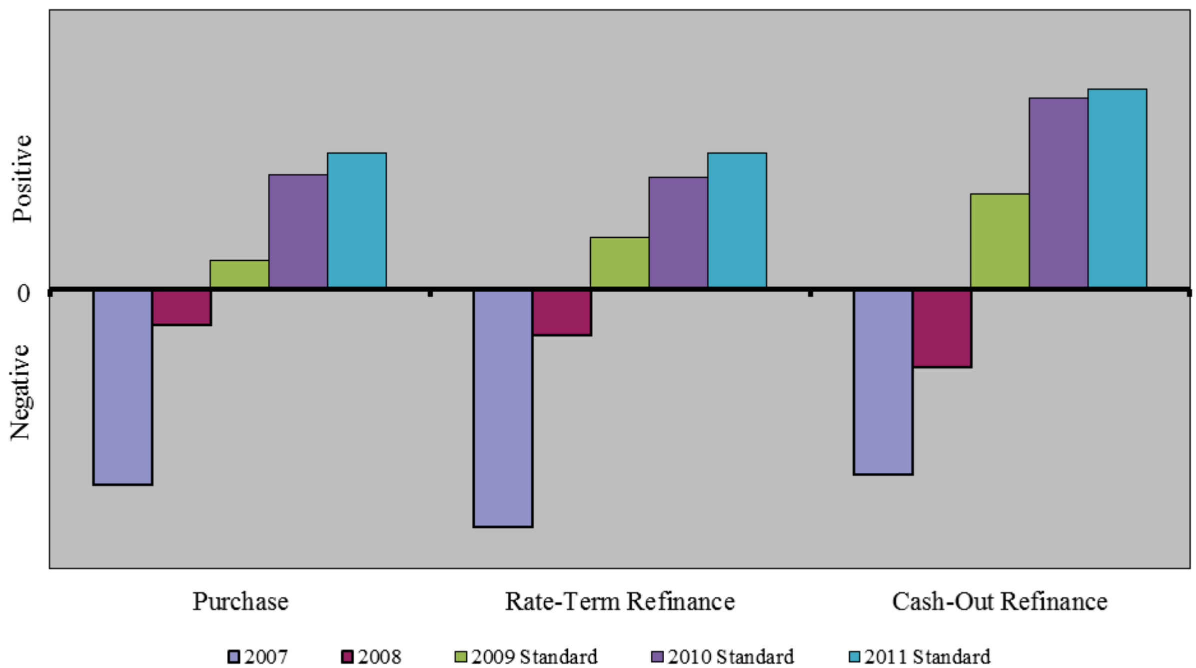


	Purchase	Rate-Term Refinance	Cash-Out Refinance
2007	22	18	23
2008	23	20	26
2009 Standard	24	19	25
2010 Standard	26	21	29
2011 Standard	29	23	30

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

The average guarantee fee charged by the Enterprises on standard mortgages in 2011 increased for all three loan purpose categories, with the largest rise for purchase loans (see Figure 4). Cash-out refinance loans continued to have the highest average fees. Rate-term refinance loans continued to have the lowest average guarantee fees, due in part to their lower LTV ratios and consequently lower credit risk. Estimated fee gaps also increased for standard mortgages in all three loan purposes categories in 2011 (see Figure 5). Cash-out refinances continued to have the highest (most positive) gaps. As in recent years, the gaps for purchases and rate-term refinances were similar to each other and lower than those for cash-out refinances.

Figure 5
Estimated Single-Family Guarantee Fee Gap by Loan Purpose, 2007-2011



Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

<u>Borrower Credit Score</u>

The data FHFA collects from the Enterprises for this study include borrower credit scores calculated using models developed by Fair Isaac Corporation (FICO). The three credit score categories include loans whose borrowers have scores greater than or equal to 720, scores between 660 and 719, and scores below 660. The credit score profile for Enterprise acquisitions of standard mortgages was little changed in 2011. The majority of standard loans continued to have borrower credit scores in the highest score category. As a share of all standard acquisitions, mortgages whose borrowers had scores in that category grew by 17 percentage points in 2009 and have been essentially unchanged since then (see Table 7). The share of the lower credit score category held steady at only two percent in 2011, a significant decrease from 2007, when this category accounted for 17 percent of acquisitions.

Table 7
Single-Family Acquisitions by Credit Score, 2007-2011[1]
(share of total unpaid principal balance)

	>=720	660-719	<660
2007	55%	28%	17%
2008	68%	24%	8%
2009 Standard	85%	13%	2%
2010 Standard	86%	13%	2%
2011 Standard	85%	13%	2%
Change from 2010	0%	0%	0%

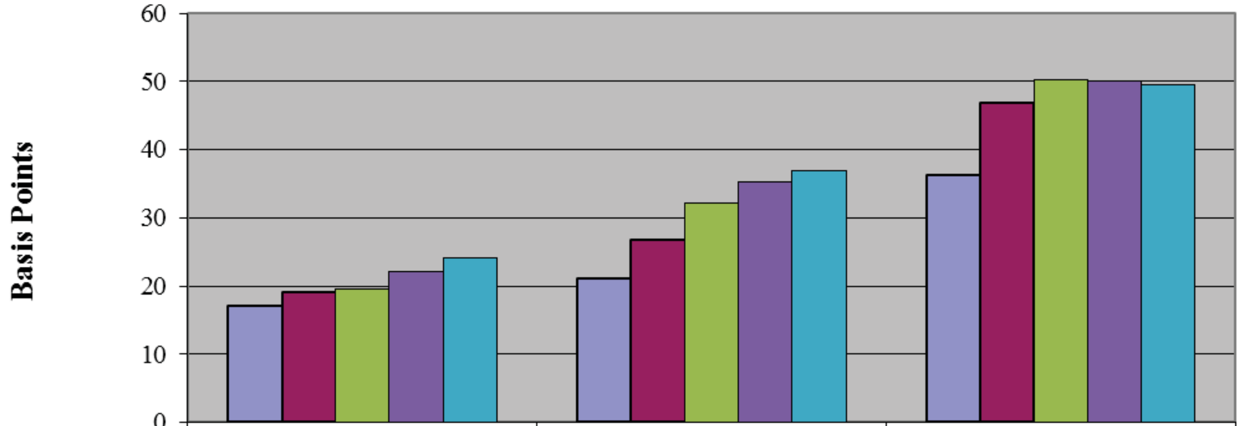
(1) Based on study population for 2007-2008 and standard loans for 2009-2011.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

The average single-family guarantee fees charged by the Enterprises on standard mortgages increased modestly from 2010 for loans in the two higher credit score categories and remained the same for the lowest category (see Figure 6). Overall, modeled costs were unchanged for the top two categories and lower for the lowest category. Fannie Mae's modeled costs increased in the two highest categories and were unchanged in the lowest category, whereas Freddie Mac's modeled costs decreased for each category.

On a combined basis, the Enterprises' guarantee fee gaps improved in each credit score category. Standard loans in the below 660 category became gap positive for both Enterprises combined in 2011 for the first time in the five-year study period (see Figure 7), as the positive gap for Fannie Mae's acquisitions outweighed a negative gap for Freddie Mac's.

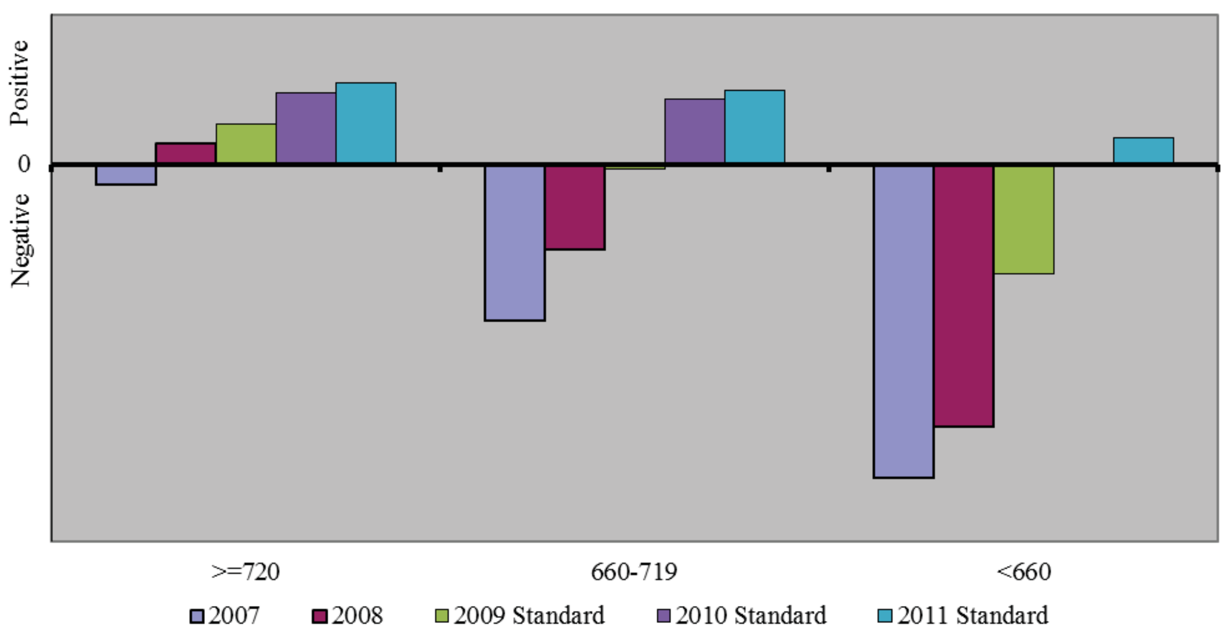
Figure 6
Estimated Single-Family Guarantee Fee by Credit Score, 2007-2011



	>=720	660-719	<660
2007	17	21	36
2008	19	27	47
2009 Standard	20	32	50
2010 Standard	22	35	50
2011 Standard	24	37	50

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Figure 7
Estimated Single-Family Guarantee Fee Gap by Credit Score, 2007-2011



Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

In 2011, as in the previous four years, loans with the best credit scores implicitly cross-subsidized mortgages with lower credit scores, as indicated by the differences in the fee gaps for standard loans in different credit score categories shown in Figure 7. The groups of loans with the lowest scores received the greatest implicit subsidies. Nonetheless, the degree of implicit cross-subsidization fell in 2011, as it had in the three previous years, with improvement in the gaps and low acquisition volume in the lower credit score categories. As was shown in Table 7, loans with credit scores less than 660 represented only two percent of standard loan acquisition volume in the last three years.

Loan-to-Value Ratio

The share of single-family mortgages acquired by Fannie Mae and Freddie Mac that had LTV ratios equal to or less than 70 percent comprised a slight majority of the Enterprises' standard acquisitions again in 2011 (see Table 8). The share of standard loans with LTV ratios above 90 percent doubled to four percent in 2011. The share of standard loans with an LTV ratio above 80 percent, the level at which credit enhancement such as mortgage insurance is required, increased from six percent to nine percent. In 2007, nearly a quarter of the acquisitions had been in that category.

As the LTV ratio of a mortgage increases, the likelihood of default and the severity of expected default losses rise, resulting in a higher estimated gross cost to the Enterprises. However, the requirement in the Enterprises' charters for loans acquired with LTV ratios above 80 percent to have credit enhancements such as MI protects the Enterprises against some of the losses arising from default. Thus, the risk of mortgages with a specific LTV ratio depends heavily on the level of MI coverage that the Enterprises require for loans with that LTV ratio and on the financial soundness of the MI provider.

Table 8

Single-Family Acquisitions by Loan-to-Value Ratio, 2007-2011[(1)]

(share of total unpaid principal balance)

	0 - 70	70.1 - 80	80.1 - 90	>90
2007	31%	45%	9%	15%
2008	38%	40%	12%	10%
2009 Standard	52%	42%	5%	2%
2010 Standard	51%	43%	4%	2%
2011 Standard	50%	41%	5%	4%
Change from 2010	-1%	-2%	1%	2%

(1) Based on study population for 2007-2008 and standard loans for 2009-2011.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Table 9 shows the standard MI coverage levels applicable in 2011 to most 30-year mortgages and the degree of Enterprise protection against losses, at the time of loan origination, for each coverage amount shown.[15] The standard MI coverage levels required by the Enterprises exceed the charter requirement for 20 percent protection, based on the purchase price or the appraised value of the house. However, any HARP or flexible refinance mortgage carries forward the MI coverage, if any, applicable to the previous loan that is refinanced. As a result of house price depreciation, the LTV ratios of HARP loans generally and flexible refinance loans often are higher than those of the previous mortgages. As a result, the Enterprises' MI coverage levels for HARP and many flexible refinance loans are lower than those shown in Table 9.[16]

The guarantee fees charged by the Enterprises reflect the presence of any mortgage insurance. Below an LTV ratio of 80 percent—the maximum LTV ratio that, for standard loans, does not require MI coverage or other credit enhancement—the Enterprises charge higher guarantee fees as LTV ratios rise and credit risk increases. Because mortgage insurance reduces the credit risk of the loan, loans that carry MI and have LTV ratios greater than 80 percent are sometimes charged less than mortgages with lower LTV ratios but no MI coverage.

Table 9
Mortgage Insurance Coverage Levels
(Standard Loans)
30-Year Loan for $100,000 Home

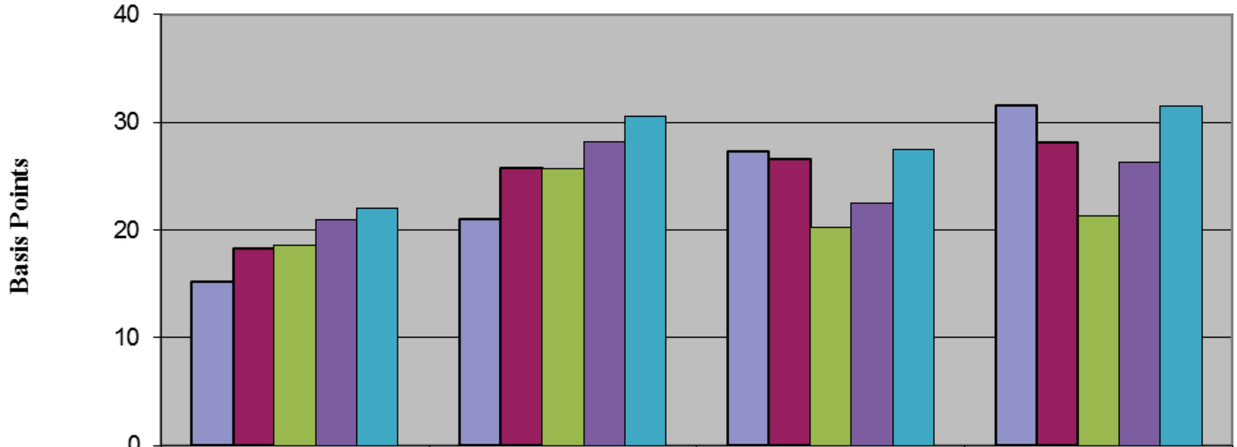
LTV Ratio	Loan Amount	MI Coverage	Protection at Origination
80	$80,000	0%	$20,000
85	$85,000	12%	$25,200
90	$90,000	25%	$32,500
95	$95,000	30%	$33,500

Source: Federal Housing Finance Agency based on Fannie Mae Seller Guide and Freddie Mac Seller Guide

[15] The level of Enterprise protection at loan origination is equal to the down payment plus the MI coverage percentage times the loan amount. For example, the protection on a 30-year loan on a house with a purchase price of $100,000 and 10 percent down payment is equal to the down payment of $10,000 plus the MI coverage of 25 percent of the $90,000 loan amount ($10,000 + 25 percent x $90,000 = $32,500).

[16] In September 2009, Fannie Mae announced alternative MI coverage levels. Specifically, the Enterprise would acquire mortgages with LTV ratios above 80 percent if the MI coverage limited Fannie Mae's exposure to 20 percent of the loan amount, in return for an additional upfront fee. That alternative became available for loans underwritten by Desktop Underwriter 8.0, effective December 12, 2009. Freddie Mac also allows for reduced MI coverage in return for an additional upfront fee, but not down to the 20 percent level required by its charter act.

Figure 8
Estimated Single-Family Guarantee Fee by Loan-to-Value Ratio, 2007-2011



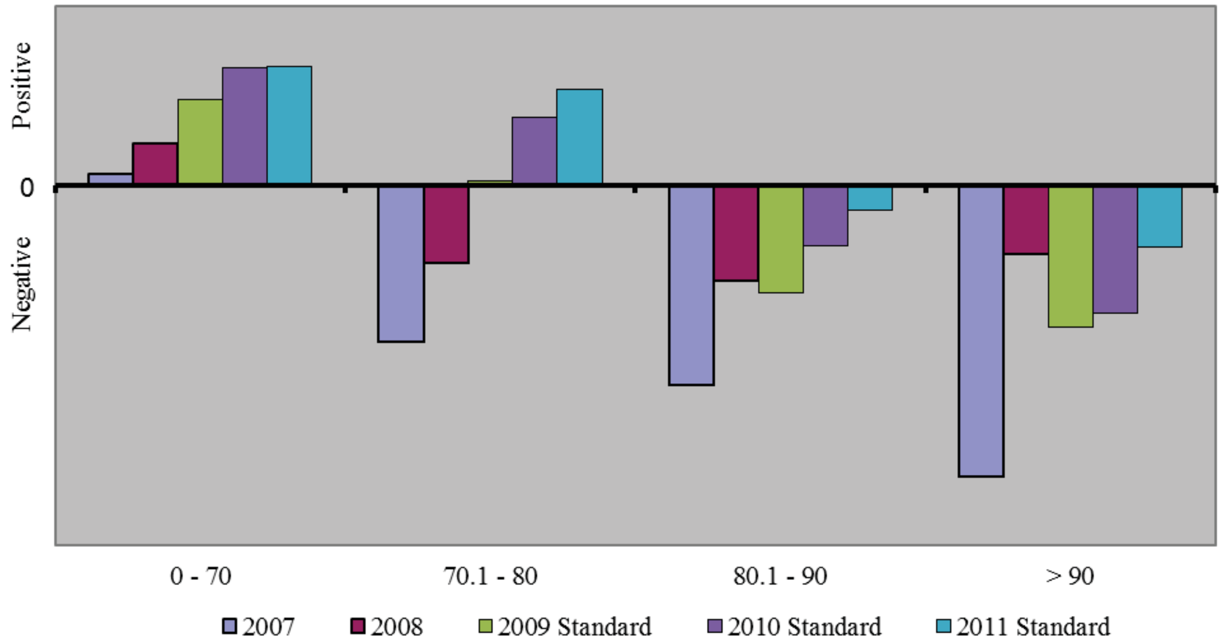
	0 - 70	70.1 - 80	80.1 - 90	> 90
2007	15	21	27	32
2008	18	26	27	28
2009 Standard	19	26	20	21
2010 Standard	21	28	23	26
2011 Standard	22	31	28	31

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

The average guarantee fees charged by each Enterprise on standard mortgages increased for each LTV ratio category in 2011, reflecting the full-year impact of increases in upfront fees announced in late 2010 (see Figure 8). Changes in guarantee fees in 2011 were largest in the two highest LTV ratio categories. For the past three years, the average charged fees for standard loans in the 70.1-80 percent LTV ratio category have been higher than those for standard loans with LTV ratios of between 80.1-90 percent. Whereas mortgages in the latter category had a higher probability of default than loans in the lower LTV ratio categories, most of them had greater loss protection at origination due to the additional protection afforded by MI or other credit enhancement. In a falling house price environment, the Enterprises' greater exposure tended to increase estimated costs more for mortgages with lower protection levels.

Each Enterprise again had negative fee gaps for standard mortgages in the two highest LTV ratio categories in 2011 (see Figure 9). Both Enterprises experienced improvements in the gaps for standard loans in all the LTV ratio categories, with the exception of a very slight decrease in gap for Freddie Mac loans in the 0-70 percent category. As in past years, at both Enterprises gaps decreased as LTV ratio increased, implying cross-subsidization of higher LTV ratio loans by those with lower LTV ratios.

Figure 9
Estimated Single-Family Guarantee Fee Gap by Loan-to-Value Ratio, 2007-2011



Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Average Guarantee Fees on HARP and Flexible Refinance Mortgages

In 2011 HARP gave owner-occupant borrowers who are current on their mortgages and have current LTV ratios of greater than 80 percent and up to 125 percent the opportunity to refinance and obtain a lower interest rate or a more stable loan product, despite a decline in their property's value that would otherwise make them ineligible under standard Enterprise guidelines without new additional mortgage insurance. Since Fannie Mae or Freddie Mac already holds the credit risk on each loan, they provided expanded eligibility and reduced documentation requirements, which include no minimum credit scores, LTV ratios up to 125 percent, and reduced appraisal requirements. If the original loan had mortgage insurance, the prior insurance is carried over to the new loan, without the need for additional coverage to reflect the decline in the property's value. If the original loan did not have mortgage insurance due to sufficient borrower equity at origination, no mortgage insurance or borrower equity contribution is required for the refinance. In 2011 each Enterprise provided a guarantee fee pricing discount by imposing a cap of two percent on the upfront fee for each HARP loan. As noted, HARP 2.0 has expanded eligibility for the program and reduced both guarantee fees and lender representations and warranties in an effort to reach more homeowners, but no loans that qualified under the revised program were delivered in 2011.

In 2011 HARP provided the following benefits to Fannie Mae and Freddie Mac:

- Opportunity to Re-Price Mortgage Credit Risk. FHFA expects that the additional fees collected on HARP loans, together with the guarantee fees collected on the original loans that are refinanced, will, on average, cover the projected credit expenses and administrative costs associated with the mortgages. The result was a better overall alignment of guarantee fees charged to credit risk than prior to the transactions. However, the additional revenues were often substantially less than what would be collected on standard refinances due to a pricing cap, which limits the upfront fees, and because the Enterprises do not charge for the lack or inadequate extent of mortgage insurance.

- Improvement in Economic Position. The expectation is that the overall economic position of each Enterprise was improved by the transaction because a HARP mortgage is a more stable loan product and/or has a lower mortgage payment than the loan it refinances, and additional fee income was earned in 2011 through the re-pricing of the credit risk. Also, by completing the refinance process, borrowers demonstrate a commitment to homeownership, which further reduces the likelihood of default. That benefit is partially offset if borrowers capitalize closing costs, increasing LTV ratios on the new loans, or extend the loans' maturity date, both of which increase credit risk.

- Lower Costs. The costs to the Enterprises of allowing a HARP transaction are lower than the costs of providing a loan modification. The mortgages that are refinanced through HARP are not considered impaired, and Troubled Debt Restructuring (TDR) accounting treatment is not required.

This section presents combined data on HARP and flexible refinance mortgages. The latter includes any loan acquired under Fannie Mae's Refi Plus or Freddie Mac's Relief Refi program after the start date of HARP (April 2009) that was not eligible for a standard refinance and has one or more of the following characteristics: 1) the home is an investor property or second home and the LTV ratio exceeds 75 percent; 2) the property has two to four units and the LTV ratio is greater than 75 percent and less than 80 percent; 3) the borrower's credit score is less than 620; or 4) the combined LTV ratio exceeds 97 percent of loans that have the same objective as HARP and have similarly relaxed underwriting standards.

As a share of Enterprise single-family acquisitions, HARP and flexible refinance mortgages increased from four percent in 2009 to 12 percent in 2010 and 2011 (see table 10). The first HARP loans were acquired in the second quarter of 2009, and activity grew over the rest of that year, as lenders increased their marketing of the program. The combined HARP and flexible refinance share of acquisitions peaked at 15 percent in the second quarter of 2011 and declined in the second half of the year.

Table 10
HARP and Flexible Refinance Share of Unpaid Principal Balance of Mortgages Acquired in 2009-2011, by Quarter

Quarter	2009	2010	2011
1	0%	14%	13%
2	2%	13%	15%
3	8%	11%	13%
4	9%	11%	9%
Full Year	4%	12%	12%

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

The preceding section on standard mortgages used fee gaps, which reflect estimated costs derived from the Enterprise costing models, to compare the guarantee fees Fannie Mae and Freddie Mac charge on those loans to the cost of bearing the credit risk they pose. Given the special nature of HARP and similar flexible refinance programs, the analysis now takes a different approach by comparing the interest rates of HARP and flexible refinance mortgages to those of the original loans they replaced. In order to provide a meaningful comparison, the analysis focuses on 30-year fixed-rate loans. Thirty-year fixed-rate HARP and flexible refinance mortgages acquired from 2009 to 2011 had interest rates about 120 basis points lower on average in each year than the interest rates on loans they refinanced (see Table 11), providing a meaningful savings to borrowers.

Table 11
Comparison of the Interest Rates of 30-Year Fixed-Rate HARP and Flexible Refinance Mortgages Acquired in 2009-2011 and Those of the Loans They Refinanced

	2009	2010	2011
Original Loan	6.4%	6.3%	6.1%
New Loan	5.1%	5.1%	4.9%
Difference	-1.2%	-1.2%	-1.2%

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Variation in Fees by Lender Delivery Volume

In recent years, each Enterprise has acquired single-family mortgages from a group of about 1,000 lenders. Table 12 shows the number of lenders that delivered such loans to each Enterprise in 2007 through 2011.

Table 12
Number of Lenders by Enterprise,
2007-2011(1)

	2007	2008	2009 Standard	2010 Standard	2011 Standard
Fannie Mae	986	1,018	1,077	1,050	1,040
Freddie Mac	904	914	1,039	1,029	993

(1) Based on study population for 2007-2008 and standard loans for 2009-2011.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

A significant proportion of each Enterprise's single-family acquisitions come from a small group of large lenders. For this study, FHFA ranked lenders by the UPB of the mortgages in the study population that they delivered to each Enterprise, creating five groups for each year, as shown in Tables 13-16 and in Figure 10: each Enterprise's top five lenders (1-5), next 10 lenders (6-15), next 10 lenders after that (16-25), next 75 lenders (26-100), and lenders beyond the top 100 (101+). FHFA calculated the average total guarantee fee for each acquisition-volume group by weighting the amounts for each lender in each group by the UPB for that lender. Mortgages acquired from the top five lenders at the Enterprises accounted for 60 percent of their combined business volume in 2011, down one percentage point from 2010 (see Table 13).[17]

[17] Section 1601 of HERA specifies a breakdown of guarantee fees charged based on the asset size of the originator and the number of loans sold or transferred to an Enterprise. FHFA has grouped lenders by the UPB of loans delivered, consistent with Enterprise practice.

Table 13
Single-Family Acquisitions by Acquisition-Volume Group, 2007-2011[(1)]
(share of total unpaid principal balance)

	XL 1-5	L 6-15	M 16-25	S 26-100	XS 101+
2007	64%	25%	4%	5%	2%
2008	62%	26%	4%	5%	3%
2009 Standard	60%	19%	5%	8%	8%
2010 Standard	61%	19%	5%	8%	8%
2011 Standard	60%	21%	4%	8%	7%
Change from 2010	-1%	2%	0%	0%	0%

(1) Based on study population for 2007-2008 and standard loans for 2009-2011.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Table 14 provides the average ongoing, upfront, and total guarantee fees Fannie Mae and Freddie Mac charged on standard single-family mortgages for loans acquired from lenders in the five acquisition-volume groups in 2007-2011. In each year, average upfront fees have varied less across the groups than average ongoing fees, reflecting the similar credit risk profiles of mortgages delivered by lenders in each of the groups. Average upfront fees paid by lenders in each group have risen over the five-year period and increased by one to two basis points in 2011. The difference between the average upfront fees paid by lenders in the extra-small-volume and the extra-large-volume groups shows a slight downward trend over the five years, although there are exceptions such as a nearly one basis point increase in 2011. Average ongoing fees have not shown a clear trend up or down over the five years, but rose slightly for most acquisition-volume groups in 2011. The difference between the average ongoing fees paid by lenders in the extra-small-volume and the extra-large-volume groups rose from 2007 to 2009, declined in 2010, and was essentially unchanged last year.

Table 14
Estimated Single-Family Guarantee Fees
by Acquisition-Volume Group, 2007 – 2011[1]

	Acquisition-Volume Group		Guarantee Fees Ongoing	Guarantee Fees Upfront	Guarantee Fees Total
2007	XL	1-5	16	4	20
	L	6-15	18	5	24
	M	16-25	19	8	28
	S	26-100	21	6	26
	XS	100+	22	6	28
	XL - XS Difference		(7)	(2)	(8)
2008	XL	1-5	13	9	22
	L	6-15	15	10	25
	M	16-25	16	11	27
	S	26-100	18	10	29
	XS	100+	21	10	31
	XL - XS Difference		(8)	(1)	(9)
2009 Standard	XL	1-5	12	8	20
	L	6-15	13	9	22
	M	16-25	14	9	23
	S	26-100	17	9	26
	XS	100+	20	9	29
	XL - XS Difference		(9)	(1)	(10)
2010 Standard	XL	1-5	13	10	23
	L	6-15	14	11	25
	M	16-25	15	10	25
	S	26-100	17	10	27
	XS	100+	21	10	31
	XL - XS Difference		(8)	0	(8)
2011 Standard	XL	1-5	14	11	25
	L	6-15	14	12	26
	M	16-25	16	12	27
	S	26-100	17	12	30
	XS	100+	21	12	33
	XL - XS Difference		(8)	(1)	(8)

(1) Based on study population for 2007-2008 and standard loans for 2009-2011.

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Table 15
Estimated Single-Family Guarantee Fees
by Acquisition-Volume Group, 2011 by Quarter

	Acquisition- Volume Group		Guarantee Fees Ongoing	Upfront	Total
1Q11 Standard	XL	1-5	13	9	21
	L	6-15	14	9	23
	M	16-25	16	10	25
	S	26-100	17	10	27
	XS	100+	21	11	33
	XL - XS Difference		(9)	(2)	(11)
2Q11 Standard	XL	1-5	14	12	26
	L	6-15	14	13	27
	M	16-25	16	13	30
	S	26-100	18	13	31
	XS	100+	22	13	35
	XL - XS Difference		(8)	(1)	(9)
3Q11 Standard	XL	1-5	14	14	28
	L	6-15	14	14	29
	M	16-25	16	13	30
	S	26-100	18	14	31
	XS	100+	21	13	34
	XL - XS Difference		(7)	1	(6)
4Q11 Standard	XL	1-5	14	12	26
	L	6-15	15	12	27
	M	16-25	16	12	28
	S	26-100	17	12	29
	XS	100+	21	12	33
	XL - XS Difference		(7)	(0)	(7)

Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Quarterly data indicate that the average guarantee fees Fannie Mae and Freddie Mac charged on standard single-family mortgages increased for nearly all five acquisition-volume groups between the first and the fourth quarters of 2011 (see Table 15). The increases were generally higher for larger-volume lenders than for smaller-volume ones. Average upfront fees rose by between one and three basis points, with the largest increases occurring for lenders in the largest-volume groups. As the Enterprises renegotiated expiring contracts in 2011, they increased ongoing fees more for large-volume lenders. Between the first and fourth quarters, average ongoing fees increased by two basis points for the extra-large-volume group and declined by less than one-half of one basis point for the extra-small-volume group. As a result, the difference between the average ongoing fees paid by lenders in those two groups declined from nine basis points in the first quarter to seven basis points in the fourth.

Smaller lenders primarily choose to sell whole loans for cash, since they typically lack the volume and capacity to swap mortgages for MBS (see Table 16). In contrast, larger lenders primarily swap loans for MBS under lender-specific guarantee fee contracts negotiated with each Enterprise. When lenders sell whole loans, they receive an established cash price that reflects an embedded guarantee fee. That embedded guarantee fee is not explicitly stated to the lenders, but instead is an input used by the Enterprises in setting cash prices. Smaller-volume lenders relied less on whole loan deliveries and more on swapping loans for MBS in 2011 than in the previous year.

Table 16
Whole Loan Share of Single-Family Acquisitions
by Acquisition-Volume Group, 2007-2011[1]
(share of category unpaid principal balance)

	XL 1-5	L 6-15	M 16-25	S 26-100	XS 101+
2007	1%	8%	11%	56%	95%
2008	3%	11%	15%	59%	94%
2009 Standard	0%	17%	32%	70%	96%
2010 Standard	0%	12%	26%	70%	94%
2011 Standard	0%	6%	27%	66%	93%
Change from 2010	0%	-6%	1%	-4%	-2%

(1) Based on study population for 2007-2008 and standard loans for 2009-2011.

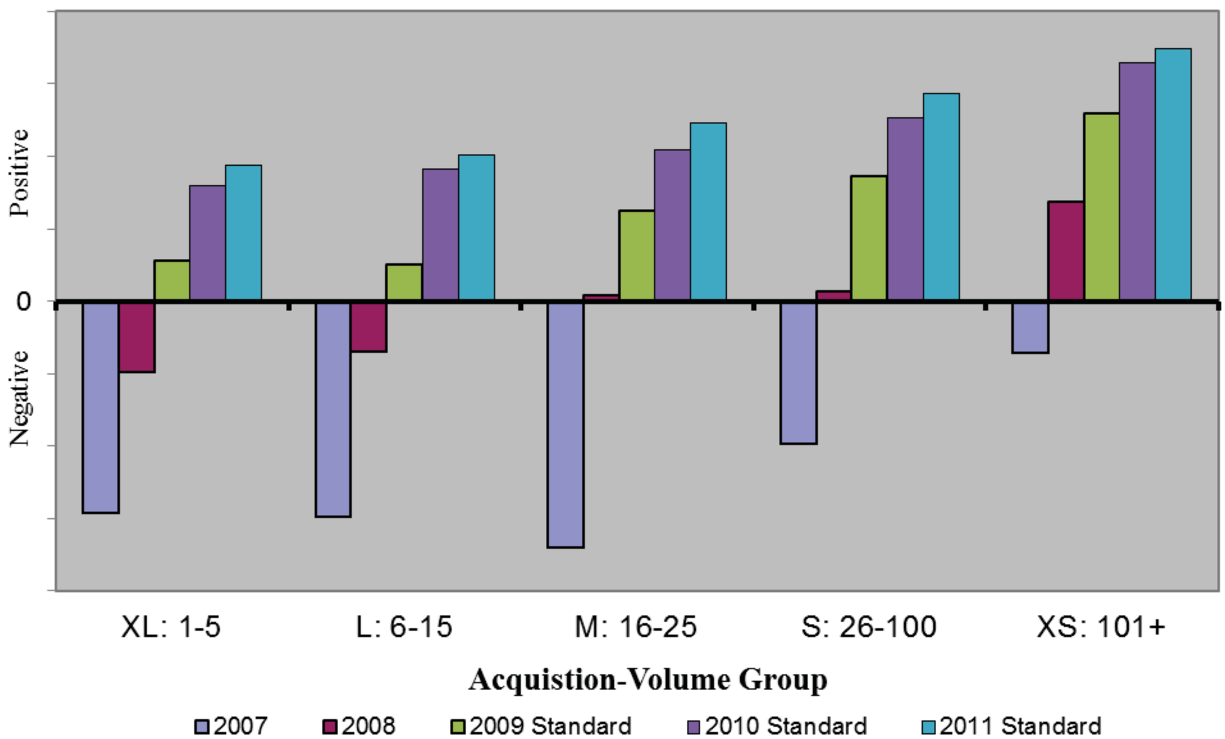
Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

The whole loan programs offer lenders faster cash proceeds and lower financing costs since there is not the intermediate step of swapping loans for MBS and then reselling the MBS to investors. Lenders also benefit from reduced hedging costs through the avoidance of the interest rate risk inherent in holding MBS. Fannie Mae and Freddie Mac finance and hedge the interest rate risk associated with holding the whole loans they acquire. Each Enterprise packages whole loans it has acquired from multiple lenders to create securities that can be sold in the capital markets.

In determining the guarantee fees they charge, each Enterprise historically gave consideration to the total volume of mortgages to be delivered by each lender. They traditionally took this approach because the larger a lender's delivery volume, the more that business contributes to the liquidity that supports the demand for the Enterprise's outstanding MBS, which benefits to some extent all lenders that do business with the Enterprise.

In addition to MBS liquidity considerations, guarantee fee differences have existed for other reasons. First, the largest lenders historically were able to use their significant volumes to negotiate better terms of business such as lower ongoing guarantee fees and sometimes discounts in upfront fees. As noted, during 2011 the Enterprises increased ongoing fees more for lenders in the largest-acquisition volume groups as expiring contracts were renegotiated. Second, the administrative costs of doing business with a lender are partly fixed, so the administrative cost per loan of guaranteeing a larger lender's business is lower. The Enterprises' cost models use a fixed allocation of G&A expenses across all loans without respect to a lender's volume. Third, counterparty risk may be less for the larger institutions that are subject to federal regulation and extensive financial disclosure requirements. However, concentrations of counterparty risk and dependence for business on the largest counterparties may more than offset such benefits.

Figure 10
Estimated Single-Family Guarantee Fee Gap by Acquisition-Volume Group, 2007 - 2011



Source: Federal Housing Finance Agency based on data from Fannie Mae and Freddie Mac

Despite those limitations in the data, Figure 10 presents estimated fee gaps for standard mortgages acquired in 2007 through 2011 from lenders in the five acquisition-volume groups. Between 2010 and 2011, gaps rose for lenders in each acquisition-volume group, as they have consistently since 2008, but the increases were smaller in 2011 than in the two previous years. The estimated fee gap remained the largest for lenders in the extra-small-volume group, but the difference between the gap for that category and for the extra-large-volume group declined. Quarterly data indicate that the difference between the fee gaps for lenders in the two groups declined by three basis points between the first and fourth quarters of the year.

CONCLUSION

Although Fannie Mae and Freddie Mac consider model-derived estimates of cost in determining the single-family guarantee fees they charge, each Enterprise's pricing often subsidizes its guarantees of some mortgages using higher returns that it expects to earn on guarantees of other loans. In 2007 through 2011, cross-subsidization in single-family guarantee fees charged by the Enterprises was evident across product types, credit score categories, and LTV ratio categories. If there had been no cross-subsidization, Enterprise guarantee fees would have been higher on 30-year fixed-rate mortgages, loans to borrowers with lower credit scores, and mortgages with lower down payments. Guarantee fees would have been lower on loans with a 15-year term to maturity, low LTV ratios, and those that were made to borrowers with strong credit scores. However, because the share of higher-risk loans acquired by the Enterprises was lower in 2010 and 2011 than in prior years, and the Enterprises have adjusted their prices to better account for credit risk, overall there was less cross-subsidization in Enterprise single-family guarantee fee pricing in the two later years.

Fannie Mae and Freddie Mac each responded to deteriorating housing market conditions with guarantee fee pricing increases beginning in March 2008. The main changes to pricing were the introduction of a 25 basis point upfront adverse market charge on all single-family mortgages, risk-based pricing based on LTV ratios and borrower credit scores, and various additional fees for combinations of loan attributes that increase credit risk. Those changes helped reduce instances where receipts associated with new acquisitions were expected to be less than costs (including a target rate of return on required capital). Since 2008, each Enterprise has continued to make changes to its guarantee fee pricing, both upfront fees charged for specific risk attributes and ongoing fees. However, in both 2010 and 2011, the changes to pricing were far less extensive than those implemented in 2008 to respond to the financial crisis.

The average estimated cost of guaranteeing standard single-family mortgages acquired by Fannie Mae and Freddie, as estimated by internal Enterprise costing models at the time of acquisition, fell in 2008, 2009, and 2010 as a result of better underwriting, improvements in the credit profile of acquisitions, and improvements in the house price outlook. Costs rose slightly in 2011 due in part to an increase in acquisitions of loans with higher LTV ratios, which included HARP and flexible refinance loans and an increasing number of standard loans. While the housing market remained stressed and price declines continued in many markets, in 2011 the Enterprises' costing models reflected a more favorable environment than had been assumed in 2009.

As a share of total Enterprise acquisitions of single-family mortgages, HARP loans more than doubled to 11 percent in 2010, the program's first full year, but fell slightly in 2011 to 10 percent. The number of flexible refinance mortgages, which are in many respects similar to HARP loans, grew by nearly 45 percent in 2011, but still constituted only two percent of acquisitions. In 2010 and 2011 HARP and flexible refinance borrowers who refinanced from a 30-year fixed rate mortgage into another loan of the same type were able to reduce their interest rates by about 120 basis points on average. Although HARP and flexible refinance borrowers were not required to purchase additional or new mortgage insurance on their loans to compensate for low equity positions caused by declining property values, the loans still improved each Enterprise's economic position and reduced borrowers' monthly mortgage payments on average.