Statement of

Patrick J. Lawler
Chief Economist
Federal Housing Finance Agency

Before the U.S. House of Representatives

Subcommittee on Capital Markets, Insurance, and

Government-Sponsored Enterprises

"Understanding the Implications and Consequences of the Proposed Rule on Risk Retention"

April 14, 2011

Statement of
Patrick J. Lawler, Chief Economist
Federal Housing Finance Agency
Before the U.S. House of Representatives
Subcommittee on Capital Markets, Insurance, and
Government-Sponsored Enterprises
"Understanding the Implications and Consequences of the
Proposed Rule on Risk Retention"
April 14, 2011

Chairman Garrett, Ranking Member Waters and members of the Subcommittee, thank you for the opportunity to testify on the Federal Housing Finance Agency's (FHFA's) participation in the joint agency rulemaking for the implementation of the credit risk retention requirements for asset-backed securities in the Dodd-Frank Act.

One of the widely recognized causes of the financial crisis of 2008 was the poor quality of loans collateralizing many asset-backed securities, with subprime mortgages being the most flagrant culprits. Too often, lenders made loans that they would not have been willing to hold themselves only because they knew they could sell them to securitizers at an attractive price. Pools of such loans were used to back securities that were structured so that most of the securities received high credit ratings and were purchased by investors who gave little attention to underlying loan quality.

This "originate-to-distribute" model lacked the proper incentives for the origination and securitization of high quality loans, with fair terms for borrowers and proper underwriting to prudent standards. Risk retention better aligns the incentives between securitizers and investors and reduces information asymmetries by requiring that securitizers of asset-backed securities have a financial stake in the performance of loans underlying a security, or "skin-in-the-game." Through risk retention, including exemptions for loans with characteristics that imply a lower risk of default, securitizers will have a disincentive to acquire poor quality loans for securitization, which, in turn, will make originators less interested in making such loans. Investors, therefore, should be more willing to provide capital for residential mortgages and other types of loans. This may be an important step in facilitating the return of private capital to the residential housing market and other lending markets that benefit from securitization.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (P.L. 111-203), enacted on July 21, 2010, requires in Section 941 that the federal banking agencies (Office of the Comptroller of the Currency, Federal Reserve, and Federal Deposit Insurance Corporation (FDIC)) and Securities and Exchange Commission (SEC) jointly prescribe regulations to require that securitizers retain a portion of the credit risk of loans that collateralize asset-backed securities. The Act included FHFA and the Department of Housing and Urban Development (HUD) among the joint rulemaking agencies for the purpose of the residential mortgage asset class and also for jointly defining and creating an exemption from the risk retention requirements for qualified residential mortgages (QRM). The Act charged the Chairman of the Financial Stability Oversight Council with the responsibility to coordinate the rulemaking.

The agencies jointly released a notice of proposed rulemaking (NPR) the last week in March 2011. The public comment period runs through June 10, 2011, after which the agencies will consider the comments and publish a final rule. The Act provides for the final regulations to become effective one year after publication for residential mortgages, and two years after publication for the other asset classes.

This proposed rule is the product of a long and deliberative process. It started well before the passage of the Dodd-Frank Act under the aegis of the President's Working Group on Financial Markets (PWG) in 2009. Over a period of several months, many of the same regulators that have proposed this rule discussed earlier proposals by the SEC and the FDIC to require or reward some degree of risk retention in securitizations.

After enactment of the Dodd-Frank Act, the Department of the Treasury began hosting meetings of the banking agencies, SEC, FHFA and HUD for the purpose of coordinating the rulemaking on risk retention. It was FHFA's goal, along with the other agencies, to develop draft rules in line with the Act's express language and its intent to align the interests of investors and securitizers and to provide for growth and stability in the securitization market in a responsible manner. In developing the rule, the agencies sought to have a meaningful level of credit risk retention, while reducing the potential for the rule to affect negatively the availability and cost of credit to families and businesses. We also recognized that the NPR is not a final product, and we included more than 170 questions for public comment, to assist in shaping the final rule.

In today's testimony, I am going to focus on some areas that received a lot of attention by the agencies and have also been the subject of early public commentary. They include the tightness of the underwriting standards for the QRM exemption, especially the required down payment; the types of risk retention allowed, including the premium capture accounts that would be required for some securitizations and the special risk retention rules proposed for Fannie Mae and Freddie Mac (the Enterprises); and the servicing rules associated with the QRM exemption.

Standards for Qualified Residential Mortgages

The Act directs the agencies to define QRM, taking into consideration those underwriting and product features that historical loan performance data indicate result in a lower risk of default. These features include documentation and verification of borrower financial resources; housing- and total debt- to-income payment ratios; mitigation of payment shock on adjustable-rate mortgages; mortgage insurance to the extent that it reduces the risk of default; and restriction of high-risk features, such as negative amortization, interest-only payments, and prepayment penalties.

The agencies must require that securities consisting of one or more non-QRM loans be subject to retention of not less than five percent of the credit risk, but the Act provides latitude for the agencies to specify the permissible forms of risk retention and to allow the securitizers to allocate some or all of the risk retention to loan originators.

The proposed QRM standards were designed to reflect an understanding that Congress intended that risk retention be the norm, with only the best loans exempt. For risk retention to be successful, there needs to be a sufficient quantity of non-QRM loans of acceptable quality, so that non-QRM securities can achieve a reasonable degree of liquidity. If non-QRM loans are relatively scarce, their costs will be higher and their availability will suffer.

The main requirements for a loan to meet the proposed QRM standards are:

- Loan must be a closed-end, first-lien, owner-occupied mortgage.
- Home purchaser must make a minimum down payment of 20 percent of the purchase price plus closing costs. Subordinate financing is not allowed on purchase loans. Rate and term refinances and cash-out refinances must have combined loan-to-value ratios (LTVs) no greater than 75 percent and 70 percent, respectively.
- Borrower's mortgage debt payments cannot exceed 28 percent of income and total debt payments cannot exceed 36 percent of income.
- Loan terms cannot exceed 30 years, and interest-only, negative-amortization, balloon loans, and prepayment penalties are not eligible. Points and fees cannot exceed three percent of the loan amount, and there are payment caps on adjustable rate mortgages to mitigate payment shock.
- Borrowers must be current and cannot have missed two consecutive payments on any consumer debt in the past two years; and cannot have had a bankruptcy, foreclosure or short sale within the past three years.
- Servicing standards must incorporate loss mitigation practices and address subordinate liens.
- Mortgage insurance may not be used to meet the borrower equity requirements. While mortgage insurance reduces loss severity, the agencies did not find substantive evidence that default rates have been reduced by mortgage insurance. The rulemaking solicits public comments in this area.

In developing the standards for QRM, the agencies examined the historical performance of loans with different risk attributes. FHFA contributed to this analysis by examining the delinquency performance of loans acquired by Fannie Mae and Freddie Mac over the period from 1997 to 2009 for each of the major QRM risk factors. FHFA posted a Mortgage Market Note titled "Qualified Residential Mortgages" on its website on April 12, 2011. That document summarizes the methodology we used and provides quantitative results.[1]

---

[1] http://www.fhfa.gov/webfiles/20686/QRM_FINAL_ALL_R41111.pdf

Our analysis estimated the number of loans that would and would not have met the QRM standard in each year and calculates the percentages of those loans that have been 90 days or more delinquent so far. Loans meeting the QRM standards varied from close to 10 percent of Enterprise acquisitions that were originated during the boom years when underwriting standards were lower, to about 31 percent for 2009 originations, or 27 percent when considering only purchase loans. The debt-to-income ratios had the strongest impact on the share of loans meeting the QRM standard. However, that result may reflect some underreporting of income by applicants who knew that they would qualify for the loan without reporting higher income.

FHFA also evaluated the impact of varying the required down payment from 20 percent.. Lowering the QRM's minimum down payment to only 10 percent would have increased the share of qualifying Enterprise loans used for home purchase by just 5 percentage points, from 27 percent to 32 percent. The additional loans would be much riskier, though. Their ever-90-days delinquency rates were consistently 2 to 2.5 times higher than the rates for QRM loans. Because these were all Enterprise loans, virtually all of the loans with LTVs above 80 percent had mortgage insurance, so allowing higher LTV loans only if they had mortgage insurance would not have improved the results.

Concerns have been raised about the impact this standard would have on the availability or cost of finance for homebuyers who are unable to put down 20 percent of the purchase price. The agencies expect to receive a significant number of comments on this issue and will consider them carefully before issuing a final rule. Loans that do not achieve QRM status and are not purchased by an Enterprise or guaranteed by FHA would subject securitizers to the higher costs associated with risk retention, and those costs might well be passed on to borrowers.

In evaluating the potential impact of risk retention, it is important to distinguish between the effect of existing risk-based pricing and the effects that might be caused by risk retention. Some commentaries on the proposed rule indicate that only borrowers who can put 20 percent down will be able to get the best rates. But significant differences in rates based on credit risk already exist today. Freddie Mac, for example, will pay its best price only for loans with LTVs of 60 percent or less and borrower FICO scores of 700 or more.

In considering how much risk retention might add to borrowers' costs, it is well to keep in mind that interest rates on jumbo loans, which do not currently have any serious securitization options--QRM or non-QRM-- available, have been about 60 basis points above those on the largest loans available for securitization through Fannie Mae or Freddie Mac. In effect, that spread is currently the cost of not being able to securitize any portion of those loans. It seems reasonable to anticipate that in a market environment that is receptive to private label securities, risk retention would have a much smaller effect on mortgage rates because it would only prevent lenders from securitizing five percent of their loans.

As required by the Dodd-Frank Act, the standards that define QRM are associated with a low risk of default based on historical data. Investors should be willing to purchase securities backed by pools of such mortgages without the retention of credit risk by the securitizer. However, because QRM has been defined in the NPR as the best class of loans, rather than an average class of loans, there should continue to be many loans made to creditworthy borrowers that fall outside of the QRM standards. The five percent risk retention requirement on securities backed by such loans will help to increase investor confidence and encourage originators and securitizers to maintain prudent underwriting standards, without the race to the bottom that was prevalent in the boom years.

While the proposed QRM standard requires a 20 percent down payment and does not recognize mortgage insurance as a source of meaningful reductions in mortgage defaults, FHFA expects that securitizers and investors will continue to recognize the value of mortgage insurance and other credit enhancements as a vehicle for the reduction of loss severity in the event of default. Therefore, borrowers should continue to have access to mortgage credit without making a 20 percent down payment.

Forms of Risk Retention for Non-QRM Loans

The agencies have proposed in the NPR more than one way for securitizers to satisfy the risk retention requirement for non-QRM loans. The NPR provides a menu of options that would allow the market to determine the most appropriate form of risk retention for a particular deal that satisfies the needs of the investor community, at the lowest cost to the securitizer. This will benefit market liquidity and may allow the market to develop a consensus on risk retention over time.

A securitizer may meet the risk retention requirements for residential mortgage loans through an unhedged five percent of the credit risk in the form of:

- A vertical slice with pro-rata exposure to each class,
- A horizontal slice consisting of the most subordinate class or classes,
- A combination of vertical and horizontal slices, or
- A randomly selected sample of loans.

The NPR allows a securitizer to share the retained risk by allocating a portion of the requirement to originators, but only to originators that provide at least 20 percent of the aggregate loan balances and take at least 20 percent of the retained risk. The rule also allows for resecuritizations of existing securities without the retention of credit risk, but only for structures that result in a single class that simply passes through the cash flows of the underlying securities, rather than redistributing the credit risk between classes.

Finally, the NPR includes a premium recapture account, which comprises any proceeds of more than 95 percent of the par value of the securities. This would discourage security structures that permit the securitizer to take a substantial profit up front at the time of securitization. Structures that would provide an immediate gain on sale to the securitizer would need to include a special reserve account into which the entire surplus derived from the sale of the securities would be deposited, and funds in that account would be available to cover losses before any were imposed on investors. Structures giving the securitizers immediate cash gains were widely abused during the boom, and they generated some of the worst losses. The premium capture account requirement is designed to prevent such abuses by ensuring that the securitizer has a continuing interest in the performance of the underlying assets.

Treatment of Enterprise Securities

Although the Act authorizes the agencies to make exemptions separate and apart from the statutory exemption that applies to Ginnie Mae securities, the NPR does not exempt the Enterprises from the risk retention requirements. However, the proposed rule allows the full guarantee of the credit risk by Fannie Mae and Freddie Mac on their single-family mortgage-backed securities (MBS) to qualify as a permissible form of risk retention while they are in conservatorship with financial support from the U.S. Treasury.

The 100 percent risk retention by the Enterprises on their guaranteed MBS is obviously the maximum possible and far exceeds the five percent retention required by Section 941. Therefore, the NPR does not classify all of the Enterprises' loans as qualified residential mortgages, but rather acknowledges that the risk retention by the Enterprises on almost all of their securities is already complete. Furthermore, since the risk retained by the Enterprises is itself backed by the Treasury through the Senior Preferred Stock Purchase Agreements and not by private capital, it is stronger than any other form of 100 percent risk retention by a private corporation.

The Enterprises' guarantees and the backing of the U.S. Treasury appear to provide the necessary protection for investors and the proposed treatment of Enterprise MBS would thus be in the public interest. Retention of five percent of the securities issued would not result in a greater alignment of Enterprise interests with those of investors, and it would be inconsistent with the Enterprises' agreements with the Treasury that require a 10 percent per year wind down in mortgage assets held for investment by each Enterprise. Simply excluding assets held for the purpose of meeting the risk retention rule from the retained portfolio for the purpose meeting the portfolio reduction targets would prevent forced sales of other assets or violations of the agreements, but it would not address the purpose of these provisions of the agreements with Treasury, which was to reduce the size of the Enterprises' retained portfolios to limit taxpayer risks.

It seems unlikely that requiring the Enterprises to hold five percent of their newly issued securities would encourage private capital to enter the market to any significant degree. The added Enterprise costs would be only a few basis points, at most, and taxpayers would bear increased interest rate and operational risks from larger retained portfolios. There are more efficient and effective means to reduce the market share of the Enterprises and boost private participation in the secondary mortgage market. Congress has been considering a number of ways to lessen the government's role in housing finance over time, including increasing guarantee fees over time and reducing the conforming loan limit. The Administration's February 2011 white paper, "Reforming America's Housing Finance Market," discussed these and other possible approaches. Since being placed into conservatorship, the Enterprises' underwriting standards have been strengthened and several price increases have been initiated to better align pricing with risk. FHFA will continue to evaluate further changes along these lines, and we will continue to work with Congress on evaluating legislative approaches to encourage greater private sector participation.

<u>Some Comments on the Mortgage Servicing Requirements for QRMs</u>

The proposed rule includes several loan servicing requirements that must be met to receive QRM treatment. These address important problems in the servicing of mortgages that must be corrected, but they are not meant to constitute an exhaustive list that solves all problems. Indeed, as proposed, the requirements only apply to loans that are securitized as QRMs. Separately, FHFA has been working with the Enterprises to align the requirements that each places on its loan servicers, incorporating emerging best practices. At the same time, we have been working with the Enterprises and HUD to consider more effective methods of compensating servicers, and we have held discussions with other regulators as part of an effort to establish national servicing standards. The requirements in this proposal should be viewed as part of a much broader process of reform in mortgage servicing.

I will be happy to answer any questions you may have.

Mortgage Market Note

Qualified Residential Mortgages

April 11, 2011

MORTGAGE MARKET NOTE 11-02[1]

Introduction

One important purpose of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) is to reform the securitization of financial assets in the U.S. [2] To that end, the legislation requires the federal banking agencies, the Securities and Exchange Commission, the Secretary of Housing and Urban Development, and the Federal Housing Finance Agency ("the Agencies") to jointly issue regulations to require securitizers to retain an economic interest in a portion of the credit risk for residential mortgages that they use to collateralize asset-backed securities. Dodd-Frank requires the Agencies to exempt securities from this requirement that are backed only by loans with low default risk that meet a Qualified Residential Mortgage (QRM) standard.

The Agencies must jointly define what constitutes a QRM "taking into consideration underwriting and product features that historical loan performance data indicate result in a lower risk of default." To help the public consider the definition set forth in the recently-published Notice of Proposed Rulemaking ("NPR") that would implement the risk retention provision of Dodd-Frank, this data release provides historical data on loan volumes and ever-90-day[3] delinquency rates of mortgages purchased or guaranteed by Fannie Mae or Freddie Mac ("the Enterprises").

Purpose

Given the proposed standard of a QRM exemption to the risk retention rule contained in Dodd-Frank, the data in this release provide broad answers to the questions:

---

[1] This Mortgage Market Note revises and corrects the March 31, 2011 Mortgage Market Note: Qualified Residential Mortgages. Revisions were made to the final two paragraphs of text concerning the marginal ever-90-day delinquency rates resulting from small adjustments to the proposed Qualified Residential Mortgage standards, as well as the bullet point that summarizes the key finding, "Expanding QRM Definitions Would Add Loans with Much Poorer Performance". Additional tables were also added (see Section 4c), which were not included in the prior version.

[2] See Pub. L. No. 111-203, § 941, 124 Stat. 1376, 1890-1896 (2010) of the Dodd-Frank Act. See also, S. Rep. 111-176 at 128-131 (2010) (discussing subtitle D of title IX of the Dodd-Frank Act).

[3] A mortgage is ever-90-day delinquent if it has had a payment 90 days past-due or longer, has been put into foreclosure or transferred as a deed-in-lieu of foreclosure, or has been classified as a real-estate-owned (REO) property after an unsuccessful sale at a foreclosure auction at any point in the life of the loan through September of 2010. The dataset contains monthly information on the number of days each delinquent mortgage is past due and whether loans are in foreclosure processing. However, mortgages are identified as being in REO only at the end of each quarter.

- What is the volume and performance of conventional single-family mortgages acquired by the Enterprises in recent years that would have met the proposed requirements, and how does this compare to the volume and performance of loans that would not have met the proposed requirements, and to overall volume and performance?

- How have the volume and performance of proposed QRM loans changed over time, especially with respect to typical years versus the housing boom years?

- How does the volume and performance of proposed QRM mortgages change when small adjustments are made to the qualification standards?

The analysis here does not attempt to estimate how overall loan volumes might have been affected if risk retention requirements had been in place, or how interest rates on QRM loans might differ from those on non-QRM loans.

Key Findings

This data release examines the volume and performance of all first-lien, single-family mortgages, and the subset of QRM eligible mortgages, acquired by the Enterprises from 1997 through 2009. The following analysis does not fully capture the restrictions of the interagency QRM proposal, although it attempts to come as close as possible, given the limitations of available data. Therefore, when necessary, the analysis utilizes approximations for the proposed QRM standards. For example, credit score(s) for the borrower(s) calculated using models developed by Fair Isaac Corporation (FICO) at loan origination are used as a proxy variable for borrower credit history as the dataset used does not capture detailed credit bureau information on a borrower's credit performance. An appendix summarizes the data used to prepare the analysis, which reaches the following broad conclusions:

QRM Shares Were Lowest During the Boom Years

- About 30.5 percent of conventional single-family mortgages originated in 2009 and subsequently acquired by the Enterprises would have met the proposed QRM standards. The QRM shares were lower in 1997 through 2008. Prior to the beginning of the housing boom in 2004, the years with the highest QRM shares were 1998 (23.3 percent) and 2003 (24.6 percent).

Delinquencies Were Higher for Non-QRM Loans, but Highest in 2004 to 2008 Non-QRM Loans

- Ever-90-day delinquencies for non-QRM loans originated during the 13 years considered here were 6 to 12 times as frequent as ever-90-day delinquencies for QRM loans. Prior to the housing boom, mortgages originated in 1997 through 2003 and subsequently acquired by the Enterprises that would have met the proposed QRM standards had an ever-90-day delinquency rate ranging from 0.3 percent to 0.6 percent. In the same period, the ever-90-day delinquency rate for loans that would not have met the proposed standard ranged from 2.6 percent to 3.7 percent.

- Mortgages originated in 2004 through 2008 and subsequently acquired by the Enterprises that would have met the proposed QRM standards had an ever-90-day delinquency rate ranging from 0.7 percent to 2.7 percent. In the same period, the ever-90-day delinquency rate for loans that would not have met the proposed QRM standard ranged from 6.2 percent to 21.5 percent.

Risk-Factors Contributing to Poor Performance of Non-QRM Loans Varied from Typical Years to Boom Years

- For the 2005-2007 origination years, the requirement for product-type (no non-traditional and low documentation loans, or loans for houses not occupied by the owner) was the QRM risk factor that most reduced delinquency rates. For most origination years, requirements for borrower credit score and loan-to-value ratio are the factors that most reduce the ever-90-day delinquency rate of mortgages acquired by the Enterprises that would have met the proposed QRM standards.

Debt-to-Income Ratios are Most Restrictive Factor within Proposed QRM Definition

- Among the factors that the NPR uses to define a QRM, the requirement that excludes the most mortgages is that which limits the borrower's front-end and back-end debt-to-income ratios, which may in part reflect a tendency for the borrower and/or lender to report an income that met the minimum underwriting requirement and no more.

Expanding QRM Definitions Would Add Loans with Much Poorer Performance

- Loans that would have met QRM standards except for having loan-to-value ratios above 80 percent but less than 90 percent had ever-90-day delinquency rates that ranged from 2.0 to 3.9 times as great as QRM loans originated in the same year. Relaxing the PTI/DTI requirement from 28/36 to 30/38 would have resulted in delinquency rates up to 2.1 times as great as for QRM loans.

Risk-Factors in Historic Loan Performance Data

The following data analysis describes how the QRM exemption requirements reduce the occurrence of delinquent mortgages relative to non-qualifying mortgages. In addition, the analysis describes how relaxing or tightening the risk-factors changes the QRM volume and ever-90-day delinquencies. The data come from FHFA's Historical Loan Performance ("HLP") dataset, which contains loan-level information on the characteristics and performance of all single-family mortgages acquired by the Enterprises.[4] FHFA updates the Historical Loan Performance dataset quarterly with information from each Enterprise.

[4] The Historical Loan Performance dataset does not include loans backing private-label MBS bought by the Enterprises.

The loans used for the analysis comprise nearly 75 million mortgages and had an aggregate unpaid principal balance at origination of $11.9 trillion.

Defining Risk-Factor Requirements for Analysis

The HLP dataset contains information on factors that lenders use to assess mortgage credit risk at origination and information on subsequent loan performance. Risk-factors include the product-type, payment-to-income and debt-to-income (PTI/DTI) ratios at origination, initial loan-to-value (LTV) ratios based on the purchase price or appraised property value and the first-lien balance, and credit score(s) for the borrower(s) calculated using models developed by Fair Isaac Corporation (FICO). We define each risk-factor as the following:

- A **Product-Type qualified residential mortgage** is a first-lien mortgage that is for an owner-occupant with fully documented income, fully amortizing with a maturity that does not exceed 30 years and, in the case of adjustable-rate-mortgages (ARMs), has an interest rate reset limit of 2 percent annually and a limit of 6 percent over the life of the loan. Under QRM, loans may not be alternative-A (Alt-A, most of which are low- or no-document) mortgages, interest-only (IO) mortgages, negatively amortizing mortgages such as payment option-ARMs, or balloon mortgages. Therefore, loans with these characteristics are disqualified regardless of other risk-factor qualification.

- A **PTI/DTI qualified residential mortgage** has a borrower's ratio of monthly housing debt to monthly gross income that does not exceed 28 percent and a borrower's total monthly debt to monthly gross income that does not exceed 36 percent.
  - Payment-to-income ratio, otherwise known as front-end DTI, is the sum of the borrowers' monthly payment for principal, interest, taxes, and insurance divided by the total gross monthly income of all borrowers as determined at the time of origination.
  - Debt-to-Income ratio, or back-end DTI, is similar to payment-to-income but adds all other fixed debts into the numerator of the ratio.

- An **LTV ratio qualified residential mortgage** must meet a minimum LTV ratio that varies according to the purpose for which the mortgage was originated. For home purchase mortgages, rate and term refinances, and cash-out refinances, the LTV ratios are 80, 75, and 70 percent, respectively.

- A **FICO qualified residential mortgage** has a borrower's FICO score greater than or equal to 690 at the origination of the loan. The HLP dataset does not record delinquency history, prior bankruptcy of foreclosure, etc. of borrowers in the loans analyzed. For this reason, using a threshold of 690 for the FICO of the borrower at origination is a proxy for the absent detailed credit bureau data.

Data Limitations

The HLP data used for this analysis contains information on first lien mortgages, but does not indicate if a subordinate lien is present, so that some loans with combined LTV ratios greater than the QRM maximums will be missed and loans with equal reported LTV ratios may pose different credit risk. This data limitation is probably not a serious shortcoming for the years 1997 to, roughly, 2003, or for 2008 and 2009, as comparatively few junior liens were originated in those years. But for the peak years of the housing boom, 2004-2007, effects on volume and delinquency reduction are probably both understated. In addition, the PTI and DTI calculations use Enterprise definitions of income and debt payments, which may differ slightly from the definitions used in the NPR. Finally, the Enterprises did not always require full interior appraisals for low risk originations, and this risk-factor is not captured in the following analysis. However, it is likely that originators will respond to the proposed regulations by requiring full appraisals for loans that otherwise meet the QRM standards, so this is not likely to be a serious limitation of the analysis.

Mortgages missing either FICO scores or LTV ratios comprise 0.9 percent and 0.2 percent of the principal of all mortgages in the dataset. However, the percentage of mortgages missing either a front-end or back-end debt-to-income ratios for all years in the full dataset is 3.9 percent. Given the percentage of low- or no-document loans between 2004 and 2008, a significant portion of the missing observations are disqualified by the product-type qualification requirement in those years. The product-type requirement reduces the total missing for PTI/DTI to 2.2 percent. However, having the stipulation that loans must be fully-documented, the remaining mortgages that have missing observations, regardless of qualification in other risk factors, are rendered to non-qualified status. Therefore, the QRM qualified set of mortgages does not have any missing data.

Analysis of Mortgages Acquired by the Enterprises

Volume of QRM-Qualified and Non-Qualified Loans

The first set of tables in Appendix A (Section 1) provide information on the volume of QRM-qualified and non-QRM qualified loans by origination year. When interpreting this table, it is important to understand that there is significant overlap across each column. For example, a mortgage that meets the PTI/DTI requirement may also meet the FICO requirement and therefore be captured in both columns. The first column shows the unrestricted volume of mortgages and the percentages in the subsequent columns reflect the volume of mortgages that would qualify for a single requirement, without restricting the data with the other three QRM requirements. About 19.8 percent of conventional single-family mortgages originated in 1997 through 2009 and subsequently acquired by the Enterprises would have met the proposed QRM standards. The origination year with the highest QRM share was in 2009 (30.5 percent) (see Figure 1).

Prior to the beginning of the housing boom in 2004, the years with the highest QRM shares were 1998 (23.3 percent) and 2003 (24.6 percent). The percentage of mortgages originated from 2004 into 2008 that would have been disqualified by the product-type requirement (that is, mortgages with little or no documentation, interest only or negative amortization mortgages, etc.) is much higher than in other years. In figure 2, the percentages range from a low of 6.2 percent in 1998 to a peak of 37.9 percent in 2006. This observation reflects how the timing of the housing boom coincided with an increase in the volume of non-traditional and low-documentation loans as well as loans secured by investors. The shift in the boom years contrasts with the periods before and after, where higher concentrations of delinquencies in groups consist of mortgages with traditional payment-types.

Figure 1. Percent of All Mortgages That Would Have Met All Requirements Under the Proposed QRM Standard, by Year of Origination

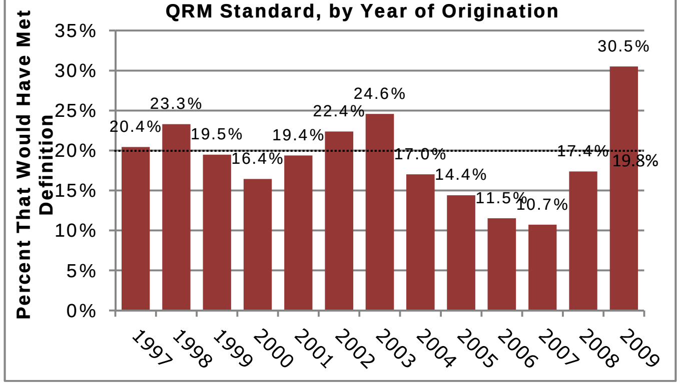
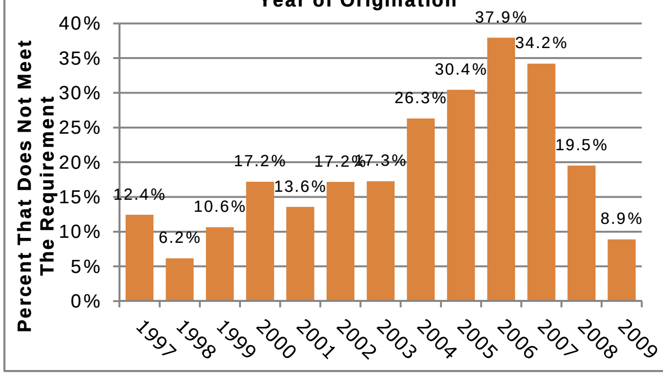


Figure 2. Percent of All Mortgages Disqualified by the Proposed Product-Type Requirement, by Year of Origination



Ever-90-Day Delinquency Rates of QRM-Qualified and Non-Qualified Loans

Similarly, the second set of tables in the Appendix A (Section 2) provide information on the ever-90-day delinquency rates for the same groups as the tables in section A. The ever 90-day delinquency rates should be interpreted with caution. Relative comparisons of those rates are likely to be most revealing within origination years for two reasons. First, ever 90-day delinquency rates can only increase as time passes, so rates for recent years are understated relative to those for earlier years. Second, rates for groups of mortgages that appear identical at origination but were originated in different years may have different performance because economic conditions vary over time. For example, low interest rates and rapid house price appreciation allowed many borrowers who took out loans during times of peak house price appreciation to refinance their loans, reducing the ever 90-day delinquency rates of mortgages in those origination years relative to those loans taken at the end of the period.

Figure 3. Ever-90-Day Delinquency Rate by Unpaid Principal Balance at Origination, by Year of Origination and Qualification of Proposed Requirements

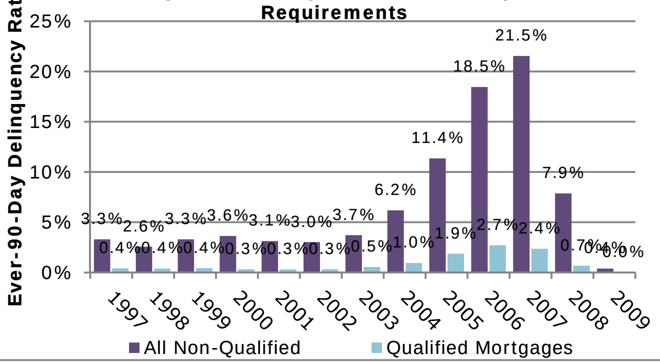
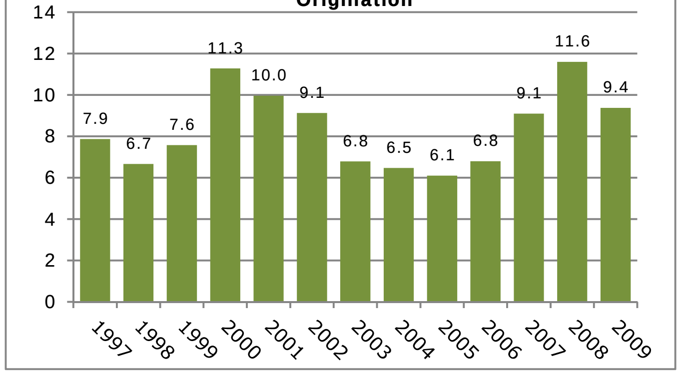


Figure 4. Ratio of Non-Qualified to Qualified Loan Ever-90-Day Delinquency Rate, by Year of Origination



Prior to the housing boom, mortgages originated in 1997 through 2003 and subsequently acquired by the Enterprises that would have met the proposed QRM standard had an ever-90-day delinquency rate ranging from 0.3 percent to 0.5 percent (see Figure 3). In the same period, the ever-90-day delinquency rate for non-qualified loans (those that would not have met the proposed requirements) ranged from 2.6 percent to 3.7 percent. During the housing boom, mortgages originated in 2004 through 2008 and subsequently acquired by the Enterprises that would have met the proposed QRM standards had an ever-90-day delinquency rate ranging from 0.7 percent to 2.7 percent (see Figure 3). In the same period, the average delinquency rate for loans that would not have met the proposed standard ranged from 6.2 percent to 21.5 percent. The ratio of delinquency rates for non-qualified residential mortgages to qualified residential mortgages range from 6.1 to 11.6 for all years and reach peaks in 2000 and 2008 (see Figure 4).

Impact of Removing One of the Risk-Factors

The third set of tables in the Appendix A (Section 3) combine the information on the volumes and ever-90-day delinquency rates found in the previous two sets of tables to show the effect of removing one requirement while holding all others at their respective QRM levels. The first column shows the delinquency rate, or volume, for loans that appear eligible for QRM treatment under the proposed regulation. The last column shows the increase in total delinquency rate or total volume from removing all QRM requirements. The intermediate columns show the effect of removing one criterion from the proposed QRM standard. For example, the column headed FICO score shows the extent to which delinquency rates, and loan volume, would increase if all aspects of the QRM standards were maintained, except for the limitation on credit history (as proxied by the FICO score).

The ever-90-day delinquency rates for mortgages originated from 2004 into 2008 are concentrated in the non-product-type QRM groups of mortgages (see Figure 5). When the PTI/DTI requirement is removed from the QRM standards, the percent change in the volume of mortgages increases significantly in comparison to the change in ever-90-day delinquency rates (see Figure 6), which, as noted earlier, may reflect on the reporting of income by the borrower and/or lender at the time of origination. Leaving aside mortgages originated in 2005-2007, which were much more likely to have non-traditional payment terms than loans originated in other years, borrower credit score and LTV ratio are the factors that most reduce the ever-90-day delinquency rate of mortgages that would have met the proposed QRM standard (see Figures 7, 8).

Figure 5. Difference In Volume and Performance When Removing the Product-Type Requirement from the QRM Standards

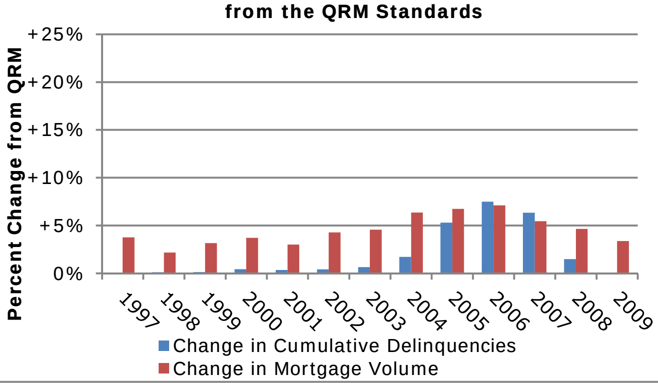


Figure 6. Difference In Volume and Performance When Removing the DTI/PTI Ratio Requirement from the QRM Standards

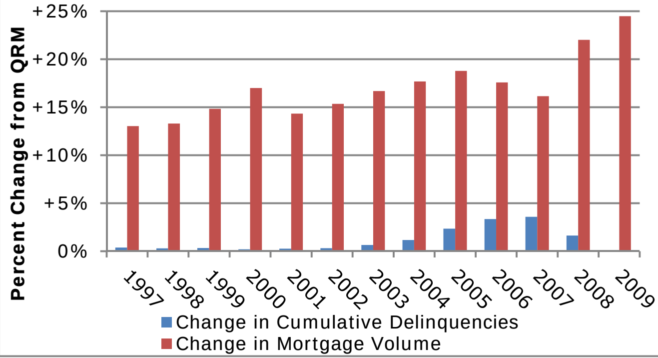


Figure 7. Difference In Volume and Performance When Removing the LTV Ratio Requirement from the QRM Standards

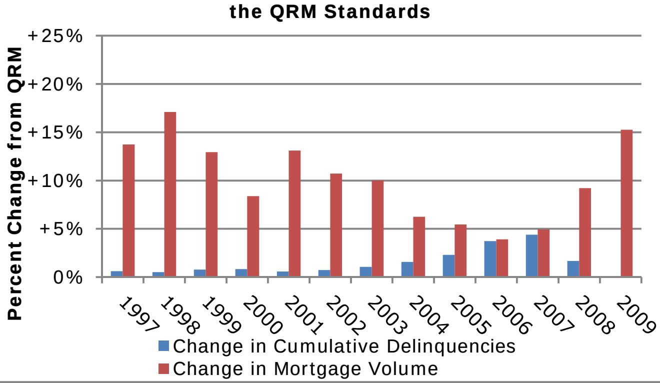
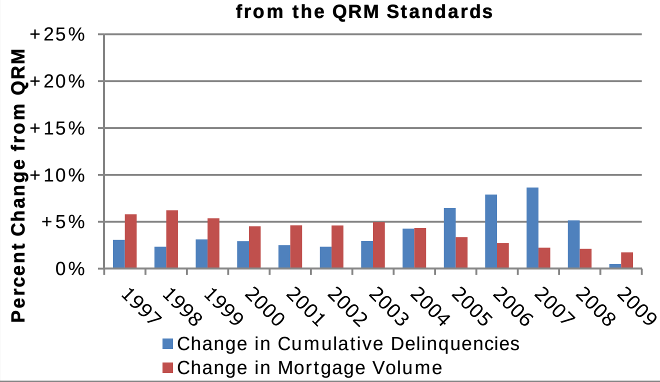


Figure 8. Difference In Volume and Performance When Removing the FICO Score Requirement from the QRM Standards



Impact of Adjusting One of the Risk-Factors

Where the previous tables provide information on the exclusion of one or more of the requirements, the final set of tables in the Appendix A (Sections 4a, 4b and 4c) provide a brief description of the sensitivity of volume and performance, by year, to small adjustments to the QRM requirements. To assess changes to the risk-factors, the analysis relaxes or tightens each requirement. For the relaxed qualifications, adjustments to the minimum PTI/DTI ratios move from 28/36 to 30/38, the maximum LTV ratios move from 80, 75, and 70 percent to 90, 85, and 80 percent, respectively, and the minimum FICO score changes from 690 to 660. For the tighter qualifications, adjustments to the minimum PTI/DTI ratios move to 26/34, the maximum LTV ratios move to 70, 65, and 60 percent, respectively, and the minimum FICO score changes to 720. While some of the adjustments are targeted to evaluate specific policy discussions, all of the adjustments reflect an attempt to provide context to the proposed QRM standards on which this data release is based.

The first column in tables 4a and 4b shows the ever-90-day delinquency rates for QRMs and subsequent columns provide information on the effect of changing one standard, while holding the others constant. For example, the “Higher DTI” column in the delinquency portion of the tables in section 4a shows the effect relaxing the PTI/DTI standard. Applying a less stringent PTI/DTI standard, while holding all other proposed QRM standards constant, raises the delinquency rate by a few basis points over the rate shown in the first column, where all QRM standards are applied as per the interagency proposal. The second section of the table shows the effect on mortgage lending volume (measured in unpaid principle balance terms) from changing one standard while holding others constant. The final three columns show the tradeoff between the changes in volume and the changes in delinquency that result from an adjustment to one of the standards. These columns display the ratio of the change in delinquency to the change in total volume. The second to last column in the Purchases table of section 4a shows that a relaxation of the LTV ratio requirement from 80 to 90 percent in 1997, holding all other requirements equal to the proposed QRM standards, produces a rate of change for an ever-90-day delinquency of 1.63 basis points for every 1 percentage point change to volume. More specifically, the ever-90-day delinquency rate in 1997 increases from 0.42 percent to 0.51 percent if the maximum LTV Ratio moves from 80 to 90 percent; the increase in default cost may be absorbed by Private Mortgage Insurance (PMI) but the ever-90-day delinquency rate nevertheless increases.

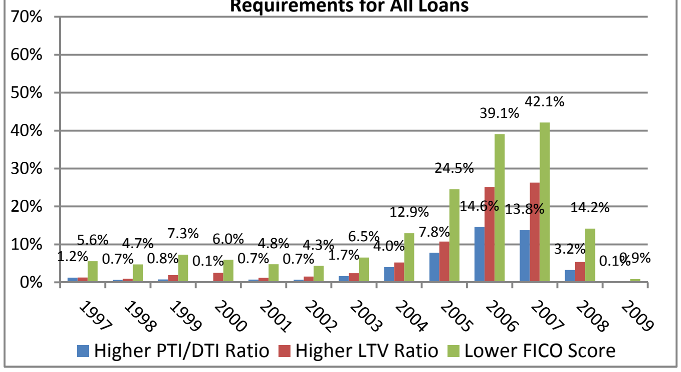


Figure 9. Percent Change of Ever-90-Day Delinquency Rates to Mortgage Volume When Relaxing Individual QRM Requirements for All Loans

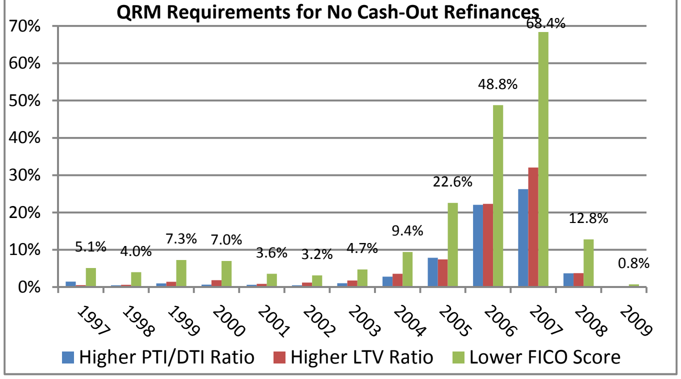


Figure 10. Percent Change of Ever-90-Day Delinquency Rates to Mortgage Volume When Relaxing Individual QRM Requirements for No Cash-Out Refinances

The effects of altering the proposed QRM standards during the boom years are different from the effects in more typical years, sometimes substantially so. For example, in section in 2007 at the height of the housing boom, lowering the FICO requirement from 690 to 660 would have increased the delinquency rate by 42 basis points for each percentage point increase in volume. From 1997 to 2002, relaxing the FICO standard would have only increased ever-90-day delinquency rates from between 4.3 and 7.3 basis points for each percentage point increase in volume. For those same years, relaxing the PTI/DTI risk-factor requirement from 28/36 to 30/38 would have increased ever-90-day delinquency rates from between 0.7 and 1.2 basis points for each percentage point increase in volume (see Figure 9). An adjustment to the PTI/DTI requirements would affect ever-90-day delinquency rates less than an adjustment to any other proposed QRM requirement. In contrast, ever-90-day delinquency rates related to FICO score, especially for no cash-out refinances during the housing boom years shown in figure 10, are the most sensitive to an adjustment to the QRM requirements.

Loans that were just beyond the proposed QRM requirements had substantially higher ever-90-day delinquency rates than did loans that met all of the proposed QRM requirements. For example, Section 4c of the Appendix A shows that during the peak years of the boom, 2004 to 2007, purchase loans that met all requirements had an ever-90-day delinquency rate ranging from 1.16 to 2.33 percent, while purchase loans that met all requirements except that their LTV ratios were higher, between 80 and 90 percent, than the proposed QRM requirement, had an ever-90-day delinquency rate ranging from 2.66 to 5.51 percent, about 2.0 to 2.3 times the percent for QRM eligible loans. Even for the more typical years, 1997 to 2002, this finding is persistent as loans with an LTV ratio between 80 and 90 percent are still about 2.0 to 2.5 times more delinquent than the proposed QRM eligible loans.

Similarly, from 2004 to 2007, all loans that met the proposed QRM requirements had an ever-90-day delinquency rate ranging from 0.95 to 2.72 percent, while loans that met all requirements except that their PTI/DTI ratios were between 28/36 and 30/38 percent had an ever-90-day delinquency rate ranging from 1.72 to 4.68 percent, about 1.7 to 1.8 times the percent for QRM eligible loans. In the 1997 to 2002 time period, loans with these higher PTI/DTI ratios had delinquencies rates between 1.1 and 1.7 times the percent for QRM eligible loans.

APPENDIX A SECTION 1: PERCENT OF UNPAID-PRINCIPAL-BALANCE BY PROPOSED REQUIREMENT QUALIFICATION

ALL LOANS

Year		All Loans	Percent of Mortgages that Do Not Qualify for the Following Requirements				All Non-Qualified	Percent of Mortgages that Qualify for the the Following Requirements				Qualified Mortgages
			Product-Type	PTI/DTI	LTV	FICO		Product-Type	PTI/DTI	LTV	FICO	
1997	$	286,497,878,371	12.43%	44.44%	46.59%	33.40%	79.56%	87.57%	55.56%	53.41%	66.60%	20.44%
1998	$	691,033,994,509	6.17%	40.94%	47.28%	30.56%	76.71%	93.83%	59.06%	52.72%	69.44%	23.29%
1999	$	481,450,519,442	10.64%	48.88%	46.59%	32.76%	80.52%	89.36%	51.12%	53.41%	67.24%	19.48%
2000	$	356,779,731,420	17.19%	57.53%	44.46%	34.63%	83.56%	82.81%	42.47%	55.54%	65.37%	16.44%
2001	$	1,039,412,013,403	13.57%	49.68%	48.62%	31.63%	80.63%	86.43%	50.32%	51.38%	68.37%	19.37%
2002	$	1,385,056,256,240	17.17%	48.58%	41.89%	28.94%	77.63%	82.83%	51.42%	58.11%	71.06%	22.37%
2003	$	1,924,265,340,603	17.26%	47.56%	37.12%	26.69%	75.43%	82.74%	52.44%	62.88%	73.31%	24.57%
2004	$	937,643,914,289	26.31%	57.38%	36.25%	31.02%	82.97%	73.69%	42.62%	63.75%	68.98%	17.03%
2005	$	939,069,358,457	30.43%	62.68%	35.16%	29.31%	85.59%	69.57%	37.32%	64.84%	70.69%	14.41%
2006	$	887,443,942,464	37.93%	67.28%	35.78%	31.21%	88.48%	62.07%	32.72%	64.22%	68.79%	11.52%
2007	$	1,027,460,511,244	34.21%	69.10%	45.58%	32.26%	89.28%	65.79%	30.90%	54.42%	67.74%	10.72%
2008	$	793,136,249,487	19.52%	62.19%	40.68%	18.18%	82.61%	80.48%	37.81%	59.32%	81.82%	17.39%
2009	$	1,176,445,135,548	8.89%	47.02%	33.67%	7.57%	69.48%	91.11%	52.98%	66.33%	92.43%	30.52%

PURCHASES

Year		All Loans	Percent of Mortgages that Do Not Qualify for the Following Requirements				All Non-Qualified	Percent of Mortgages that Qualify for the the Following Requirements				Qualified Mortgages
			Product-Type	PTI/DTI	LTV	FICO		Product-Type	PTI/DTI	LTV	FICO	
1997	$	171,316,168,314	13.58%	45.87%	44.31%	32.65%	79.26%	86.42%	54.13%	55.69%	67.35%	20.74%
1998	$	243,827,154,269	7.91%	45.45%	44.20%	31.84%	77.92%	92.09%	54.55%	55.80%	68.16%	22.08%
1999	$	252,736,885,540	12.76%	51.89%	42.26%	30.30%	80.14%	87.24%	48.11%	57.74%	69.70%	19.86%
2000	$	259,462,348,244	16.94%	57.68%	39.65%	31.24%	81.83%	83.06%	42.32%	60.35%	68.76%	18.17%
2001	$	334,671,388,428	17.10%	55.24%	39.04%	31.11%	80.43%	82.90%	44.76%	60.96%	68.89%	19.57%
2002	$	378,648,800,742	22.98%	56.73%	35.83%	30.48%	81.57%	77.02%	43.27%	64.17%	69.52%	18.43%
2003	$	428,404,858,343	25.58%	57.77%	33.43%	29.23%	81.97%	74.42%	42.23%	66.57%	70.77%	18.03%
2004	$	397,943,548,815	31.83%	60.61%	26.98%	27.49%	83.29%	68.17%	39.39%	73.02%	72.51%	16.71%
2005	$	433,917,427,310	36.81%	63.50%	21.97%	24.48%	84.33%	63.19%	36.50%	78.03%	75.52%	15.67%
2006	$	459,040,004,449	39.62%	67.67%	22.43%	26.51%	86.43%	60.38%	32.33%	77.57%	73.49%	13.57%
2007	$	504,879,485,500	33.63%	70.36%	36.93%	28.80%	87.61%	66.37%	29.64%	63.07%	71.20%	12.39%
2008	$	321,485,446,505	20.83%	64.91%	34.49%	16.19%	82.67%	79.17%	35.09%	65.51%	83.81%	17.33%
2009	$	225,983,942,704	15.38%	54.40%	18.84%	8.24%	72.94%	84.62%	45.60%	81.16%	91.76%	27.06%

NO CASHOUT REFINANCES

Year	All Loans	Percent of Mortgages that Do Not Qualify for the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	All Non-Qualified	Percent of Mortgages that Qualify for the the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	Qualified Mortgages
1997	$ 72,883,400,278	11.21%	41.91%	48.39%	33.33%	78.96%	88.79%	58.09%	51.61%	66.67%	21.04%
1998	$ 302,723,323,315	5.51%	37.65%	47.08%	29.44%	74.76%	94.49%	62.35%	52.92%	70.56%	25.24%
1999	$ 140,480,199,806	8.21%	44.65%	49.13%	35.44%	79.66%	91.79%	55.35%	50.87%	64.56%	20.34%
2000	$ 48,878,241,470	15.43%	56.56%	54.50%	42.38%	86.34%	84.57%	43.44%	45.50%	57.62%	13.66%
2001	$ 390,566,245,690	10.81%	44.63%	48.40%	29.49%	77.44%	89.19%	55.37%	51.60%	70.51%	22.56%
2002	$ 584,998,514,202	14.25%	41.83%	37.47%	24.64%	71.31%	85.75%	58.17%	62.53%	75.36%	28.69%
2003	$ 920,098,549,172	14.00%	40.54%	32.81%	22.18%	68.94%	86.00%	59.46%	67.19%	77.82%	31.06%
2004	$ 269,562,391,201	20.63%	49.47%	36.64%	28.13%	77.63%	79.37%	50.53%	63.36%	71.87%	22.37%
2005	$ 169,162,254,192	25.31%	57.10%	43.13%	29.16%	83.58%	74.69%	42.90%	56.87%	70.84%	16.42%
2006	$ 131,792,837,483	38.68%	63.97%	49.03%	31.93%	89.76%	61.32%	36.03%	50.97%	68.07%	10.24%
2007	$ 196,852,210,903	37.90%	66.82%	53.69%	32.36%	90.59%	62.10%	33.18%	46.31%	67.64%	9.41%
2008	$ 231,714,054,542	19.75%	57.54%	41.02%	16.17%	79.84%	80.25%	42.46%	58.98%	83.83%	20.16%
2009	$ 637,544,819,174	7.97%	43.87%	35.65%	6.77%	67.20%	92.03%	56.13%	64.35%	93.23%	32.80%

CASHOUT REFINANCES

Year	All Loans	Percent of Mortgages that Do Not Qualify for the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	All Non-Qualified	Percent of Mortgages that Qualify for the the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	Qualified Mortgages
1997	$ 42,298,309,778	9.87%	43.04%	52.72%	36.55%	81.83%	90.13%	56.96%	47.28%	63.45%	18.17%
1998	$ 144,483,516,925	4.63%	40.25%	52.90%	30.76%	78.75%	95.37%	59.75%	47.10%	69.24%	21.25%
1999	$ 88,233,434,096	8.40%	46.99%	54.94%	35.53%	82.95%	91.60%	53.01%	45.06%	64.47%	17.05%
2000	$ 48,439,141,706	20.33%	57.76%	60.10%	44.96%	89.97%	79.67%	42.24%	39.90%	55.04%	10.03%
2001	$ 314,174,379,286	13.25%	50.04%	59.10%	34.84%	84.81%	86.75%	49.96%	40.90%	65.16%	15.19%
2002	$ 421,408,941,296	16.00%	50.63%	53.49%	33.54%	82.87%	84.00%	49.37%	46.51%	66.46%	17.13%
2003	$ 575,761,933,088	16.29%	51.18%	46.76%	32.01%	80.95%	83.71%	48.82%	53.24%	67.99%	19.05%
2004	$ 270,137,974,274	23.86%	60.53%	49.49%	39.08%	87.84%	76.14%	39.47%	50.51%	60.92%	12.16%
2005	$ 335,989,676,955	24.77%	64.44%	48.19%	35.62%	88.23%	75.23%	35.56%	51.81%	64.38%	11.77%
2006	$ 296,611,100,532	34.97%	68.14%	50.55%	38.16%	91.07%	65.03%	31.86%	49.45%	61.84%	8.93%
2007	$ 325,728,814,842	32.87%	68.53%	54.09%	37.58%	91.07%	67.13%	31.47%	45.91%	62.42%	8.93%
2008	$ 239,936,748,440	17.53%	63.04%	48.63%	22.78%	85.22%	82.47%	36.96%	51.37%	77.22%	14.78%
2009	$ 312,916,373,670	6.10%	48.11%	40.34%	8.70%	71.64%	93.90%	51.89%	59.66%	91.30%	28.36%

SECTION 2: EVER-90-DAY DELINQUENCY RATES BY PROPOSED REQUIREMENT QUALIFICATION

ALL LOANS

Year	All Loans	Mortgages that Do Not Qualify for the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	All Non-Qualified	Mortgages that Qualify for the the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	Qualified Mortgages
1997	2.72%	1.78%	3.55%	4.19%	6.37%	3.31%	2.85%	2.05%	1.43%	0.88%	0.42%
1998	2.06%	1.62%	2.74%	3.08%	4.97%	2.57%	2.09%	1.59%	1.15%	0.78%	0.39%
1999	2.75%	2.06%	3.42%	4.22%	6.31%	3.30%	2.83%	2.10%	1.46%	1.01%	0.44%
2000	3.09%	4.37%	3.71%	5.12%	7.02%	3.64%	2.83%	2.25%	1.47%	1.01%	0.32%
2001	2.59%	4.29%	3.40%	4.00%	6.20%	3.13%	2.32%	1.79%	1.25%	0.92%	0.31%
2002	2.42%	3.34%	3.21%	4.14%	5.92%	3.03%	2.23%	1.68%	1.19%	1.00%	0.33%
2003	2.94%	3.68%	3.99%	5.09%	6.96%	3.72%	2.79%	2.00%	1.68%	1.48%	0.55%
2004	5.29%	6.59%	6.59%	8.62%	10.44%	6.18%	4.82%	3.54%	3.40%	2.97%	0.95%
2005	9.99%	14.52%	12.11%	14.56%	17.79%	11.36%	8.01%	6.44%	7.52%	6.76%	1.86%
2006	16.65%	24.47%	19.70%	24.26%	27.98%	18.47%	11.88%	10.38%	12.41%	11.51%	2.72%
2007	19.49%	28.28%	23.49%	28.85%	33.67%	21.55%	14.92%	10.54%	11.65%	12.74%	2.37%
2008	6.62%	9.09%	8.95%	11.18%	17.99%	7.87%	6.02%	2.79%	3.49%	4.09%	0.68%
2009	0.28%	0.34%	0.46%	0.50%	1.62%	0.39%	0.28%	0.12%	0.17%	0.17%	0.04%

PURCHASES

Year	All Loans	Mortgages that Do Not Qualify for the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	All Non-Qualified	Mortgages that Qualify for the the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	Qualified Mortgages
1997	2.87%	1.68%	3.66%	4.72%	6.88%	3.50%	3.05%	2.19%	1.39%	0.92%	0.42%
1998	2.59%	1.68%	3.19%	4.19%	6.07%	3.20%	2.67%	2.10%	1.33%	0.97%	0.46%
1999	2.62%	1.78%	3.17%	4.40%	6.44%	3.18%	2.75%	2.04%	1.33%	0.96%	0.40%
2000	2.59%	3.54%	3.13%	4.66%	6.39%	3.09%	2.39%	1.85%	1.22%	0.86%	0.29%
2001	2.97%	4.65%	3.72%	5.34%	7.15%	3.61%	2.63%	2.06%	1.46%	1.09%	0.38%
2002	3.18%	3.82%	3.79%	6.07%	7.31%	3.79%	2.99%	2.39%	1.57%	1.37%	0.48%
2003	4.43%	4.33%	5.38%	8.48%	9.73%	5.20%	4.47%	3.13%	2.40%	2.25%	0.93%
2004	5.87%	6.73%	7.22%	11.53%	12.20%	6.81%	5.47%	3.79%	3.78%	3.47%	1.16%
2005	10.74%	15.22%	13.05%	17.78%	20.16%	12.34%	8.13%	6.73%	8.76%	7.69%	2.13%
2006	16.39%	24.25%	19.69%	25.63%	30.20%	18.53%	11.22%	9.48%	13.71%	11.40%	2.76%
2007	18.84%	26.76%	23.00%	31.05%	35.95%	21.18%	14.83%	8.97%	11.70%	11.92%	2.33%
2008	6.26%	7.66%	8.24%	12.40%	18.53%	7.44%	5.89%	2.59%	3.03%	3.89%	0.64%
2009	0.30%	0.36%	0.41%	0.48%	1.75%	0.38%	0.29%	0.17%	0.25%	0.17%	0.07%

NO CASHOUT REFINANCES

Year	All Loans	Mortgages that Do Not Qualify for the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	All Non-Qualified	Mortgages that Qualify for the the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	Qualified Mortgages
1997	2.37%	1.85%	3.31%	3.40%	5.65%	2.90%	2.43%	1.69%	1.40%	0.73%	0.37%
1998	1.74%	1.45%	2.49%	2.57%	4.39%	2.22%	1.76%	1.29%	1.01%	0.64%	0.33%
1999	2.94%	2.43%	3.87%	4.31%	6.40%	3.57%	2.98%	2.18%	1.61%	1.03%	0.46%
2000	4.51%	6.92%	5.53%	6.42%	8.76%	5.16%	4.07%	3.19%	2.22%	1.38%	0.40%
2001	2.24%	3.55%	3.14%	3.56%	5.74%	2.81%	2.08%	1.51%	0.99%	0.77%	0.27%
2002	1.91%	2.66%	2.81%	3.60%	5.34%	2.56%	1.78%	1.26%	0.89%	0.78%	0.28%
2003	2.17%	2.87%	3.16%	3.98%	5.86%	2.94%	2.05%	1.49%	1.28%	1.11%	0.46%
2004	4.13%	5.74%	5.47%	6.76%	9.04%	5.09%	3.71%	2.81%	2.60%	2.20%	0.77%
2005	7.97%	12.33%	9.96%	11.55%	15.04%	9.26%	6.49%	5.32%	5.26%	5.06%	1.43%
2006	16.73%	25.19%	19.70%	22.95%	26.30%	18.32%	11.39%	11.46%	10.74%	12.24%	2.74%
2007	22.30%	32.88%	26.61%	30.07%	33.92%	24.32%	15.85%	13.63%	13.31%	16.75%	2.86%
2008	6.48%	10.40%	9.29%	10.57%	17.91%	7.94%	5.52%	2.67%	3.64%	4.28%	0.70%
2009	0.28%	0.31%	0.49%	0.54%	1.71%	0.40%	0.28%	0.12%	0.14%	0.18%	0.04%

CASHOUT REFINANCES

Year	All Loans	Mortgages that Do Not Qualify for the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	All Non-Qualified	Mortgages that Qualify for the the Following Requirements: Product-Type	PTI/DTI	LTV	FICO	Qualified Mortgages
1997	2.72%	2.22%	3.50%	3.62%	5.69%	3.21%	2.77%	2.12%	1.71%	1.00%	0.51%
1998	1.83%	1.86%	2.39%	2.48%	4.20%	2.22%	1.83%	1.46%	1.11%	0.78%	0.39%
1999	2.79%	2.70%	3.51%	3.71%	5.85%	3.25%	2.80%	2.15%	1.67%	1.10%	0.52%
2000	4.39%	6.07%	5.05%	5.55%	7.75%	4.82%	3.95%	3.47%	2.63%	1.64%	0.51%
2001	2.61%	4.56%	3.30%	3.50%	5.77%	3.02%	2.31%	1.92%	1.32%	0.92%	0.31%
2002	2.46%	3.55%	3.08%	3.50%	5.39%	2.90%	2.25%	1.82%	1.26%	0.98%	0.31%
2003	3.08%	4.05%	3.87%	4.53%	6.31%	3.68%	2.89%	2.25%	1.80%	1.56%	0.51%
2004	5.60%	7.06%	6.56%	7.65%	9.61%	6.25%	5.14%	4.12%	3.58%	3.02%	0.89%
2005	10.04%	14.32%	11.87%	14.02%	16.81%	11.16%	8.64%	6.74%	6.34%	6.30%	1.70%
2006	17.03%	24.49%	19.73%	23.88%	26.22%	18.44%	13.01%	11.25%	10.02%	11.35%	2.61%
2007	18.80%	27.50%	22.44%	25.80%	30.82%	20.43%	14.54%	10.88%	10.55%	11.56%	2.14%
2008	7.24%	9.94%	9.63%	10.53%	17.54%	8.37%	6.66%	3.16%	4.12%	4.20%	0.72%
2009	0.27%	0.40%	0.45%	0.42%	1.38%	0.37%	0.26%	0.10%	0.17%	0.17%	0.03%

SECTION 3: THE EFFECT OF REMOVING INDIVIDUAL REQUIREMENTS

ALL LOANS

Change in the QRM Ever-90-Day Delinquency Rate When Removing One of the Qualification Requirements

Year	QRM Delinquency Rate	Product Type	PTI/DTI	LTV	FICO	All Req'ts
1997	0.42%	+0.05%	+0.39%	+0.61%	+3.08%	+2.30%
1998	0.39%	+0.10%	+0.31%	+0.52%	+2.34%	+1.68%
1999	0.44%	+0.13%	+0.34%	+0.78%	+3.12%	+2.31%
2000	0.32%	+0.43%	+0.20%	+0.83%	+2.94%	+2.77%
2001	0.31%	+0.35%	+0.27%	+0.59%	+2.52%	+2.27%
2002	0.33%	+0.41%	+0.32%	+0.73%	+2.34%	+2.09%
2003	0.55%	+0.64%	+0.66%	+1.06%	+2.95%	+2.40%
2004	0.95%	+1.72%	+1.16%	+1.58%	+4.27%	+4.33%
2005	1.86%	+5.30%	+2.36%	+2.31%	+6.46%	+8.13%
2006	2.72%	+7.49%	+3.35%	+3.73%	+7.90%	+13.93%
2007	2.37%	+6.34%	+3.59%	+4.39%	+8.66%	+17.12%
2008	0.68%	+1.48%	+1.64%	+1.68%	+5.15%	+5.94%
2009	0.04%	+0.06%	+0.11%	+0.09%	+0.50%	+0.24%

Change in the Total QRM Dollar Volume When Removing One of the Qualification Requirements

Year	QRM Volume	Product Type	PTI/DTI	LTV	FICO	All Loans
1997	20.44%	+3.75%	+13.04%	+13.74%	+5.81%	$ 286,497,878,371
1998	23.29%	+2.17%	+13.30%	+17.10%	+6.24%	$ 691,033,994,509
1999	19.48%	+3.16%	+14.83%	+12.95%	+5.37%	$ 481,450,519,442
2000	16.44%	+3.70%	+17.00%	+8.40%	+4.53%	$ 356,779,731,420
2001	19.37%	+3.01%	+14.33%	+13.11%	+4.62%	$ 1,039,412,013,403
2002	22.37%	+4.28%	+15.35%	+10.72%	+4.62%	$ 1,385,056,256,240
2003	24.57%	+4.55%	+16.68%	+10.02%	+4.98%	$ 1,924,265,340,603
2004	17.03%	+6.35%	+17.68%	+6.25%	+4.34%	$ 937,643,914,289
2005	14.41%	+6.74%	+18.78%	+5.45%	+3.36%	$ 939,069,358,457
2006	11.52%	+7.11%	+17.59%	+3.91%	+2.73%	$ 887,443,942,464
2007	10.72%	+5.44%	+16.14%	+4.95%	+2.24%	$ 1,027,460,511,244
2008	17.39%	+4.64%	+22.01%	+9.22%	+2.12%	$ 793,136,249,487
2009	30.52%	+3.38%	+24.47%	+15.26%	+1.74%	$ 1,176,445,135,548

PURCHASES

Year	QRM Delinquency Rate	Product Type	PTI/DTI	LTV	FICO	All Req'ts
1997	0.42%	+0.03%	+0.36%	+0.80%	+3.13%	+2.44%
1998	0.46%	+0.04%	+0.30%	+0.90%	+2.70%	+2.13%
1999	0.40%	+0.12%	+0.30%	+0.98%	+3.05%	+2.23%
2000	0.29%	+0.38%	+0.17%	+0.83%	+2.51%	+2.29%
2001	0.38%	+0.35%	+0.28%	+0.97%	+2.72%	+2.59%
2002	0.48%	+0.50%	+0.32%	+1.28%	+2.61%	+2.70%
2003	0.93%	+0.72%	+0.78%	+1.84%	+3.29%	+3.50%
2004	1.16%	+1.97%	+1.24%	+2.53%	+3.93%	+4.71%
2005	2.13%	+6.18%	+2.49%	+2.87%	+5.94%	+8.61%
2006	2.76%	+8.69%	+3.28%	+3.29%	+6.78%	+13.63%
2007	2.33%	+6.76%	+3.31%	+4.33%	+6.79%	+16.51%
2008	0.64%	+1.36%	+1.42%	+2.10%	+4.73%	+5.62%
2009	0.07%	+0.09%	+0.09%	+0.07%	+0.63%	+0.23%

Year	QRM Volume	Product Type	PTI/DTI	LTV	FICO	All Loans
1997	20.74%	+4.40%	+14.02%	+12.11%	+5.55%	$ 171,316,168,314
1998	22.08%	+2.99%	+15.33%	+13.09%	+6.23%	$ 243,827,154,269
1999	19.86%	+4.02%	+17.29%	+10.39%	+4.93%	$ 252,736,885,540
2000	18.17%	+4.21%	+19.37%	+7.56%	+4.45%	$ 259,462,348,244
2001	19.57%	+4.20%	+18.76%	+7.94%	+4.92%	$ 334,671,388,428
2002	18.43%	+5.80%	+18.86%	+6.12%	+4.51%	$ 378,648,800,742
2003	18.03%	+6.81%	+19.38%	+5.32%	+4.42%	$ 428,404,858,343
2004	16.71%	+9.21%	+20.88%	+3.25%	+3.78%	$ 397,943,548,815
2005	15.67%	+10.22%	+22.25%	+2.51%	+2.92%	$ 433,917,427,310
2006	13.57%	+9.37%	+21.75%	+2.02%	+2.48%	$ 459,040,004,449
2007	12.39%	+6.88%	+19.94%	+3.27%	+1.95%	$ 504,879,485,500
2008	17.33%	+6.08%	+26.06%	+6.40%	+1.86%	$ 321,485,446,505
2009	27.06%	+7.02%	+33.83%	+8.18%	+1.89%	$ 225,983,942,704

NO CASHOUT REFINANCES

Change in the QRM Ever-90-Day Delinquency Rate When Removing One of the Qualification Requirements

Year	QRM Delinquency Rate	Product Type	PTI/DTI	LTV	FICO	All Req'ts
1997	0.37%	+0.06%	+0.43%	+0.32%	+2.94%	+2.00%
1998	0.33%	+0.11%	+0.27%	+0.36%	+2.15%	+1.41%
1999	0.46%	+0.17%	+0.43%	+0.66%	+3.26%	+2.47%
2000	0.40%	+0.66%	+0.31%	+0.70%	+3.69%	+4.11%
2001	0.27%	+0.32%	+0.24%	+0.50%	+2.21%	+1.97%
2002	0.28%	+0.27%	+0.28%	+0.65%	+2.01%	+1.63%
2003	0.46%	+0.42%	+0.54%	+0.88%	+2.69%	+1.71%
2004	0.77%	+1.01%	+0.97%	+1.25%	+4.09%	+3.36%
2005	1.43%	+3.09%	+1.92%	+1.96%	+6.46%	+6.54%
2006	2.74%	+6.44%	+3.70%	+3.72%	+8.57%	+13.99%
2007	2.86%	+7.94%	+5.20%	+5.39%	+10.27%	+19.45%
2008	0.70%	+1.80%	+1.94%	+1.55%	+5.25%	+5.78%
2009	0.04%	+0.03%	+0.11%	+0.10%	+0.48%	+0.24%

Change in the Total QRM Dollar Volume When Removing One of the Qualification Requirements

Year	QRM Volume	Product Type	PTI/DTI	LTV	FICO	All Loans
1997	21.04%	+3.12%	+11.92%	+15.76%	+6.12%	$ 72,883,400,278
1998	25.24%	+1.92%	+12.34%	+18.72%	+6.40%	$ 302,723,323,315
1999	20.34%	+2.44%	+12.42%	+14.98%	+6.23%	$ 140,480,199,806
2000	13.66%	+2.31%	+11.72%	+10.37%	+5.06%	$ 48,878,241,470
2001	22.56%	+2.89%	+13.21%	+15.14%	+4.72%	$ 390,566,245,690
2002	28.69%	+4.46%	+15.27%	+11.65%	+4.90%	$ 584,998,514,202
2003	31.06%	+4.48%	+16.76%	+11.22%	+5.22%	$ 920,098,549,172
2004	22.37%	+5.15%	+16.81%	+8.76%	+5.07%	$ 269,562,391,201
2005	16.42%	+4.93%	+16.06%	+8.46%	+3.82%	$ 169,162,254,192
2006	10.24%	+6.22%	+13.03%	+6.20%	+2.73%	$ 131,792,837,483
2007	9.41%	+5.15%	+12.27%	+6.36%	+2.16%	$ 196,852,210,903
2008	20.16%	+4.61%	+20.18%	+10.87%	+2.06%	$ 231,714,054,542
2009	32.80%	+3.01%	+22.10%	+16.44%	+1.63%	$ 637,544,819,174

CASHOUT REFINANCES

Year	QRM Delinquency Rate	Product Type	PTI/DTI	LTV	FICO	All Req'ts
1997	0.51%	+0.18%	+0.48%	+0.54%	+3.12%	+2.20%
1998	0.39%	+0.20%	+0.37%	+0.42%	+2.09%	+1.44%
1999	0.52%	+0.23%	+0.42%	+0.56%	+3.05%	+2.27%
2000	0.51%	+0.70%	+0.41%	+0.81%	+4.26%	+3.88%
2001	0.31%	+0.33%	+0.23%	+0.52%	+2.67%	+2.30%
2002	0.31%	+0.40%	+0.28%	+0.61%	+2.57%	+2.15%
2003	0.51%	+0.64%	+0.60%	+1.12%	+3.11%	+2.57%
2004	0.89%	+1.29%	+1.08%	+1.51%	+4.92%	+4.71%
2005	1.70%	+2.71%	+2.22%	+2.55%	+7.11%	+8.34%
2006	2.61%	+3.77%	+3.34%	+4.05%	+9.06%	+14.42%
2007	2.14%	+3.46%	+3.37%	+3.84%	+9.99%	+16.66%
2008	0.72%	+1.39%	+1.73%	+1.44%	+5.47%	+6.52%
2009	0.03%	+0.05%	+0.10%	+0.07%	+0.44%	+0.24%

Year	QRM Volume	Product Type	PTI/DTI	LTV	FICO	All Loans
1997	18.17%	+2.23%	+10.98%	+16.86%	+6.32%	$ 42,298,309,778
1998	21.25%	+1.30%	+11.88%	+20.45%	+5.91%	$ 144,483,516,925
1999	17.05%	+1.84%	+11.63%	+17.04%	+5.28%	$ 88,233,434,096
2000	10.03%	+2.40%	+9.66%	+10.90%	+4.46%	$ 48,439,141,706
2001	15.19%	+1.90%	+11.01%	+16.10%	+4.18%	$ 314,174,379,286
2002	17.13%	+2.67%	+12.30%	+13.58%	+4.33%	$ 421,408,941,296
2003	19.05%	+2.99%	+14.53%	+11.60%	+5.00%	$ 575,761,933,088
2004	12.16%	+3.34%	+13.83%	+8.15%	+4.43%	$ 270,137,974,274
2005	11.77%	+3.14%	+15.67%	+7.74%	+3.71%	$ 335,989,676,955
2006	8.93%	+4.00%	+13.17%	+5.81%	+3.12%	$ 296,611,100,532
2007	8.93%	+3.39%	+12.61%	+6.70%	+2.75%	$ 325,728,814,842
2008	14.78%	+2.75%	+18.34%	+11.41%	+2.52%	$ 239,936,748,440
2009	28.36%	+1.52%	+22.56%	+17.99%	+1.87%	$ 312,916,373,670

SECTION 4a. THE EFFECT OF RELAXING INDIVIDUAL REQUIREMENTS

ALL LOANS

	Change in the Ever-90-Day Delinquency Rates After Decreasing Each Requirement					Change in the Total QRM Dollar Volume After Decreasing Each Requirement					Percent Change of Delinquency Rate to Mortgage Volume		
Year	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	Year	QRM Volume	Higher DTI	Higher LTV	Lower FICO	All Loans	Higher DTI	Higher LTV	Lower FICO
1997	0.42%	+0.03%	+0.11%	+0.15%	1997	20.44%	+2.70%	+8.81%	+2.64%	$ 286,497,878,371	1.22%	1.28%	5.59%
1998	0.39%	+0.02%	+0.12%	+0.13%	1998	23.29%	+2.46%	+12.51%	+2.74%	$ 691,033,994,510	0.66%	0.92%	4.73%
1999	0.44%	+0.02%	+0.17%	+0.18%	1999	19.48%	+2.28%	+8.64%	+2.51%	$ 481,450,519,437	0.77%	1.92%	7.32%
2000	0.32%	+0.00%	+0.12%	+0.12%	2000	16.44%	+2.32%	+4.75%	+2.00%	$ 356,779,731,419	0.10%	2.50%	5.95%
2001	0.31%	+0.01%	+0.12%	+0.10%	2001	19.37%	+2.02%	+9.84%	+2.16%	$ 1,039,412,013,402	0.73%	1.17%	4.78%
2002	0.33%	+0.01%	+0.13%	+0.10%	2002	22.37%	+2.12%	+8.47%	+2.22%	$ 1,385,056,256,237	0.68%	1.51%	4.34%
2003	0.55%	+0.04%	+0.19%	+0.15%	2003	24.57%	+2.16%	+7.98%	+2.27%	$ 1,924,265,340,603	1.66%	2.43%	6.54%
2004	0.95%	+0.08%	+0.25%	+0.25%	2004	17.03%	+2.08%	+4.72%	+1.95%	$ 937,643,914,292	4.02%	5.23%	12.94%
2005	1.86%	+0.17%	+0.46%	+0.39%	2005	14.41%	+2.15%	+4.26%	+1.60%	$ 939,069,358,458	7.80%	10.76%	24.54%
2006	2.72%	+0.28%	+0.74%	+0.50%	2006	11.52%	+1.93%	+2.93%	+1.28%	$ 887,443,942,463	14.57%	25.17%	39.07%
2007	2.37%	+0.24%	+0.88%	+0.44%	2007	10.72%	+1.71%	+3.33%	+1.04%	$ 1,027,460,511,244	13.75%	26.30%	42.13%
2008	0.68%	+0.08%	+0.37%	+0.16%	2008	17.39%	+2.41%	+6.91%	+1.13%	$ 793,136,249,488	3.24%	5.34%	14.18%
2009	0.04%	+0.00%	+0.02%	+0.01%	2009	30.52%	+3.17%	+12.43%	+1.14%	$ 1,176,445,135,544	0.14%	0.13%	0.87%

PURCHASES

Year	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	Year	QRM Volume	Higher DTI	Higher LTV	Lower FICO	All Loans	Higher DTI	Higher LTV	Lower FICO
1997	0.42%	+0.03%	+0.09%	+0.14%	1997	20.74%	+2.98%	+5.39%	+2.52%	$ 171,316,168,315	1.06%	1.63%	5.51%
1998	0.46%	+0.02%	+0.10%	+0.15%	1998	22.08%	+2.85%	+5.42%	+2.63%	$ 243,827,154,269	0.54%	1.92%	5.71%
1999	0.40%	+0.01%	+0.10%	+0.16%	1999	19.86%	+2.67%	+4.27%	+2.35%	$ 252,736,885,537	0.52%	2.42%	6.96%
2000	0.29%	+0.00%	+0.06%	+0.10%	2000	18.17%	+2.68%	+3.21%	+2.07%	$ 259,462,348,244	0.00%	1.95%	4.94%
2001	0.38%	+0.02%	+0.08%	+0.13%	2001	19.57%	+2.61%	+3.16%	+2.31%	$ 334,671,388,428	0.67%	2.52%	5.64%
2002	0.48%	+0.02%	+0.08%	+0.13%	2002	18.43%	+2.50%	+2.37%	+2.19%	$ 378,648,800,742	0.83%	3.34%	5.92%
2003	0.93%	+0.07%	+0.11%	+0.23%	2003	18.03%	+2.42%	+1.95%	+1.89%	$ 428,404,858,343	2.80%	5.50%	11.96%
2004	1.16%	+0.10%	+0.10%	+0.26%	2004	16.71%	+2.51%	+1.22%	+1.82%	$ 397,943,548,817	4.05%	8.35%	14.17%
2005	2.13%	+0.18%	+0.14%	+0.36%	2005	15.67%	+2.59%	+0.98%	+1.58%	$ 433,917,427,309	7.00%	14.09%	22.93%
2006	2.76%	+0.28%	+0.14%	+0.45%	2006	13.57%	+2.41%	+0.75%	+1.35%	$ 459,040,004,449	11.63%	19.23%	33.15%
2007	2.33%	+0.23%	+0.19%	+0.36%	2007	12.39%	+2.13%	+1.04%	+1.06%	$ 504,879,485,501	10.99%	18.04%	34.23%
2008	0.64%	+0.07%	+0.29%	+0.16%	2008	17.33%	+2.77%	+3.26%	+1.07%	$ 321,485,446,506	2.53%	8.96%	15.23%
2009	0.07%	+0.01%	+0.01%	+0.02%	2009	27.06%	+3.94%	+5.34%	+1.21%	$ 225,983,942,702	0.16%	0.23%	1.47%

NO CASHOUT REFINANCES

	Change in the Ever-90-Day Delinquency Rates After Decreasing Each Requirement					Change in the Total QRM Dollar Volume After Decreasing Each Requirement						Percent Change of Delinquency Rate to Mortgage Volume		
Year	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	Year	QRM Volume	Higher DTI	Higher LTV	Lower FICO		All Loans	Higher DTI	Higher LTV	Lower FICO
1997	0.37%	+0.03%	+0.07%	+0.15%	1997	21.04%	+2.36%	+12.34%	+2.87%	$	72,883,400,278	1.48%	0.55%	5.11%
1998	0.33%	+0.01%	+0.09%	+0.11%	1998	25.24%	+2.31%	+14.60%	+2.87%	$	302,723,323,316	0.47%	0.62%	4.01%
1999	0.46%	+0.02%	+0.16%	+0.21%	1999	20.34%	+1.91%	+11.53%	+2.84%	$	140,480,199,805	1.01%	1.43%	7.27%
2000	0.40%	+0.01%	+0.15%	+0.14%	2000	13.66%	+1.58%	+7.99%	+2.01%	$	48,878,241,470	0.66%	1.88%	7.01%
2001	0.27%	+0.01%	+0.10%	+0.08%	2001	22.56%	+1.90%	+11.93%	+2.28%	$	390,566,245,688	0.63%	0.88%	3.58%
2002	0.28%	+0.01%	+0.12%	+0.08%	2002	28.69%	+2.20%	+9.63%	+2.48%	$	584,998,514,198	0.50%	1.23%	3.17%
2003	0.46%	+0.02%	+0.17%	+0.12%	2003	31.06%	+2.22%	+9.33%	+2.54%	$	920,098,549,171	1.06%	1.80%	4.72%
2004	0.77%	+0.06%	+0.27%	+0.22%	2004	22.37%	+1.98%	+7.44%	+2.35%	$	269,562,391,200	2.80%	3.59%	9.42%
2005	1.43%	+0.14%	+0.54%	+0.40%	2005	16.42%	+1.78%	+7.31%	+1.76%	$	169,162,254,193	7.86%	7.44%	22.57%
2006	2.74%	+0.32%	+1.19%	+0.60%	2006	10.24%	+1.45%	+5.35%	+1.23%	$	131,792,837,483	22.07%	22.33%	48.77%
2007	2.86%	+0.34%	+1.64%	+0.69%	2007	9.41%	+1.30%	+5.11%	+1.01%	$	196,852,210,902	26.26%	32.04%	68.37%
2008	0.70%	+0.09%	+0.33%	+0.15%	2008	20.16%	+2.39%	+8.77%	+1.17%	$	231,714,054,542	3.69%	3.76%	12.79%
2009	0.04%	+0.00%	+0.01%	+0.01%	2009	32.80%	+3.02%	+12.36%	+1.09%	$	637,544,819,173	0.15%	0.11%	0.77%

CASHOUT REFINANCES

Year	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	Year	QRM Volume	Higher DTI	Higher LTV	Lower FICO		All Loans	Higher DTI	Higher LTV	Lower FICO
1997	0.51%	+0.03%	+0.25%	+0.19%	1997	18.17%	+2.16%	+16.55%	+2.77%	$	42,298,309,778	1.62%	1.51%	6.86%
1998	0.39%	+0.03%	+0.20%	+0.13%	1998	21.25%	+2.13%	+20.09%	+2.67%	$	144,483,516,926	1.21%	0.99%	4.84%
1999	0.52%	+0.03%	+0.26%	+0.20%	1999	17.05%	+1.72%	+16.54%	+2.42%	$	88,233,434,095	1.81%	1.56%	8.33%
2000	0.51%	+0.02%	+0.31%	+0.24%	2000	10.03%	+1.15%	+9.72%	+1.64%	$	48,439,141,706	1.88%	3.24%	14.44%
2001	0.31%	+0.01%	+0.18%	+0.10%	2001	15.19%	+1.54%	+14.35%	+1.84%	$	314,174,379,286	0.78%	1.24%	5.60%
2002	0.31%	+0.01%	+0.20%	+0.10%	2002	17.13%	+1.66%	+12.32%	+1.88%	$	421,408,941,297	0.51%	1.60%	5.33%
2003	0.51%	+0.03%	+0.34%	+0.16%	2003	19.05%	+1.85%	+10.30%	+2.11%	$	575,761,933,089	1.56%	3.26%	7.62%
2004	0.89%	+0.08%	+0.49%	+0.30%	2004	12.16%	+1.55%	+7.18%	+1.75%	$	270,137,974,275	4.96%	6.86%	17.04%
2005	1.70%	+0.14%	+0.90%	+0.44%	2005	11.77%	+1.76%	+6.96%	+1.54%	$	335,989,676,956	8.22%	12.91%	28.87%
2006	2.61%	+0.26%	+1.47%	+0.58%	2006	8.93%	+1.39%	+5.22%	+1.20%	$	296,611,100,531	18.71%	28.22%	47.99%
2007	2.14%	+0.18%	+1.39%	+0.44%	2007	8.93%	+1.32%	+5.81%	+1.03%	$	325,728,814,841	13.36%	23.91%	42.43%
2008	0.72%	+0.08%	+0.48%	+0.17%	2008	14.78%	+1.93%	+9.99%	+1.19%	$	239,936,748,440	4.09%	4.83%	14.45%
2009	0.03%	+0.00%	+0.03%	+0.01%	2009	28.36%	+2.92%	+17.68%	+1.19%	$	312,916,373,669	0.05%	0.14%	0.68%

SECTION 4b. THE EFFECT OF TIGHTENING INDIVIDUAL REQUIREMENTS

ALL LOANS

	Change in the Ever-90-Day Delinquency Rates After Decreasing Each Requirement					Change in the Total QRM Dollar Volume After Decreasing Each Requirement					Percent Change of Delinquency Rate to Mortgage Volume		
Year	QRM Delinquency Rate	Lower DTI	Lower LTV	Higher FICO	Year	QRM Volume	Lower DTI	Lower LTV	Higher FICO	All Loans	Lower DTI	Lower LTV	Higher FICO
1997	0.42%	-0.03%	-0.10%	-0.10%	1997	20.44%	-2.80%	-11.98%	-4.08%	$ 286,497,878,371	0.90%	0.83%	2.50%
1998	0.39%	-0.02%	-0.10%	-0.10%	1998	23.29%	-2.55%	-12.42%	-4.44%	$ 691,033,994,510	0.73%	0.78%	2.25%
1999	0.44%	-0.02%	-0.10%	-0.12%	1999	19.48%	-2.35%	-11.08%	-3.72%	$ 481,450,519,437	0.81%	0.90%	3.29%
2000	0.32%	-0.01%	-0.08%	-0.09%	2000	16.44%	-2.40%	-10.21%	-2.93%	$ 356,779,731,419	0.59%	0.80%	2.96%
2001	0.31%	-0.01%	-0.08%	-0.07%	2001	19.37%	-2.17%	-9.43%	-3.26%	$ 1,039,412,013,402	0.58%	0.86%	2.12%
2002	0.33%	-0.01%	-0.10%	-0.07%	2002	22.37%	-2.30%	-9.17%	-3.52%	$ 1,385,056,256,237	0.63%	1.05%	2.06%
2003	0.55%	-0.03%	-0.18%	-0.13%	2003	24.57%	-2.34%	-9.40%	-3.65%	$ 1,924,265,340,603	1.36%	1.92%	3.67%
2004	0.95%	-0.07%	-0.38%	-0.22%	2004	17.03%	-2.14%	-8.06%	-2.84%	$ 937,643,914,292	3.14%	4.69%	7.89%
2005	1.86%	-0.17%	-0.84%	-0.42%	2005	14.41%	-2.15%	-7.28%	-2.30%	$ 939,069,358,458	8.05%	11.53%	18.26%
2006	2.72%	-0.25%	-1.35%	-0.59%	2006	11.52%	-1.86%	-6.29%	-1.88%	$ 887,443,942,463	13.27%	21.48%	31.58%
2007	2.37%	-0.23%	-1.18%	-0.59%	2007	10.72%	-1.68%	-5.78%	-1.60%	$ 1,027,460,511,244	13.48%	20.47%	36.73%
2008	0.68%	-0.06%	-0.24%	-0.17%	2008	17.39%	-2.42%	-8.00%	-1.98%	$ 793,136,249,488	2.41%	3.04%	8.52%
2009	0.04%	-0.00%	-0.01%	-0.01%	2009	30.52%	-3.35%	-11.57%	-2.54%	$ 1,176,445,135,544	0.13%	0.09%	0.40%

PURCHASES

Year	QRM Delinquency Rate	Lower DTI	Lower LTV	Higher FICO	Year	QRM Volume	Lower DTI	Lower LTV	Higher FICO	All Loans	Lower DTI	Lower LTV	Higher FICO
1997	0.42%	-0.03%	-0.12%	-0.10%	1997	20.74%	-3.10%	-14.07%	-3.99%	$ 171,316,168,315	0.88%	0.85%	2.45%
1998	0.46%	-0.02%	-0.15%	-0.11%	1998	22.08%	-2.93%	-15.60%	-4.28%	$ 243,827,154,269	0.70%	0.95%	2.65%
1999	0.40%	-0.02%	-0.13%	-0.11%	1999	19.86%	-2.76%	-13.88%	-3.66%	$ 252,736,885,537	0.66%	0.96%	2.93%
2000	0.29%	-0.01%	-0.11%	-0.07%	2000	18.17%	-2.77%	-12.45%	-3.16%	$ 259,462,348,244	0.46%	0.89%	2.27%
2001	0.38%	-0.01%	-0.15%	-0.08%	2001	19.57%	-2.74%	-13.89%	-3.48%	$ 334,671,388,428	0.48%	1.11%	2.29%
2002	0.48%	-0.02%	-0.21%	-0.10%	2002	18.43%	-2.58%	-13.15%	-3.27%	$ 378,648,800,742	0.67%	1.62%	3.12%
2003	0.93%	-0.06%	-0.46%	-0.20%	2003	18.03%	-2.50%	-13.00%	-2.95%	$ 428,404,858,343	2.48%	3.53%	6.69%
2004	1.16%	-0.08%	-0.65%	-0.25%	2004	16.71%	-2.52%	-11.69%	-2.78%	$ 397,943,548,817	3.15%	5.57%	9.11%
2005	2.13%	-0.18%	-1.34%	-0.44%	2005	15.67%	-2.57%	-10.86%	-2.41%	$ 433,917,427,309	7.15%	12.39%	18.32%
2006	2.76%	-0.25%	-1.98%	-0.60%	2006	13.57%	-2.32%	-9.51%	-2.11%	$ 459,040,004,449	10.63%	20.78%	28.40%
2007	2.33%	-0.21%	-1.72%	-0.57%	2007	12.39%	-2.08%	-8.72%	-1.77%	$ 504,879,485,501	9.85%	19.76%	32.34%
2008	0.64%	-0.04%	-0.26%	-0.15%	2008	17.33%	-2.72%	-11.43%	-1.96%	$ 321,485,446,506	1.65%	2.27%	7.66%
2009	0.07%	-0.01%	-0.03%	-0.02%	2009	27.06%	-3.95%	-19.57%	-2.61%	$ 225,983,942,702	0.13%	0.15%	0.79%

NO CASHOUT REFINANCES

	Change in the Ever-90-Day Delinquency Rates After Decreasing Each Requirement				Change in the Total QRM Dollar Volume After Decreasing Each Requirement						Percent Change of Delinquency Rate to Mortgage Volume		
Year	QRM Delinquency Rate	Lower DTI	Lower LTV	Higher FICO	Year	QRM Volume	Lower DTI	Lower LTV	Higher FICO	All Loans	Lower DTI	Lower LTV	Higher FICO
1997	0.37%	-0.02%	-0.09%	-0.10%	1997	21.04%	-2.48%	-10.09%	-4.33%	$ 72,883,400,278	0.81%	0.85%	2.37%
1998	0.33%	-0.01%	-0.08%	-0.09%	1998	25.24%	-2.44%	-11.90%	-4.68%	$ 302,723,323,316	0.53%	0.63%	1.87%
1999	0.46%	-0.02%	-0.13%	-0.14%	1999	20.34%	-1.97%	-9.08%	-3.98%	$ 140,480,199,805	0.78%	1.38%	3.48%
2000	0.40%	-0.03%	-0.11%	-0.12%	2000	13.66%	-1.67%	-5.28%	-2.60%	$ 48,878,241,470	1.71%	2.17%	4.75%
2001	0.27%	-0.01%	-0.06%	-0.06%	2001	22.56%	-2.11%	-8.74%	-3.55%	$ 390,566,245,688	0.47%	0.68%	1.67%
2002	0.28%	-0.01%	-0.06%	-0.06%	2002	28.69%	-2.47%	-9.17%	-4.19%	$ 584,998,514,198	0.43%	0.65%	1.40%
2003	0.46%	-0.02%	-0.12%	-0.12%	2003	31.06%	-2.49%	-9.79%	-4.31%	$ 920,098,549,171	0.81%	1.18%	2.70%
2004	0.77%	-0.04%	-0.20%	-0.20%	2004	22.37%	-2.14%	-6.90%	-3.56%	$ 269,562,391,200	1.79%	2.87%	5.67%
2005	1.43%	-0.13%	-0.40%	-0.40%	2005	16.42%	-1.87%	-5.28%	-2.61%	$ 169,162,254,193	7.11%	7.49%	15.23%
2006	2.74%	-0.30%	-1.03%	-0.79%	2006	10.24%	-1.41%	-3.28%	-1.77%	$ 131,792,837,483	21.60%	31.52%	44.64%
2007	2.86%	-0.31%	-1.22%	-0.84%	2007	9.41%	-1.28%	-3.15%	-1.50%	$ 196,852,210,902	24.06%	38.84%	56.03%
2008	0.70%	-0.07%	-0.28%	-0.19%	2008	20.16%	-2.47%	-6.65%	-2.13%	$ 231,714,054,542	2.64%	4.27%	8.97%
2009	0.04%	-0.00%	-0.01%	-0.01%	2009	32.80%	-3.27%	-10.63%	-2.54%	$ 637,544,819,173	0.12%	0.07%	0.29%

CASHOUT REFINANCES

Year	QRM Delinquency Rate	Lower DTI	Lower LTV	Higher FICO	Year	QRM Volume	Lower DTI	Lower LTV	Higher FICO	All Loans	Lower DTI	Lower LTV	Higher FICO
1997	0.51%	-0.03%	-0.09%	-0.12%	1997	18.17%	-2.17%	-6.74%	-3.97%	$ 42,298,309,778	1.23%	1.30%	3.00%
1998	0.39%	-0.02%	-0.06%	-0.10%	1998	21.25%	-2.11%	-8.12%	-4.19%	$ 144,483,516,926	1.18%	0.68%	2.49%
1999	0.52%	-0.03%	-0.07%	-0.14%	1999	17.05%	-1.77%	-6.23%	-3.47%	$ 88,233,434,095	1.91%	1.08%	4.05%
2000	0.51%	-0.02%	-0.05%	-0.18%	2000	10.03%	-1.19%	-3.19%	-2.05%	$ 48,439,141,706	1.55%	1.66%	8.72%
2001	0.31%	-0.01%	-0.03%	-0.07%	2001	15.19%	-1.63%	-5.52%	-2.65%	$ 314,174,379,286	0.73%	0.47%	2.68%
2002	0.31%	-0.01%	-0.05%	-0.07%	2002	17.13%	-1.80%	-5.58%	-2.83%	$ 421,408,941,297	0.73%	0.93%	2.58%
2003	0.51%	-0.03%	-0.11%	-0.13%	2003	19.05%	-1.99%	-6.10%	-3.12%	$ 575,761,933,089	1.33%	1.80%	4.16%
2004	0.89%	-0.07%	-0.23%	-0.21%	2004	12.16%	-1.58%	-3.89%	-2.23%	$ 270,137,974,275	4.75%	5.99%	9.28%
2005	1.70%	-0.16%	-0.51%	-0.40%	2005	11.77%	-1.74%	-3.66%	-2.01%	$ 335,989,676,956	9.36%	13.81%	20.13%
2006	2.61%	-0.22%	-0.83%	-0.48%	2006	8.93%	-1.36%	-2.63%	-1.56%	$ 296,611,100,531	16.00%	31.46%	30.57%
2007	2.14%	-0.22%	-0.69%	-0.46%	2007	8.93%	-1.30%	-2.80%	-1.40%	$ 325,728,814,841	17.30%	24.67%	32.91%
2008	0.72%	-0.07%	-0.21%	-0.17%	2008	14.78%	-1.95%	-4.70%	-1.87%	$ 239,936,748,440	3.64%	4.49%	8.98%
2009	0.03%	-0.00%	-0.00%	-0.01%	2009	28.36%	-3.10%	-7.72%	-2.50%	$ 312,916,373,669	0.15%	0.01%	0.38%

SECTION 4c: THE MARGINAL EVER-90-DAY DELINQUENCY RATES THAT RESULT FROM ADJUSTMENTS TO INDIVIDUAL REQUIREMENTS

The Ever-90-Day Delinquency Rate for Mortgages That Would Have Gained QRM Qualification from Relaxing an Individual Requirement

	ALL LOANS				PURCHASE LOANS				NO CASHOUT REFINANCES				CASHOUT REFINANCES			
Year	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO
1997	0.42%	0.70%	0.79%	1.71%	0.42%	0.67%	0.85%	1.70%	0.37%	0.71%	0.55%	1.59%	0.51%	0.84%	1.04%	1.95%
1998	0.39%	0.55%	0.72%	1.62%	0.46%	0.59%	0.99%	1.87%	0.33%	0.46%	0.58%	1.46%	0.39%	0.68%	0.81%	1.55%
1999	0.44%	0.60%	0.98%	2.05%	0.40%	0.51%	0.98%	1.94%	0.46%	0.69%	0.92%	2.15%	0.52%	0.86%	1.04%	2.14%
2000	0.32%	0.34%	0.85%	1.42%	0.29%	0.29%	0.71%	1.29%	0.40%	0.50%	0.81%	1.50%	0.51%	0.72%	1.15%	2.19%
2001	0.31%	0.47%	0.66%	1.34%	0.38%	0.53%	0.96%	1.62%	0.27%	0.42%	0.57%	1.16%	0.31%	0.44%	0.68%	1.26%
2002	0.33%	0.50%	0.80%	1.40%	0.48%	0.65%	1.17%	1.70%	0.28%	0.43%	0.75%	1.27%	0.31%	0.41%	0.78%	1.33%
2003	0.55%	0.99%	1.34%	2.30%	0.93%	1.50%	2.03%	3.31%	0.46%	0.81%	1.19%	2.05%	0.51%	0.84%	1.47%	2.12%
2004	0.95%	1.72%	2.09%	3.41%	1.16%	1.94%	2.66%	3.79%	0.77%	1.45%	1.84%	3.10%	0.89%	1.57%	2.21%	3.26%
2005	1.86%	3.15%	3.87%	5.79%	2.13%	3.41%	4.48%	6.09%	1.43%	2.86%	3.20%	5.54%	1.70%	2.81%	4.12%	5.54%
2006	2.72%	4.68%	6.35%	7.72%	2.76%	4.61%	5.51%	7.70%	2.74%	5.32%	6.22%	8.34%	2.61%	4.54%	6.60%	7.47%
2007	2.37%	4.08%	6.06%	7.32%	2.33%	3.93%	4.76%	6.94%	2.86%	5.67%	7.51%	9.98%	2.14%	3.51%	5.66%	6.36%
2008	0.68%	1.32%	1.98%	3.31%	0.64%	1.15%	2.48%	3.44%	0.70%	1.53%	1.78%	3.42%	0.72%	1.41%	1.92%	3.03%
2009	0.04%	0.09%	0.10%	0.32%	0.07%	0.12%	0.14%	0.48%	0.04%	0.09%	0.09%	0.30%	0.03%	0.05%	0.10%	0.23%

The Ever-90-Day Delinquency Rate for Mortgages That Would Have Lost QRM Qualification from Tightening an Individual Requirement

	ALL LOANS				PURCHASE LOANS				NO CASHOUT REFINANCES				CASHOUT REFINANCES			
Year	QRM Delinquency Rate	Lower DTI	Lower LTV	Higher FICO	QRM Delinquency Rate	Higher DTI	Higher LTV	Lower FICO	QRM Delinquency Rate	Lower DTI	Lower LTV	Higher FICO	QRM Delinquency Rate	Lower DTI	Lower LTV	Higher FICO
1997	0.42%	0.58%	0.49%	0.83%	0.42%	0.58%	0.48%	0.83%	0.37%	0.52%	0.46%	0.76%	0.51%	0.71%	0.66%	0.94%
1998	0.39%	0.54%	0.47%	0.81%	0.46%	0.59%	0.52%	0.93%	0.33%	0.45%	0.41%	0.72%	0.39%	0.62%	0.48%	0.82%
1999	0.44%	0.57%	0.51%	0.96%	0.40%	0.51%	0.45%	0.87%	0.46%	0.60%	0.62%	1.03%	0.52%	0.81%	0.63%	1.06%
2000	0.32%	0.41%	0.37%	0.72%	0.29%	0.36%	0.34%	0.63%	0.40%	0.60%	0.58%	0.93%	0.51%	0.64%	0.62%	1.20%
2001	0.31%	0.41%	0.40%	0.66%	0.38%	0.46%	0.45%	0.75%	0.27%	0.36%	0.36%	0.58%	0.31%	0.41%	0.36%	0.65%
2002	0.33%	0.46%	0.47%	0.72%	0.48%	0.58%	0.56%	0.95%	0.28%	0.39%	0.41%	0.62%	0.31%	0.42%	0.42%	0.68%
2003	0.55%	0.85%	0.84%	1.32%	0.93%	1.32%	1.11%	1.94%	0.46%	0.69%	0.71%	1.18%	0.51%	0.74%	0.74%	1.17%
2004	0.95%	1.42%	1.38%	2.07%	1.16%	1.61%	1.44%	2.43%	0.77%	1.13%	1.21%	1.83%	0.89%	1.39%	1.38%	1.81%
2005	1.86%	2.85%	2.69%	4.07%	2.13%	3.07%	2.73%	4.56%	1.43%	2.47%	2.27%	3.53%	1.70%	2.64%	2.82%	3.67%
2006	2.72%	4.00%	3.84%	5.76%	2.76%	3.95%	3.60%	6.01%	2.74%	4.65%	4.94%	6.52%	2.61%	3.82%	4.59%	4.86%
2007	2.37%	3.59%	3.38%	5.72%	2.33%	3.35%	3.06%	5.77%	2.86%	4.81%	5.29%	7.29%	2.14%	3.46%	3.65%	4.61%
2008	0.68%	1.04%	0.96%	1.99%	0.64%	0.88%	0.77%	1.81%	0.70%	1.16%	1.27%	2.31%	0.72%	1.19%	1.18%	1.88%
2009	0.04%	0.08%	0.06%	0.15%	0.07%	0.10%	0.08%	0.26%	0.04%	0.07%	0.05%	0.12%	0.03%	0.07%	0.04%	0.13%