July 28, 2011

Office of the Comptroller of the Currency
250 E Street, SW., Mail Stop 2-3
Washington, DC 20219
Docket No. OCC-2011-0002

Elizabeth M. Murphy
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090
File Number S7-14-11

Jennifer J. Johnson
Secretary
Board of Governors of the Federal Reserve
System
20th Street and Constitution Avenue, NW.
Washington, D.C. 20551
Docket No. R-1411

Alfred M. Pollard
General Counsel
Federal Housing Finance Agency
1700 G St NW, 4th Floor
Washington, DC 20552
RIN 2590-AA43

Robert E. Feldman
Executive Secretary
Federal Deposit Insurance Corporation
550 17th Street, NW
Washington, DC 20429
Attention: Comments/Legal ESS
RIN 3064-AD74

Regulations Division
Office of General Counsel
Department of Housing and Urban
Development
451 7th Street, SW, Room 10276
Washington, DC 20410-0500
Docket No. FR-5504-P-01

Title: Credit Risk Retention Proposed Rule

Ladies and Gentlemen:

Genworth Mortgage Insurance ("Genworth")[1] welcomes this opportunity to submit our comments on the proposed rules (the "Agencies' Proposal") to implement the requirements of Section 941(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Act").[2] As encouraged in the Agencies' Proposal, following the Section entitled "Overview of Issues and Recommendations," we will identify and discuss each specific request for comment to which Genworth is responding.

---

[1] Genworth is a subsidiary of Genworth Financial, Inc. (NYSE: GNW), a leading Fortune 500 global financial security company. Genworth Financial has more than $100 billion in assets and employs approximately 6,500 people with a presence in more than 25 countries. Its products and services help meet the investment, protection, retirement and lifestyle needs of more than 15 million customers. Genworth Financial operates through three segments: Retirement & Protection, U.S. Mortgage Insurance and International (including international mortgage insurance).
[2] Pub. L. No. 111-203, 124 Stat. 1376 (2010). The Act has been codified as new section 15G of the Securities and Exchange Act of 1934.

As further discussed in the detailed comments that follow, Genworth urges the Agencies (defined below) to make the following changes to the Agencies' Proposal:

- Adopt a definition of Qualified Residential Mortgage ("QRM") that includes prudently underwritten loans made to creditworthy borrowers with loan to value ratios ("LTVs") up to 95% (and, in the case of loans with LTVs above 80%, that have private mortgage insurance coverage).[3]
- Require mortgage insurers to underwrite insured QRMs in order to satisfy the QRM definition, and mandate sufficient mortgage insurance coverage to provide loss protection equivalent to a 20% down payment.
- Ensure that all forms of risk retention are meaningful so as to incent the origination of well underwritten loans, and include private mortgage insurance as a permitted form of risk retention.

The Agencies' Proposal of a narrowly defined QRM coupled with permissive risk retention requirements is unlikely to accomplish the important objective of restoring investor confidence in residential mortgage securitizations. If adopted, the Agencies' Proposal could prolong the ongoing housing market slow down, crowd private capital out of housing finance, drive up housing costs – especially for traditionally underserved borrowers -- and concentrate mortgage lending within a handful of large financial institutions. In our comments, Genworth will provide extensive and detailed data, including independent third party analyses, that will enable the Agencies to evaluate our recommendations and validate our conclusions.

Overview of Issues and Recommendations.

Section 941 (Regulation of Credit Risk Retention).

Section 941 (Regulation of Credit Risk Retention) of the Act amends the Securities Exchange Act of 1934 to require that securitizers retain an economic interest in a portion (generally, 5%) of the credit risk ("risk retention") for securitized assets (including residential and commercial mortgages, automobile loans, credit card receivables and other similar financial assets).

Section 941 directs each of the regulators to whom this letter is addressed (the "Agencies") to jointly prescribe regulations regarding risk retention for residential mortgages that are securitized. Recognizing that, for decades, a significant segment of residential mortgage lending has been underwritten prudently and has benefited from stable and efficient secondary market financing, Congress also provided for an exemption from risk retention for QRMs.[4] The QRM exemption was designed to facilitate a residential mortgage market that is driven by the origination and securitization of prudently underwritten, sustainable mortgage loans with traditional terms and features: loans with a longstanding history of performing well across economic cycles that will afford a diverse population of creditworthy borrowers access to homeownership. The objective of risk retention, including the exemption for QRMs, was clear: to impose market discipline by requiring the originator or securitizer to retain meaningful exposure to potential losses, or "skin in the game," for higher risk mortgages, and to incent the

---

[3] Analysis of historical loan level performance data supports a definition of QRM that includes loans with LTVs up to 97% -- loans that traditionally have enabled sustainable home ownership, especially for low and moderate income borrowers and first time home buyers. The performance data is included in Exhibit A – Analysis of CoreLogic Servicing Database Loan Level Data.

[4] "[D]one properly, securitization provides significant economic benefits. It deepens the pool of capital available for lending, making credit more available and less expensive. It spreads risk more widely through the financial system, making the system more stable. Policymakers and regulators are thus rightly focused on fixing securitization's flaws." Mark Zandi and Cristian deRitis, *Reworking Risk Retention*, Moody's Analytics, June 20, 2011.

securitization of prudently underwritten, sustainable residential mortgages that do not warrant any new risk retention requirement.[5] Properly designed and implemented, risk retention and the QRM exemption would ensure that creditworthy borrowers have access to safe and sustainable mortgages offered on competitive terms by a broad array of mortgage lenders, and will impose significant economic consequences on riskier lending practices. Congress understood that an inclusive definition of prudent and sustainable QRMs coupled with significant risk retention requirements for other, riskier loans would create a lasting foundation for a strong and stable housing market.[6]

It is generally recognized that the 2008 financial crisis was sparked by the collapse of a housing bubble that had developed in the years preceding the meltdown. For decades, a secondary market for residential mortgages (the "originate to distribute" model) had facilitated the production of low risk, affordable mortgages with sustainable, standardized terms.[7] Beginning around 2004, a confluence of factors, including low interest rates, excess liquidity and home price increases that greatly outpaced growth in income led to the growth of risky, exotic mortgage loans (including interest only, negative amortization and payment option adjustable rate mortgages), and to weakened underwriting standards (exacerbated by the frequent failure to adhere to even those weaker standards) and reliance on expectations of home price appreciation to qualify a borrower for a mortgage. The proven model for responsible low down payment lending (requiring some borrower down payment and obtaining mortgage insurance to mitigate the risk of default) gave way to high-risk, simultaneous second liens ("piggyback seconds"). The introduction of automated underwriting systems meant that many loans were approved based on opaque models with unclear (and constantly changing) risk parameters, and the growth of low and no documentation loans meant that there was no process to verify borrowers' income or assets. The fundamental building blocks of traditional mortgage underwriting -- a thorough assessment of a borrower's credit history, capacity to meet his or her obligations and the collateral for the loan -- largely were ignored. [8]

Qualified Residential Mortgage Exemption.

<u>Legislative language.</u> The Act calls for QRMs to be prudently underwritten, sustainable mortgages with underwriting and product features that "historical loan performance data indicate result in a lower risk of default."[9] In other words, QRMs are meant to be loans that are

---

[5] "[I]n circumstances where the assets collateralizing the ABS meet underwriting and other standards that should ensure the assets pose low credit risk, the statute provides or permits an exemption." *Credit Risk Retention*, 76 *Fed. Reg.* 24090 (Apr. 29, 2011). See, also, 15 U.S.C. 78o-11(c)(1)(B)(ii), (e)(1) - (2).

[6] According to Senator Johnny Isakson, one of the original sponsors of the QRM provision, the only risk retention that will be required is when someone is making a bad loan. The amendment embodies the principle that underwriting, not risk retention, is the cure-all to good lending. 12 *Cong. Rec.* S3576 (May 12, 2010). Senator Mark Warner, also a sponsor, explained that, although "skin in the game" is important, more important is the underlying quality of the mortgage. Senator Warner added that the amendment remains true to the legislation's intent to ensure that the mortgage securitization process requires mortgage originators to have a financial stake (Ibid.).

[7] See, e.g., Financial Crisis, Inquiry Commission, *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, January, 2011. "For decades, a version of the originate-to-distribute model produced safe mortgages. Fannie and Freddie had been buying prime, conforming mortgages since the 1970s, protected by strict underwriting standards." (p. 89).

[8] See, e.g., Patricia McCoy, et al., *Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure*, 41 Conn. L. Rev. 493 (2009). "The expansion of lending without risk controls ... increased prices unsustainably and promoted loans that could not be repaid. Eventually, lenders believed their ability to assess risk of loans was so good that they created ever more complicated mortgage instruments with different and complicated metrics of default risk pricing. The result was the nontraditional lending instruments of the past decade such as option ARMs, interest-only ARMs, and no-documentation loans." (p. 503). See, also, Financial Crisis, Inquiry Commission, *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, January, 2011. "The Commission concludes that there was untrammeled growth in risky mortgages. Unsustainable, toxic loans polluted the financial system and fueled the housing bubble." (p. 101).

[9] Dodd-Frank Wall Street Reform and Consumer Protection Act. Pub. L. No. 111-203, 124 Stat. 1376, 1894 (2010).

structured and underwritten to perform well in any economic cycle; loans that, when they predominate in the market, will facilitate a strong, stable housing market. The Act specifically enumerates the following list of underwriting terms and features for consideration under QRM: (i) documentation and verification of the borrower's financial resources; (ii) standards with respect to the borrower's (a) residual income, (b) ratio of housing payments to monthly obligations and (c) ratio of total installment payments to income; (iii) mitigation of the potential for payment shock on adjustable rate mortgages; (iv) mortgage guarantee insurance or other types of insurance or credit enhancement obtained at the time of origination to the extent such insurance or other credit enhancement reduces the risk of default; and (v) prohibiting or restricting the use of balloon payments, negative amortization, prepayment penalties, interest-only payments or other features that have been demonstrated to exhibit a higher risk of borrower default.

The Proposed Rule.[10]

The Agencies' Proposal diverges significantly from the Act by crafting a narrowly defined QRM and a permissive list of options to satisfy risk retention requirements, instead of incenting strong underwriting through a broader QRM and the imposition of material risk retention on higher risk mortgage loans.[11]

Adverse Consequences of a Narrow QRM.

The proposed definition of QRM (the "Agency QRM") is far narrower than mandated by the Act. In particular:

- The proposal mandates a 20% down payment requirement that will preclude roughly 75% of eligible home buyers from the QRM market, even when those borrowers have strong, fully-documented and verified, credit;[12] and
- The proposal sets debt-to-income ratios ("DTIs") at levels that are unnecessarily punitive and that are far more restrictive than the traditional standards that have served the housing market well for many years preceding the housing bubble.

Agency QRMs would have accounted for only approximately 30% of the overall originations market even in 2009 and 2010, two years in which credit standards were the highest they have been in decades.[13] In more typical years, for example, 2001, only 15% of the market would have met the Agency QRM definition. As the Agencies have recognized, adopting the proposed, narrow QRM (or the alternative proposed by the Agencies (the "Agency Alternative QRM")) would render many prudent, sustainable loans made to creditworthy borrowers non-QRMs, thereby imposing unnecessary costs of risk retention.[14]

---

[10] The discussion set forth in this section and the subsections that follow responds to Questions 106-108 and 110-112 of the Agencies' Proposal.
[11] In their discussion of the QRM exemption, the Agencies state that "[they] recognize that many prudently underwritten residential mortgage loans will not meet the proposed definition of a QRM." *Credit Risk Retention*, 76 Fed. Reg. 24090, 24118 (Apr. 29, 2011). When requesting comment on the Agency Alternative QRM, the Agencies acknowledge that "[t]he approach taken by the proposal to implementing the exemption for QRMs within the broader context of section 15G is to limit QRMs to mortgages of very high quality, while providing sponsors considerable flexibility in how they meet the risk retention requirements for loans that do not qualify as QRMs (or for another exemption)." Ibid., 24129.
[12] According to the National Association of Realtors *Profile of Home Buyers and Sellers 2010*, 75% of all homebuyers in 2010 made a down payment of 20% or less, and 56% made a down payment of 10% or less.
[13] Market shares have been calculated based on data included in the CoreLogic Servicing Database. The CoreLogic Servicing Database includes loan level data on approximately 130 million residential mortgage loans and covers over 80% of the residential mortgage market. Further information on CoreLogic can be found at www.corelogic.com.
[14] *Credit Risk Retention*, 76 Fed. Reg. 24090, 24118-24119 (Apr. 29, 2011).

Limiting QRMs to high down payment borrowers will have a disproportionately adverse impact on low-to-moderate income, minority and first-time home buyers.[15] A combination of higher down payment and income requirements (plus tighter credit standards) will mean that many creditworthy, underserved borrowers will be denied access to prudently underwritten and sustainable conventional loans -- loans that "*they would have qualified for in the 1990s before the boom and bust* (emphasis added)."[16] The irony of a narrow QRM is that borrowers most in need of statutory and regulatory protection from unfair lending practices will be shut out of the safe and sound QRM market. Borrowers could end up with higher-cost, riskier loans that they will be ill suited to handle over the long term.[17]

A narrow QRM also distorts securitizer incentives in ways that may actually *encourage* the origination of riskier loans. The Agencies' Proposal limits the QRM exemption to loans that are virtually riskless, and imposes risk retention on the significant portion of the market that is comprised of prudently underwritten, sustainable loans with reasonable and predictable risk. As a practical matter, a "one size fits all" approach that broadly applies risk retention and fails to differentiate among loans with a wide range of risk characteristics could minimize the incentive to originate high quality mortgages.

Genworth's Proposed QRM.[18]

Historical loan performance data demonstrate that QRMs can be defined far more inclusively than the Agencies are proposing while still performing at acceptable levels. Genworth thus urges the Agencies to revise the definition of QRMs to include loans with LTVs of up to 95% (provided that loans with LTVs above 80% have private mortgage insurance (or other comparable insurance or credit enhancement)) and back-end DTIs of up to 45% (the "Genworth Proposed QRM" or "Genworth Proposal").[19] The Genworth Proposal would increase materially the number of borrowers who would have access to a QRM, expand the reach of QRM to a greater percentage of low to moderate income, minority and first-time home buyers, and still result in loans that would perform well under even the most conservative benchmark of performance.[20] Said differently, the Agency QRM (and the Agency Alternative QRM) will substantially reduce the availability of mortgage credit, suppress the opportunity for homeownership and impede the return of a strong and stable housing market, with only inconsequential improvements in loan performance. This is, quite simply, bad policy.[21]

QRM Performance.[22]

---

[15] Per the State of the Nation's Housing: 2011, minorities will account for 70% of net new households in 2010 – 2012. The Joint Center for Housing Studies of Harvard University, *State of the Nation's Housing: 2011*, p. 4.

[16] Ibid., p.2.

[17] Moody's Analytics estimates that the interest rate for non-QRM loans will rise by 75 – 100 basis points. See Mark Zandi and Cristian deRitis, *Reworking Risk Retention*, Moody's Analytics, June 20, 2011, p. 2.

[18] The discussion set forth in this section responds to Questions 106, 114, 120, 121 and 123 of the Agencies' Proposal.

[19] The Agencies' Proposal includes a front-end DTI (the ratio of monthly mortgage payments to monthly gross income) and a back-end DTI (the ratio of total monthly scheduled debt to monthly gross income). Genworth is not recommending that a front-end DTI requirement be included in the definition of a QRM. However, should the Agencies determine that a front-end DTI is necessary, Genworth recommends that it be set at a level that that corresponds to a 45% back-end DTI. As a general rule, front-end DTIs are typically six percentage points less than comparable back-end DTIs.

[20] Based on analysis of approximately 44 million loans originated from 2001 - 2008 with an aggregate principle amount of approximately $8.8 trillion included in the CoreLogic Servicing Database.

[21] Analysis of historical loan level performance data supports a definition of QRM that includes loans with LTVs up to 97% -- loans that traditionally have enabled sustainable home ownership, especially for low and moderate income borrowers and first time home buyers. The performance data is included in Exhibit A – Analysis of CoreLogic Servicing Database Loan Level Data.

[22] The discussion set forth in this section responds to Questions 106, 114, 120, 121 and 123 of the Agencies' Proposal.

The narrow approach taken by the Agencies (including the Agency Alternative QRM) is not warranted based on loan performance. An analysis of approximately 44 million first lien residential mortgage loans originated from 2001 – 2008 contained in the CoreLogic Servicing Database demonstrates that loans with LTVs up to 95% and DTIs up to 45% perform well even under severe economic stress and should be included in the definition of QRM.[23] Genworth analyzed the performance of loans that would have satisfied the Agency QRM definition, the Agency Alternative QRM definition and the Genworth Proposed QRM definition.[24] The loan terms of each definition are set forth in the table below:

Terms and Features –
Agency QRM/Agency Alternative QRM/Genworth Proposed QRM

	Agency QRM	Agency Alternative QRM	Genworth Proposed QRM
Front DTI	28	28 Arm/33 Fixed	N/A
Back DTI	36	38 Arm/41 Fixed	45
Purchase CLTV/piggyback	80%/No	90%/Yes	95%/No
Refinance CLTV/piggyback	75%/Yes	90%/Yes	95%/No
Cash CLTV/piggyback	70%/Yes	75%/Yes	95%/No
Negative Amortization	No	No	No
Points and Fees	3% Cap	3% Cap	3% Cap
Interest Only	No	No	No
Balloons	No	No	No
Prepay Penalty	No	No	No
ARM Margins	2/2/6	2/2/6	2/2/6
ARM Product	All	All	All
Credit	690*	690*	690*
Max Term	30yr	30yr	30yr
Occupancy	Primary	Primary	Primary
Documentation	Full	Full	Full
MI Requirement >80 LTV	n/a	MI or Piggyback	Yes

*690 FICO score is used as a proxy for the credit history factors included in the Agencies' Proposal.
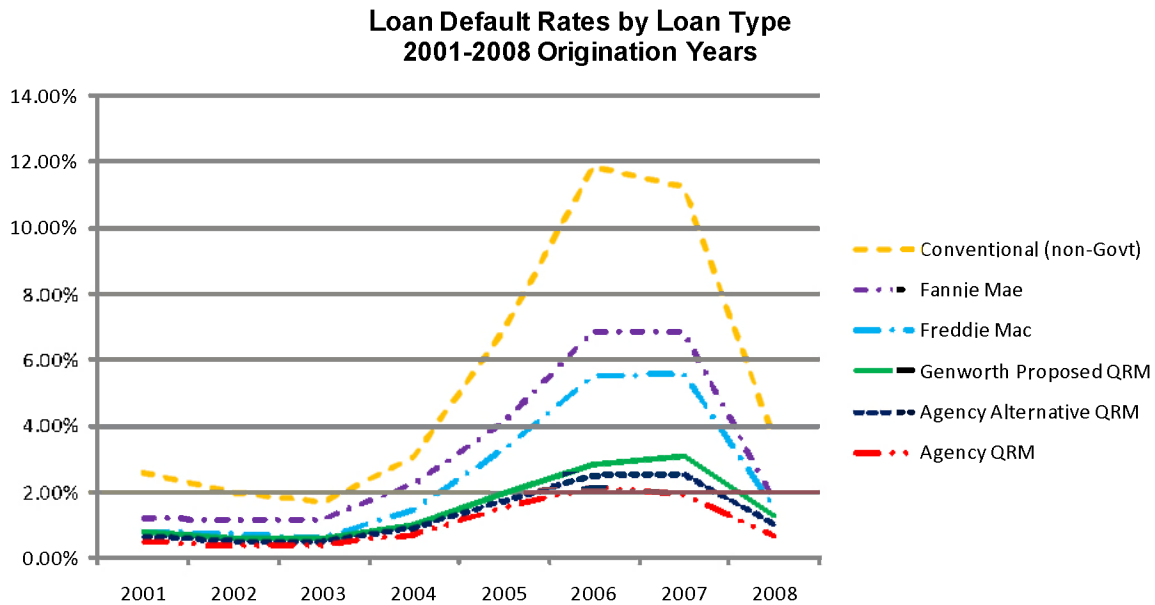
The graph below compares cumulative default rates for loans that would satisfy the definitions of Agency QRM, Agency Alternative QRM and the Genworth Proposed QRM to all conventional (non-government) loans, loans purchased by Fannie Mae and loans purchased by Freddie Mac.[25] The data clearly show that the definition of QRM can be broadened significantly while

---

[23] The analysis assumes that any definition of QRM adopted by the Agencies will include only fully documented, fully amortizing loans and, in the case of loans with LTVs greater than 80%, mortgage insurance.

[24] The CoreLogic Servicing Database does not include front-end ratios, and so Genworth ran only back-end ratios. The impact of a 3% cap on points and fees was estimated based on aggregate, state-by-state data provided by a national mortgage lender because the CoreLogic Servicing Database does not include detail on points and fees. The CoreLogic Servicing Database does not include credit history factors, so for analytical purposes, Genworth used a 690 FICO score used as a proxy for the proposed factors.

[25] Source: for conventional loans, CoreLogic Servicing Database 2001 – 2008 originations; for Fannie Mae and Freddie Mac loans, first quarter 2011 earnings releases available at http://www.fanniemae.com/ir/pdf/sec/2011/q1credit_summary.pdf and http://www.freddiemac.com/investors/er/pdf/supplement_1q11.pdf, respectively. Conventional loans are all loans other than those insured or guaranteed by a Federal agency.

still performing within acceptable ranges. *The Genworth Proposed QRM, with its broader reach, still performs 54% better than GSE loans and 77% better than conventional loans.* The default rate for the Agency QRMs is .81%, for the Agency Alternative is 1.02%, and for the Genworth Proposal is 1.20%.[26] All three options perform materially better than conventional loans, loans purchased by Fannie Mae and loans purchased by Freddie Mac, which experienced average default rates of 5.13%, 2.83% and 2.23%, respectively.

Loan Default Rates by Loan Type
2001-2008 Origination Years

Detailed data reflected in the graph are set forth in the table below:

Loan Default Rates by Loan Type
2001 – 2008 Origination Years

	Conventional (non-Govt)	Fannie Mae	Freddie Mac	Genworth Proposed QRM	Agency Alternative QRM	Agency QRM
2001	2.56%	1.20%	0.80%	0.81%	0.66%	0.48%
2002	1.98%	1.10%	0.70%	0.58%	0.48%	0.36%
2003	1.67%	1.15%	0.60%	0.58%	0.50%	0.39%
2004	3.05%	2.20%	1.47%	1.01%	0.88%	0.72%
2005	6.91%	4.11%	3.30%	1.97%	1.73%	1.49%
2006	11.86%	6.85%	5.50%	2.81%	2.47%	2.11%
2007	11.22%	6.85%	5.60%	3.08%	2.52%	1.94%
2008	3.62%	1.70%	1.50%	1.28%	1.00%	0.64%
2001-2008	5.13%	2.83%	2.23%	1.20%	1.02%	0.81%

In addition to comparing the performance of the Agencies' QRM proposals and the Genworth Proposal, Genworth also performed a logistical regression analysis using CoreLogic data in

---

[26] Default rate is the percentage of loans originated that upon termination were in foreclosure or "REO" (real estate owned) status or were 90 days or more delinquent.

order to determine the impact of the amount of a down payment on loan performance relative to other loan features. [27] The regression analysis rank orders the relative impact of eight loan features on the probability that a loan will default. As shown in the table below, the loan terms with the greatest impact on performance are related to loan amortization (whether a loan is an interest only loan or a negative amortization loan). Interest only loans and negative amortization loans are 3.8 times and 3.7 times more likely to default, respectively, than fully amortizing loans. The amount of the down payment (evaluated in 1% increments) is only the sixth most significant variable. A 1% decrease in the amount of a down payment makes a loan only 1.04 times more likely to default. The regression analysis shows that weak underwriting criteria and risky loan terms – NOT down payment – are the primary features that drive loan defaults.

Loan Feature	Relative Probability Of Default	Relative Impact on Default
Interest Only	3.83	1
Negative Amortization	3.71	2
Low/No Documentation	1.44	3
Piggyback Second	1.32	4
5/1 and less ARMs	1.18	5
Down Payment*	1.04	6
FICO Score*	1.01	7
Loan Term*	1.01	7

* Down payment, FICO score and loan term are continuous variables that were measured in 1%, one point and one year increments, respectively.

QRM Market Reach. [28]

The Agency QRM and the Agency Alternative QRM will deny a significant portion of potential home buyers access to prudent and sustainable mortgages. The Genworth Proposed QRM will perform well *and* will significantly expand the availability of QRMs.[29]

- On average, only 17% of loans originated from 2001 – 2010 would have satisfied the Agency QRM definition and only 23% of those originations would have satisfied the Agency Alternative QRM definition.
- Looking only at 2009 and 2010, two years in which credit standards were the highest they have been in decades, the Agency QRM would have accounted for only 30% of originations.
- In contrast, 25% of 2001 – 2010 originations (43% looking at only 2009 and 2010) would have qualified as a Genworth Proposed QRM.

While the recent financial crisis demonstrated that overly lenient underwriting standards can result in some borrowers obtaining mortgages that are not sustainable, overly stringent standards are now being blamed for denying creditworthy borrowers access to mortgages and

---

[27] Logistic regression is a statistical methodology that is used to predict a probable outcome (in this instance, whether a loan will default) in light of a set of variables (interest only, negative amortization, low or no documentation, existence of a piggyback second, down payment amount, 5/1 and less ARM, FICO score and loan term).

[28] The discussion set forth in this section responds to Questions 106, 108 and 110 of the Agencies' Proposal.

[29] Market shares calculated based on data for approximately 50 million loans originated from 2001 – 2010 included in the CoreLogic Servicing Database.

impeding the resolution of the housing crisis. The Agency QRM and the Agency Alternative QRM will institutionalize these overly restrictive standards, excluding the bulk of first time home buyers and all but the comparatively very wealthy and cash rich from the housing market. This is inconsistent with the policy legislated by Congress under the Act. Congress recognized the need for flexibility in underwriting and explicitly recognized that risk cannot be avoided in its entirety, but must be identified, quantified, assumed and managed prudently.[30]

Obtaining a home remains the goal of many newly formed households and home ownership will remain an important component of individual wealth.[31] Housing will and must remain a substantial factor in the composition of the American economy. The collapse of the housing market bubble will not change that. It is critically important that the Agencies addressing the need of lenders to manage risk for higher risk loans made to marginal borrowers not over-react and structurally limit home ownership and with it the American economy.

To assess market reach of the various alternatives under consideration, Genworth calculated the percent of 2001 – 2010 conventional mortgage market originations (as reflected in the CoreLogic Servicing Database) that would have satisfied the Agency Alternative QRM definition and the Genworth Proposed QRM definition. As seen in the graph below, while the Agency Alternative QRM would reach a greater portion of the market (approximately 34% more) than the Agency QRM, the Genworth Proposal reaches an approximately 47% greater share of the market than even the Agency Alternative.

Increase in Market Reach of Agency Alternative QRMs and Genworth Proposal vs. Agency QRM

---
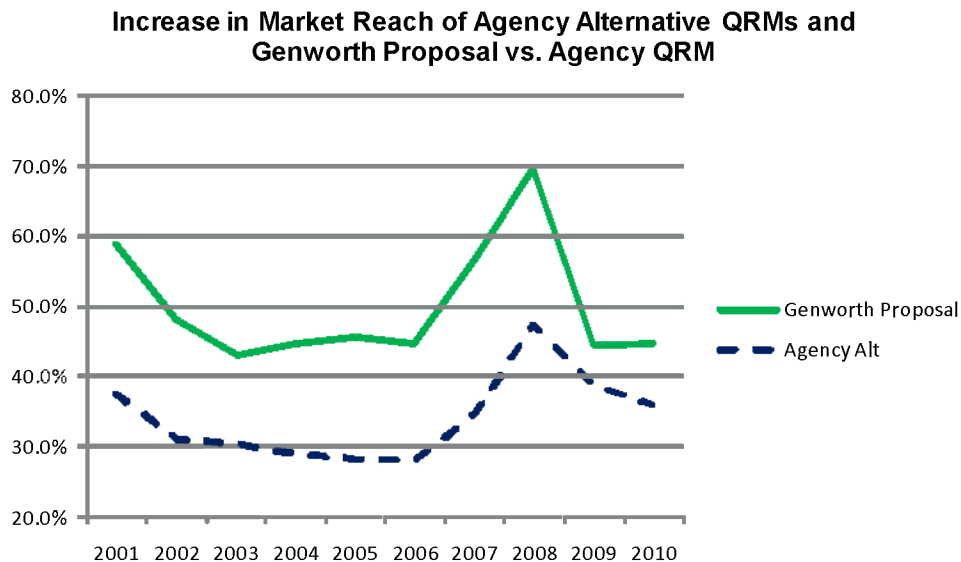
[30] The need for flexible underwriting standards and the importance of ensuring that underserved borrowers have access to prudent, affordable mortgages was highlighted during Senate debate on a proposed amendment to the Act that would have mandated a 5% down payment. Voicing his opposition to the proposal, Senate Banking Committee Chairman Chris Dodd stated "the [5% down payment requirement] puts in government-dictated, hard-wired underwriting standards that would have very serious consequences … for first-time home buyers, minority home buyers and others who are seeking to attain the American dream of home ownership … [I]t does this at a time … that the housing markets are just starting to recover, potentially putting that recovery at risk." 156 *Cong. Rec.* S3518 (May 11, 2010).

[31] See, e.g., David Streitfeld and Megan Thee-Brenan, *Despite Fears, Owning a Home Retains Its Allure, Poll Shows*, The New York Times, June 29, 2011. "Owning a house remains central to Americans' sense of well-being, even as many doubt their home is a god investment after a punishing recession. Nearly nine in 10 Americans say homeownership is an important part of the American dream, according to the latest New York Times/CBS News poll. And they are keen on making sure it stays that way, for themselves and everyone else."

The market impact of the Agency QRM and the Agency Alternative QRM is even more harmful when one looks specifically at *which* borrowers will be excluded from QRMs. The Agencies' QRM proposals will adversely impact traditionally underserved markets and first-time home buyers. In 2010, approximately 86% of first-time home buyers would have been excluded by the 20% down payment requirement, and approximately 70% would have been excluded even if the down payment requirement was reduced to 10%. Approximately 56% of first time home buyers purchased their homes with a down payment of 5% or less. Median down payments in 2010 were 8%, with first time home buyers averaging a 4% down payment.[32]

A Narrow QRM will Force All Low Down Payment Lending to the FHA.[33]

The narrow approach for QRM taken by the Agencies, together with the exemption from risk retention provided in the Act for the FHA and the recognition of the GSE guarantee as risk retention, will force virtually all low down payment lending to the FHA (or, for the foreseeable future, to the GSEs). Borrower costs will be increased and borrower choice will be limited, private capital will be driven out of housing, and the role of the government – and the ultimate financial risk to taxpayers – will be expanded.

Under the Agencies' Proposal, the only way for a low down payment borrower to secure a loan, regardless of that borrower's credit history or capacity to repay his or her loan, will be via FHA, the GSEs (but only for so long as their guarantee is a permissible form of risk retention), or through a higher cost non-QRM that is subject to risk retention.[34] That is a poor outcome for borrowers, for housing markets and for taxpayers.

In many cases today, the cost to a borrower of an FHA loan exceeds the cost of a loan with private mortgage insurance. For example, a borrower purchasing a $250,000 home with a 10% down payment would pay thousands of dollars more (over the typical life of a mortgage loan) for a loan with FHA insurance than for a comparable loan with private mortgage insurance.[35] But if low down payment loans are excluded from the definition of QRM, once the treatment of the GSE guarantee as risk retention expires, there will no longer be a lower cost private mortgage insurance option for that borrower because loans with private mortgage insurance will have to bear the cost of risk retention – even loans to high quality, low risk borrowers. Loans with private mortgage insurance will be saddled with unnecessary costs that could drive virtually all low down payment lending to the FHA. This paradigm runs the risk of driving private mortgage insurers (and the capital they invest in housing finance) from the market, leaving borrowers with less choice and higher costs, and burdening taxpayers with more housing market risk. This outcome would flout the Administration's stated goals of decreasing the role of the Government in housing finance and returning to a market that is primarily capitalized by private sector investment. In their joint paper on reforming U.S. housing finance released in February 2011, The Department of the Treasury and the U.S. Department of Housing and Urban Development laid out a plan under which private markets "will be the primary source of mortgage credit and

---

[32] National Association of Realtors, *Profile of Home Buyers and Sellers 2010*, p. 71.

[33] The discussion set forth in this section responds to Questions 79, 106, 120 and 162.

[34] Moody's Analytics estimates that the interest rate for non-QRM loans will rise by 75 – 100 basis points. See Mark Zandi and Cristian deRitis, *Reworking Risk Retention*, Moody's Analytics, June 20, 2011.

[35] Assumes property purchase price of $250,000, base note rate of 5% (5.375% if the loan is sold to a GSE and subject to their current loan-level pricing), and borrower FICO score of 680, resulting in monthly payment of $1947 for a loan with FHA insurance versus a monthly payment of $1897 for a loan with private mortgage insurance sold to a GSE. Also assumes borrower remains in the home for at least four years.

bear the burden for losses." [36] The approach taken by the Agencies will make this vision for reform impossible to achieve. Concerns about the impact of a narrow QRM coupled with the FHA exemption have been raised by many members of Congress following the release of the Agencies' Proposal.[37]

As we will discuss in greater detail in our response to Question 143, the Agency Alternative QRM gives rise to many of the same issues as the Agency QRM. Therefore, Genworth urges the Agencies to adopt the Genworth Proposed QRM.

The Methodology Employed by the Agencies to Evaluate Their Proposals is Flawed.[38]

The approach taken by the Agencies relies on an analysis of loan data that is flawed in two material respects. First, the analysis considers only loans purchased by the GSEs and thus excludes mortgage originations held in bank portfolios or securitized in non-GSE (private label) transactions. Second, it mistakenly presumes that comparing the performance of above 80% LTV loans to all loans with LTVs less than 80% is a meaningful analysis.

Although the Agencies' own analysis shows that broadening the definition of QRM to include loans with LTVs above 80% results in an ever-to-date serious delinquency rate of only 1.68%, the Agencies appear to have based their recommendation for a narrow QRM with a 20% down payment requirement on a separate analysis that compares the performance of above 80% LTV loans to all loans with LTVs from 0 – 80%. They also failed to control for other differences in loan characteristics (such as loan purpose or whether a loan was fully documented). It is not surprising that loans with larger down payments perform better than loans with smaller down payments. But QRMs are not intended to be riskless loans. The question that must be asked and answered to properly craft a definition of QRM (in combination with the other elements of a QRM), is what, if any, LTV cap is required to ensure satisfactory QRM performance. Genworth respectfully suggests that the Genworth Proposed QRMs answers that question.

An 80% LTV ratio is the traditional demarcation line between "low" and "high" LTV loans.[39] Therefore, to determine the level of down payment that should be included in the definition of QRM, the Agencies should compare loans with LTVs above 80% to loans with LTVs equal to 80%. Genworth undertook an analysis using loan level data in the CoreLogic Servicing Database to calculate the weighted average difference in default rates between 80% LTV loans and (a) >80 to 90% LTV loans and (b) >90 – 95% LTV loans. As seen in the table below, the relative performance of above 80% LTV loans, even for loans originated during the height of the housing bubble, is far better than the performance rates that result from the analysis undertaken by FHFA.

---

[36] See U.S. Dept. of the Treasury and U.S. Dept. of Housing and Urban Development, *Reforming America's Housing Finance Market: A Report to Congress*, February, 2011. Available at http://www.treasury.gov/initiatives/Documents/Reforming%20America's%20Housing%20Finance%20Market.pdf.
[37] Examples of letters to the Agencies from members of Congress raising concerns about the Agencies' Proposal are available at http://www.sec.gov/comments/s7-14-11/s71411.shtml.
[38] The discussion set forth in this section responds to Questions 110, 120, and 121 of the Agencies' Proposal.
[39] The statutory charters of the GSEs require them to obtain mortgage insurance (or other credit enhancement) on loans with LTVs above 80%.

Relative Default Rates – >80% LTV vs. 80% LTV		
Origination Years	LTVs	
	80.01–90%	90.01–95%
1999-2008	1.80	1.89
2004-2007 (housing bubble)	1.63	1.57

Evaluating Mortgage Insurance Under the QRM Standard.[40]

The Act directs the Agencies to consider loans with mortgage insurance as one of the terms and features of a QRM "to the extent such insurance … reduces the risk of default."[41] The Agencies excluded mortgage insurance from the QRM criteria on the basis that they lacked data that shows that loans with mortgage insurance are "less likely to default."[42] As further discussed below, that standard is insufficient because, while an evaluation of what makes a loan "less likely to default" is clearly relevant, by itself it is too narrow a test that fails to follow the statutory language of and the public policy behind the Investor Protection section (Title IX) of the Act. Moreover, independent statistical analyses of loan level data clearly demonstrate that loans with LTVs above 80% with mortgage insurance do experience lower default rates and higher cure rates than comparable uninsured loans. By definition, mortgage insurance reduces the severity of losses on loans that do go to default.

Mortgage Insurance Should be Included In QRM Because it Reduces Frequency of Default.
Third party data and independent analysis thereof by Promontory Financial Group, LLC ("Promontory") demonstrate empirically that loans with mortgage insurance are less likely to default than comparable uninsured loans.[43] Using the CoreLogic Servicing Database, Genworth analyzed 4.9 million low down payment loans originated from 2003 to 2007 (the "MI Impact Analysis") to compare default rates of loans with combined loan to value ratios ("CLTVs") above 80% that were done as single first lien loans with mortgage insurance ("Insured Loans") to above 80% CLTV loans that were structured as an uninsured first lien coupled with a piggyback second.[44] Any meaningful assessment of the performance of Insured Loans must be based on a comparison to uninsured loans with piggyback seconds, since piggybacks were (and still are) the most prevalent alternative to the use of mortgage insurance. Controlling for origination year, geography, level of documentation, loan purpose, FICO score and CLTV, Insured Loans became seriously delinquent 32% less often than loans with piggyback seconds. Of loans that did become seriously delinquent, Insured Loans returned to current status (cured) 54% more often than loans with piggyback seconds. As a result, borrowers with Insured Loans stayed in their homes 40% more often than those with piggyback seconds. The MI Impact Analysis demonstrates that not all low down payment loans are created equal. Mortgage insurance

---

[40] The discussion set forth in this section and the subsections that follow responds to Questions 111(a) – (c) of the Agencies' Proposal.
[41] Dodd-Frank Wall Street Reform and Consumer Protection Act. Pub. L. No. 111-203, 124 Stat. 1376, 1895 (2010).
[42] According to the Agencies, "the Agencies have not identified studies or historical loan performance data adequately demonstrating that mortgages with such credit enhancements are less likely to default than other mortgages after adequately controlling for loan underwriting or other factors know to influence credit performance, especially considering the important role of LTV ratios in predicting default. Therefore, the Agencies are not proposing to include any criteria regarding mortgage guarantee insurance or other types of insurance or credit enhancements at this time." *Credit Risk Retention*, 76 Fed. Reg. 24090, 24119 (Apr. 29, 2011).
[43] Mortgage insurance is written pursuant to a legally binding master policy issued by a mortgage insurer. Under the terms of the master policy, an originator is bound to adhere to mortgage insurance credit criteria in order for a loan to be eligible for mortgage insurance.
[44] The MI Impact Analysis is included as Exhibit B.

significantly mitigates the risk that a loan will become seriously delinquent and go into default. The data makes it clear: with proper underwriting and mortgage insurance, low down payment lending can be done without exposing the borrower, lender or investor to excessive risk.

As a follow up to the MI Impact Analysis, at Genworth's request, Promontory undertook a study assessing the performance of mortgage loans originated from 2003 to 2007 with piggyback seconds to the performance of Insured Loans. Promontory examined over 5.6 million mortgage loans included in the CoreLogic Servicing Database with CLTVs above 80%, studying both the presence and timing of delinquencies. Promontory assessed the relative performance of Insured Loans and loans with piggyback seconds over time, controlling for loan characteristics that are indicators of the risk of delinquency, including documentation level, loan purpose, owner-occupied status, CLTV and FICO score. They also included local unemployment rates, market interest rates and home price indices, factors Promontory believes significantly explain borrower propensity to default. After controlling for this extensive set of factors, Promontory found that *loans with mortgage insurance consistently experience lower severe delinquency rates (ever 90 days past due) than comparable uninsured loans with piggyback seconds*. (The complete Promontory study is included as Exhibit C.)

The statistical methodology Promontory employed (described below) enabled them to quantify the extent that mortgage insurance acts as a proxy for unobserved aspects of the mortgage underwriting process (effectively, the impact of mortgage insurance acting as an independent risk underwriter), which serves to lower default risk for observed characteristics (such as documentation levels and CLTVs).[45]

To conduct its study, Promontory first analyzed the loan level data to identify differences in severe delinquency rates between the two loan types based on loan attributes (origination year, FICO score, CLTV and loan purpose (purchase or refinance) (a "tabular analysis") and by studying vintage curves (which examine performance over time for loans originated in a given year). The tabular and vintage analyses were both "strongly suggestive" of differing performance between Insured Loans and loans with piggyback seconds. However, Promontory determined that it was important to control for other risk factors in order to draw any meaningful conclusions from the data. To do so, they applied a statistical method of survival modeling to control for risk factors that could impact loan performance and to account for the impact of time on such factors.[46] The survival analysis focuses on the risk of default.

The tabular analysis of loan level data shows that:
- For all loans in the data set, Insured Loans had 33% lower severe delinquency rates.
- Insured Loans outperformed uninsured loans with piggyback seconds by over 30% in all FICO score buckets – and by over 50% for loans with FICO scores above 700.
- Insured loans performed better in all CLTV buckets. Insured Loans with 90% CLTVs outperformed 90% CLTV uninsured loans with piggybacks by 42%.
- Insured Loans performed better regardless of loan purpose – purchase Insured Loans performed 25% better and refinance Insured Loans performed 50% better.

---

[45] In fact, the Promontory results may understate the positive impact of mortgage insurance, because it is impossible to account for the likelihood that lenders submit higher quality loans when those loans will require mortgage insurance in order to comply with mortgage insurance credit standards.
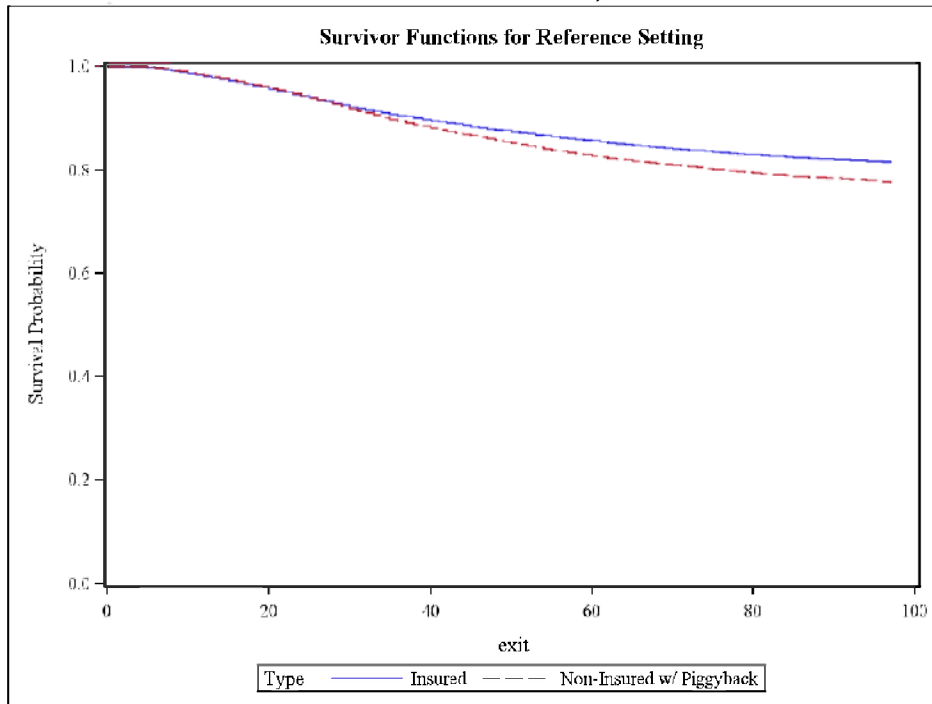
[46] The statistical methods of survival analysis (also called life-table analysis or failure-time analysis) have been developed to analyze the time-to-occurrence of an event as well as the fact of its occurrence. For example, survival analysis has been employed to study the time-to-failure of machine components, time-to-death of patients in a clinical trial, and the duration of unemployment spells of workers. As fully discussed in their study, Promontory used survival analysis to model the "lifetimes" of mortgages. Because there are two "events" that may end the lifetime of a mortgage (default or payoff), and because either of those events may impact the probability of observing the other, Promontory used a "competing risks" survival analysis.

Promontory's statistical survival analysis controlled for eleven loan attributes, including time-varying variables (items 8 – 11) that account for the impact of dynamic regional macroeconomic factors:

1. Documentation (full vs. low)
2. Loan purpose (purchase vs. refinance)
3. Occupancy status (owner occupied vs. other)
4. CLTV
5. FICO score at origination
6. Original interest rate[47]
7. Original payment
8. Interest rate differential (loan interest rate vs. market interest rate)
9. Change in payment
10. Change in value (reflected in Case-Shiller home price index)[48]
11. Unemployment rate

To illustrate the difference between Insured Loans and loans with piggyback seconds, Promontory prepared baseline survival curves. As seen below, the curves clearly illustrate the higher default risk associated with uninsured loans with piggyback seconds.
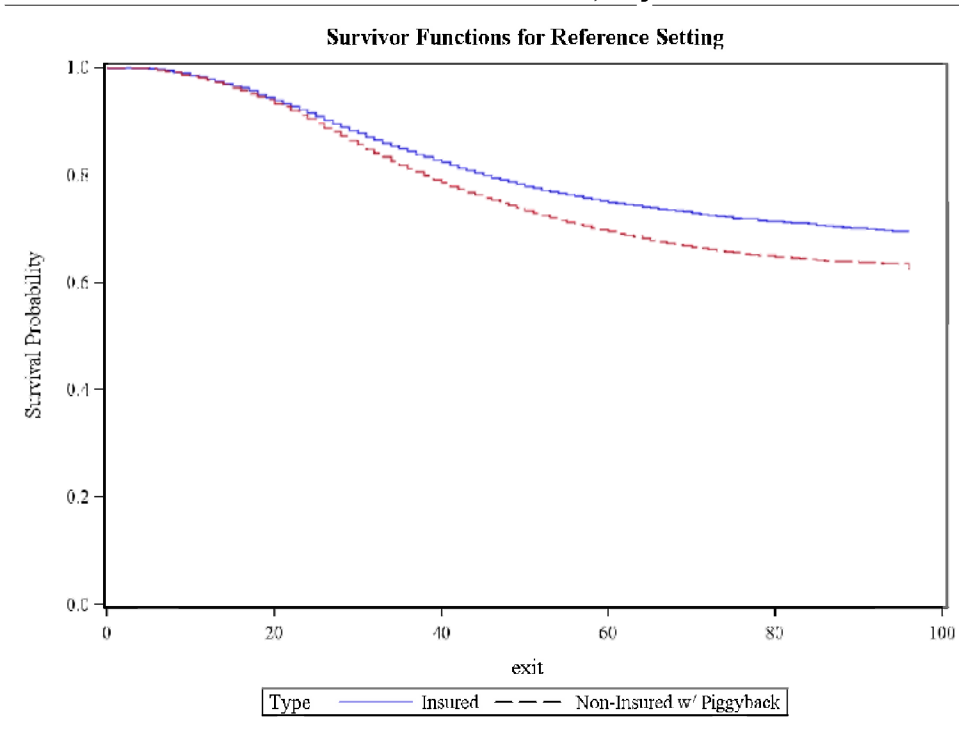
Parametric Baseline Survival Curve Estimates, Fixed Rate Loans

---

14

Parametric Baseline Survival Curve Estimates, Adjustable Rate Loans

Survivor Functions for Reference Setting

The table below shows default rates (i.e., default or serious delinquency) for a range of time periods since origination. The 72-month cumulative default rate for uninsured loans with piggyback seconds was approximately 21% greater than for comparable Insured Loans.

Estimated Baseline Cumulative Default Rates – Cumulative Proportion Defaulting by Selected Months

Type	Months					
	12	24	36	48	60	72
Insured	0.017	0.057	0.097	0.127	0.149	0.167
Non-Insured w/Piggyback	0.017	0.058	0.110	0.149	0.180	0.202
% Difference (Non-Insured Relative to Insured Loans)	*-2.15%*	*2.09%*	*13.47%*	*17.40%*	*20.79%*	*20.98%*

Promontory's analysis confirms that mortgage insurance reduces the frequency of default. Controlling for a range of factors, uninsured mortgage loans with piggyback seconds have historically experienced higher lifetime rates of severe delinquency than comparable Insured Loans. Although neither the language nor intent of the Act require mortgage insurance to demonstrably lower the frequency of defaults, given its history of doing so, together with its role in mitigating severity of loss and facilitating cures of troubled loans (discussed below), loans with mortgage insurance should be included within the definition of QRM.

Mortgage Insurance Should be Included in QRM Because it Reduces Severity of Losses. Most private mortgage insurance is structured to cover losses up to a stated percentage (25 – 30%)

15

of the outstanding loan amount (plus certain foreclosure-related expenses) of a defaulted loan.[49] By its nature, private mortgage insurance reduces the amount ("severity") of losses suffered by an investor when a mortgage default results in a loss, because the mortgage insurer assumes the "first-loss" position on the loan. (Since the housing crisis began in 2007, mortgage insurers have paid over $24 billion in claims to investors.) That is precisely why requiring mortgage insurance on low down payment loans, especially when the mortgage insurance decision is made at the time a loan is originated, absolutely satisfies the policy objective of having "skin in the game." Mortgage insurance is, in many respects, the functional equivalent of "horizontal" risk retention over the life of a loan. For a quantitative analysis of the extent to which mortgage insurance reduces loss severity, see "The Agencies Should Require Deep Mortgage Insurance Coverage, Obtained at the Time a Loan is Originated," below.

<u>Mortgage Insurance Should be Included in QRM Because it Improves Cure Rates.</u> When a loan goes to foreclosure, the private mortgage insurer is responsible for paying a claim. As a result, mortgage insurers have a clear financial incentive to work to keep borrowers in their homes. The impact of this incentive is seen in the data on mortgage insurance cure rates. The MI Impact Analysis shows that Insured Loans cure 54% more often than comparable loans with piggyback seconds.

This marked performance differential is not surprising. In the years leading up to the housing crisis, piggyback seconds were often used as a way to avoid the credit enhancement requirement contained in the statutory charters of Fannie Mae and Freddie Mac (the "GSEs"). A loan with a CLTV above 80% was originated as two separate loans: a first lien mortgage with an LTV no greater than 80% and a simultaneously originated second lien for an amount that typically brought the CLTV to 90% or greater. The first lien was generally sold to a GSE or other investor and characterized as an 80% LTV loan. The second lien was either sold in a 'private label' (non-GSE) securitization or held in portfolio. Because of the disconnect between the first lien and the second lien, piggyback seconds ignore the actual credit risk on a loan. The first lien is underwritten on the false premise that the LTV is only 80%, when in fact the total LTV is higher due to the simultaneous second. In contrast, loans with mortgage insurance are underwritten based on the actual, all-in LTV, which makes their credit evaluation far more realistic. A mortgage insurer's entire business model depends on accurately assessing the credit quality of a mortgage loan, because the insurer is putting its own capital at risk in a first-loss position.[50] The results are evidenced by the data.

In addition, one of the lessons learned from the housing crisis is that the conflict of interests between first and second lien holders exerts downward pressure on housing, especially in a weak housing market. There is broad recognition that second liens have been a major impediment to loan modifications and other loan workouts, largely because of conflicts of interest between servicers, investors and borrowers.[51] Including low down payment loans with

---

[49] Private mortgage insurance covers a material portion of – but not all – expected losses. As a result, investors receive significant default protection, but because they still are exposed to some level of losses, they are incented to ensure that loans are well underwritten and, once originated, well serviced. The following is a high level example of how private MI mitigates, but does not eliminate, investor losses. Assume a $200,000 home with a mortgage of $180,000 (a "90 LTV" loan) that goes into default, and a property value at the time of default of $120,000. The mortgage insurer would pay a claim of approximately $45,000 (25% coverage on the $180,000 loan). After receiving the claim payment, the investor would have a loss of $15,000.

[50] In the event that a borrower becomes delinquent, mortgage insurers have strong incentives to try to facilitate the modification of the loan and the restoration of the borrower to current status. When a loan defaults, mortgage insurers are required to pay a claim amount. Therefore, helping to keep a borrower out of foreclosure is always in a mortgage insurer's best economic interest. For a further discussion of mortgage insurers' loss mitigation activities, see response to Question 111.

[51] See *National Mortgaging Servicing Standards and Conflicts of Interest: Hearing before the Subcomm. on Housing, Transportation, and Community Development of the S. Comm. on Banking, Housing, and Urban Affairs*, 112th Cong., May 12, 2011 (Testimony of Laurie Goodman, Senior Managing Director, Amherst Securities Group). The first conflict cited by Goodman is the fact that "first lien servicers have significant ownership interests in 2nd liens and often have no ownership interest in the

private mortgage insurance in QRMs will create a firm regulatory framework that will ensure that any risk associated with lower down payments is accurately assessed and mitigated.

<u>"Risk of Default" Encompasses Both Frequency of Default and Severity of Loss.</u> Focusing on the frequency of default (as the Agencies have done by using a "less likely to default" test) as the sole basis of inclusion or exclusion from the criteria used to define QRM unjustifiably narrows the scope mandated under the Act and fails to recognize the other important quantitative and qualitative benefits of private mortgage insurance. Several aspects of the Act point to a clear intent that the QRM exemption operate to protect secondary market investors by promoting safe and sound lending practices.

From a statutory construction perspective, the risk retention and QRM provisions are contained in the "Investor Protection" section of the Act, which focuses on "credit risk."[52] The underlying public policy is promoting the viability and sustainability of reliable secondary markets for asset-backed securities.[53] The Agencies' focus on default frequency alone is inadequate to properly meet these legislative objectives. The impact on an individual borrower from a default is not this section of the Act's principal focus other than as a function of the broader impact defaulted loans have on capital markets.[54] Even so, as discussed above, loans with mortgage insurance are less likely to default than comparable uninsured loans and consequently better serve the interests of both borrowers and investors. Under Title IX, the real question posed to the Agencies by Congress (for risk retention and the QRM definition, each of which at its core is a legislative response to the credit risk borne by the capital markets) is how best to incent the origination of prudently underwritten, sustainable loans to creditworthy borrowers in order to better protect secondary market investors.

The statutory language enacted by Congress to guide the Agencies in defining QRM directs them to take into account whether data indicate if underwriting or product features "result in a lower **risk** of default" (emphasis added). Congress could have opted to use other language such as whether factors result in a lower "**frequency**" of default, but it did not. Further, Congress uses the language "reduces the **risk** of default" (emphasis added) in the sub-section that addresses the use of mortgage insurance as a feature of QRM. Congress did not enact the"**less likely**" to default test used in the Agencies' Proposal.[55] Under ordinary rules of statutory construction, the term "risk of default" used by Congress should be given a broader interpretation than the Agencies utilize. Looking to the plain meaning of the statutory language, Webster's defines "risk" as the "possibility of loss or injury." This definition focuses not on the mere incidence, rate or frequency of any kind of event, but rather on events that result in "loss or injury." Defaults can occur at a high rate or frequency with little or no loss or injury to the

---

corresponding first lien mortgage loans that are made to the same borrower and secured by the same property." Available at http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=484c5b2b-6924-459f-898e-3ae075feeb15. Rep. Brad Miller, D-NC has similarly acknowledged that "[t]here is a conflict of interest to servicing securitized first liens while holding the second." Alex Ulam, *Why Second-Lien Loans Remain A Worry*, American Banker, May 2, May 2011.
[52] "Credit risk is not only the probability of borrower delinquency and default, but also the likely recovery or loss caused by the delinquency or default." Lauren E. Willis, *Will the Mortgage Market Correct? How Households and Communities Would Fare if Risk Were Priced Well*, 41 Conn. L. Rev. 1177 (2009).
[53] By requiring that the securitizer retain a portion of the ***credit risk*** [emphasis added] of the assets being securitized, section 15G provides securitizers an incentive to monitor and ensure the quality of the assets underlying a securitization transaction, and thereby helps align the interests of the securitizer with the interests of investors.… The credit risk retention requirements of section 15G are an important part of the legislative and regulatory efforts to address weaknesses and failures in the securitization process and the securitization markets. Section 15G complements other parts of the Dodd-Frank Act intended to improve the securitization markets. *Credit Risk Retention*, 76 Fed. Reg. 24090, 24186 (Apr. 29, 2011).
[54] In recognition of the separate policies underpinning the QM and QRM, the Agencies discuss in the Agencies' Proposal the legislative limitation that the QRM can be "no broader than" the QM and expressly acknowledge "the different purposes and effects of the QRM and the QM standards." Ibid., 24117-24. A straightforward and natural reading of this cross-reference is that Congress sought to guard against defining QRM in such a way as to permit that which is prohibited by QM.
[55] Ibid.

secondary markets (for example, there may be no loss arising from a borrower default in an appreciating housing market save for the limited consequences of early repayment or reinvestment risk).[56] Under the Investor Protection section of the Act, it is not meaningful to evaluate how underwriting or product features affect "risk of default" without evaluating the associated "loss or injury" to the secondary market.

Proposed Forms of Risk Retention. The Agencies' Proposal, which sets out a narrowly defined definition of QRM and a permissive standard for satisfying risk retention, undermines the primary purpose of risk retention -- to drive the production of higher quality mortgages (i.e., QRMs) by forcing securitizers to retain credit exposure on riskier assets. To be effective, the retained risk must be significant: a securitizer must be exposed to meaningful losses over a meaningful period of time, and the QRM exemption must be designed to include a broad cohort of prudently underwritten, sustainable mortgages to creditworthy borrowers.[57] Otherwise, borrowers will be denied access to the best mortgages on the best terms; smaller banks and mortgage bankers will be at a competitive disadvantage, driving consolidation that will inevitably result in less consumer choice and higher borrower costs; and the incentive to originate high quality mortgages will be undermined.[58]

As we will discuss in our response to Question 143, the Agency Alternative QRM gives rise to many of the same issues as the Agency QRM.[59] Therefore, Genworth urges the Agencies to adopt the Genworth Proposed QRM.

Relationship between QRM and Title XIV's "Qualified Mortgage."

Section 941(e)(4)(C) of the Act provides that QRM can be "no broader than the definition of 'qualified mortgage' as the term is defined under section 129C(c)(2) of the Truth in Lending Act, as amended by the Consumer Financial Protection Act of 2010 [Title XIV of the Act (the "Mortgage Reform and Anti-Predatory Lending Act")]." Title XIV is a consumer protection law that creates new loan origination requirements and an "ability to repay" standard directed at protecting borrowers from unfair practices and unnecessary defaults, in part by including a detailed delineation of a Qualified Mortgage ("QM"). The primary focus of Title IX, on the other hand, is investor protection. Accordingly, the terms of a QRM, including mortgage insurance on above 80% LTV loans, are designed to lower the "risk of default," a standard that encompasses both the frequency and severity of default. A straightforward and natural reading of the requirement that QRM be "no broader than the definition of 'qualified mortgage'" is that Congress sought to guard against defining QRM to inadvertently permit that which is prohibited by QM. Beyond that, however, the Agencies expressly acknowledge "the different purposes and effects of the QRM and QM standards."[60]

Getting the Rule Right is Central to Housing Policy and to Housing Market Recovery.[61]

---

[56] Whether reinvestment risk creates actual injury will be a function of prevailing interest rates at the time of the early repayment. There are circumstances where there is no economic harm to investors upon a borrower default.

[57] "[T]he amount of risk retained should be material in order to create meaningful incentives for sound and sustainable securitization practices." U.S. Senate. Committee on Banking, Housing, and Urban Affairs, *The Restoring American Financial Stability Act of 2010*, 111 S. Rpt. 176, p. 131.

[58] "The approach taken by the regulatory authorities is to use a very narrow definition of QRM, expecting that most loans that are originated would require risk retention, and providing sponsors with considerable flexibility in how they meet the risk retention guidelines on non-QRM loans. We believe this approach is anti-competitive, and represents another benefit for the "too-big-to-fail" banks, who have both origination and securitization departments." Amherst Securities Group LP June 2, 2011 comment letter on the Agencies Proposal, available at http://www.sec.gov/comments/s7-14-11/s71411-38.pdf.

[59] The Agency Alternative QRM raises an additional issue because the Agencies are proposing to permit loans with piggyback seconds within the Alternative definition.

[60] See *Credit Risk Retention*, 76 Fed. Reg. 24090, 24118-19 (Apr. 29, 2011).

[61] The discussion set forth in this section responds to Question 110 of the Agencies' Proposal.

The Benefits of Home Ownership. Federal policy has traditionally supported homeownership, and for generations buying a home has been a cornerstone to achieving the American dream. When done right, homeownership allows families to achieve financial stability that enables them to be productive, engaged members of their communities. The most common reasons cited for purchasing a home are nonfinancial in nature: raising and educating children, securing a safe place to live and having control over one's environment.[62] For these social benefits to be achieved, borrowers must be 'home ready' and must have access to affordable, sustainable mortgages.

For communities and families to benefit, homeownership must be sustainable. Mere "access" is not enough.[63] However, being home ready does not require that a borrower wait to amass a 20% down payment. Approximately one-third of home purchases over the past decade have been enabled by down payments of less than 20%.[64] The Agencies' Proposal exacerbates the challenge of saving for any down payment by requiring borrowers to fund a 20% down payment, and also to pay all closing costs out of pocket and still have adequate reserves. According to an analysis done by Bankrate.com, closing costs for a $200,000 mortgage used to purchase a $250,000 home in 2010 ranged from $3,000 to $5,600.[65] Typical reserve requirements range from two to six months of mortgage payments, or roughly $3,000 to $9,000 on a 5% fixed-rate mortgage. In addition, many borrowers are subject to additional escrow requirements. All in, in the example provided, requiring a 20% down payment plus closing costs plus reserves and plus escrow could result in over $20,000 in additional cash costs (approximately 10% of the original loan amount), making homeownership unobtainable for many borrowers who have sufficient resources and a demonstrated capacity to satisfy the obligations of homeownership.[66] Prudent, sustainable, low down payment lending is critical to helping home ready borrowers become home buyers.

Macroeconomic Impact of Housing. Housing, and in particular, residential construction, generates jobs, spending and tax revenue. A 2009 report from the National Association of Home Builders found that construction of 100 single family homes resulted in the following benefits: 324 local jobs, $2.1 million in local income and $2.2 million in taxes and other revenue for local government.[67] In addition to construction, housing drives stable consumption of goods and services.[68] (The impact of housing on gross domestic product is illustrated in the table below.) The ongoing housing downturn continues to put downward pressure on economic recovery, and a narrow QRM that unnecessarily keeps potential creditworthy homebuyers out of the market will only prolong the downturn.[69]

---

[62] The Joint Center for Housing Studies of Harvard University, *State of the Nation's Housing: 2011*, p. 18.
[63] Kim Manturuk, et al., *Homeownership and Civic Engagement in Low Income Urban Neighborhoods: A Longitudinal Analysis*, Center for Community Capital, University of North Carolina at Chapel Hill, 2010. Available at http://www.ccc.unc.edu/documents/HO.CivicEngagement.LIHO.5.11.10.pdf
[64] Based on Genworth analysis of loan-level data contained in the CoreLogic Servicing Database.
[65] *State-by-State Closing Costs*, Bankrate.com, 2010. Available at http://www.bankrate.com/finance/mortgages/2010-closing-costs/state-ranking-chart.aspx.
[66] Over half of respondents polled in May 2011 by the National Foundation for Credit Counseling said they would never be able to save enough money for a down payment on a home. Only 12% of respondents said they would have no trouble coming up with a 20% down payment. National Foundation for Credit Counseling, *Poll Shows No Improvement in Consumers' Ability to Afford Mortgage Loan Down-Payment*, NFCC News Releases, June, 2011. Available at http://www.nfcc.org/NewsRoom/newsreleases/FLOI_MayResults.cfm.
[67] Housing Policy Department of the National Association of Home Builders, *The Local Impact of Home Building in a Typical Metro Area: Income, Jobs and Taxes Generated*, June 2009. Available at http://www.nahb.org/fileUpload_details.aspx?contentTypeID=3&contentID=35601&subContentID=219188
[68] See *State of the Nation's Housing: 2011*, pgs. 9 – 10.
[69] In a recent publication, credit rating provider DBRS concluded that very conservative mortgage underwriting standards (including high down payment requirements) will make it "likely that most of the U.S. population will not be able to qualify for a mortgage any

<u>Responses to Numbered Questions.</u>

Below are the questions to which Genworth is responding.

Section III. General Risk Retention Requirement

A. Minimum 5 percent risk retention required

12(a). Would the minimum five percent risk retention requirement, as proposed to be implemented, have a significant adverse effect on liquidity or pricing in the securitization markets for certain types of assets (such as, for example, prudently underwritten residential mortgage loans that do not satisfy all of the requirements to be a QRM)? 12(b). If so, what markets would be adversely affected and how? What adjustments to the proposed rules (e.g., the minimum risk retention amount, the manner in which credit exposure is measured for purposes of applying the risk retention requirement, or the form of risk retention) could be made to the proposed rules to address these concerns in a manner consistent with the purposes of section 15G? Please provide details and supporting data.

Genworth does not believe that risk retention, by itself, will adversely impact liquidity or pricing given the range of options that may be used to satisfy the requirement, and the relatively minimal economic cost of options such as the vertical slice and representative sample. (See response to Questions 13 and 14 for a discussion of the various forms of risk retention.) However, as further discussed below, risk retention together with a narrow QRM will restrict lender competition, increase pricing for high quality mortgage loans and limit access to home ownership for underserved borrowers.

A narrow QRM will shrink the size of the market for securitizations of QRM loans. Because investors demand a premium for purchasing less liquid securities, the smaller market will lead to increased costs of securitizing QRMs. Those costs ultimately will be borne by QRM borrowers. In addition, many borrowers who have good credit and who qualify for prudently underwritten, sustainable loans will end up with non-QRM loans that unnecessarily will be subject to the cost of risk retention.

A narrow QRM also distorts securitizer incentives in ways that could actually *encourage* the origination of riskier loans. The Agencies' Proposal limits the QRM exemption to loans that are virtually riskless, and imposes risk retention on the significant portion of the market that is comprised of prudently underwritten, sustainable loans with reasonable and predicable credit risk. As a practical matter, a "one size fits all" approach that broadly applies risk retention and fails to differentiate among loans with a wide range of risk characteristics could minimize the incentive to originate high quality mortgages.

B. Permissible Forms of Risk Retention

---

time soon." DBRS, *Prime Mortgage Requirements – Then Versus Now*, US Structured Finance Newsletter, 7, June 20, 2011. Available at www.dbrs.com.

13. Is the proposed menu of options approach to risk retention, which would allow a sponsor to choose the form of risk retention (subject to all applicable terms and conditions), appropriate?

14. Should the Agencies mandate that sponsors use a particular form of risk retention (e.g., a vertical slice or a horizontal slice) for all or specific types of asset classes or specific types of transactions? 14(b). If so, which forms should be required for which asset classes and why?

The impact of risk retention will vary depending on factors such as the nature of the sponsor (for example, banks will be subject to regulatory capital implications that will not apply to non-bank sponsors), and accounting rules (whether the securitization is required to be consolidated on a sponsor's balance sheet). Regardless, there is general agreement that the most meaningful form of risk retention for residential mortgage securitizations is the horizontal slice, and that other options, especially the vertical slice and representative sample, will be less costly and thus less impactful.[70] It is unclear how the objective of risk retention is served when sponsors are offered a range of options, several of which are materially less consequential than a 5% horizontal slice.

18. How effective would each of the proposed risk retention options be in creating incentives to monitor and control the quality of assets that are securitized and in aligning the interests among the parties in a securitization transaction?

As a matter of common sense, it is reasonable to assume that risk retention that exposes a sponsor to material, first-position loss from the assets serving as collateral will create the strongest incentive to monitor and control the quality of those assets. The 5% horizontal slice, held for the life of the security, is the most meaningful form of risk retention proposed by the Agencies. Any other options should be permitted only to the extent they are economically equivalent to a 5% horizontal slice to avoid undermining the impact of the risk retention rule.

19(a). Are there other forms of risk retention that the Agencies should permit? 19(b). If so, please provide a detailed description of the form(s), how such form(s) could be implemented, and whether such form(s) would be appropriate for all, or just certain, classes of assets.

Genworth recommends that the Agencies recognize private mortgage insurance as a permitted form of risk retention for non-QRM residential mortgage backed securities ("RMBS"). Just as private mortgage insurance will enable prudent and sustainable low down payment loans to be included in the definition of QRM, so could it serve as effective risk retention, providing meaningful skin in the game equivalent to, or greater than the forms or risk retention that currently are proposed. Because mortgage insurers are subject to extensive regulatory oversight, including risk based capital and reserve requirements, risk retention in the form of private mortgage insurance insurer would provide added protection to investors (compared to the forms of risk retention included in the Agencies' Proposal), because the mortgage insurer

---

[70] See, e.g., *The State of the Securitization Markets: Hearing before the Subcommittee on Securities, Insurance, and Investment of the S. Comm. on Banking, Housing, and Urban Affairs*, 112th Cong., May 18, 2011 (Testimony of Martin S. Hughes, President and Chief Executive Officer, Redwood Trust, Inc.). "[t]he most effective form of risk retention is the horizontal slice and ... other forms are much less effective. The horizontal slice requires the sponsor to retain all of the first-loss securities and places the sponsor's entire investment at risk. Only that approach will provide the required incentive for a sponsor to ensure that the senior securities are backed by safe and sound loans, which will benefit borrowers as well as investors." Available at http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=2a3a9983-0783-4fd7-b6a4-b27c3cc86c9a.

would have a contractual obligation backed by its capital and reserves. (For a detailed discussion of mortgage insurance regulation, see response to Question 111, especially "Private Mortgage Insurance Overview.")

Consistent with the Act,[71] the Agencies' Proposal permits a sponsor of a commercial mortgage backed security ("CMBS") to satisfy risk retention if a third party purchases an eligible horizontal residual interest in the issuing entity (a "B Piece"). Private mortgage insurance could be structured to serve as a comparable form of risk retention for non-QRM RMBS. Private mortgage insurance is issued by an independent, regulated third party that places its private capital in a first-loss position in the event a residential mortgage defaults. Mortgage insurers retain exposure to risk for the long term; typically, throughout the life of a loan.[72] Like a purchaser of a CMBS B-Piece, mortgage insurers can be involved in assessing the quality of the underlying assets early in the securitization process. Indeed, to satisfy risk retention, the mortgage insurance decision could be required to be made at the time a loan is originated, consistent with the statutory definition of QRM. The mortgage insurance underwrite, with its thorough evaluation of the underlying assets and rejection from the pool of any assets that do not comply with the underwriting requirements for the transaction, would serve the same purpose as the B-piece buyer's due diligence. (See Question 111 for a further discussion of how prudent underwriting by private mortgage insurers improves loan performance.)

There are a number of ways mortgage insurance could be structured to serve as a form of risk retention. One approach would be for a mortgage insurer to insure the risk of 100% of the first 5% of losses. That structure would provide the economic equivalent of a 5% horizontal slice. An alternative would be to require loan level mortgage insurance on each loan included in a non-QRM securitization. Of course, if the Agencies permit other, less material forms of risk retention, it is unlikely that any sponsor will chose any risk retention option – whether horizontal slice or private mortgage insurance – that has more meaningful economic consequences.

8. Treatment of government-sponsored enterprises

79. Is our proposal regarding the treatment of the Enterprises appropriate?

The proposed treatment of the Enterprises (GSEs) is appropriate, and is necessary in light of the proposed narrow definition of QRMs. Recognizing the GSE guarantee as qualifying risk retention will permit the current market for conventional, conforming mortgages to continue uninterrupted until such time as the framework is in place to allow for an orderly transition to successor entities as part of future housing finance reform. While some have argued that GSE loans are simply another form of government lending, there are significant distinctions between a GSE mortgage and an FHA mortgage; most notably, GSE loans with less than a 20% down payment generally have private mortgage insurance in a first-loss position. In contrast, FHA insurance covers (and taxpayers are exposed to) close to 100% of losses on every loan it insures. Said differently, low down payment GSE loans with mortgage insurance have material amounts of private capital serving as "skin in the game".

---

[71] Section 15G(c)(2)(E)(ii).

[72] Genworth expects some parties will advocate for risk retention to be required only for a limited period of time. Private mortgage insurance coverage, in contrast, could be structured to remain in place for the life of a securitization. Any such structure would have to comply with the Homeowners Protection Act of 1998 (12 US.C. 4902), which requires that borrower paid private mortgage insurance terminate when a loan amortizes to specified levels, provided the borrower has satisfied conditions regarding timely payment of the mortgage.

Because the FHA has a complete, permanent exemption from risk retention, without the proposed treatment of the GSEs, virtually all low down payment lending, regardless of the associated credit risk, would end up insured by the FHA or would be forced into a more expensive non-QRM execution. The approximately 13% of the mortgage market that traditionally has been served by private mortgage insurers will have no outlet other than FHA insurance.[73] This outcome is in direct conflict with Treasury and HUD's objective of bringing private capital back into the housing finance market, and is counter to the interests of lenders, borrowers and investors. See responses to Questions 106 and 162 for a further discussion of the nexus between risk retention, QRM and the FHA.

80. Would applying the hedging prohibition to all of the credit risk that the Enterprises are required to retain when using § ___.11 to satisfy the risk retention requirements be an unduly burdensome result for the Enterprises?

Applying the hedging prohibition to all of the credit risk that the Enterprises are required to retain would be unduly burdensome. Transaction level mortgage insurance has long served as effective third party credit loss mitigation. Prohibiting the GSEs from obtaining such insurance would limit their ability to manage and mitigate their risk of loss, which would be counter to their interests and, given that the GSEs are in conservatorship, to the interests of taxpayers.

IV. Qualified Residential Mortgages

A. Overall Approach to Defining Qualifying Residential Mortgages

106. Is the overall approach taken by the Agencies in defining a QRM appropriate?

The approach taken by the Agencies in defining QRM is not appropriate. As further discussed below, the proposed narrow approach will not incent – and may actually discourage -- the origination of prudent, sustainable mortgages to creditworthy borrowers. It will limit borrower choice and increase borrower pricing, and its consequences will be especially harmful for low to moderate income, minority and first-time home buyers. The Agencies' approach is based on a flawed analysis of loan level data that overstates the risk of a broader approach.

The Narrow Approach Taken by the Agencies is Inconsistent With the Objective of Incenting the Origination of Prudent, Sustainable Mortgages to Creditworthy Borrowers.

The Act calls for QRMs to be prudently underwritten, sustainable mortgages with underwriting and product features that "historical loan performance data indicate result in a lower risk of default".[74] In other words, QRMs are meant to be loans that are structured and underwritten to perform well in any economic cycle: loans that, when they predominate in the market, will facilitate a strong, stable housing market. The legislation specifically references the following underwriting terms and features for QRMs: (i) documentation and verification of the borrower's financial resources; (ii) standards with respect to the borrower's (a) residual income, (b) ratio of housing payments to monthly obligations and (c) ratio of total installment payments to income; (iii) mitigation of the potential for payment shock on adjustable rate mortgages; (iv) mortgage guarantee insurance or other types of insurance or credit enhancement obtained at the time of origination to the extent such insurance or other credit enhancement reduces the risk of default;

---

[73] *Mortgage Origination Indicators,* Inside Mortgage Finance, April 29, 2011, p.4.
[74] Dodd-Frank Wall Street Reform and Consumer Protection Act. Pub. L. No. 111-203, 124 Stat. 1376, 1894 (2010).

and (v) prohibiting or restricting the use of balloon payments, negative amortization, prepayment penalties, interest-only payments or other features that have been demonstrated to exhibit a higher risk of borrower default.

The Agency QRM is far narrower than mandated by the Act.[75] In particular:

- The proposal mandates a 20% down payment requirement that will preclude roughly 75% of eligible home buyers from the QRM market, even when those borrowers have strong, fully-documented, fully-verified credit; and[76]
- The proposal sets DTIs at levels that are unnecessarily punitive and that are far more restrictive than the traditional standards that have served the housing market well for many years preceding the housing bubble.

QRM Performance.

The narrow approach taken by the Agencies (including the Agency Alternative QRM further discussed in the response to Questions 143, 144 and 147) is not warranted based on loan performance. An analysis of approximately 44 million first lien residential mortgage loans originated from 2001 – 2008 contained in the CoreLogic Servicing Database demonstrates that loans with LTVs up to 95% and DTIs up to 45% perform well even under severe economic stress and should be included in the definition of QRM.[77] Genworth analyzed the performance of loans that would have satisfied the Agency QRM definition, the Agency Alternative QRM definition and the Genworth Proposed QRM definition.[78] The loan terms of each definition are set forth in the table below:

---

[75] The Agencies have acknowledged that they have defined QRM very narrowly. See, e.g., *Credit Risk Retention*, 76 Fed. Reg. 24090, 24096 (Apr. 29, 2011). "The Agencies recognize that many prudently underwritten residential and mortgage loans ... may not satisfy all the underwriting and other criteria in the proposed rules for qualified assets." See also, ibid. at 24129. "An alternative approach to implementing the exemption for QRMs within the context of section 15G would be to create *a broader definition of a QRM that includes a wider range of mortgages* ..." (emphasis added).

[76] According to the National Association of Realtors *Profile of Home Buyers and Sellers 2010*, 75% of all home buyers in 2010 made a down payment of 20% or less, and 56% made a down payment of 10% or less.

[77] The analysis assumes that any definition of QRM adopted by the Agencies will include only fully documented, fully amortizing loans and, in the case of loans with down payments of less than 20%, mortgage insurance.

[78] The CoreLogic Servicing Database does not include front-end DTIs, and so Genworth ran only back-end DTIs. The impact of a 3% cap on points and fees was estimated based on aggregate, state-by-state data provided by a national mortgage lender because the CoreLogic Servicing Database does not include detail on points and fees. The CoreLogic Servicing Database does not include credit history factors, so for analytical purposes, Genworth used a 690 FICO score used as a proxy for the proposed factors.

Terms and Features –
Agency QRM/Agency Alternative QRM/Genworth Proposed QRM

	Agency QRM	Agency Alternative QRM	Genworth Proposed QRM
Front DTI	28	28 Arm/33 Fixed	N/A
Back DTI	36	38 Arm/41 Fixed	45
Purchase CLTV/piggyback	80%/No	90%/Yes	95%/No
Refinance CLTV/piggyback	75%/Yes	90%/Yes	95%/No
Cash CLTV/piggyback	70%/Yes	75%/Yes	95%/No
Negative Amortization	No	No	No
Points and Fees	3% Cap	3% Cap	3% Cap
Interest Only	No	No	No
Balloons	No	No	No
Prepay Penalty	No	No	No
ARM Margins	2/2/6	2/2/6	2/2/6
ARM Product	All	All	All
Credit	690*	690*	690*
Max Term	30yr	30yr	30yr
Occupancy	Primary	Primary	Primary
Documentation	Full	Full	Full
MI Requirement >80 LTV	n/a	MI or Piggyback	Yes

*690 FICO score is used as a proxy for the credit history factors included in the Agencies' Proposal.

The graph below compares cumulative default rates for loans that would satisfy the definitions of Agency QRM, Agency Alternative QRM and the Genworth Proposed QRM to all conventional (non-government) loans, loans purchased by Fannie Mae and loans purchased by Freddie Mac.[79] The data clearly show that the definition of QRM can be broadened significantly while still performing within acceptable ranges. *The Genworth Proposed QRM, with its broader reach, still performs 54% better than GSE loans and 77% better than conventional loans.* The default rate for the Agency QRMs is .81%, for the Agency Alternative is 1.02%, and for the Genworth Proposal is 1.20%.[80] All three options perform materially better than conventional loans, loans purchased by Fannie Mae and loans purchased by Freddie Mac, which experienced average default rates of 5.13%, 2.83% and 2.23%, respectively.

---

[79] Source: for conventional loans, CoreLogic Servicing Database 2001 – 2008 originations; for Fannie Mae and Freddie Mac loans, first quarter 2011 earnings releases available at http://www.fanniemae.com/ir/pdf/sec/2011/q1credit_summary.pdf and http://www.freddiemac.com/investors/er/pdf/supplement_1q11.pdf, respectively. Conventional loans are all loans other than those insured or guaranteed by a Federal agency.
[80] Default rate is the percentage of loans originated that upon termination were in foreclosure or "REO" (real estate owned) status or were 90 days or more delinquent.

Loan Default Rates by Loan Type
2001-2008 Origination Years

Detailed data reflected in the graph are set forth in the table below:

Loan Default Rates by Loan Type
2001 – 2008 Origination Years

	Conventional (non-Govt)	Fannie Mae	Freddie Mac	Genworth Proposed QRM	Agency Alternative QRM	Agency QRM
2001	2.56%	1.20%	0.80%	0.81%	0.66%	0.48%
2002	1.98%	1.10%	0.70%	0.58%	0.48%	0.36%
2003	1.67%	1.15%	0.60%	0.58%	0.50%	0.39%
2004	3.05%	2.20%	1.47%	1.01%	0.88%	0.72%
2005	6.91%	4.11%	3.30%	1.97%	1.73%	1.49%
2006	11.86%	6.85%	5.50%	2.81%	2.47%	2.11%
2007	11.22%	6.85%	5.60%	3.08%	2.52%	1.94%
2008	3.62%	1.70%	1.50%	1.28%	1.00%	0.64%
2001-2008	5.13%	2.83%	2.23%	1.20%	1.02%	0.81%

In addition to comparing the performance of the Agencies' QRM proposals and the Genworth Proposal, Genworth also performed a logistical regression analysis of the CoreLogic data in order to determine the impact of the amount of a down payment on loan performance relative to other loan features. [81] The regression analysis rank orders the relative impact of eight loan features on the probability that a loan will default. As shown in the table below, the loan terms with the greatest impact on performance are related to loan amortization (whether a loan is an interest only loan or a negative amortization loan). Interest only loans and negative amortization

---

[81] Logistic regression is a statistical methodology that is used to predict a probable outcome (in this instance, whether a loan will default) in light of a set of variables (interest only, negative amortization, low or no documentation, existence of a piggyback second, down payment amount, 5/1 and less ARM, FICO score and loan term).

loans are 3.8 times and 3.7 times more likely to default, respectively, than fully amortizing loans. The amount of the down payment (evaluated in 1% increments) is only the sixth most significant variable. A 1% decrease in the amount of a down payment makes a loan only 1.04 times more likely to default. The regression analysis shows that weak underwriting criteria and risky loan terms – NOT down payment – are the primary features that drive loan defaults.

Loan Feature	Relative Probability Of Default	Relative Impact on Default
Interest Only	3.83	1
Negative Amortization	3.71	2
Low/No Documentation	1.44	3
Piggyback Second	1.32	4
5/1 and less ARMs	1.18	5
Down Payment*	1.04	6
FICO Score*	1.01	7
Loan Term*	1.01	7

* Down payment, FICO score and loan term are continuous variables that were measured in 1%, one point and one year increments, respectively.

QRM Market Reach.

The Agency QRM and the Agency Alternative QRM will deny a significant portion of potential home buyers access to prudent and sustainable mortgages. The Genworth Proposed QRM will perform well *and* will significantly expand the availability of QRMs.[82]

- On average, only 17% of loans originated from 2001 – 2010 would have satisfied the Agency QRM definition and only 23% of those originations would have satisfied the Agency Alternative QRM definition.
- Looking only at 2009 and 2010, two years in which credit standards were the highest they have been in decades, the Agency QRM would have accounted for only 30% of originations.
- In contrast, 25% of 2001 – 2010 originations (43% looking at only 2009 and 2010) would have qualified as a Genworth Proposed QRM.
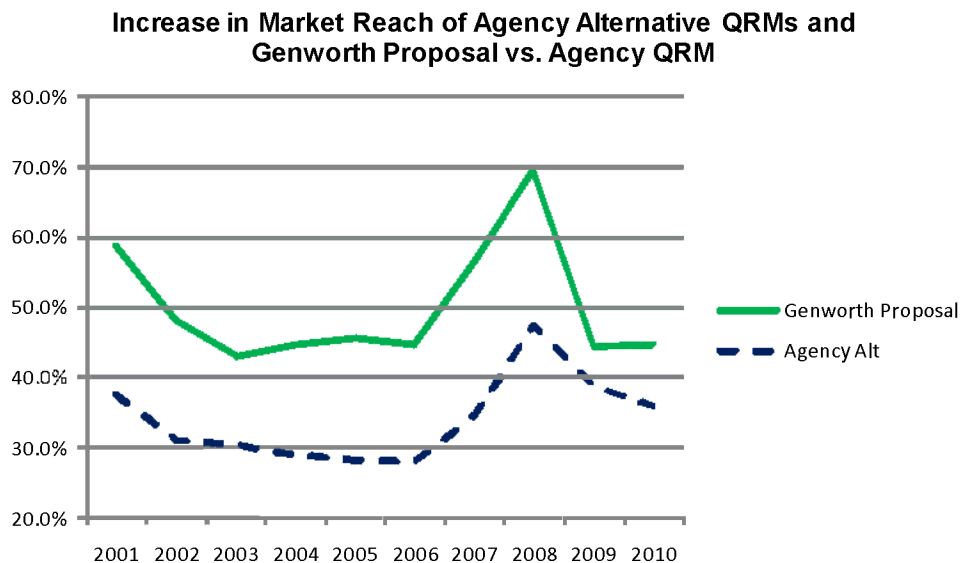

While the recent financial crisis demonstrated that overly lenient underwriting standards can result in some borrowers obtaining mortgages that are not sustainable, overly stringent standards are now being blamed for denying creditworthy borrowers access to mortgages and impeding the resolution of the housing crisis. The Agency QRM and the Agency Alternative QRM will institutionalize these overly restrictive standards, excluding the bulk of first time home buyers and all but the comparatively very wealthy and cash rich from the housing market. This is inconsistent with the policy legislated by Congress under the Act. Congress recognized the

---

[82] Market shares calculated based on information for approximately 50 million loans originated from 2001 - 2010 included in the CoreLogic Servicing Database.

need for flexibility in underwriting and explicitly recognized that risk cannot be avoided in its entirety, but must be identified, quantified, assumed and managed prudently.[83]

Obtaining a home remains the goal of many newly formed households and home ownership will remain an important component of individual wealth.[84] Housing will and must remain a substantial factor in the composition of the American economy. The collapse of the housing market bubble will not change that. It is critically important that the Agencies addressing the need of lenders to manage risk for higher risk loans made to marginal borrowers not over-react and structurally limit home ownership and with it the American economy.

To assess market reach of the various alternatives under consideration, Genworth calculated the percentage of 2001 – 2010 conventional mortgage market originations (as reflected in the CoreLogic Servicing Database) that would have satisfied the Agency Alternative QRM definition and the Genworth Proposed QRM definition. As seen in the graph below, while the Agency Alternative QRM would reach a greater portion of the market (approximately 34% more) than the Agency QRM, the Genworth Proposal reaches an approximately 47% greater share of the market than even the Agency Alternative.

Increase in Market Reach of Agency Alternative QRMs and Genworth Proposal vs. Agency QRM

The market impact of the Agency QRM and the Agency Alternative QRM is even more harmful when one looks specifically at *which* borrowers will be excluded from QRMs. The Agencies' QRM proposals will adversely impact traditionally underserved markets and first-time home

---

[83] The need for flexible underwriting standards and the importance of ensuring underserved borrowers have access to prudent, affordable mortgages was highlighted during Senate debate on a proposed amendment to the Act that would have mandated a 5% down payment. Voicing his opposition to the proposal, Senate Banking Committee Chairman Chris Dodd stated "the [5% down payment requirement] puts in government-dictated, hard-wired underwriting standards that would have very serious consequences … for first-time home buyers, minority home buyers and others who are seeking to attain the American dream of home ownership … [I]t does this at a time … that the housing markets are just starting to recover, potentially putting that recovery at risk." 156 *Cong. Rec.* S3518 and S 3520 (May 11, 2010).

[84] See, e.g., David Streitfeld and Megan Thee-Brenan, *Despite Fears, Owning a Home Retains Its Allure, Poll Shows*, The New York Times, June 29, 2011. "Owning a house remains central to Americans' sense of well-being, even as many doubt their home is a good investment after a punishing recession. Nearly nine in 10 Americans say homeownership is an important part of the American dream, according to the latest New York Times/CBS News poll. And they are keen on making sure it stays that way, for themselves and everyone else."

buyers. In 2010, approximately 86% of first-time home buyers would have been excluded by the 20% down payment requirement, and approximately 70% would have been excluded even if the down payment requirement was reduced to 10%. Approximately 56% of first time home buyers purchased their homes with a down payment of 5% or less. Median down payments in 2010 were 8%, with first time home buyers averaging a 4% down payment.[85]

<u>The Agencies' Proposal Could Discourage the Origination of Prudently Underwritten, Sustainable Mortgages.</u>

A narrow QRM distorts securitizer incentives in ways that may actually *encourage* the origination of riskier loans. The Agencies' Proposal limits the QRM exemption to loans that are virtually riskless, and imposes risk retention on the significant portion of the market that is comprised of prudently underwritten, sustainable loans with reasonable and predicable credit risk. As a practical matter, a "one size fits all" approach that broadly applies risk retention to low and high risk loans could minimize the incentive to originate high quality mortgages.

<u>A Narrow QRM will Force All Low Down Payment Lending to the FHA.</u>

The narrow approach for QRM taken by the Agencies, together with the exemption from risk retention provided in the Act for the FHA and the recognition of the GSE guarantee as risk retention, will force virtually all low down payment lending to the FHA (or, for the foreseeable future, to the GSEs). Borrower costs will be increased and borrower choice will be limited, private capital will be driven out of housing, and the role of the government – and the ultimate financial risk to taxpayers – will be expanded.

Under the Agencies' Proposal, the only way for a low down payment borrower to secure a loan, regardless of that borrower's credit history or capacity to repay his or her loan, will be via FHA, the GSEs (but only for so long as their guarantee is a permissible form of risk retention), or through a higher cost non-QRM that is subject to risk retention.[86] That is a poor outcome for borrowers, for housing markets and for taxpayers.

In many cases today, the cost to a borrower of an FHA loan exceeds the cost of a loan with private mortgage insurance. For example, a borrower purchasing a $250,000 home with a 10% down payment would pay thousands of dollars more (over the typical life of a mortgage loan) for a loan with FHA insurance than for a comparable loan with private mortgage insurance.[87] But if low down payment loans are excluded from the definition of QRM, once the treatment of the GSE guarantee as risk retention expires, there will no longer be a lower cost private mortgage insurance option for that borrower because loans with private mortgage insurance will have to bear the cost of risk retention – even loans to high quality, low risk borrowers. Loans with private mortgage insurance will be saddled with unnecessary costs that will drive virtually all low down payment lending to the FHA. Private mortgage insurers, and the capital they invest in housing finance, could be driven from the market, and taxpayers will be exposed to unprecedented amounts of housing market risk. In their joint paper on reforming U.S. housing finance released in February 2011, The Department of the Treasury and the U.S. Department of Housing and Urban Development laid out a plan under which private markets "will be the

---

[85] National Association of Realtors, *Profile of Home Buyers and Sellers 2010*, p. 71.
[86] Moody's Analytics estimates that the interest rate for non-QRM loans will rise by 75 – 100 basis points. See Mark Zandi and Cristian deRitis, *Reworking Risk Retention*, Moody's Analytics, June 20, 2011.
[87] Assumes property purchase price of $250,000, base note rate of 5% (5.375% if the loan is sold to a GSE and subject to their current loan-level pricing), and borrower FICO score of 680, resulting in monthly payment of $1947 for a loan with FHA insurance versus a monthly payment of $1897 for a loan with private mortgage insurance sold to a GSE. Also assumes borrower remains in the home for at least four years.

primary source of mortgage credit and bear the burden for losses."[88] The approach taken by the Agencies will make this vision for reform impossible to achieve. Concerns about the impact of a narrow QRM coupled with the FHA exemption have been raised by many members of Congress following the release of the Agencies' Proposal.[89]

As we will discuss in greater detail in our response to Question 143, the Agency Alternative QRM gives rise to many of the same issues as the Agency QRM. Therefore, Genworth urges the Agencies to adopt the Genworth Proposed QRM.

<u>The Methodology Employed by the Agencies to Evaluate Their Proposals is Flawed.</u>

The approach taken by the Agencies relies on an analysis of loan data that is flawed in two material respects. First, the analysis considers only loans purchased by the GSEs and thus excludes mortgage originations held in bank portfolios or securitized in non-GSE (private label) transactions. Second, it mistakenly presumes that comparing the performance of above 80% LTV loans to all loans with LTVs less than 80% is a meaningful analysis.

Although the Agencies' own analysis shows that broadening the definition of QRM to include loans with LTVs above 80% results in an ever-to-date serious delinquency rate of only 1.68%, the Agencies appear to have based their recommendation for a narrow QRM with a 20% down payment requirement on a separate analysis that compares the performance of above 80% LTV loans to all loans with LTVs from 0 – 80%. They also failed to control for other differences in loan characteristics (such as loan purpose or whether a loan is fully documented). It is not surprising that loans with larger down payments perform better than loans with smaller down payments. But QRMs are not intended to be riskless loans. The question that must be asked and answered to properly craft a definition of QRM (in combination with the other elements of a QRM), is what, if any, LTV cap is required to ensure satisfactory QRM performance. Genworth respectfully suggests that the Genworth Proposed QRMs answers that question.

An 80% LTV ratio is the traditional demarcation line between "low" and "high" LTV loans.[90] Therefore, to determine the level of down payment that should be included in the definition of QRM, the Agencies should compare loans with LTVs above 80% to loans with LTVs equal to 80%. Genworth undertook an analysis using loan level data in the CoreLogic Servicing Database to calculate the weighted average difference in default rates between 80% LTV loans and (a) >80 to 90% LTV loans and (b) >90 – 95% LTV loans. As seen in the table below, the relative performance of above 80% LTV loans, even for loans originated during the height of the housing bubble, is far better than the performance rates that result from the analysis undertaken by FHFA.

Relative Default Rates – > 80% LTV vs. 80% LTV		
Origination Years	LTVs	
	80.01–90%	90.01–95%
1999-2008	1.80	1.89
2004-2007 (housing bubble)	1.63	1.57

[88] See U.S. Dept. of the Treasury and U.S. Dept. of Housing and Urban Development, *Reforming America's Housing Finance Market: A Report to Congress*, February, 2011. Available at http://www.treasury.gov/initiatives/Documents/Reforming%20America's%20Housing%20Finance%20Market.pdf.
[89] A sample of letters to the Agencies from members of Congress raising concerns about the Agencies' Proposal is available at http://www.sec.gov/comments/s7-14-11/s71411.shtml.
[90] The statutory charters of the GSEs require them to obtain mortgage insurance (or other credit enhancement) on loans with LTVs above 80%.

108. What impact, if any, might the proposed QRM standards have on pricing, terms, and availability of non-QRM residential mortgages, including to low and moderate income borrowers?

The proposed QRM standards (for both the Agency QRM and the Agency Alternative QRM) will exclude a significant percentage of low to moderate income, minority and first-time home buyers from QRM loans, thereby forcing them to FHA insured loans, GSE loans (for so long as the GSE guarantee is deemed permissible risk retention) or to non-QRM loans that unnecessarily will be subject to the cost of risk retention. The result will be to impose additional costs on borrowers who can least afford them. (See response to Question 106 for a further discussion of the impact of a narrow QRM on underserved markets).

Approximately one third of home purchases over the past decade have been enabled by down payments of less than 20%.[91] The Agencies' Proposal exacerbates the significant challenge of saving for any down payment by requiring borrowers not only to fund a 20% down payment, but also to pay all closing costs out of pocket, and still to have adequate reserves. According to an analysis done by Bankrate.com, closing costs for a $200,000 mortgage used to purchase a $250,000 home in 2010 ranged from $3,000 to $5,600.[92] Typical reserve requirements range from two to six months of mortgage payments, or roughly $3,000 to $9,000 on a 5% fixed-rate mortgage, and many borrowers are subject to additional escrow requirements. All in, requiring borrowers to fund a 20% down payment plus closing costs plus reserves and plus escrow could result in over $20,000 in additional cash costs (approximately 10% of the original loan amount), making homeownership unattainable for many borrowers who have sufficient resources and a demonstrated capacity to satisfy the obligations of homeownership. Prudent, sustainable low down payment lending is critical to helping home ready borrowers become home buyers.[93]

The table below shows the amount of down payment that would be required, and the time it would take a typical family to save that down payment, for homes in a range of metropolitan statistical areas ("MSAs") that are illustrative of low, moderate and high cost markets. Depending on the market, it would take a family as long as 21 years to save for a home if a 20% down payment is required, versus five years for that same home if that family has access to a prudent, sustainable QRM with a 5% down payment requirement.

---

[91] Based on Genworth analysis of loan-level data contained in the CoreLogic Servicing Database.

[92] *State-by-State Closing Costs*, Bankrate.com, 2010. Available at http://www.bankrate.com/finance/mortgages/2010-closing-costs/state-ranking-chart.aspx.

[93] Over half of respondents polled in May 2011 by the National Foundation for Credit Counseling said they would never be able to save enough money for a down payment on a home. Only 12% of respondents said they would have no trouble coming up with a 20% down payment. National Foundation for Credit Counseling, *Poll Shows No Improvement in Consumers' Ability to Afford Mortgage Loan Down-Payment*, NFCC News Releases, June, 2011. Available at http://www.nfcc.org/NewsRoom/newsreleases/FLOI_MayResults.cfm

If Down Payment Required is: 20%

MSA	Median Sale Price, 2010 (a)	Down Payment	Area Median Income (b)	Down Payment as a % of AMI	Years to Save for Down Payment (c)
New Orleans	$223,000	$44,600	$36,258	123%	21
Los Angeles County	$560,000	$112,000	$60,879	184%	32
Las Vegas	$158,000	$31,600	$62,919	50%	9
Columbia, SC	$142,000	$28,400	$55,586	51%	9

If Down Payment Required is: 10%

MSA	Median Sale Price, 2010 (a)	Down Payment	Area Median Income (b)	Down Payment as a % of AMI	Years to Save for Down Payment (c)
New Orleans	$223,000	$22,300	$36,258	62%	11
Los Angeles County	$560,000	$56,000	$60,879	92%	16
Las Vegas	$158,000	$15,800	$62,919	25%	4
Columbia, SC	$142,000	$14,200	$55,586	26%	4

If Down Payment Required is: 5%

MSA	Median Sale Price, 2010 (a)	Down Payment	Area Median Income (b)	Down Payment as a % of AMI	Years to Save for Down Payment (c)
New Orleans	$223,000	$11,150	$36,258	31%	5
Los Angeles County	$560,000	$28,000	$60,879	46%	8
Las Vegas	$158,000	$7,900	$62,919	13%	2
Columbia, SC	$142,000	$7,100	$55,586	13%	2

(a) Source: HUD, as basis for 2011 FHA Loan Limits.
(b) Source: US Census, 2009 (most recent available).
(c) Assumes borrower income is equal to the Area Median Income and assumes a savings rate of 5.8% (the 2010 personal savings rate as set forth in the National Economics Accounts, Bureau of Economic Analysis, U.S. Department of Commerce. 25 March 2011).

In addition to the financial barriers discussed above, as a practical matter there likely will be a stigma attached to non-QRMs that will further limit access to mortgage financing. It has become common to talk about QRM as the "gold standard" for lending, so it will be hard to avoid the presumption that a non-QRM is a "bad" loan. Lenders will thus be reluctant to originate,

investors will be reluctant to purchase, and examiners and auditors will look with suspicion on, any non-QRM loans. The skepticism will attach to loans whether held in portfolio, sold as whole loans or securitized.

111(a). *The Agencies seek comment on whether mortgage guarantee insurance or other types of insurance or credit enhancements obtained at the time of origination would or would not reduce the risk of default of a residential mortgage that meets the proposed QRM criteria but for a higher adjusted LTV ratio. Commenters are requested to provide historical loan performance data or studies and other factual support for their views if possible, particularly if they control for loan underwriting or other factors known to influence credit performance. 111(b). If the information indicates that such products would reduce the risk of default, should the LTV ratio limits be increased to account for the insurance or credit enhancement? 111(c). If so, by how much?*

As further discussed below, data clearly demonstrate that mortgage insurance reduces the risk of default. Accordingly, the QRM exemption should include loans with LTVs of up to 95%, provided those loans have mortgage insurance (or comparable credit enhancement that similarly is proven to reduce the risk of default) that is obtained at the time of origination. In conjunction with the inclusion of such loans in the QRM exemption, Genworth recommends that the Agencies consider specifying the amount (depth) of mortgage insurance (or other credit enhancement) required, and mandating that a mortgage insurer perform a full prudential underwrite in order for an Insured Loan to satisfy the definition of a QRM.

Private Mortgage Insurance Overview.

Private mortgage insurers serve an important role in housing finance: they bring capital to the market and place that capital at risk in a first-loss position, impose risk discipline, enable sustainable homeownership without having to amass a 20% down payment and work to facilitate helping troubled borrowers to avoid foreclosure.[94]

Private mortgage insurance operates under a unique mandatory regulatory framework and has a business model design that promotes many key aspects of a sound mortgage finance system. Mortgage insurance's intrinsic value serves as a mitigant to the inherent risk of mortgage lending.

Unlike the FHA, private mortgage insurers do not insure against 100% of loss (typically, mortgage insurance provides first-loss coverage that covers approximately 25 - 30% of the unpaid loan balance (plus certain additional expenses) of a defaulted loan). By assuming a "first-loss" position, private mortgage insurance dramatically offsets losses arising from a borrower default. But by design, the product does not completely eliminate the risk of loss.[95] Private mortgage insurance is designed to be "skin in the game" that offers real economic benefit to lenders and investors while still incenting them to carefully underwrite mortgage loans and holding them accountable for fraud, misrepresentation and lack of compliance in the origination process.

---

[94] In November, 2010, Promontory published a comprehensive report on the historical and current role of private mortgage insurers entitled "The Role of Private Mortgage Insurance in the U.S. Housing Finance System." See Exhibit D for a copy of this report.
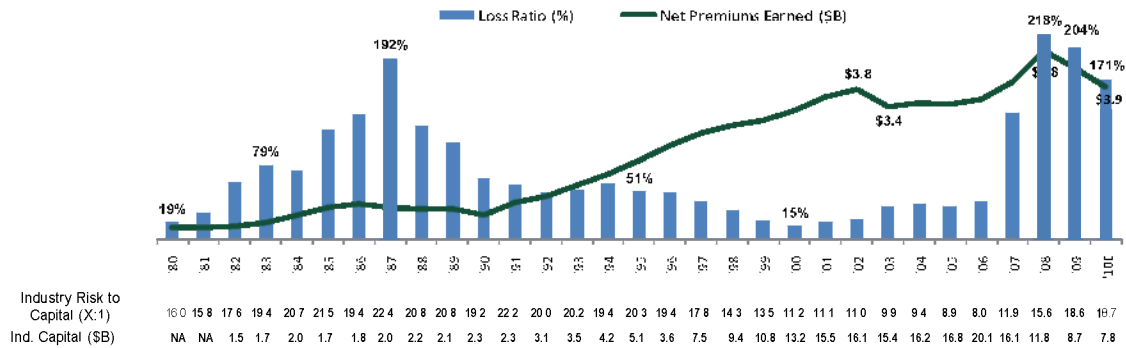[95] The following is a high level example of how private MI mitigates, but does not eliminate, investor losses. Assume a $200,000 home with a mortgage of $180,000 (a "90 LTV" loan) that goes into default, and a property value at the time of default of $120,000. The mortgage insurer would pay a claim of approximately $45,000 (25% coverage on the $180,000 loan). After receiving the claim payment, the investor would have a loss of $15,000.

There are two primary capital requirements for mortgage insurers. First, a mortgage insurer must maintain sufficient capital such that its ratio of risk-in-force to statutory capital (which consists of its policyholders' surplus and contingency reserve) cannot exceed 25:1 (absent the granting of a waiver by the applicable state insurance regulator) or it may not write any new business. Second, in addition to the normal provision for losses in the form of (i) case basis reserves for loans that are currently delinquent and reported as such by the lender or loan servicer and (ii) incurred but not reported loss reserves (for loans that are currently delinquent but not yet reported as such), mortgage insurers are required under insurance statutory accounting principles to post the contingency reserves alluded to earlier in this paragraph which are funded with 50% of net earned premiums over a period of ten years. The contingency reserve is an additional premium reserve established for the protection of policyholders against the effect of adverse economic cycles. These reserves have allowed mortgage insurers to meet all their obligations in connection with the extraordinary losses suffered by lenders during the current crisis.

These capital and reserve requirements mean that the industry holds significant capital against each loan insured throughout the time a loan is outstanding, and has the liquidity to pay claims. In this regard, private MI is significantly different from other types of investment and credit enhancement. One of the lessons learned from the housing crisis is that housing markets are not well served by structures that encourage short-term investment without adequate regulatory oversight and capital and reserve requirements. Mortgage insurance represents material amounts of capital and reserves in a first-loss position that are committed for the long term.

In addition, mortgage insurance premium income, capital and reserve requirements combine to provide countercyclical protections against housing downturns. As illustrated in the graph below, during times of market stress (for example, the "Oil Patch" in the mid 1980s), mortgage insurers experienced high levels of losses and their risk-to-capital ratios rose accordingly. As markets stabilized beginning later in that decade, higher earned premiums and lower claims paid enabled the industry to replenish its capital base. The countercyclical model was again tested over the past several years, and as expected, risk-to-capital ratios have risen in the face of unprecedented losses. But still, the model is working exactly as intended. As loan performance improves, tightened guidelines and pricing adjustments (together with recent external capital raises) will restore capital and support new business. It is important to note that the industry model relies on an ability to insure adequate amounts of new, high-quality business in stable housing markets. For the model to function, market share between the FHA and private mortgage insurers must be restored to traditional levels. Especially in light of the exemption from risk retention provided in the Act for FHA loans, a narrow QRM would severely undermine the ability of the model to function as designed. (For a further discussion of the impact of the FHA exemption from risk retention, see response to Question 162.)

Countercyclical Capital Model

| Loss Ratio (%) | Net Premiums Earned ($B) |

	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10
Industry Risk to Capital (X:1)	16.0	15.8	17.6	19.4	20.7	21.5	19.4	22.4	20.8	20.8	19.2	22.2	20.0	20.2	19.4	20.3	19.4	17.8	14.3	13.5	11.2	11.1	11.0	9.9	9.4	8.9	8.0	11.9	15.6	18.6	18.7
Ind. Capital ($B)	NA	NA	1.5	1.7	2.0	1.7	1.8	2.0	2.2	2.1	2.3	2.3	3.1	3.5	4.2	5.1	3.6	7.5	9.4	10.8	13.2	15.5	16.1	15.4	16.2	16.8	20.1	16.1	11.8	8.7	7.8

Source: MICA Reports & Statutory Filings
2009 and 2010 Includes new entrant capital (Essent Guaranty)

When a loan goes to foreclosure, the private mortgage insurer is responsible for paying a claim. As a result, mortgage insurers have a clear financial incentive to work to keep borrowers in their homes. This directly aligns the interest of the mortgage insurer with the best interest of the borrower, and the industry has developed expertise in loss mitigation that is evidenced by its decades-long track record of actively working to keep borrowers in their homes. From 2008 through the first quarter of 2011, the industry facilitated loan workouts with approximately 455,000 borrowers on mortgage loans with an aggregate principal balance of approximately $86 billion.[96]

Of course, the best way for a mortgage insurer to avoid paying a claim is to insure high quality, low risk loans that do not go to default. The industry has historical data and deep expertise in data analytics that it uses to understand and assess the likelihood of a future default based on loan characteristics, macroeconomic assumptions and a borrower's credit profile. As further discussed in "The Agencies Should Require that Mortgage Insurers Perform a Prudential Underwrite of Insured QRMs," below, Genworth recommends that the Agencies require that mortgage insurers perform a prudential underwrite in order for an Insured Loan to satisfy the definition of QRM.

Evaluating Mortgage Insurance Under the QRM Standard.

The Agencies excluded mortgage insurance from the QRM criteria on the basis that they lacked data that shows that loans with mortgage insurance are "less likely to default."[97] First, this standard is insufficient because, while an evaluation of what makes a loan "less likely to default"

---

[96] Based on MICA member company data. For an overview of Genworth's recent loss mitigation activity, see Exhibit E. Additional detail is available at www.Genworth.com/Scorecard.

[97] According to the Agencies, "the Agencies have not identified studies or historical loan performance data adequately demonstrating that mortgages with such credit enhancements are less likely to default than other mortgages after adequately controlling for loan underwriting or other factors know to influence credit performance, especially considering the important role of LTV ratios in predicting default. Therefore, the Agencies are not proposing to include any criteria regarding mortgage guarantee insurance or other types of insurance or credit enhancements at this time." *Credit Risk Retention*, 76 Fed. Reg. 24090, 24119 (Apr. 29, 2011).

is clearly relevant, by itself it is too narrow a test that fails to follow the statutory language of and the public policy behind the Investor Protection sections of the Act. The standard specified by the Act is whether a factor "reduces [or lowers] risk of default." Properly interpreted, evaluating "risk of default" requires an assessment of a factor's impact on secondary market investors. The Agencies expressly recognize that "[mortgage] insurance protects creditors from losses when borrowers default."[98] The Agencies should take into account the loss protection provided by mortgage insurance and on that basis include mortgage insurance in the QRM criteria. Second, even if one were to adopt the narrower "less likely to default" test used by the Agencies, this comment letter supplies the Agencies with more than adequate data demonstrating that mortgage insurance meets this standard and should be among the QRM criteria.

"Risk of Default" Encompasses Both Frequency of Default and Severity of Loss. Focusing on the frequency of default (as the Agencies have done by using a "less likely to default" test) as the sole basis of inclusion or exclusion from the criteria used to define QRM unjustifiably narrows the scope mandated under the Act and fails to recognize the other important quantitative and qualitative benefits of private mortgage insurance. Several aspects of the Act point to a clear intent that the QRM exemption operate to protect secondary market investors by promoting safe and sound lending practices.

From a statutory construction perspective, the risk retention and QRM provisions are contained in the "Investor Protection" section of the Act, which focuses on "credit risk."[99] The underlying public policy is promoting the viability and sustainability of reliable secondary markets for asset-backed securities.[100] The Agencies' focus on default frequency alone is inadequate to properly meet these legislative objectives. The impact on an individual borrower from a default is not this section of the Act's principal focus other than as a function of the broader impact defaulted loans have on capital markets.[101] Even so, loans with mortgage insurance are less likely to default than comparable uninsured loans and consequently better serve the interests of both borrowers and investors. Under Title IX, the real question posed to the Agencies by Congress for risk retention and the QRM definition, which at their core are a legislative response to the credit risk borne by the capital markets, is how best to incent the origination of prudently underwritten, sustainable loans to creditworthy borrowers to better protect secondary market investors.

The statutory language enacted by Congress to guide the Agencies in defining QRM directs them to take into account whether data indicate if underwriting or product features "result in a lower **risk** of default" (emphasis added). Congress could have opted to use other language such as whether factors result in a lower "**frequency**" of default, but it did not. Further, Congress uses the language "reduces the **risk** of default" (emphasis added) in the sub-section

---

[98] Ibid.

[99] "Credit risk is not only the probability of borrower delinquency and default, but also the likely recovery or loss caused by the delinquency or default." Lauren E. Willis, *Will the Mortgage Market Correct? How Households and Communities Would Fare if Risk Were Priced Well*, 41 Conn. L. Rev. 1177 (2009).

[100] "By requiring that the securitizer retain a portion of the **credit risk** [emphasis added] of the assets being securitized, section 15G provides securitizers an incentive to monitor and ensure the quality of the assets underlying a securitization transaction, and thereby helps align the interests of the securitizer with the interests of investors. ... The credit risk retention requirements of section 15G are an important part of the legislative and regulatory efforts to address weaknesses and failures in the securitization process and the securitization markets. Section 15G complements other parts of the Dodd-Frank Act intended to improve the securitization markets." *Credit Risk Retention*, 76 Fed. Reg. 24090, 24096 (Apr. 29, 2011).

[101] In recognition of the separate policies underpinning the QM and QRM, the Agencies discuss in the Agencies' Proposal the legislative limitation that the QRM can be "no broader than" the QM and expressly acknowledge "the different purposes and effects of the QRM and the QM standards." Ibid., 24117-24. A straightforward and natural reading of this cross-reference is that Congress sought to guard against defining QRM in such a way as to permit that which is prohibited by QM.

that addresses the use of mortgage insurance as a feature of QRM. Congress did not enact the **"less likely"** to default test used in the Agencies' Proposal.[102] Under ordinary rules of statutory construction, the term "risk of default" used by Congress should be given a broader interpretation than the Agencies utilize. Looking to the plain meaning of the statutory language, Webster's defines "risk" as the "possibility of loss or injury." This definition focuses not on the mere incidence, rate or frequency of any kind of event, but rather on events that result in "loss or injury." Defaults can occur at a high rate or frequency with little or no loss or injury to the secondary markets (for example, there may be no loss arising from a borrower default in an appreciating housing market save for the limited consequences of early repayment or reinvestment risk).[103] Under the Investor Protection section of the Act, it is not meaningful to evaluate how underwriting or product features affect "risk of default" without evaluating the associated "loss or injury" to the secondary market.

Fully addressing the public policy underlying Congress' enactment of the risk retention section requires an evaluation of the broader consequences of default to the capital markets. Going beyond consideration of only the incidence (or frequency) of default requires focus on the impact (or severity) of default. As detailed below, in the case of mortgage insurance, evaluating what "lowers [or reduces] the risk of default" under a wide lens capturing both the frequency of default and the severity of loss shows that mortgage insurance will squarely deal with credit risk as part of QRM in the way intended by Congress by (i) reducing the frequency of default in the first place and increasing the rate of cures (i.e., loans that are rehabilitated if a borrower falls behind on payments), and (ii) reducing severity through claims payments. Either prong is a sufficient basis for inclusion of mortgage insurance in QRM. Together, these attributes of mortgage insurance will benefit both QRM borrowers and investors.

Mortgage Insurance Should be Included In QRM Because it Reduces Frequency of Default. Third party data and independent analysis thereof demonstrate empirically that loans with mortgage insurance are less likely to default than comparable uninsured loans.[104] Using the CoreLogic Servicing Database, Genworth analyzed 4.9 million low down payment loans originated from 2003 to 2007 (the "MI Impact Analysis") to compare default rates of above 80% CLTV Insured Loans to above 80% CLTV loans that were structured as an uninsured first lien coupled with a piggyback second.[105] Controlling for origination year, geography, level of documentation, loan purpose, FICO score and CLTV, Insured Loans became seriously delinquent 32% less often than loans with piggyback seconds. Of loans that did become seriously delinquent, Insured Loans returned to current status (cured) 54% more often than loans with piggyback seconds. As a result, borrowers with Insured Loans stayed in their homes 40% more often than those with piggyback seconds. The MI Impact Analysis demonstrates that not all "low down payment loans" are created equal. Mortgage insurance significantly mitigates the risk that a loan will become delinquent and go into default. The data makes it clear: with proper underwriting and mortgage insurance, low down payment lending can be done without exposing the borrower, lender or investor to excessive risk.

As a follow up to the MI Impact Analysis, at Genworth's request, Promontory undertook a study assessing the performance of mortgage loans originated from 2003 to 2007 with piggyback seconds to the performance of Insured Loans. Promontory examined over 5.6 million mortgage

---

[102] See *Credit Risk Retention*, 76 Fed. Reg. 24090 (Apr. 29, 2011).

[103] Whether reinvestment risk creates actual injury will be a function of prevailing interest rates at the time of the early repayment. There are circumstances where there is no economic harm to investors upon a borrower default.

[104] Mortgage insurance is written pursuant to a legally binding master policy issued by a mortgage insurer. Under the terms of the master policy, an originator is bound to adhere to mortgage insurance credit criteria in order for a loan to be eligible for mortgage insurance.

[105] The MI Impact Analysis is included as Exhibit B.

loans included in the CoreLogic Servicing Database with CLTVs above 80%, studying both the presence and timing of delinquencies. Promontory assessed the relative performance of Insured Loans and loans with piggyback seconds over time, controlling for loan characteristics that are indicators of the risk of delinquency, including documentation level, loan purpose, owner-occupied status, CLTV and FICO score. They also included local unemployment rates, market interest rates and home price indices, factors Promontory believes significantly explain borrower propensity to default. After controlling for this extensive set of factors, Promontory found that *loans with mortgage insurance consistently experience lower severe delinquency rates (ever 90 days past due) than comparable uninsured loans with piggyback seconds.* (The complete Promontory study is included as Exhibit C)

The statistical methodology Promontory employed (described below) enabled them to quantify the extent that mortgage insurance acts as a proxy for unobserved aspects of the mortgage underwriting process (effectively, the impact of mortgage insurance acting as an independent risk underwriter), which serves to lower default risk for observed characteristics (such as documentation levels and CLTVs).[106]

To conduct its study, Promontory first analyzed the loan level data to identify differences in severe delinquency rates between the two loan types based on loan attributes (origination year, FICO score, CLTV and loan purpose (purchase or refinance) (a "tabular analysis") and by studying vintage curves (which examine performance over time for loans originated in a given year). The tabular and vintage analyses were both "strongly suggestive" of differing performance between Insured Loans and loans with piggyback seconds. However, Promontory determined that it was important to control for other risk factors in order to draw any meaningful conclusions from the data. To do so, they applied a statistical method of survival modeling to control for risk factors that could impact loan performance and to account for the impact of time on such factors.[107] The survival analysis focuses on the risk of default.

The tabular analysis of loan level data shows that:
- For all loans in the data set, Insured Loans had 33% lower severe delinquency rates.
- Insured Loans outperformed uninsured loans with piggyback seconds by over 30% in all FICO score buckets – and by over 50% for loans with FICO scores above 700.
- Insured loans performed better in all CLTV buckets. Insured Loans with 90% CLTVs outperformed 90% CLTV uninsured loans with piggybacks by 42%.
- Insured Loans performed better regardless of loan purpose – purchase Insured Loans performed 25% better and refinance Insured Loans performed 50% better.

Promontory's statistical survival analysis controlled for eleven loan attributes, including time-varying variables (items 8 – 11) that account for the impact of dynamic regional macroeconomic factors:

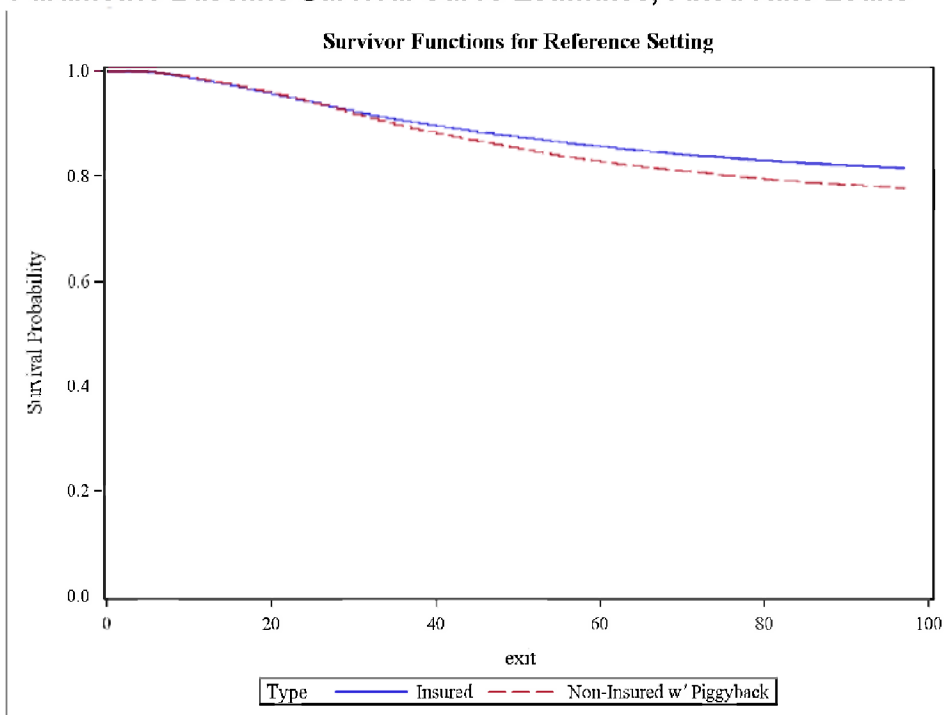1. Documentation (full vs. low)
2. Loan purpose (purchase vs. refinance)

---

[106] In fact, the Promontory results may understate the positive impact of mortgage insurance, because it is impossible to account for the likelihood that lenders submit higher quality loans when those loans will require mortgage insurance in order to comply with mortgage insurance credit standards.

[107] The statistical methods of survival analysis (also called life-table analysis or failure-time analysis) have been developed to analyze the time-to-occurrence of an event as well as the fact of its occurrence. For example, survival analysis has been employed to study the time-to-failure of machine components, time-to-death of patients in a clinical trial, and the duration of unemployment spells of workers. As fully discussed in their study, Promontory used survival analysis to model the "lifetimes" of mortgages. Because there are two "events" that may end the lifetime of a mortgage (default or payoff), and because either of those events may impact the probability of observing the other, Promontory used a "competing risks" survival analysis.

3. Occupancy status (owner occupied vs. other)
4. CLTV
5. FICO score at origination
6. Original interest rate[108]
7. Original payment
8. Interest rate differential (loan interest rate vs. market interest rate)
9. Change in payment
10. Change in value (reflected in Case-Shiller home price index)[109]
11. Unemployment rate

To illustrate the difference between Insured Loans and loans with piggyback seconds, Promontory prepared baseline survival curves. As seen below, the curves clearly illustrate the higher default risk associated with uninsured loans with piggyback seconds.

Parametric Baseline Survival Curve Estimates, Fixed Rate Loans

Survivor Functions for Reference Setting

Parametric Baseline Survival Curve Estimates, Adjustable Rate Loans

Survivor Functions for Reference Setting

The table below shows default rates (i.e., default or serious delinquency) for a range of time periods since origination. The 72-month cumulative default rate for uninsured loans with piggyback seconds was approximately 21% greater than for comparable Insured Loans.

Estimated Baseline Cumulative Default Rates – Cumulative Proportion Defaulting by Selected Months

Type	Months					
	12	24	36	48	60	72
Insured	0.017	0.057	0.097	0.127	0.149	0.167
Non-Insured w/Piggyback	0.017	0.058	0.110	0.149	0.180	0.202
% Difference (Non-Insured Relative to Insured Loans)	*-2.15%*	*2.09%*	*13.47%*	*17.40%*	*20.79%*	*20.98%*

Promontory's analysis confirms that mortgage insurance reduces the frequency of default. Controlling for a range of factors, uninsured mortgage loans with piggyback seconds have historically experienced higher lifetime rates of severe delinquency than comparable Insured Loans. Although neither the language nor intent of the Act require mortgage insurance to demonstrably lower the frequency of defaults, given its history of doing so, together with its role in mitigating severity of loss and facilitating cures of troubled loans (discussed below), loans with mortgage insurance clearly should be included within the definition of QRM.

Mortgage Insurance Should be Included in QRM Because it Reduces Severity of Losses. By its nature, private mortgage insurance reduces the amount ("severity") of losses suffered by an investor when a mortgage default results in a loss. Most private mortgage insurance is structured to cover losses up to a stated percentage (25 – 30%) of the outstanding loan amount

(plus certain foreclosure-related expenses) of a defaulted loan.[110] The extent to which mortgage insurance reduces loss severity is further discussed in "The Agencies Should Require Deep Mortgage Insurance Coverage, Obtained at the Time a Loan is Originated," below.

Mortgage Insurance Should be Included in QRM Because it Improves Cure Rates. When a loan goes to foreclosure, the private mortgage insurer is responsible for paying a claim. As a result, mortgage insurers have a clear financial incentive to work to facilitate efforts to keep borrowers in their homes. The impact of this incentive is seen in the data on mortgage insurance cure rates. The MI Impact Analysis shows that Insured Loans cure 54% more often than comparable loans with piggyback seconds.

The industry has developed its own expertise in loss mitigation. From 2008 through the first quarter of 2011, mortgage insurers facilitated loan workouts with approximately 455,000 borrowers on mortgage loans with an aggregate principal balance of approximately $86 billion.[111] In 2010 alone, nearly 34,000 borrowers with Genworth mortgage insurance received loan modifications that enabled them to stay in their homes. Genworth has invested significantly in resources, tools and technology focused on keeping borrowers in their homes, and currently has a team of advisors dedicated to reaching out directly to troubled borrowers to help arrange loan modifications or other alternatives to foreclosure.[112]

<u>The Agencies Should Require Deep Mortgage Insurance Coverage, Obtained at the Time a Loan is Originated.</u>

As described below, analysis shows that, while standard mortgage insurance coverage (e.g., 30% coverage on loans with a 95% LTV) provides an insured party with loss protection equivalent to a 20% borrower down payment under most economic scenarios, "deep" mortgage insurance coverage (37% coverage for loans with a 95% LTV) actually results in *greater loss protection than a 20% borrower down payment*. Accordingly, Genworth recommends that the Agencies require deep mortgage insurance coverage (or comparable coverage from comparable insurance or other credit enhancements), obtained at the time a loan is originated, on QRMs.

MICA member companies analyzed over 30 years of historical industry data to determine the amount of mortgage insurance coverage necessary to produce net losses on 95% LTV Insured Loans equivalent to losses on uninsured loans with a 20% down payment (80% LTV loans).[113] The results are reflected in the graph below, which shows average loss rates (up to the 99th percentile) for uninsured loans with an original LTV of 80% and for insured loans with an original LTV of 95%, after giving effect to standard and deep mortgage insurance coverage. The analysis demonstrates that loans with deep coverage provide an insured party with greater loss protection than a 20% down payment. Average net losses on 95% LTV loans with standard coverage are less than average losses on 80% LTV loans up to the 75th percentile. Average net

---

[110] Private mortgage insurance covers a material portion of – but not all – expected losses. As a result, investors receive significant default protection, but because they still are exposed to some level of losses, they are incented to ensure that loans are well underwritten and, once originated, well serviced. The following is a high level example of how private MI mitigates, but does not eliminate, investor losses. Assume a $200,000 home with a mortgage of $180,000 (a "90 LTV" loan) that goes into default, and a property value at the time of default of $120,000. The mortgage insurer would pay a claim of approximately $45,000 (25% coverage on the $180,000 loan). After receiving the claim payment, the investor would have a loss of $15,000.
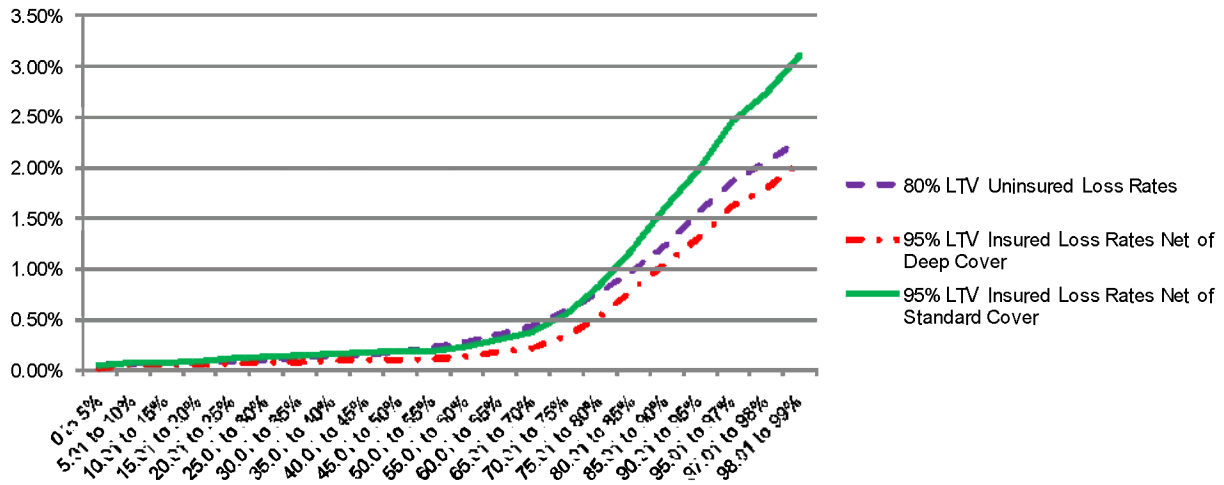[111] Based on MICA member company data.
[112] For an overview of Genworth's recent loss mitigation activity, see Exhibit E.   Additional detail is available at www.Genworth.com/Scorecard.
[113] MICA member companies initially undertook the analysis in connection with the effort by U.S. bank regulators to update bank regulatory capital requirements. The companies estimated distributions of all possible outcomes of frequency of default and recovery values of foreclosed properties. The analysis looked at "standard" coverage of 30% and "deep" coverage of 37%.

losses for 95% LTV loans with deep coverage are less than the average losses on 80% LTV loans in all percentile ranges.[114]

95% LTV Insured Loan Loss Rates Net of Standard or Deep Coverage vs. 80% LTV Uninsured Loan Loss Rates by Scenario Ranges of Possible Economic Conditions

Legend:
- 80% LTV Uninsured Loss Rates
- 95% LTV Insured Loss Rates Net of Deep Cover
- 95% LTV Insured Loss Rates Net of Standard Cover

The Agencies Should Require that Mortgage Insurers Perform a Prudential Underwrite of Insured QRMs.

For Genworth, one of the lessons learned from the housing crisis is that, to fulfill our role of imposing and maintaining market discipline for low down payment lending, we must set and enforce independent underwriting standards. Beginning in early 2008, Genworth limited delegated underwriting programs, eliminated all programs that permitted reliance on third-party automated underwriting systems in lieu of our own independent risk criteria, and revised our guidelines.[115] *An analysis of approximately 200,000 loans in our portfolio originated between 2004 – 2009 shows that loans underwritten by Genworth defaulted 20% less often than loans underwritten under a delegated program.[116]* Accordingly, Genworth recommends that the Agencies require that mortgage insurers underwrite all insured QRMs in order to satisfy the definition of QRM.

The superior performance of loans Genworth underwrote evidences the value of a requiring a loan be underwritten by a mortgage insurer who assumes first-loss exposure and holds

---

[114] 95% LTV frequency of foreclosure and distributions of possible outcomes are based on MICA member company default rates on loans originated from 1971 – 2007. Actual default rates were used through year end 2010, and subsequent default rates were estimated, based on historical performance distribution patterns, in order to produce 15-year cumulative default rates for each book year. Distributions were ranked from low to high. Frequency of foreclosure and distributions of possible outcomes for 80% LTV loans were calculated based on foreclosure frequency data by LTV, FICO score and RMBS rating category set forth in "Fitch IBCA Residential Mortgage-Backed Securities Criteria," December 1998. MICA recovery value ratios for loans originated from 1971 - 2007 were used to estimate loss severity by LTV.

[115] Delegated programs were intended to speed up the underwriting process and create cost efficiencies for lenders and mortgage insurers. Mortgage insurers generally audited lenders to ensure compliance with the requirements for delegation, but as housing markets declined and loans became delinquent, it became apparent that many lenders had failed to properly underwrite the loans in compliance with program standards.

[116] Loans were fully documented and fully amortizing, with LTVs up to 97% and FICO scores above 680.

regulatory capital to support that exposure. Mortgage insurers have unique, strong incentives to conduct a detailed and qualitative underwrite that assesses the "three Cs" of mortgage underwriting: credit, capacity and collateral. The underwriting process goes far beyond merely confirming that all required documentation is in the file, and includes: verifying employment history and income history (including recalculating all sources of income and assessing the stability and continuity thereof), validating savings patterns and validating sources of assets, assessing breadth and depth of assets, ensuring history of prudent credit management and validating the borrower's ongoing ability to repay his or her obligations. The mortgage insurance underwrite also includes a thorough review of the appraisal to establish the legitimacy and value of the collateral being financed. The mortgage insurer is independent from the originator and has no motivation to approve loans that do not fall within specified credit risk parameters.

Since traditional underwriting does directly translate into improved loan performance, requiring mortgage insurers to perform a full prudential underwrite (as described above) of each insured QRM will improve the performance of QRM loans. Requiring a prudential mortgage insurance underwrite would also benefit investors, since, if the insurer performs the underwrite, it largely would be precluded from denying a claim based on lender fraud, misrepresentation or failure to comply with mortgage insurance guidelines. Requiring the prudential mortgage insurance underwrite will create an unprecedented level of certainty regarding claims payments, and limiting a mortgage insurer's right to "rescind" a claim creates even greater incentive for the insurer to thoroughly and accurately underwrite each loan it insures.

<u>Piggyback Seconds Are Not an Adequate Substitute for Private Mortgage Insurance.</u>

In the years leading up to the housing crisis, simultaneous second lien mortgages (piggyback seconds) were often used as a way to avoid the credit enhancement requirement contained in Fannie Mae and Freddie Mac's statutory charters. A loan with a CLTV above 80% was originated as two separate loans: a first lien mortgage with an LTV no greater than 80% and a simultaneously originated second lien for an amount that typically brought the CLTV to 90% or greater. The first lien generally was sold to a GSE or other investor and characterized as an 80% LTV loan. The second lien was either sold in a "private label" (non-GSE) securitization or held in portfolio. Because of the disconnect between the first lien and second lien, piggyback seconds ignore the actual credit risk on the loan. The first lien is underwritten on the false premise that the LTV is only 80%, when in fact the actual LTV is far higher due to the amount of simultaneous second. In contrast, mortgage insurers underwrite the loan based on the actual, all-in LTV, which makes their credit evaluation far more realistic. And mortgage insurers must pay careful attention to how a loan is underwritten and the credit risk thereon, because the insurer is putting its own capital at risk in a first-loss position. A mortgage insurer's entire business model depends on accurately assessing the credit quality of a mortgage loan. The results are evident in the data discussed above.

Because mortgage insurers are obligated to pay claims upon foreclosure, it is in their interest to facilitate a loan modification or other workout. The interests of mortgage insurers are thus directly aligned with those of borrowers and investors, all of whom benefit when foreclosure is avoided. This makes Insured Loans very different than loans with piggyback seconds. If a second lien is under water and the lien holder is still carrying it at full value, a workout of the first lien could compel the write down of the second lien. In that case, the second lien holder may attempt to block a loan work out – an outcome that is adverse to the interest of the first lien investor (and the borrower). Many second lien holders are servicers of the first lien, which

positions them to block (or slow) efforts to resolve troubled loans.[117] Second lien holders have been blamed for holding up short sales and complicating efforts to resolve defaulted loans.[118]

112(a). If the proposed QRM criteria were adjusted for the inclusion of mortgage guarantee insurance or other types of insurance or credit enhancements, what financial eligibility standards should be incorporated for mortgage insurance or financial product providers and how might those standards be monitored and enforced?

Private mortgage insurers are subject to state insurance regulation that is specifically tailored to the nature of the risk insured – long-duration, mortgage credit risk. State laws impose loan-level capital and reserve requirements that are held long term. (See the response to Question 111 for a detailed discussion of the counter cyclical nature of mortgage insurance capital and reserves.) In addition, mortgage insurers are subject to strict limits on investments and limitations on dividend payments, and to provisions designed to address potential operational risk. Many states have adopted a version of the National Association of Insurance Commissioners ("NAIC") Model Mortgage Guaranty Insurance Act (the "NAIC Model Act") (a copy of which is included as Exhibit F), which, in addition to imposing strong financial controls, requires that mortgage insurers only engage in the business of mortgage insurance and imposes limitations on risk concentrations.[119]

The framework of state regulation described above provides an appropriate standard to determine whether mortgage insurance from a particular insurer will meet the criteria for inclusion in a QRM (and, should the Agencies agree that private mortgage insurance can serve as a form of risk retention, should also be the basis for determining eligibility to provide risk retention). State Departments of Insurance, with their power of oversight and their practice of performing regular, detailed audits of mortgage insurers, already monitor and enforce mortgage insurers' compliance with their strict financial standards. A simple, transparent and effective means to determine a mortgage insurer's "eligibility" for purposes of the Agencies' Proposal would be to require the insurer to be in regulatory good standing in its state of domicile, and in at least one additional state that has adopted legislation based on the NAIC Model Act. The state of domicile asserts the most supervisory authority over an insurer, and is best positioned to undertake quantitative and qualitative assessments of companies in its jurisdiction.

112(b). What disclosure regarding the entity would be appropriate?

In light of the proposed eligibility standard described above, which references the NAIC Model Act, Genworth suggests that the appropriate level of disclosure regarding a mortgage insurer should be sufficient to allow investors in a mortgage-backed security collateralized by QRMs to (1) identify the relevant mortgage insurers for the purpose of accessing the information publicly

---

[117] See *National Mortgaging Servicing Standards and Conflicts of Interest: Hearing before the Subcomm. on Housing, Transportation, and Community Development of the S. Comm. on Banking, Housing, and Urban Affairs*, 112th Cong., May 12, 2011 (Testimony of Laurie Goodman, Senior Managing Director, Amherst Securities Group). The first conflict cited by Goodman is the fact that "first lien servicers have significant ownership interests in 2nd liens and often have no ownership interest in the corresponding first lien mortgage loans that are made to the same borrower and secured by the same property." Available at http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=484c5b2b-6924-459f-898e-3ae075feeb15. Rep. Brad Miller, D-NC has similarly acknowledged that "[t]here is a conflict of interest to servicing securitized first liens while holding the second." Alex Ulam, *Why Second-Lien Loans Remain A Worry*, American Banker, May 2, May 2011.

[118] *Legacy Issues Causing Headaches in Non-Agency Markets, Experts Say – Can Regulators Fix Them?* Inside MBS & ABS, June 24, 2011.

[119] See Exhibit G for an explanation of mortgage insurance capital requirements, Exhibit H for an explanation of Genworth's reserving methodology, and Exhibit I for a description of the statutory limitations on mortgage insurance investment and dividends.

available about them under the NAIC financial reporting and disclosure regime and (2) quantify the degree of exposure to each such mortgage insurer.

The NAIC establishes standards for financial reporting and disclosure that are designed to enable meaningful, comparable financial information of mortgage guaranty insurers. Annually, mortgage insurers must file financial statements and disclosures in all states in which they conduct business, including exhibits and schedules with detailed information on underwriting, investments, reinsurance and loss development. An independent actuarial opinion of the adequacy of reserves is required to be delivered annually, with a summary going to each state, and further detail going to the state of domicile. In addition, statutory financials must be independently audited each year. This information is readily accessible through the insurer's state of domicile and electronically on the NAIC website.[120] Furthermore, the NAIC Insurance Regulatory Information System ("IRIS") establishes a standard set of performance metrics covering premium trends, profitability, liquidity, and loss development that must be reported.[121] Several states impose additional reporting requirements and establish additional performance standards.

In order to facilitate access to financial information about the mortgage insurer, the offering document for the mortgage-backed securities collateralized by QRMs with mortgage insurance should comply with the proposed loan–level disclosure requirements regarding mortgage insurance proposed by the Securities and Exchange Commission in May 2010, as part of its comprehensive proposed revisions to Securities Act Regulation AB, commonly referred to as "Reg. AB2."[122] Items 2(d)(1) through 2(d)(6) of proposed Schedule L to Reg AB2, which mandates asset-level disclosures for each residential mortgage loan backing a mortgage-backed security, require, among other things, disclosure of the name of the insurance company providing mortgage insurance for the loan and the percentage of mortgage insurance coverage obtained. These disclosures would enable investors in the mortgage-backed security to calculate the aggregate exposure to each mortgage insurer and to evaluate such exposure in light of the financial information publicly available about the insurer. This disclosure would be further enhanced by mandating that periodic reports prepared with respect to the mortgage-backed securities contain the information specified in Items 2(n)(1) through 2(n)(6) of proposed Schedule L-D to Reg AB2, which requires the issuer to report, on a loan by loan basis, details about the amount of mortgage insurance claims filed and paid. Such disclosure would enable investors in the mortgage-backed securities to monitor the exposure to each insurer on a monthly basis throughout the life of the transaction.

C. Eligibility Criteria

1. Eligible Loans, First Lien, No Subordinate Liens, Original Maturity and Written Application Requirements

---

[120] https://eapps.naic.org/insData/
[121] IRIS is primarily intended to assist state insurance departments in executing their statutory mandates to oversee the financial condition of insurance companies operating in their respective states. IRIS is one of the tools that help to identify those companies that merit priority in the allocation of the regulators' resources, thus directing those resources to the best possible use. IRIS consists of two phases. The first is a statistical phase consisting of the calculation of standard ratios based on key financial data from a company's annual audited financial statements. The second, the analytical phase, is a review of the annual financial statements and financial ratios by experienced financial examiners. This analytical phase results in companies being assigned a designation of "Level A," "Level B" or "Reviewed, no level." These designations are then communicated to the states for follow-up. A designation of "Level A" means that the states should give these insurers the highest priority and review these insurers first. "Level B" insurers may also have adverse results, but they do not require the immediate attention required for "Level A" insurers. Ratio results from the statistical phase are publicly available.
[122] *Asset Backed Securities*; 75 Fed. Reg. 23328 (May 3, 2010).

*114(a). The Agencies request comment on each of these conditions for QRM eligibility.
In addition, should a loan be disqualified from being a QRM if the creditor has reason to know of
another recorded or perfected lien on the property in a purchase transaction? 114(b). If so, what
would constitute a reason to know by the creditor?*

As further discussed in the response to Question 111, second liens have proven to materially
impede loan modifications and workouts, and piggyback seconds have undermined the credit
quality of high CLTV loans. For these reasons, if a creditor has a reason to know of a second
lien that causes the CLTV on a property to exceed 80%, the first and second liens should be
disqualified from being a QRM unless the first lien has mortgage insurance based on the loan's
CLTV. A creditor should be deemed to have a reason to know of the second lien if the second
lien is originated within 30 days of the first lien.

4. Loan-to-Value Ratio / 7. Ability to Repay

*120. The Agencies seek comment on the appropriateness of the proposed LTV and
combined LTV ratios for the different types of mortgage transactions*
*123. The Agencies seek comment on the appropriateness of the proposed front-end
ratio limit of 28 percent and the proposed back-end ratio limit of 36 percent.*

Neither the LTV ratio, the CLTV ratios, the front-end ratio limit nor the back-end ratio limit
proposed by the Agencies are appropriate. Consistent with sound and transparent analytics
and good housing policy, prudently underwritten, sustainable loans with LTVs up to 95% and
DTIs up to 45% can and should be made to creditworthy borrowers; provided that loans with
CLTVs above 80% are protected by mortgage insurance (or comparable credit enhancement)
obtained at the time of origination.

Loan-to-value Ratios.

Default Rates by CLTV:
QRM Proposals vs. Conventional Market
2001-2008 Originations
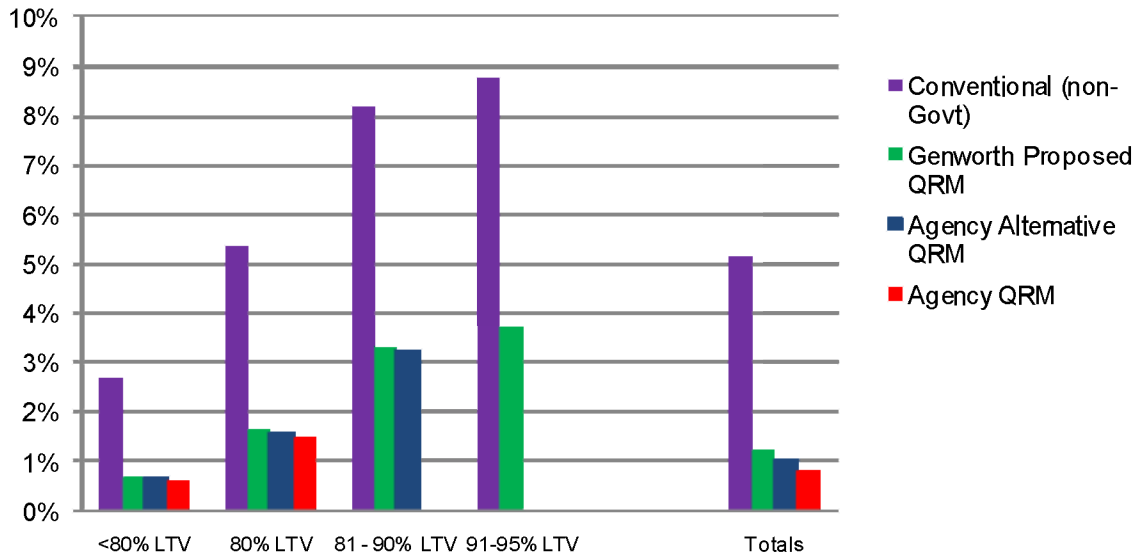
Source: CoreLogic Servicing Database.

Detailed data reflected in the chart are set forth in the table below:

Default Rates by CLTV: QRM Proposals vs. Conventional Market
2001 – 2008 Originations

	Conventional (non-Govt)	Genworth Proposed QRM	Agency Alternative QRM	Agency QRM
<80% LTV	2.69%	0.69%	0.68%	0.62%
80% LTV	5.38%	1.63%	1.56%	1.51%
81 - 90% LTV	8.20%	3.30%	3.25%	
91-95% LTV	8.51%	3.59%		
Totals (< 95% LTV)	5.09%	1.20%	1.02%	0.81%

As shown in the chart above, loans that meet the definition of a Genworth Proposed QRM perform very well – far better than the overall conventional originations within the same LTV ranges.[123] It is no surprise that loans with higher LTVs experience higher default rates than lower LTV loans. But the data make it clear that high LTV loans – when prudently underwritten and when protected by mortgage insurance – perform well within acceptable ranges. Including above 80% LTV loans with mortgage insurance in the definition of QRM will result in broad consumer access to safe and sound loans. Limiting QRMs to loans with LTVs at or below 80%

---

[123]Genworth was unable to compare QRM default rates by CLTV to Fannie Mae or Freddie Mac default rates by CLTV because neither GSE publicly discloses this information.

would render approximately 75% of recent home buyers, and over 85% of recent first-time home buyers, ineligible for an Agency QRM, while only marginally improving the aggregate QRM performance rate.[124] See Exhibit A for a detailed description of the various analyses undertaken by Genworth to determine the performance and market reach of Agency QRMs, Agency Alternative QRMs and the Genworth Proposed QRM.

Debt-to-income Ratios.

Genworth recommends that QRMs include loans with back-end DTIs up to 45%.   As seen in the table below, loans with the other QRM criteria and with DTIs up to 45% still perform well – materially better than conventional loans within the same DTI ranges. The ratios proposed by the Agencies are unnecessarily restrictive and will only serve to exclude creditworthy borrowers from the QRM market without meaningfully improving loan performance.[125]

Default Rates By DTI: Conventional vs. Genworth Proposed QRM
2001-2008 Originations
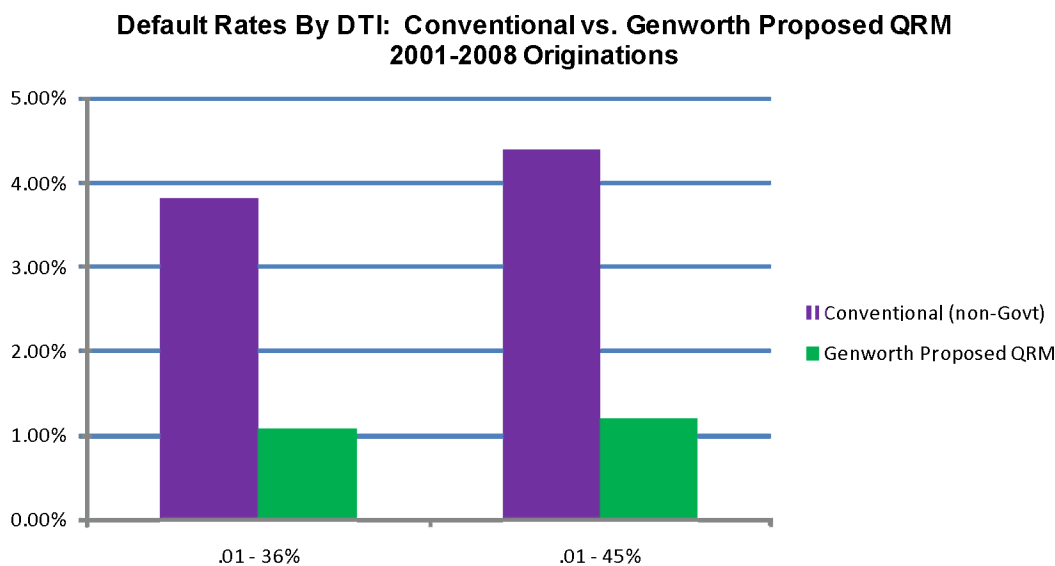
Detailed data reflected in the chart are set forth in the table below:

Default Rates by DTI: Conventional vs. Genworth Proposed QRM
2001 – 2008 Originations

	.01 - 36%	.01 - 45%
Conventional (non-Govt)	3.82%	4.38%
Genworth Proposed QRM	1.09%	1.20%

D. Request for Comment on Possible Alternative Approach

---

[124] According to the National Association of Realtors *Profile of Home Buyers and Sellers 2010*, 75% of all homebuyers in 2010 made a down payment of 20% or less, and 56% made a down payment of 10% or less.

[125] Based on loans originated from 2001 – 2008 included in the CoreLogic Servicing Database. The CoreLogic Servicing Database does not include front-end DTIs. Genworth is not recommending that a front-end DTI requirement be included in the definition of a QRM. However, should the Agencies determine that a front-end DTI is necessary, Genworth recommends that it be set at a level that that corresponds to a 45% back-end DTI. As a general rule, front-end ratios are typically six percentage points less than comparable back-end ratios.

143. The Agencies seek comment on the potential benefits and costs of the alternative approach, with a broader QRM exemption combined with a stricter set of risk retention requirements for non-QRM mortgages.

The Agency Alternative QRM, while somewhat broader than the Agency QRM, is still far too narrow, and will exclude a significant percentage of low to moderate income, minority and first-time home buyers from the QRM market. The immaterial improvement in loan performance that results from limiting QRMs to loans with a 10% down payment (rather than including loans with LTVs up to 95%) does not justify the material adverse impact of the alternative. Moreover, the language of the Agencies' Proposal could be interpreted to permit the use of piggyback seconds to satisfy the down payment requirement, which would undermine the credit quality of the loans and certainly is not appropriate. Genworth recommends that the Agencies clarify that any final definition of QRM exclude loans with piggyback second liens. For a complete discussion of the issues and concerns related to piggyback seconds, see response to Question 111. Genworth urges the Agencies to adopt the Genworth Proposed QRM. (See responses to Questions 106, 111, 112, 114, 120 and 123 for analyses of the performance and market impact of the Agency Alternative QRM.)

144(a). If such an alternative approach were to be adopted, what stricter risk retention requirements would be appropriate in order to provide additional incentives to underwrite a greater share of origination volume within the QRM definition? 144(b). Should such stricter requirements involve the form of risk retention or a higher amount of risk retention? 144(c). Are there other changes that would achieve the same objective?

As discussed in the response to Question 143, the proposed alternative is not appropriate and will not incent the origination of prudent and sustainable mortgages to creditworthy borrowers. Imposing stricter risk retention requirements on the proposed alternative would only exacerbate its adverse consequences.

147. What impact might a broader QRM definition have on the pricing, liquidity, and availability of loans that might fall outside the broader QRM boundary?

A broader QRM definition will still result in non-QRMs likely being be more expensive than QRMs, both because of the cost of risk retention, and because a relatively small non-QRM market will make their securitization less liquid. As a result, investors likely will demand a "liquidity premium" on non-QRM securitizations. This outcome is entirely appropriate and consistent with the objective of the risk retention rule. With a broad QRM, non-QRMs will clearly be higher risk mortgages, and their pricing and availability should reflect that risk. One of the lessons learned from the collapse of the housing market is that the easy access to high risk loans can "contaminate" the broader housing market, turning loan-level risk into systemic risk. Risk retention was, in part, designed as a means to avoid a repeat of this contamination effect. One way to contain and manage risk is to require that the risk be fully reflected in the pricing, liquidity and availability of high risk assets.

V. Reduced Risk Retention Requirements for ABS Backed by Qualifying Commercial Real Estate, Commercial or Automobile Loans

150(a). Should underwriting standards be developed for residential mortgage loans that are different from those proposed for the QRM definition and under which a sponsor would be required to retain more than zero but less than five percent of the credit risk?

QRMs should include prudent, sustainable loans to creditworthy borrowers that include fully documented loans with LTVs up to 95% and DTIs up to 45%. Riskier loans should be subject to a 5% risk retention requirement. An approach that applies different levels of risk retention to different groups of loans will be enormously complicated to design and enforce, and will add significant complexity to the structuring and execution of securitizations (which will translate into increased cost that ultimately will be borne by borrowers). Many banks will not be able to retain any amount of risk for mortgage securitizations, and so would be forced to sell all of their loans to a small number of very large banks who will dominate the secondary mortgage market. All low down payment lending would be insured by the FHA (or guaranteed by Fannie Mae and Freddie Mac). See the response to Question 162 for a discussion of the material adverse consequences of shifting all low down payment lending to the FHA.

VI. General Exemptions

A. Exemption for federally insured or guaranteed residential, multifamily, and health care mortgage loan assets

162(a). Have the Agencies appropriately implemented the exemption in section 15G(e)(3)(B) of the Exchange Act? 162(b). Why or why not?

The Agencies are correct that FHA insurance on single family mortgage loans falls within the exemption for securitizations that are collateralized solely by residential loan assets insured or guaranteed by the United States or an Agency thereof.[126]

The exemption for loans insured by the FHA makes it critically important that QRM be properly defined to include low down payment loans with private mortgage insurance (or other comparable insurance or credit enhancement) obtained at the time of origination. Otherwise, all low down payment lending will be done with some form of government subsidy -- and private mortgage insurers effectively could be driven out of the market.

As discussed in the response to Question 111, private mortgage insurers put their own capital at risk in a first-loss position, and the Act directs the Agencies to consider the utilization of private mortgage insurance to ensure that QRMs are prudent and sustainable mortgages. This provision was included in the legislation in part because Congress understood that it was the only way to have a private market for low down payment loans given the exemption granted to the FHA.

According to the National Association of Realtors' 2010 Profile of Home Buyers and Sellers, median down payments in 2010 were 8%, with first-time home buyers averaging a 4% down payment and repeat home buyers putting down an average of 14%.[127] Unless there is parity between the FHA and the down payment requirement permitted for QRMs, virtually all of these

---

[126] The exemption for securitizations collateralized by loans insured or guaranteed by the United States or an agency thereof also applies to loans guaranteed by the Department of Veterans Administration and by the U.S. Department of Agricultural Rural Development.
[127] National Association of Realtors *Profile of Home Buyers and Sellers 2010,* 2010, p. 71.

buyers will have no other option than to seek loans insured by the FHA (or, for a limited period of time, loans guaranteed by Fannie Mae or Freddie Mac). Not only will it be impossible to achieve the Administration's stated goal of reducing the size of the FHA's market, this provision will mean that the FHA's market will actually grow by as much as 25%.[128] Unless QRM is properly defined to include low down payment loans with private mortgage insurance, the only alternative to a government insured or GSE guaranteed loan would be a loan subject to the cost of 5% risk retention. This outcome would unnecessarily and unfairly increase the cost of home ownership, and in some cases would price borrowers out of the housing market entirely.[129] Note that, unlike the treatment of the GSEs, there is no expiration date for the FHA exemption.

There is another important reason that the Agencies should not rely solely on the FHA or other government programs to serve the low down payment market. The exemption for securitizations of government insured or guaranteed loans, and the treatment of the GSE guarantee as permissible risk retention, is not conditioned on any credit standards for those loans. FHA loans are exempt from risk retention regardless of the underwriting and product features of those loans. While there may have been sound policy reasons for exempting government insured loans from risk retention, the exemption does not further the primary objective of the risk retention rule; namely, to incent the origination of prudently underwritten, sustainable mortgages. The Agencies must be careful to ensure that the Agencies' Proposal that does not encourage excessive reliance on the Section 15G(e)(3)(b) exemption and inadvertently undermine the effectiveness of the Agencies' Proposal.

* * * * * * * * * * * * * * *

Genworth appreciates the opportunity to comment on the Agencies' Proposal. Questions or requests for further information may be directed to the undersigned or to Carol Bouchner (carol.bouchner@genworth.com, 919-846-3120), Stephen Cooke (stephen.cooke@genworth.com, 919-870-2363) or Duane Duncan (duane.duncan@genworth.com, 202-662-2573).

Very truly yours,

Kevin D. Schneider
President and Chief Executive Officer

---

[128] Based on analysis of approximately 50 million loans originated from 2001 – 2010 with an aggregate principle balance of approximately $10 trillion included in the CoreLogic Servicing Database.
[129] Standard & Poor's, *New Proposed Regulations Could Impede U.S. Mortgage Insurers' Recovery*, Global Credit Portal: RatingsDirect, May 24, 2011.

Exhibit A
Analysis of CoreLogic Servicing Database Loan Level Data

Exhibit A - Analysis of CoreLogic Servicing Database Loan Level Data

Purpose:
Genworth undertook this analysis to determine the optimal parameters for Qualified Residential Mortgages ("QRMs") in order to achieve strong, sustainable loan performance across a range of housing cycles while reaching the broadest possible segment of creditworthy borrowers. The results of this optimization analysis are the basis for the Genworth Proposed QRM. Capitalized terms used in this Exhibit A and not defined herein have the meaning assigned to such terms in the accompanying Genworth comment letter.

Database:
The CoreLogic Servicing Database includes loan-level characteristic data and historical payment history on approximately nearly 130 million loans. The Database covers over 80% of active first lien residential mortgage loans. Further information regarding CoreLogic can be found at www.corelogic.com.

QRM Criteria:
To conduct the optimization analysis, Genworth first identified loans in the CoreLogic Servicing Database that met the Agency QRM and Agency Alternative QRM definitions based on the following loan characteristics:

- Back-end DTI
- LTV
- CLTV
- Presence of Piggyback second lien
- Loan Purpose
- Negative Amortization Indicator
- Interest Only Indicator
- Balloon Indicator
- Prepay Penalty Indicator
- Annual and Lifetime Interest Rate Caps (ARM loans)
- Borrower Credit Score
- Loan Term
- Occupancy Status
- Loan Documentation Level

Genworth then ran a range of scenarios with varying LTVs and DTIs in order to determine the optimal loan parameters. In the case of loans with LTVs >80%, Genworth also analyzed loans with private mortgage insurance.

Detailed Explanation of Loan Characteristics:
Conventional Loans: The analysis looks only at conventional (non-Government) loans. Loans insured or guaranteed by the U.S. government or an Agency thereof are exempt from the risk retention requirements of the Act.
Credit Attributes: The CoreLogic Servicing Database does not include data on individual credit events such as whether a borrower has been delinquent on scheduled indebtedness. To conduct this analysis, Genworth used a FICO score of 690 as a proxy for the credit factors proposed by the Agencies. This is consistent with the analysis the Agencies conducted in connection with the issuance of the Proposed Rule.
Debt-to-Income Ratios: The CoreLogic Servicing Database does not include front-end DTIs, so Genworth ran only back-end DTIs. Back-end DTIs were not available for all loans in the Database. Loans in the Database that otherwise met the eligibility criteria but that did not have DTI information were included in the analysis.

<u>Loans with Piggyback Seconds</u>: The CoreLogic Servicing Database includes the LTV and the CLTV at time of origination. Loans with piggyback seconds were identified as with a CLTV greater than the LTV.

<u>Points and Fees</u>: The CoreLogic Servicing Database does not include information on points and fees. Genworth estimated the impact of the proposed 3% cap on points and fees based on aggregate, state-by-state data provided by a national mortgage lender.

<u>Servicing Standards</u>: It was not possible to quantify the impact of proposed servicing standards based on information contained in the CoreLogic Servicing Database, so the analysis does not give effect to any such standards.

Performance Data:

To determine loan performance, Genworth analyzed approximately 44 million loans originated from 2001-2008 that met the criteria for the Agency QRM, the Agency Alternative QRM and the Genworth Proposal. Loans originated after 2008 are not sufficiently mature (seasoned) to provide meaningful data on delinquency and default trends. Because loans can experience delinquency and return to performing status, Genworth defined "default" as loans that, upon termination, were in foreclosure or "REO" (real estate owned) status or were 90 days or more delinquent. Performance data was compiled through March 31, 2011.

The analysis calculated default rates for loans that satisfy the definition of Agency QRM and Agency Alternative QRM. To determine the optimal parameters for the Genworth Proposed QRM, Genworth calculated default rates for loans with a range of LTVs (90%, 95% and 97%) and back-end DTIs (38%, 41% and 45%). As seen in the data that follows, both LTVs and DTIs can be increased significantly with only modest increases in defaults. The Genworth Proposal will reach a broader segment of creditworthy borrowers than either the Agency QRM or the Agency Alternative QRM while still performing well across a range of housing cycles.

Performance Data

Terms & Features	Agency QRM	Agency Alternative	Adjusting DTI Level Only 38	41	45	Adjusting LTV Level Only 90	95	97	45 DTI & 97 LTV	GNW Proposed
Back End DTI	36	38Arm/41 Fix	38	41	45	36	36	36	45	45
Purch CLTV/piggy	80%/No	90%/Yes	80%/No	80%/No	80%/No	90%/No	95%/No	97%/No	97%/No	95%/No
Refi CLTV/piggy	75%/Yes	90%/Yes	75%/Yes	75%/Yes	75%/Yes	90%/No	95%/No	97%/No	97%/No	95%/No
Cash CLTV/piggy	70%/Yes	75%/Yes	70%/Yes	70%/Yes	70%/Yes	90%/No	95%/No	97%/No	97%/No	95%/No
Negative Amort.	No	No	No	No	No	No	No	No	No	No
Points & Fees	3% Cap	3% Cap	3% Cap	3% Cap	3% Cap	3% Cap	3% Cap	3% Cap	3% Cap	3% Cap
Interest Only	No	No	No	No	No	No	No	No	No	No
Balloons	No	No	No	No	No	No	No	No	No	No
Prepay Penalty	No	No	No	No	No	No	No	No	No	No
ARM Margins	2/2/6	2/2/6	2/2/6	2/2/6	2/2/6	2/2/6	2/2/6	2/2/6	2/2/6	2/2/6
ARM Product	ALL	ALL	All	All	All	All	All	All	ALL	ALL
Credit	690	690	690	690	690	690	690	690	690	690
Max Term	30yr	30yr	30	30	30	30	30	30	30yr	30yr
Occupancy	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Documentation	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
MI Req >80 LTV	n/a	No	n/a	n/a	n/a	Yes	Yes	Yes	Yes	Yes

Default Rates: # Defaulted Loans in Each Scenario / Total # Loans

Year	Agency QRM	Agency Alternative	Adjusting DTI Level Only 38	41	45	Adjusting LTV Level Only 90	95	97	45 DTI & 97 LTV	GNW Proposed
2001	0.48%	0.66%	0.48%	0.49%	0.49%	0.67%	0.78%	0.81%	0.84%	0.81%
2002	0.36%	0.48%	0.36%	0.37%	0.37%	0.50%	0.55%	0.56%	0.59%	0.58%
2003	0.39%	0.50%	0.40%	0.41%	0.41%	0.51%	0.55%	0.55%	0.59%	0.58%
2004	0.72%	0.88%	0.73%	0.74%	0.77%	0.89%	0.94%	0.96%	1.03%	1.01%
2005	1.49%	1.73%	1.50%	1.54%	1.59%	1.77%	1.82%	1.83%	1.98%	1.97%
2006	2.11%	2.47%	2.13%	2.16%	2.21%	2.58%	2.64%	2.64%	2.82%	2.81%
2007	1.94%	2.52%	1.95%	1.98%	2.01%	2.69%	2.88%	2.89%	3.11%	3.08%
2008	0.64%	1.00%	0.65%	0.67%	0.69%	1.02%	1.12%	1.13%	1.29%	1.28%
Grand Total	0.81%	1.02%	0.82%	0.84%	0.87%	1.04%	1.10%	1.11%	1.21%	1.20%

Performance Benchmarking:

Genworth benchmarked the performance of the proposals it analyzed by comparing default rates to overall conventional (non-government) mortgage originations and to GSE (Fannie Mae and Freddie Mac) originations. Because the CoreLogic Servicing Database does not identify a loan's investor, GSE data was sources from Fannie Mae and Freddie Mac first quarter 2011 earnings releases, available on their respective websites.

The comparative data is set forth below:

Default Rates

Year	Agency QRM	Agency Alternative	45 DTI & 97 LTV	GNW Proposed		Fannie Mae	Freddie Mac	Total GSE[1]		All Conventional
2001	0.48%	0.66%	0.84%	0.81%		1.20%	0.80%	1.03%		2.56%
2002	0.36%	0.48%	0.59%	0.58%		1.10%	0.70%	0.93%		1.98%
2003	0.39%	0.50%	0.59%	0.58%		1.15%	0.60%	0.95%		1.67%
2004	0.72%	0.88%	1.03%	1.01%		2.20%	1.47%	1.94%		3.05%
2005	1.49%	1.73%	1.98%	1.97%		4.11%	3.30%	3.76%		6.91%
2006	2.11%	2.47%	2.82%	2.81%		6.85%	5.50%	6.30%		11.86%
2007	1.94%	2.52%	3.11%	3.08%		6.85%	5.60%	6.34%		11.22%
2008	0.64%	1.00%	1.29%	1.28%		1.70%	1.50%	1.62%		3.62%
2001-2008	0.81%	1.02%	1.21%	1.20%		2.83%	2.23%	2.59%		5.13%
				A				B		C

GNW Proposed QRM vs. GSE (A/B - 1)	-54%	54% lower Default Rate than the GSE loans
GNW Proposed QRM vs. All Conv. (A/C - 1)	-77%	77% lower Default Rate than All Conventional loans

[1] Total GSE Default Rates calculated as a weighted average based on publically avalable origination data

Market Share:

Market share for each of the options included in the optimization analysis was determined based on approximately 50 million loans originated from 2001 – 2010 contained in the CoreLogic Servicing Database. Market shares were calculated as a percentage of total conventional originations. Market share for each option are set forth below:

Market Share Data

Market Share: # Loans Each Scenario / Total # Loans

Year	Agency QRM	Agency Alternative	Adjusting DTI Level Only 38	41	45	Adjusting LTV Level Only 90	95	97	45 DTI & 97 LTV	GNW Proposed
2001	15.3%	21.1%	15.4%	15.5%	15.6%	22.1%	23.8%	24.1%	24.6%	24.3%
2002	20.8%	27.2%	20.9%	21.1%	21.3%	28.6%	30.0%	30.2%	31.0%	30.8%
2003	21.3%	27.8%	21.6%	21.9%	22.3%	28.3%	29.3%	29.4%	30.6%	30.5%
2004	12.9%	16.7%	13.1%	13.4%	13.7%	16.9%	17.7%	17.8%	18.8%	18.7%
2005	10.6%	13.5%	10.8%	11.0%	11.4%	13.7%	14.2%	14.3%	15.5%	15.4%
2006	9.6%	12.3%	9.8%	10.2%	10.5%	12.1%	12.6%	12.7%	14.0%	13.9%
2007	10.5%	14.1%	10.7%	11.1%	11.6%	13.5%	14.5%	14.6%	16.5%	16.4%
2008	17.7%	26.1%	18.3%	19.1%	20.1%	24.3%	26.2%	26.4%	30.3%	30.1%
2009	31.3%	43.4%	31.9%	32.9%	34.0%	40.5%	41.7%	41.8%	45.4%	45.2%
2010	28.4%	38.5%	28.9%	29.5%	30.5%	36.6%	38.3%	38.4%	41.4%	41.1%
Grand Total	17.0%	22.6%	17.3%	17.7%	18.1%	22.5%	23.6%	23.7%	25.3%	25.1%

% Increase in Market Share versus Agency QRM: (Each Scenario Market Share / Market share for Agency QRM) -1

Year	Agency QRM	Agency Alternative	Adjusting DTI Level Only 38	41	45	Adjusting LTV Level Only 90	95	97	45 DTI & 97 LTV	GNW Proposed
2001	0.0%	37.5%	0.6%	1.3%	2.0%	44.2%	55.6%	57.5%	60.8%	58.7%
2002	0.0%	31.1%	0.7%	1.6%	2.6%	37.9%	44.4%	45.4%	49.2%	48.1%
2003	0.0%	30.3%	1.2%	2.8%	4.6%	32.7%	37.5%	38.1%	43.7%	43.0%
2004	0.0%	28.9%	1.5%	3.6%	6.0%	30.6%	37.0%	37.8%	45.6%	44.6%
2005	0.0%	28.1%	1.9%	4.5%	7.6%	29.1%	34.7%	35.3%	46.4%	45.5%
2006	0.0%	27.8%	2.2%	5.4%	9.4%	25.2%	31.0%	31.6%	45.6%	44.7%
2007	0.0%	34.5%	2.5%	6.2%	10.6%	29.1%	38.9%	39.6%	57.7%	56.5%
2008	0.0%	47.2%	3.1%	7.7%	13.5%	37.3%	47.8%	48.7%	71.0%	69.6%
2009	0.0%	38.7%	2.1%	5.0%	8.6%	29.5%	33.3%	33.6%	45.1%	44.4%
2010	0.0%	35.8%	1.7%	4.1%	7.6%	28.9%	34.8%	35.2%	46.0%	44.7%
Grand Total	0.0%	32.9%	1.6%	3.8%	6.5%	32.2%	38.4%	39.1%	48.4%	47.4%

Further Information:

Genworth would be pleased to provide the Agencies with further details regarding the data analyzed, including the methodology for programming and coding the analysis. We welcome the opportunity to answer any questions the Agencies may have regarding this analysis.

Exhibit B
MI Impact Analysis

Performance of Insured vs Piggyback Mortgage Loans

Genworth Financial

August 2010

Study Concept Summary

Genworth is pleased to report a more thorough examination of the differences in insured loan versus piggy back loan performance.
The Original study focused on 30+ delinquencies over four origination years with cuts by origination year, CLTV, and FICO, and two geographic cuts.
The sub group combination differences were then weighted by the overall volume of both insured and piggy-back loans in each segment,
and then rolled up to display the relative differences in performance given the specific segmentation. Overall that study suggested
that piggy-back loans performed 55% worse than insured loans with similar characteristics.

This revised study now focuses on ever 90+ delinquency rates and the cure rates on loans ever 90 days delinquent. The new study adds
an additional origination year, 2003, and more importantly, adds additional characteristic cuts such as document type, loan purpose, and expands
the geographic breaks to the nine US Census regions. The overall number of possible combination sets therefore increases nearly 20 fold
going from 256 combination segments to 5,040 in this expanded study.
This greater degree of detail should have the effect of removing the effects of differences in the distributions of insured loans relative to piggy-back loans.
Theoretically, increasing the degree of segmentation should move the overall weighted ratio of performance directionally from the 1.55 in the former study closer to 1.0.

The new study also differs from the former in that the older study used the total volume of both the insured and piggy-back loans to weight
the ratios of each identified segment. However, with a 20 fold increase in segmentation, and because piggy-back loans were smaller in volume than insured loans
some segments had extremely low piggyback volumes where it it would be entirely possible for all or none of the loans to be delinquent.
Consequently, the use of total volume weights (piggyback plus insured) would distort the effects of differences in the distribution of piggy-back loans.
For instance, for the 2003 originations 100 CLTV loans accounted for 48.9% of both the insured and piggy back volume for 2003. However, Piggy-back loans with
100% CLTV were only 17.8% of the 2003 piggy volume. Using the total volume would over-weight CLTV 100 ratios, whereas using the piggy-back volume would
put the relative difference in 100 LTV performance in a more appropriate perspective.

The other major component of this updated study is the inclusion of an analysis of the cure rates on loans ever 90 days delinquent.
The study will show that even for segments where there is little difference in ever 90+ delinquency rates, MI insured loans
exhibit significantly higher cure rates, thereby affecting the ultimate foreclosure rates on such segments. The expertise and willingness
of MIs to work with delinquent insured borrowers plays a major role in reducing the real risk of default on high LTV loans.

Study Composition

Total Volumes Of Originations	Piggy-Back Volume	$260.6 billion	Insured Volume	$588.9 billion	Total Volume	$849.5 billion
Numbers of Loans		1,045,328		3,872,318		4,917,646

Expanded Study On Ever 90 Days Delinquent And Subsequent Cure Rates	Original Study On 30+ Delinquency Rates
5 Origination Years 2003 - 2007	4 Origination Years 2004 - 2007
2 Documentation Types : Full Docs, Low or No Docs	
2 Loan Purpose Categories: Purchase, Refinancing (Other was excluded)	
4 CLTV Ranges : 80.1 to 85, 85.1 to 90, 90.1 to 95, GT 95	4 CLTV Ranges : 80.1 to 85, 85.1 to 90, 90.1 to 95, GT 95
7 FICO Ranges : <620, 620-659, 660-699, 700-719, 720-739, 740-759, 760+ (No FICOs were excluded)	8 FICO Score Ranges
9 US Census Regions	2 Market Segments : Distressed States FL,NV,CA,AZ,MI), All Others
Number of Combination Segments = 5x2x2x4x7x9 = 5,040	Number of Combination Segments = 4x4x8x2 = 256

19.7   Fold Increase In Segmentation

Data And Methodology

Genworth utilized the servicing data set of Corelogic which has collected highly detailed loan level loan perfromance information from several large major servicing companies. Piggyback loans are identified as first lien loans with an LTV of 80% and a CLTV greater than 80%. Insured loans are identified by the coding of an insurance provider, whether it be a private mortgage insurer or FHA or VA. Our study focused on loans with CLTV greater than 80%, originated from 2003 through 2007. The sample selected totals 4,917,646 loans of which 3,872,318 are insured high LTV loans, and 1,045,328 are first lien structured or piggyback loans. The overall volume totaled $0.85 trillion.

The previous study focused on loans that were currently deliquent 30+ days and loans that had terminated in default. This study takes the analysis much farther. This study reviewed the monthly status of all 4.9 million loans in the sample to see which loans were ever 90 days delinquent, and then follows the monthly status reports until the loan either cures or goes to foreclosure. Consequently, this study evaluates both the performance of the loans and also permits a review of actual cures of previous delinquencies that ultimately resulted in current status for loans still outstanding or successful payoff .

The delinquency rate for the piggyback loans is somewhat understated in that the data set only captures the delinquency rates on first liens. There are likely loans where the 1st lien is still current, but the 2nd lien is delinquent. If these delinquencies were added to the piggyback data, their delincency rate would be even higher than shown and the differential to Insured loans would be even larger.

Ever 90 Day Delinquency Rates By Origination Year
Weighting Segments By Piggyback Profile

Data Source: CoreLogic
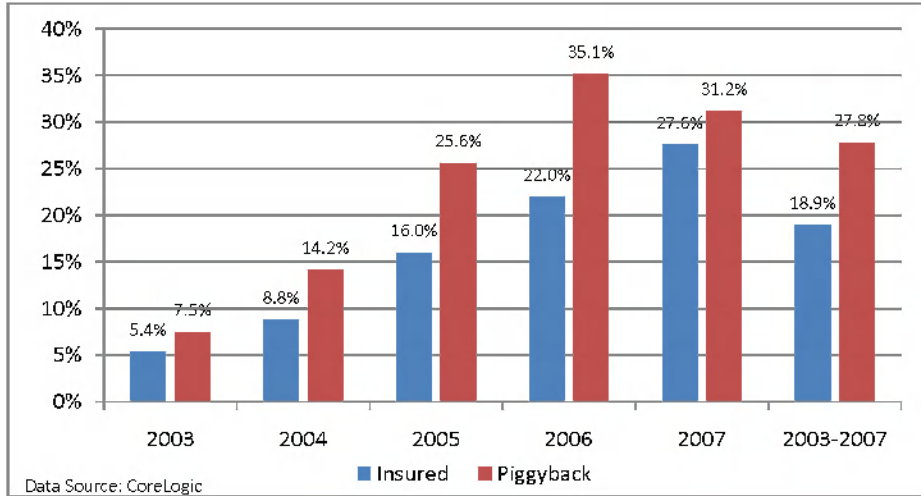
Weighted Ratios Of Piggyback Delq Rates To Insured Delq Rates
Insured Ever 90 Rate / Piggyback Ever 90 Rate

Data Source: CoreLogic
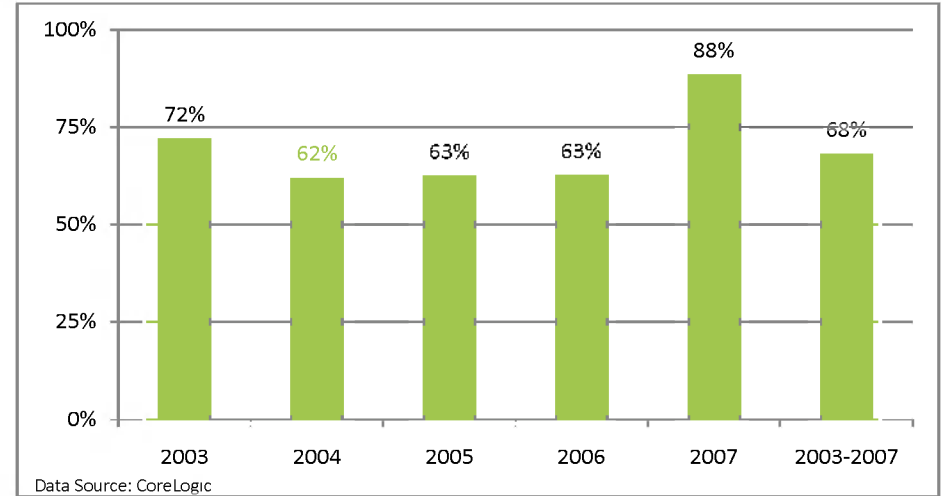
Cure Rates On Ever 90 Day Delinquencies By Origination Year
Weighting Segments By Piggyback Profile
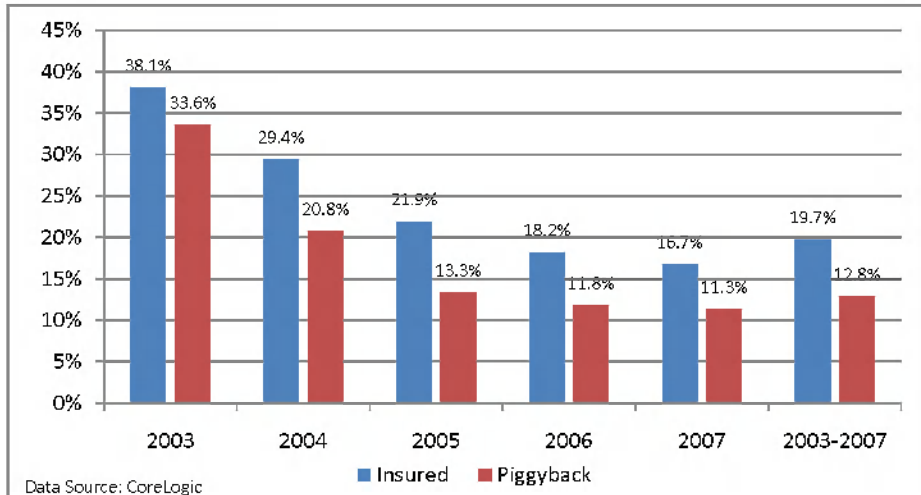
Data Source: CoreLogic

Weighted Ratios Of Insured Cure Rates To Piggybacks
Insured Cure Rate % / Piggyback Cure Rate %

Data Source: CoreLogic
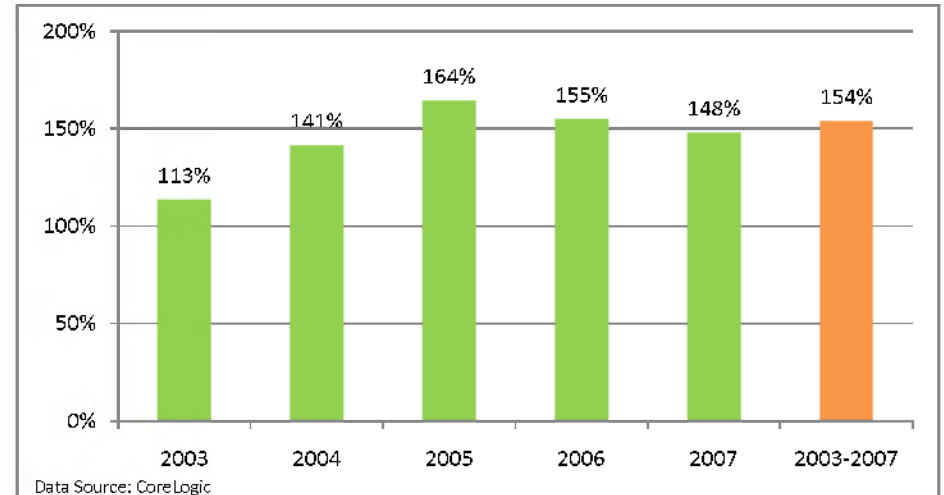
Insured Loans Performed 32% Better than Piggyback Loans

Once Delinquent 90 Days Or More, Insured Loans Exhibited Cure Rates 54% Higher Than Piggybacks

Non-Performing Rates By Origination Year

(<u>Currently</u> 90+ Days Delinquent & Defaults)

Data Source: CoreLogic
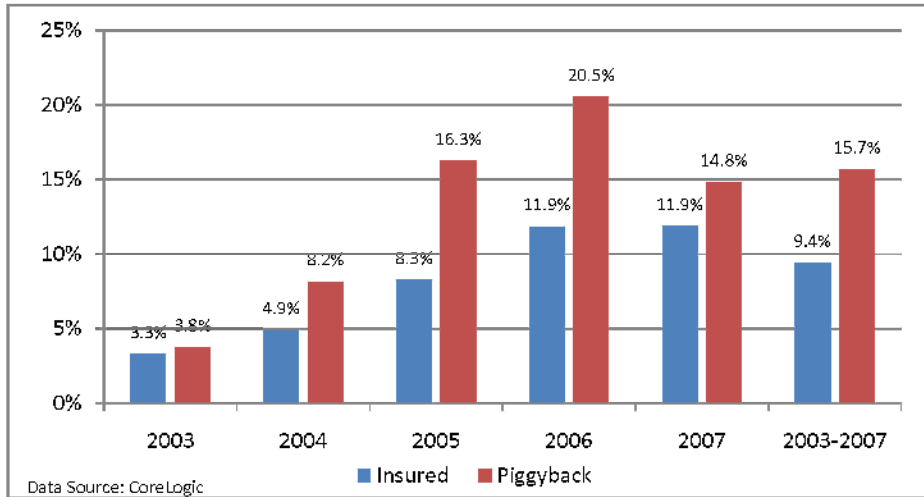
Ratios Of Piggyback Non-Performing Rates To Insured

Piggyback Non-Performing Rate / Insured Non-Performing Rate

Data Source: CoreLogic

Lower Ever 90 Delqs Combined with More Cures Result in Insured Loans Having 40% Less Defaults (90+ & F/C)

Ever 90 Day+ Delinquency Rates By CLTV
Weighting Segments By Piggyback Profile
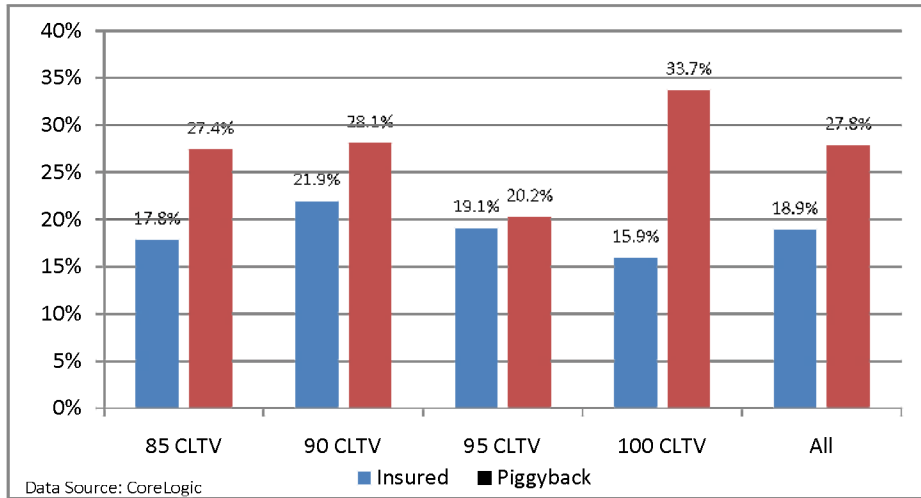
Data Source: CoreLogic

■ Insured ■ Piggyback

Weighted Ratios Of Piggyback Delq Rates To Insured Delq Rates
Piggyback ETD 90 Rate / Insured ETD 90 Rate

Data Source: CoreLogic
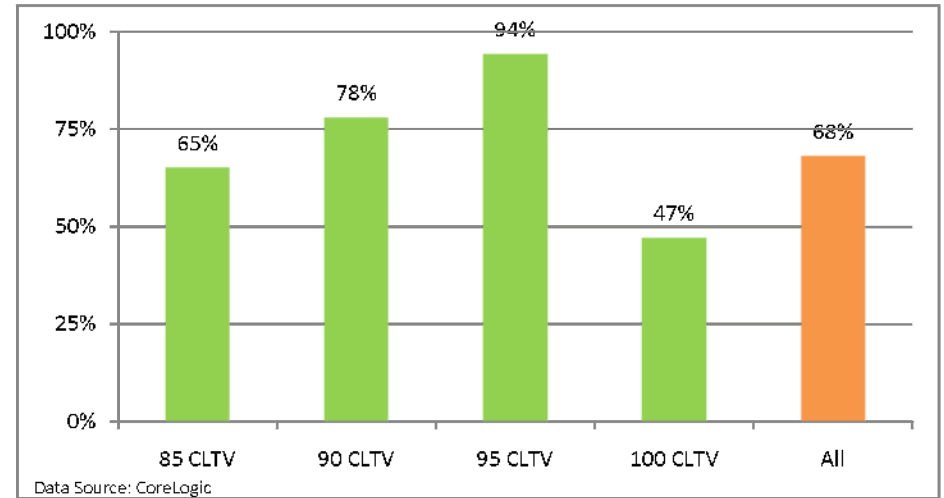
Cure Rates On Ever 90 Day Delinquencies By CLTV
Weighting Segments By Piggyback Profile
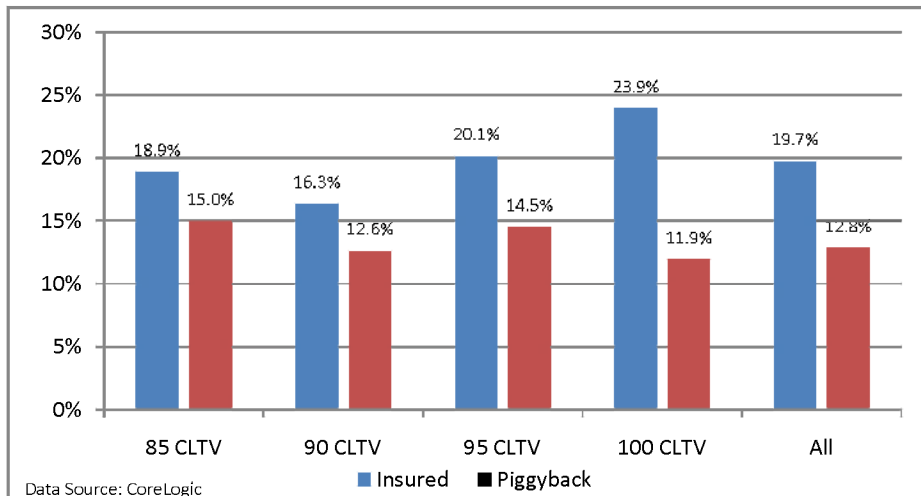
Data Source: CoreLogic

■ Insured ■ Piggyback

Weighted Ratios Of Insured Cure Rates To Piggybacks
Insured Cure Rate / Piggyback Cure Rate

Data Source: CoreLogic
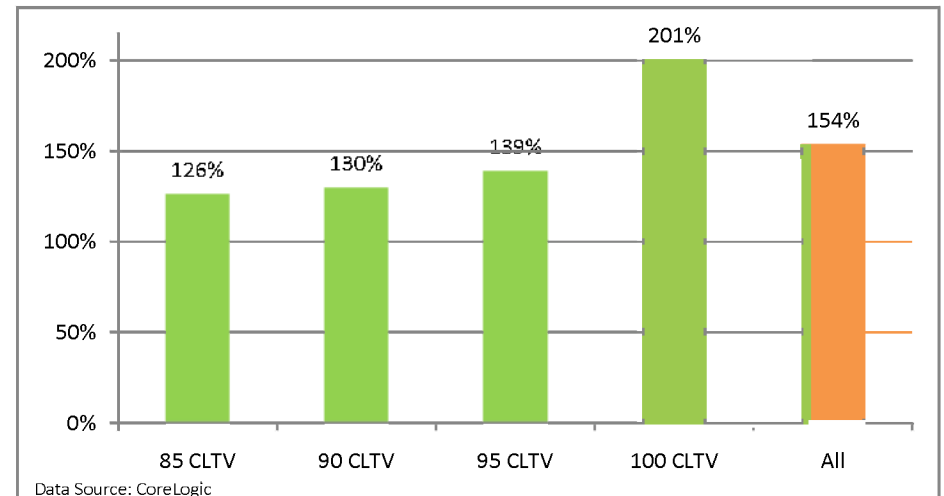
Piggyback 90+ Delinquency Rates Were Significantly Higher For All CLTV Ranges Except For 95 CLTV

Nevertheless, For ALL CLTV Ranges, Including 95 CLTV, Insured Loans Had Significantly Higher Cure Rates

Ever 90+ Delinquency Rates By FICO Score
Weighting Segments By Piggyback Profile
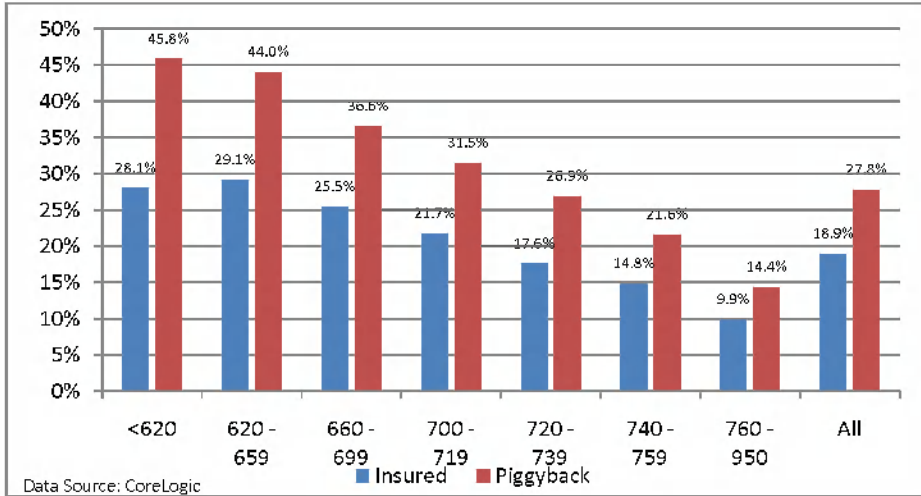
Data Source: CoreLogic

Weighted Ratios Of Piggyback Delq Rates To Insured Delq Rates
Piggyback ETD 90 Rate / Insured ETD 90 Rate

Data Source: CoreLogic
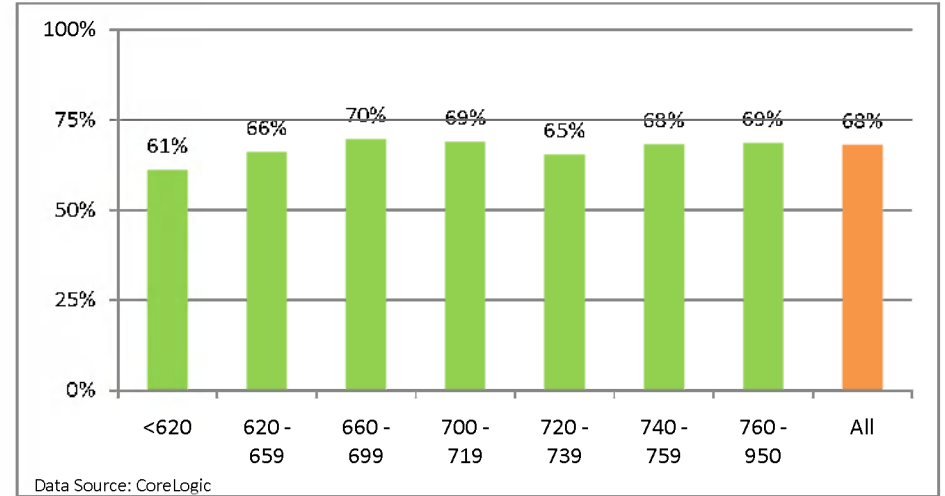
Cure Rates On Ever 90 Day Delquencies BY FICO Range
Weighting Segments By Piggyback Profile
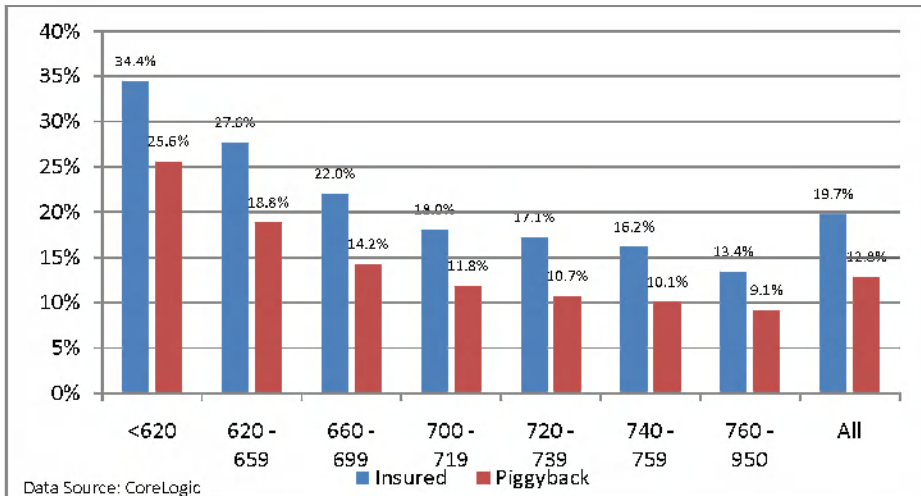
Data Source: CoreLogic

Weighted Ratios Of Insured Cure Rates To Piggybacks
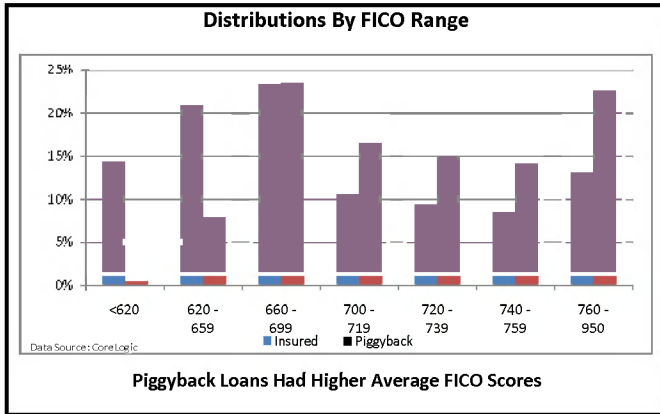### Insured Cure Rate / Piggyback Cure Rate

Data Source: CoreLogic
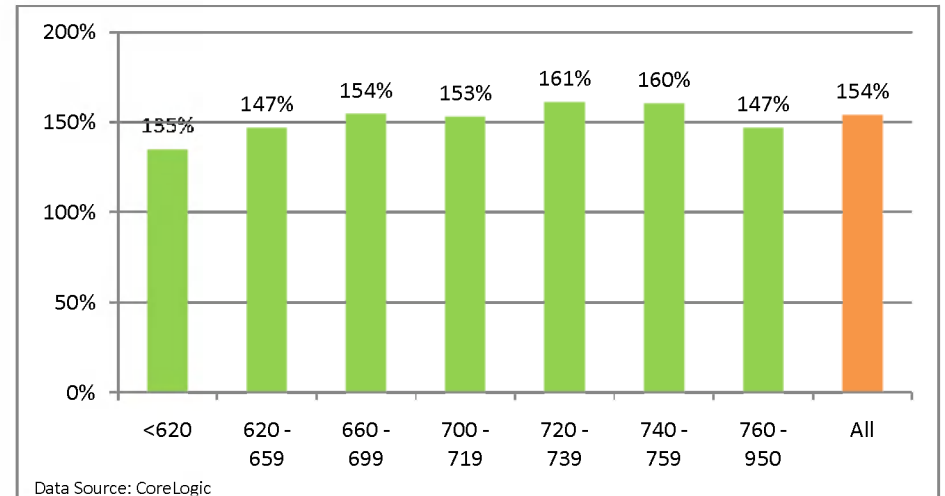
Piggyback Performance Decidely Worse in Virtually All FICO Ranges

Cure Rates On Insured Loans Solidly Higher By 35% or More Depending On the FICO Range

Ever 90+ Delinquency Rates By Doc Type/Loan Purpose
Weighting Segments By Piggyback Profile
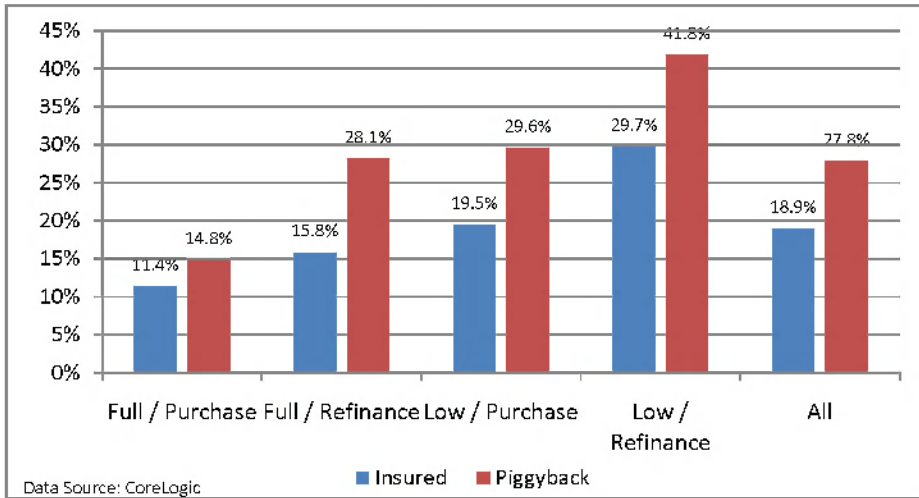
Data Source: CoreLogic

Insured / Piggyback values by segment:
- Full / Purchase: 11.4% / 14.8%
- Full / Refinance: 15.8% / 28.1%
- Low / Purchase: 19.5% / 29.6%
- Low / Refinance: 29.7% / 41.8%
- All: 18.9% / 27.8%

Weighted Ratios Of Piggyback Delq Rates To Insured Delq Rates
Piggyback ETD 90 Rate / Insured ETD 90 Rate

Data Source: CoreLogic

- Full / Purchase: 77%
- Full / Refinance: 56%
- Low / Purchase: 66%
- Low / Refinance: 71%
- All: 68%
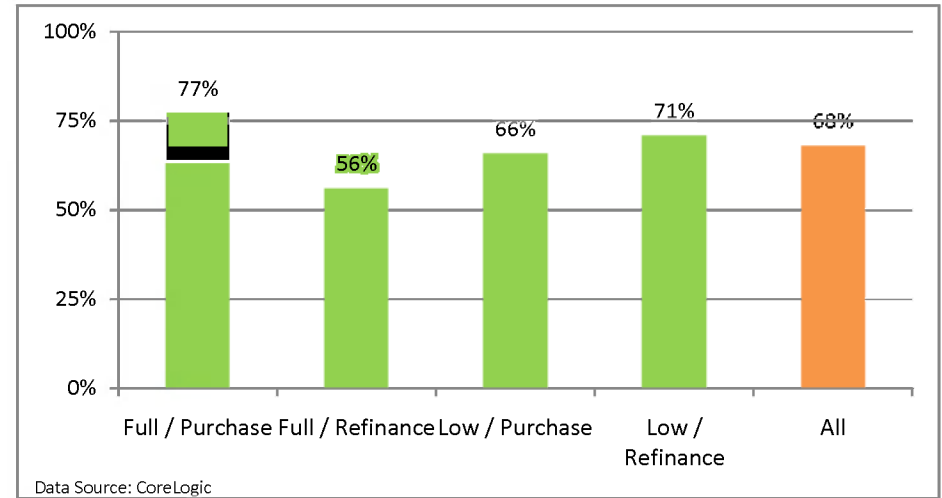
Cure Rates On Ever 90 Day Delqs By Doc Type/Loan Purpose
Weighting Segments By Piggyback Profile
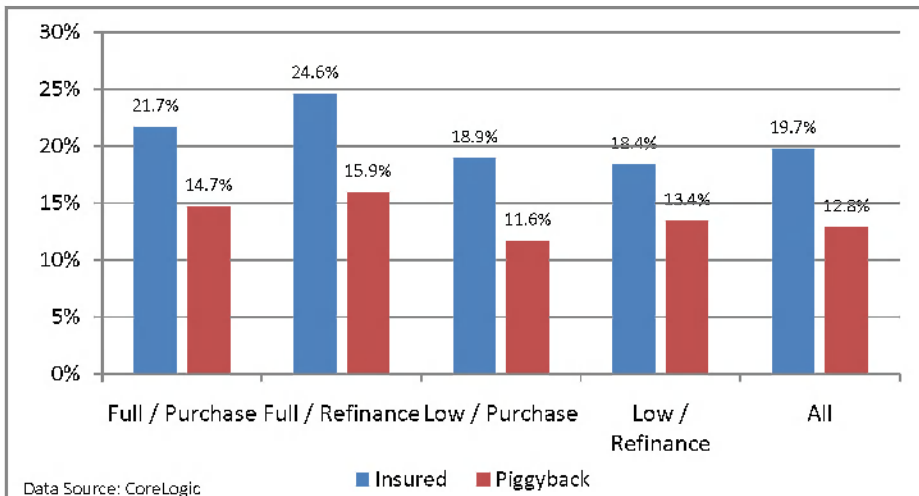
Data Source: CoreLogic

Insured / Piggyback values by segment:
- Full / Purchase: 21.7% / 14.7%
- Full / Refinance: 24.6% / 15.9%
- Low / Purchase: 18.9% / 11.6%
- Low / Refinance: 18.4% / 13.4%
- All: 19.7% / 12.8%

Weighted Ratios Of Insured Cure Rates To Piggybacks
Insured Cure Rate / Piggyback Cure Rate

Data Source: CoreLogic

- Full / Purchase: 146%
- Full / Refinance: 154%
- Low / Purchase: 163%
- Low / Refinance: 137%
- All: 154%
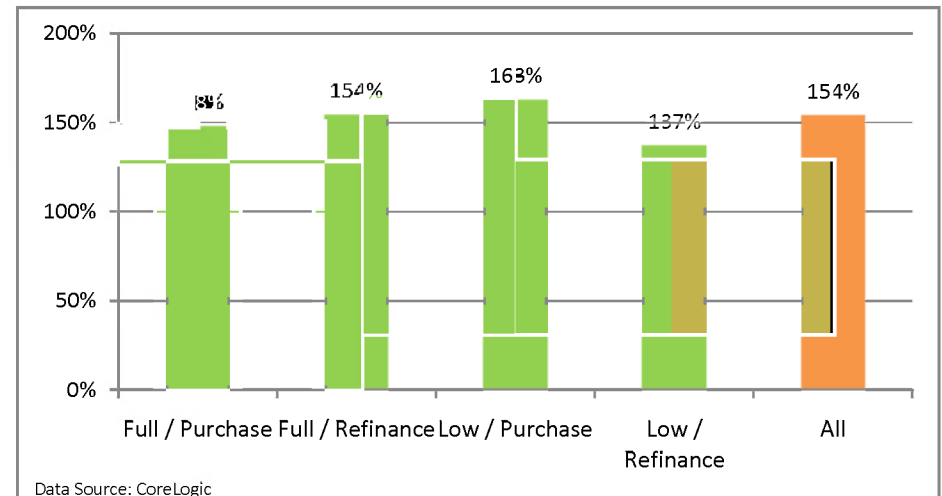
Evaluation by Documenation & Loan Purpose Shows Insured Loans Clearly Outperform Piggybacks In Each of Segment Roll Ups

Insured Loan Cure Rates Were Substantially Higher in All Of These Roll -Up Combinations

Ever 90 Day Delinquent Rates By US Census Region
Weighting Segments By Piggyback Profile
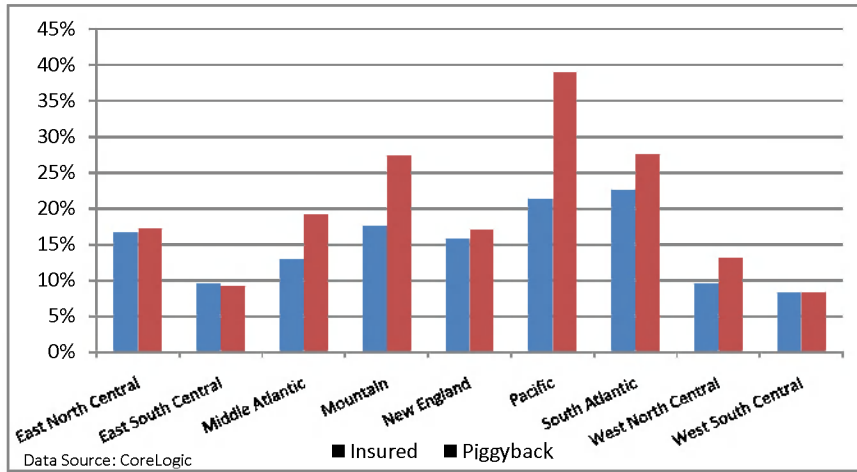
Data Source: CoreLogic

■ Insured ■ Piggyback

Weighted Ratios Of Piggyback Delq Rates To Insured Delq Rates
Piggyback ETD 90 Rate / Insured ETD 90 Rate

Data Source: CoreLogic
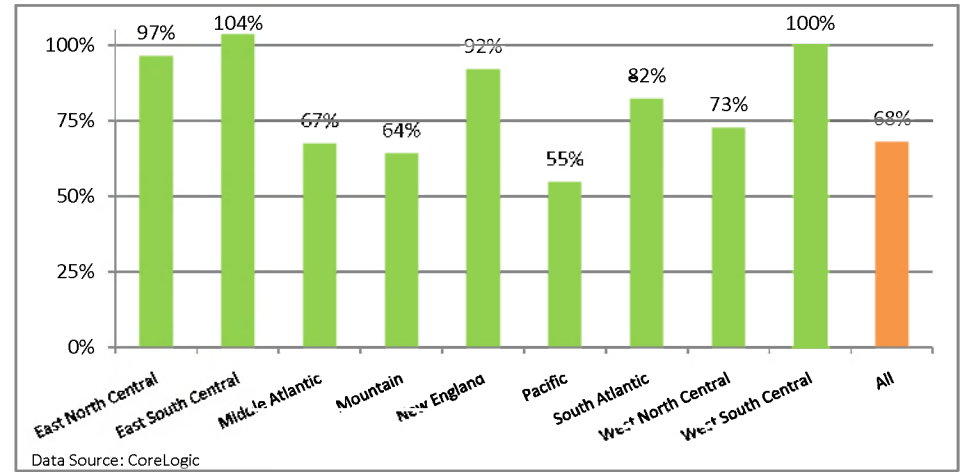
Cure Rates On Ever 90 Day Delqs By US Census Region
Weighting Segments By Piggyback Profile
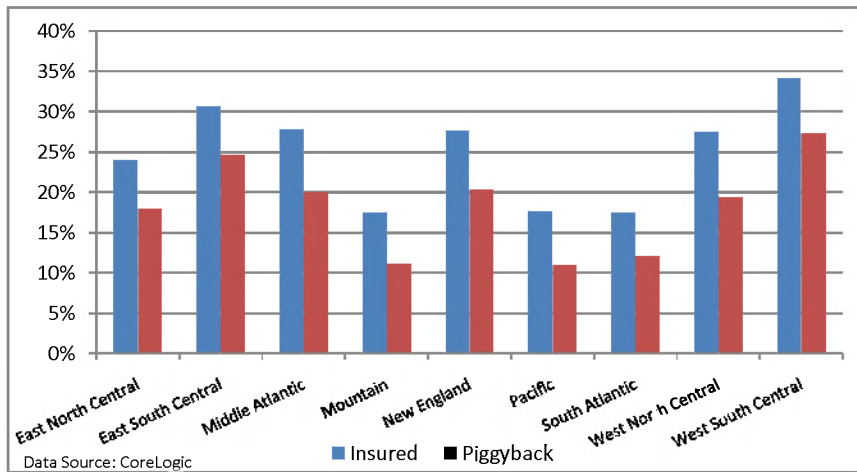
Data Source: CoreLogic

■ Insured ■ Piggyback

Weighted Ratios Of Insured Cure Rates To Piggybacks
Insured Cure Rate / Piggyback Cure Rate

Data Source: CoreLogic
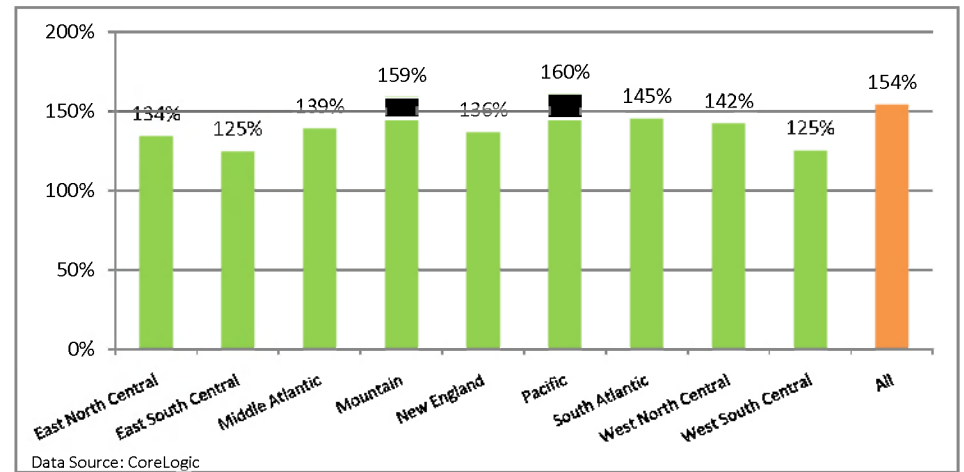
While Ever 90 Delinquent Performance Differences Were Not Uniform Across All Regions,

Such Differences Were Highest In Worse Performing Regions

Cure Rates On Insured Loans Remained Significantly Higher Across All US Census Regions

Appendix - Differences In Distributions Across Key Metrics

Distribution By CLTV

PiggyBacks Had Proportionately More 90 CLTV And Less 85 CLTV

Insured Had Proportionately More >95 CLTV

Distributions BY Loan Purpose & Doc Type

PiggyBacks Had A Higher Percentage Of Purchase Loans
(74.9% vs 67.9% for Insured)
But Also A Higher Percentage Of Low or NO Documentation
(66.7% Vs 28.6% for Insured)

Distributions By FICO Range

Piggyback Loans Had Higher Average FICO Scores

Distributions By US Census Region

Piggybacks Highly Concentrated In Pacific Region

Insured Loan Distributions By CLTV BY Origination Year

Insured Loans Maintained Relatively Higher Risk Profile Throughout

Pricing For Risk By LTV Range Remained Constant

Piggyback Loan Distributions By CLTV By Origination Year

Piggybacks In Earlier Years Had Lower Risk CLTV Profile

Increasingly Riskier Profile Through 2007

Qualified Insured Loan Performance

NON-PERFORMING RATES∗

Data Source: CoreLogic
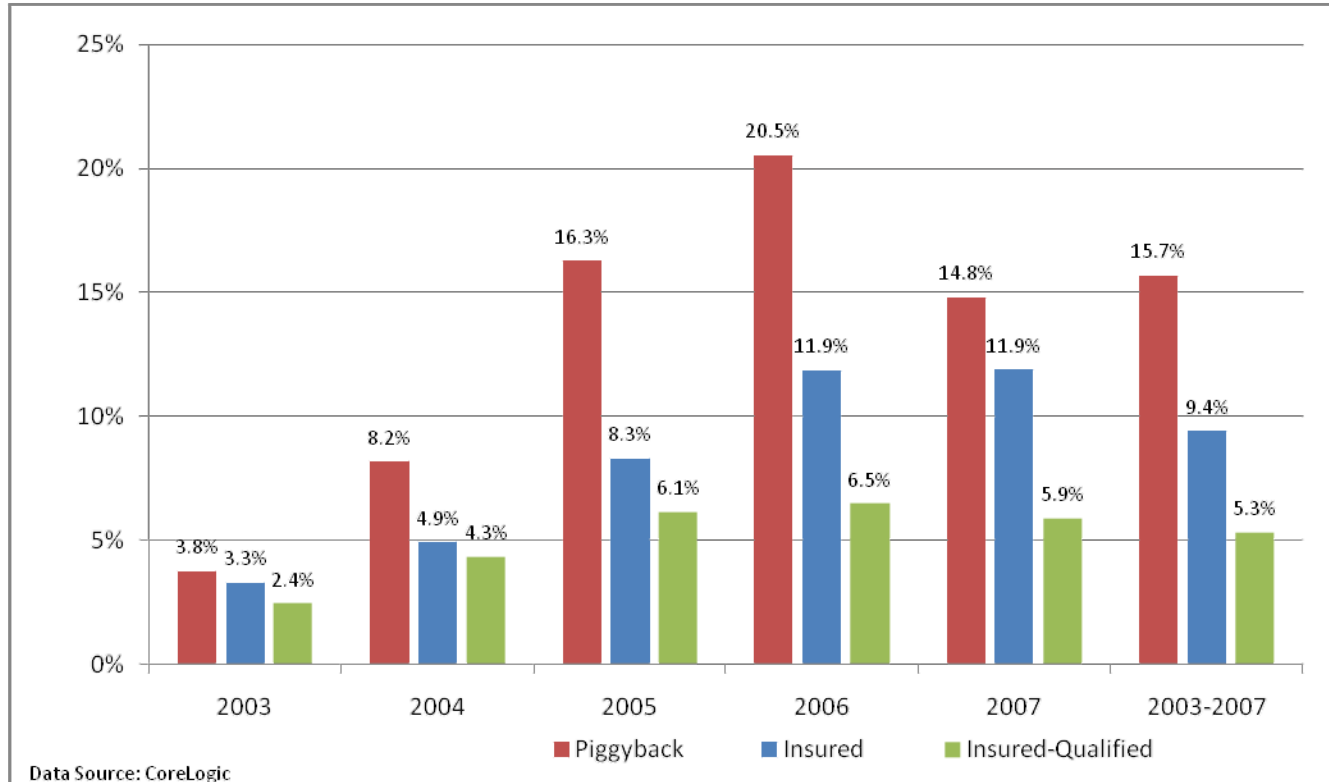
"Qualified" Insured Loans Have Performed Well Through the Downturn

* Non-Performing Rate: (# Loans Currently 90 or more days delinquent + loans that terminated in default) / original number of loans

Exhibit C

Promontory Study – *Assessing the Delinquency and Default Risk of Insured and Non-Insured High LTV Mortgages, July 15, 2011*

Assessing the Delinquency and Default Risk of Insured and Non-Insured High LTV Mortgages

July 15, 2011

i

Table of Contents

Executive Summary

During the recent housing bubble, many borrowers who lacked a 20% down payment used second mortgages (so-called piggyback loans) as a way of avoiding private mortgage insurance on a first lien with a higher than 80% loan-to-value ratio. In a typical "piggyback" transaction, a borrower would take out a first mortgage for 80% of the home's value, a second for 10%, and make a 10% down payment.

First mortgages with a piggyback second were the most prevalent alternative to the use of mortgage insurance over the past decade. At the request of Genworth Financial, Promontory Financial Group conducted an independent study to assess the relative default performance of piggyback and insured loans. For this study, Promontory analyzed the loan-level details on a sample of 5.6 million mortgages originated from 2003 to 2007. The dataset, provided by First American CoreLogic, included several borrower and loan-level characteristics. Serious delinquency was evaluated using a definition corresponding to a loan having ever been 90 or more days past due (or worse) at any given time.

Using this measure, 29.09% of the non-insured, piggyback loans were ever delinquent, compared to 19.44% of insured loans. For the 2007 origination year, the rates were 34.80% and 27.75%, respectively. For each of the provided loan-level variables, insured loans were found to have lower ever delinquent rates. For example, insured loans with a combined LTV of 95 to 100% had a delinquency rate of 21.97%, compared to 33.47% for non-insured, piggyback loans. Similarly, insured loans with FICO scores below 620 had a delinquency rate of 34.56%, well below the 50.05% rate for non-insured loans. Low-doc insured loans had a delinquency rate of 24.70%, compared to 33.67% for non-insured loans.

Because the rich dataset included loan-level, monthly performance indicators, it was possible to study not only the presence of delinquency, but the timing as well. Using a widely known statistical technique known as survival analysis, Promontory assessed the relative performance of insured and non-insured, piggyback loans over time, while simultaneously controlling for loan characteristics that are indicators of the risk of delinquency, including documentation level, loan purpose, owner-occupied status, combined LTV, and FICO score. In its analysis, Promontory also included several time-varying factors including local unemployment rates, market interest rates, and home price indices, all of which helped to significantly explain borrower propensities to default. After controlling for this wide variety of factors, Promontory still found that MI was associated with lower default rates for both fixed rate and adjustable rate first mortgages. Overall, across both fixed and adjustable rate loans, the proportion of non-insured loans surviving to 72 months was .798, compared to .833 for insured loans. Significantly, this difference implies that the baseline cumulative default rate of non-insured loans is 20.98% percent higher than that of insured loans.

Promontory's approach can quantify the extent to which MI serves as a proxy for unobserved aspects of the mortgage underwriting process, which when implemented serve to lower default risk for observed combinations of borrower and loan characteristics. However, the survival analysis regression methodology does not measure the impact that MI-related underwriting may have on adjusting the factors which are controlled for in the study, such as LTV. Any impact that MI may have on mitigating the risk associated with such factors is likely to be embedded in the model covariates, and would not be reflected in the estimated baseline performance differences between insured and non-insured loans.

Questions or comments relating to this study should be directed to C. Erik Larson, PhD, Director, Promontory Financial Group, email: elarson@promontory.com, phone: 202-384-1200.

1. Introduction

This study presents the results obtained by Promontory Financial Group in its review and assessment of the performance of mortgage loans originated with a second "piggyback" lien compared to first-lien MI-insured mortgage loans originated in the years 2003 to 2007.

Section 1 begins by illustrating the performance differences though descriptive tabular analysis of severe (ever 90 days-past-due) delinquency rates and through graphical comparison of vintage cumulative delinquency curves. A conclusion from the tabular and vintage curve analysis is that it will be important to control simultaneously for a potentially large number of risk factors, and to do so in a way that is sensitive to the time-varying impact that such factors may have over the life of the mortgage. An appropriate framework by which to control for such effects in a time-sensitive manner will require a relatively sophisticated modeling approach, that of statistical survival analysis.

Section 2 discusses the need to employ survival analysis in order to control for the presence of "censored" observations in the mortgage data. In the present context, censored observations correspond to the measured time-to-default of those accounts which have not defaulted and remain open at the end of a study period. For a censored observation, it is only known that the actual time to default or payoff will exceed the observed value. Since longer-lived accounts are more likely to be censored, analysis based solely on non-censored observations is likely to result in biased statistical estimates. Note that there are two "events" which may end a mortgage account lifetime: the first is default; the second is payoff. Since either of these two events may impact the probability of observing the other, we consider a "competing risks" survival analysis, though we continue to focus on the risk of extreme delinquency (i.e., default).

Section 3 presents the results from estimation from both simple and extended versions of MI-stratified Cox proportional hazards models, estimated by mortgage interest rate type (fixed rate and adjustable rate). Risk factor parameter estimates are generally in line with expectations as to sign. We also compare the implied baseline survival curves from the estimated models to smoothed Kaplan-Meier estimates of the empirical survival function. Our modeling approach allows us to produce separate baseline survival estimates for insured and non-insured (with piggyback) mortgages. These baseline curves have been controlled for the impact of risk factors on performance in a way that cannot accomplished by simple tabular or graphical analysis of empirical data. Overall, our analysis is supporting of the assertion that the historical performance of first lien MI-insured loans has been associated with lower rates of extreme delinquency or default, when compared to non-insured first lien loans accompanied by a piggyback second lien, and when controlling for various risk factors.

Section 4 concludes.

2. Mortgage Performance Data

The data obtained by Promontory for this study contain performance information for 5,676,428 individual residential mortgages. The data were provided by Genworth Financial in 2011, who obtained them from First American CoreLogic's servicing database.

1

There are a number of reasons why the loans in the Genworth-provided dataset might not mirror those in the population as a whole.

- First, and most importantly, both the current and original Genworth study focus exclusively on loans with <20% down payment (>80% Loan-to-Value), which is only a portion of the first-lien origination market. Loans with LTV in excess of 80% represent approximately 20% of the overall market.
- Second, the CoreLogic database does not cover 100% of the loan market, as not all servicers are CoreLogic customers. Their coverage over the study period is over 60% of loans originated. This fact reduces both the number of piggyback and insured loans in the Genworth dataset, relative to the population. However, the missing servicers during the study period were mainly large diversified national-level players, and there is no reason to think that their omission should have a systematic selectivity bias on the representativeness of mortgage types in our dataset.
- Third, CLTV is not reported on 100% of loans in the CoreLogic dataset. Genworth's definition of a "loan with a piggyback" is a first lien loan with LTV=80 and with reported CLTV >80. This definition serves to reduce the number of piggybacks potentially included in the study, while not reducing insured loans.
- Finally, certain exclusions had already been applied to the dataset before Promontory received it. These included excluding records with missing FICO at origination.

To limit and ensure the comparability of our analysis, Promontory further excluded loans with:

- Missing region;
- Combined loan-to-value (CLTV) greater than 105%;
- Categorization of 'Non Insured, Sold'; and
- A mismatch between the origination date in the dataset and the origination date as calculated from the performance history.

Of the records provided by Genworth, 5,492,097 were used in the benchmarking and vintage curve analysis described below.

a. Descriptive Statistics

This section presents summary tabular analyses illustrating how insured vs. non-insured (with piggyback) mortgage performance differs with various risk factors that are typically thought to be indicative of borrower or product risk.

Promontory used the performance definition of "ever 90 days past due or worse" (including foreclosure and "real estate owned"), a loan-level variable calculated by Genworth and provided on the analysis dataset. This variable is a measure of severe delinquency and is closely related to the definition of default used by most servicers.

Table 1 presents the lifetime cumulative delinquency rates corresponding to our performance definition (ever 90 days past due or worse). In all years except for 2003, the calculated piggyback delinquency rates are higher than the insured delinquency rates. The overall bad rate on the analysis dataset was 19.44% for insured loans and 29.09% for piggyback loans.

Table 1: Delinquency Rates by Origination Year

Origination Year	2003	2004	2005	2006	2007	2003-2007
Insured	12.10%	16.15%	20.49%	24.34%	27.75%	19.44%
Non-Insured with Piggback	9.40%	16.18%	27.47%	36.73%	34.80%	29.09%

Table 2 illustrates how delinquency rates increase with Combined Loan-to-Value (CLTV). For the insured mortgages, the CLTV value is the same as the LTV of the first lien; for non-insured mortgages, the CLTV represents the combined LTV of both the first and second (piggyback) liens.

Table 2: Delinquency Rates by CLTV

Combined LTV at Origination	80-85	85-90	90-95	95-100
Insured	16.14%	17.29%	17.57%	21.97%
Non-Insured with Piggback	30.90%	29.77%	21.80%	33.47%

As expected, increasing FICO scores are associated with lower delinquency rates, with piggyback loans having higher delinquency rates in all FICO score bands, as documented in Table 3.

Table 3: Delinquency Rates by FICO Score

Origination FICO	350-619	620-659	660-699	700-719	720-739	740-759	760+
Insured	34.56%	24.29%	18.53%	15.25%	12.47%	9.90%	7.04%
Non-Insured with Piggback	50.05%	46.35%	37.34%	32.83%	28.11%	22.74%	15.77%

Table 4 shows little difference in severe delinquency rates between purchase and refinance purposes for insured loans, while non-insured (with piggyback) loans supporting refinance are significantly riskier than loans supporting a new purchase. These patterns run against the traditional thinking that a loan supporting a new purchase is riskier than one supporting a refinance; however one may need to control for other factors to see the expected relationship in these data.

3

Table 4: Delinquency by Loan Purpose

Loan Purpose	Purchase	Refinance
Insured	19.76%	18.66%
Non-Insured with Piggyback	26.42%	38.00%

Table 5 illustrates that low documentation loans are more risky than full-documentation loans for both insured and non-insured loans.

Table 5: Delinquency by Documentation Level

Documentation Level	Full	Low
Insured	17.56%	24.70%
Non-Insured with Piggyback	21.07%	33.67%

And finally, Table 6 illustrates the dramatically lower delinquency rates for adjustable rate mortgages that are insured, compared to those that are non-insured. The difference is much smaller for fixed rate loans.

Table 6: Delinquency by Rate Type

Rate Type	Fixed Rate	Adjustable Rate
Insured	19.33%	22.45%
Non-Insured with Piggyback	20.15%	41.96%

b. Vintage Curves

Vintage curves provide powerful summaries of the performance of insured and piggyback loans. To construct our vintage curves, we plot the cumulative monthly severe delinquency rate over time for loans originated in a given year. For each vintage, we present curves for sub-segments of insured and piggyback loans. We segment using origination FICO (<=620 is SubPrime, >620 Prime) and CLTV (less than or equal to 90% and greater than 90%). The early vintages (2003 through 2005) have 72 months of performance. Vintages 2006 and 2007 have 60 and 48 months of performance, respectively. As shown in Figures 1 and 2, below, for the 2007 vintage, piggyback loans have significantly accelerated and higher lifetime cumulative delinquency.   Appendix A presents additional curves.

4

Figure 1
Cumulative Bad Rates for 2007 Vintage and CLTV LE90

Insured-Prime (mean: 0.2632 se: 0.0008)
Insured-Subprime (mean: 0.3781 se: 0.003)
Piggyback-Prime (mean: 0.3324 se: 0.0015)
Piggyback-Subprime (mean: 0.5138 se: 0.0276)

Cumulative Bad Rate
Months Since Origination
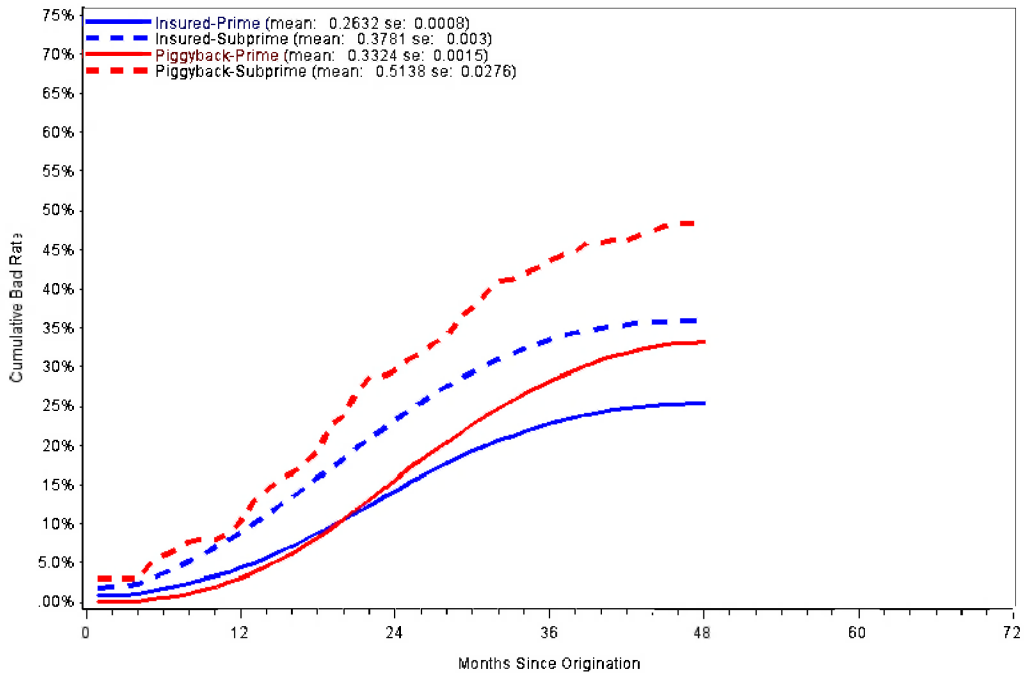
Figure 2
Cumulative Bad Rates for 2007 Vintage and CLTV GT90

Insured-Prime (mean: 0.2589 se: 0.0006)
Insured-Subprime (mean: 0.4295 se: 0.0014)
Piggyback-Prime (mean: 0.3567 se: 0.0013)
Piggyback-Subprime (mean: 0.566 se: 0.0116)

Cumulative Bad Rate
Months Since Origination

5
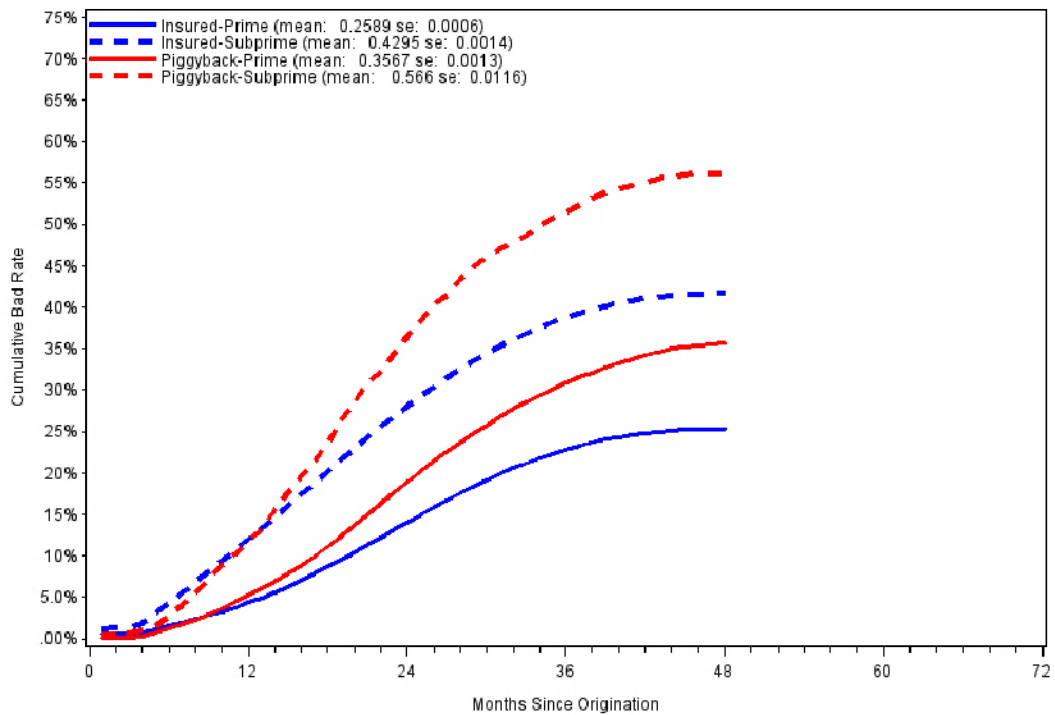
The tabular analysis and the vintage curve analysis are both strongly suggestive of differing performance characteristics for insured and non-insured (with piggyback) mortgages. However, it is undoubtedly the case that other risk factors, whose level and impact may differ for insured and non-insured (with piggyback) groups, should be controlled for before any conclusions are drawn or stylized facts established.

For instance, while the vintage curves generally illustrate that non-insured loans with piggyback seconds may have cumulative long-term delinquency rates that are higher than their insured counterparts, the vintage curves do at times cross, with insured loan cumulative severe delinquency rates often being greater during the first 12, and in some instances, first 48 months. This occurs even with vintage curves that attempt to control – albeit weakly -- for factors such as origination FICO and CLTV.   One potential explanation for this reversal in risk is that differences in payments between the two mortgage types may significantly impact the observed delinquency.   In our dataset, and in the population, insured mortgages overwhelmingly have fixed-rate payment structures, while non-insured (with piggyback) mortgages are almost evenly split between fixed- rate and adjustable-rate payment structures. Since initial rate levels of adjustable-rates loans are usually significantly below those carrying a fixed-rate, and because they remain so for months or years before any ARM reset, the initial payments for the fixed rate loans are likely to be significantly higher than the adjustable rate loans. Consequently, it would not be surprising if the higher initial payments of fixed rate mortgages (controlling for CLTV) were associated with an initial higher risk of delinquency for insured, predominantly fixed rate, mortgages.

An obvious takeaway is that it will be important to control simultaneously for a potentially large number of risk factors, and to do so in a way that is sensitive to the time varying impact that such factors may have over the life of the mortgage. Our dataset will allow us to control for such effects, but an appropriate framework in though which to control for such effects in a time-sensitive manner will require a relatively sophisticated modeling approach.

3. Survival Models and Analysis

The statistical methods of survival analysis (also called life-table analysis or failure-time analysis) have been developed to analyze the time-to-occurrence of an event as well as the fact of its occurrence. For example, survival analysis has been employed to study the time-to-failure of machine components, time-to-death of patients in a clinical trial, and the duration of unemployment spells of workers.

Introductions to the statistical literature on survival analysis may be found in texts by Kalbfleisch and Prentice (1980), Lawless (1982) and Cox and Oakes (1984). Here, we use survival analysis to model the "lifetimes" of mortgages. Note that there are two "events" which may end a mortgage account lifetime: the first is default, which we have been studying above; the second is payoff.   Since either of these two events may impact the probability of observing the other, we consider a "competing risks" survival analysis.

A common feature of survival data is the presence of censored observations. In the present context, censored observations correspond to the measured time-to-default of those accounts which have not defaulted and remain open at the end of a study period. For a censored observation, it is only known that the actual time to default or payoff will exceed the observed value. The study of survival data

6

typically employs information from both censored and non-censored observations. Since longer-lived accounts are more likely to be censored, survival analysis based solely on non-censored observations is likely to result in biased statistical estimates. Indeed, simple regression analysis of account bad-rates which fails to take account for the impact of censoring is likely to produce biased estimates of the explanatory variables if the censoring is not random or if the mixture of effects is not distributed randomly across censored and uncensored accounts.

a. Survival and Related Functions

Suppose the population under study consists of mortgage lifetimes for N relatively homogeneous accounts. Each lifetime in the population can be represented by a random variable, T_i, where i=1,...,N. If n account lifetimes are to be randomly sampled from the target population, each account will have a potential censoring time (or censoring age) a_i (i=1,...,n). The potential censoring time is determined using the opening date for the account and the closing date for the period during which observations are collected. The sample data consists of n pairs (c_i, s_i), where $s_i = min(T_i, a_i)$ is the observed lifetime of account i, and c_i is an indicator variable taking the values $c_i = 1$ if $T_i < a_i$ (s_i is an uncensored observation) and $c_i = 0$ if $T_i > a_i$ (s_i is a censored observation).

For the moment, ignore the possibility of censoring. Distributional characteristics of a population of random account lifetimes T_i are summarized by a distribution function, F(t), and survival function, S(t), here defined as

$$F(t) = 1 - S(t) = Probability(T_i < t).$$

F(t) and S(t) are both defined for $0 < t < \infty$. Using statistical survival analysis, one can use sample data to make reliable inferences about these population functions.

Note that F(t) reports the proportion of accounts in the population with lifetimes less than t, while S(t), reports the proportion of accounts with lifetimes greater than or equal to t. Also, as t increases from zero, F(t) monotonically increases from zero toward one, while S(t) monotonically decreases from one toward zero.

Closely related to the distribution function, F(t), is the density function, f(t). When t is measured in continuous units, f(t) is defined by

$$f(t) = dF(t)/dt.$$

The density function can be thought of as the instantaneous probability of the account lifetime ending at t.

The hazard function or age-specific failure rate function, h(t), is related to the distribution, survival and density functions. The hazard function is defined by

$$h(t) = f(t)/S(t).$$

The hazard, h(t), may be interpreted as the "instantaneous" conditional probability that an account will close at age t, given that it has remained open to at least age t. Hazard functions are particularly useful in the analysis of account lifetimes, since they specify the risk of immediate closure of an open account

7

at age t. The choice of an appropriate statistical model for account lifetimes is aided by the careful study of empirical hazard functions constructed from sample data.

The distribution, survival, density and hazard functions are mathematically equivalent representations of the distributional characteristics of a population of account lifetimes, since each one of them can be derived given any of the others.

b. Cox Proportional Hazard Models

As part of this study, Promontory estimated a Cox Proportional Hazard (PH) Model to investigate and quantify the relative performance of piggyback and insured loans while controlling for loan-level factors that are commonly thought to be important in describing loan performance. The Cox Proportional Hazard Model is originally due to David Cox (1972). The model has been extended significantly by others (see Therneau and Grambsch (2000)), and has received widespread empirical application. The model is usually written as

$$h_i (t) = \lambda_0(t)\ Exp(\beta_1 X_{i1t} + \beta_2 X_{i2t} + ... + \beta_k X_{ikt}).$$

This model specifies that the hazard rate for individual "i" at time "t" is made up from the product of two components: a non-negative "baseline" hazard function $\lambda_0(t)$, and an individual-specific proportionality factor $Exp(\beta_1 X_{i1t} + \beta_2 X_{i2t} + ... + \beta_k X_{ikt})$, where $X_{i1t}, X_{i2t}, .. ., X_{ikt}$ are the values of the observed , possibly time-varying, covariates (hence the indexing of the individual covariates by t.[1]) The corresponding covariate coefficients, $\beta_1, \beta_2, ... \beta_k$, are unknown parameters which have to be estimated from the data.

Taking natural logs, the model is also written as:

$$log\ h_i (t) = \alpha_0(t) + \beta_1 X_{i1t} + \beta_2 X_{i2t} + ... + \beta_k X_{ikt,}$$

The Proportional Hazards Model gets its name from the fact that the ratio of hazards for any two individuals is given by the ratio or their proportionality factors. However, there is sometimes a reason to believe that the proportionality assumption underlying the Cox specification might not be warranted, and that it is appropriate to consider extensions of the model for non-proportional hazards. One such extension is through "stratification."

In a stratified model, there is a presumption that the hazards of two (or more) groups of individuals may be written as

$$log\ h_i (t) = \alpha_1(t) + \beta_1 X_{i1t} + \beta_2 X_{i2t} + ... + \beta_k X_{ikt,}\text{ for individuals i that are members of group 1, and}$$

$$log\ h_j (t) = \alpha_2(t) + \beta_1 X_{j1t} + \beta_2 X_{j2t} + ... + \beta_k X_{jkt,}\text{ for individuals j that are members of group 2.}$$

These two specifications can be combined into a single specification for both groups by writing

$$log\ h_i (t) = \alpha_c(t) + \beta_1 X_{i1t} + \beta_2 X_{i2t} + ... + \beta_k X_{ikt,}\text{ where } \alpha_c(t) = \alpha_1(t)D_{i1} + \alpha_2(t)D_{i2}$$

---

[1] In order to incorporate time-varying covariates, we utilize a representation of the survival model as a counting process; see Hosmer and Lemeshow (1999), Appendix 2.

where D_{i1} and D_{i2} are zero-one indicator functions identifying an individual's membership in group 1 or 2.

In order to estimate the Cox PH model, methods of partial likelihood maximization are employed (which allows one to avoid specifying the baseline hazard function.)[2] In the case of a stratified model, partial likelihood estimation requires a slightly more complex estimation procedure. Separate partial likelihoods functions are first constructed for each stratification group; these functions are then multiplied together to form an aggregate partial likelihood model that is maximized though numerical estimation of the coefficient vector β.

4. Estimation

a. The Survival Analysis Modeling Dataset

Due to the size of the Genworth dataset and the computational demands in terms of memory and time required to estimate the partial likelihood algorithms for the alternative survival models, particularly in the presence of time-varying covariates , Promontory did not find it feasible to estimate the stratified proportional hazard models with the full dataset that had been provided by Genworth. Instead, we have utilized a 10% randomly selected subsample for use as a modeling dataset.[3] This dataset is still very large, containing 538,500 mortgage lifetimes. Summary information is given in the following table.

Table 7: Counts and Dispositions of Observations in the Modeling Dataset

Rate Type	Type	Default	Paid Off	Paying	Total by Rate Type
All Rate Types	Insured	83,641	144,807	203,240	538,500
	Non-insured w/ Piggyback	31,198	33,323	42,291	
Fixed Rate	Insured	73,764	126,260	188,923	452,026
	Non-insured w/ Piggyback	12,774	21,275	29,030	
Adjustable Rate	Insured	9,877	18,547	14,317	86,474
	Non-insured w/ Piggyback	18,424	12,048	13,261	

Appendix B contains additional summary information on loans characteristics in the modeling dataset.

b. Results

Estimation of Nonparametric (Empirical) Survival Curves
Rather than proceeding directly to the estimation of a stratified proportional hazards model, it will be useful to first consider the empirical survival distribution curves for default that are implied by the sample data. To this end, we have constructed smoothed estimates of the empirical survival function using the method of Kaplan and Meier (1958.) Figures 3 and 4 show the empirical, or non-parametric, estimated default survival curves for insured and non-insured (with piggyback) mortgage loans, computed for subsamples defined by whether the loans were of fixed rate or adjustable rate type.

---

[2] Estimation of Cox Proportional Hazards and other survival models is discussed in Kiefer (1988).

[3] Promontory has obtained similar results with alternative randomly selected samples of a similar size.

These curves, as do all the estimates presented in this section, focus exclusively on the risk of default, and treat the competing risk of payoff as a censoring event. This approach is a conventional and meaningful way to present results for a risk of interest (here, default) when competing risks are present.

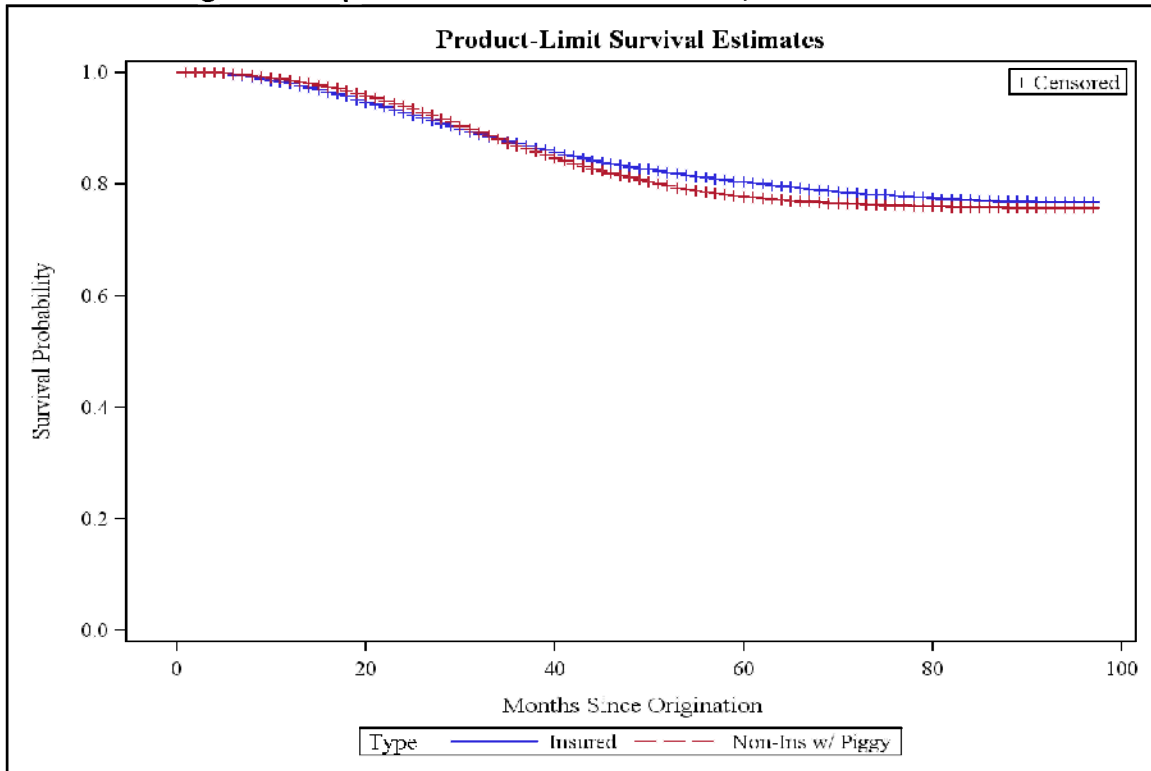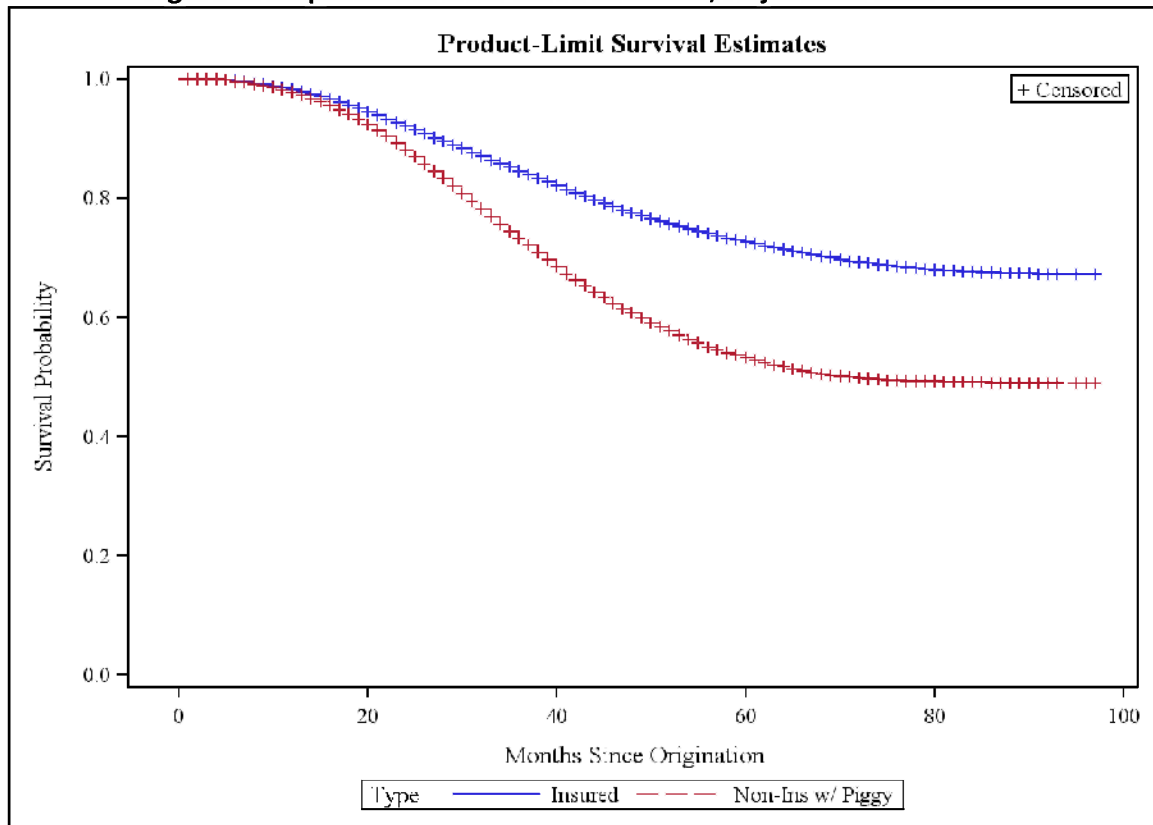**Figure 3. Empirical Survival Curve Estimate, Fixed Rate Loans**

Figure 4. Empirical Survival Curve Estimate, Adjustable Rate Loans

Note that even in the empirical survival curves, the long-term higher default risk associated with non-insured loans having piggyback second liens is easy to identify. This is particularly true for the adjustable rate loans, where the survival proportion for the uninsured mortgages ultimately drops well below that of the insured loans.

Estimation of a Stratified Proportional Hazards Model

We are now ready to turn to the estimation of the stratified Cox proportional hazards model. As suggested earlier, we have chosen to specify a model in which we include additional covariates and in which we estimate separate stratified models for subsets of our sample, with loans grouped by rate type. Part of the rationale for estimating different models for different rate types (fixed vs. adjustable) is that borrower behavior in response to changes in economic conditions is likely to be very different across these products. Furthermore, differences in mortgage product types or borrower underwriting practices may exist that are unobservable in our data, but which may result in different magnitudes of the estimated covariate coefficients or in different baseline hazard and survival estimates.

Covariates

The covariates in our model include several zero-one categorical (or dummy) variables. For each of these variables, a case that has one of the characteristics is coded as a one, and cases without the characteristic are coded as a zero. These variables include the following

11

- Documentation level (low or full documentation, with full documentation = 1);
- Loan purpose (purchase or refinance, with purchase = 1), and
- Occupancy status (Owner-occupied or not, with owner-occupied = 1).

The model also includes four continuous variables measured at the time of loan origination:

- Combined Loan-to-Value;
- FICO score at origination;
- Original Interest Rate, and
- Original Payment, a constructed variable equal to Original Loan Balance X Initial Interest Rate.

Finally, the model includes four time-varying covariates:
- Interest Rate Differential(t) = Original Interest Rate - Market Interest Rate(t)
- Change in Payment(t) = [Original Interest Rate - Market Interest Rate(t)] x Original Balance
- Change in Value(t) = (Original Value) x [%Change in Case-Shiller Index(t)], and
- Unemployment Rate(t)

The seasonally adjusted civilian unemployment rate and Case-Shiller Index data were matched to each loan based upon MSA/CBSA if available; otherwise a state or national level measure was used, respectively. The market interest rate data was obtained from Freddie Mac, and it was matched based upon the rate type of the loan. Fixed rate loans were matched to the monthly average of the average weekly 30-year rate; adjustable rate loans were matched to the monthly average of the average weekly 1-year rate.

Parameter Estimates

Table 8 presents estimation results for the fixed rate and adjustable rate loan group models. Recall that each estimated rate type model has been stratified across insured and non-insured mortgage classes. As a result, we have two sets of parameter estimates, with a given parameter set applying equally to both strata within a given rate group.

The estimated coefficients have signs that are consistent with expectations (recall that due to the proportional hazard specification, a positive parameter indicates that the hazard of default is increasing with the covariate value).

Table 8: Cox Stratified Proportional Hazards Model Parameter Estimates

Loan Type	Fixed Rate	Adjustable Rate
Documentation Level (1=Low)	0.37310	0.76391
Loan Purpose (1=Purchase)	-0.05802	-0.22628
Occupancy Status (1=Owner-Occupied)	-0.14402	-0.38135
Combined LTV at Origination	0.02400	0.03127
FICO Score at Origination	-0.00880	-0.00589
Original Interest Rate	0.21298	-0.12347
Original Payment (Original Int. Rate*Original Balance)	-0.00478	0.01213
Rate Differential (Original Int. Rate - Market Int. Rate)	0.15648	0.09901
Change in Payment (Original Int. Rate - Market Int. Rate)*Original Balance	0.04650	-0.00108**
Change in Value (Original Value)*(%Change in Case Shiller Index)	0.04439	0.02643
Unemployment Rate	0.16021	0.18988

*Note: **Estimate not significantly different from zero. All other estimates are significant at the 0.0001 level.*

Low documentation, non owner-occupied, high CLTV, and low FICO loans are of greater default risk than loans with the opposite characteristics. Somewhat surprisingly, loans supporting refinancing are of greater risk than loans supporting a new purchase – a result seen in the simple descriptive statistics for this period. The coefficients on the time varying covariates measuring the rate differential between original and current market rates, the change in payment and the change in value are also positive. The greater the difference between the original interest rate and the current market rate, or the greater the different between the original home value and the current implied market value (i.e., the absolute value of potential equity loss), the greater the default risk. Similarly, the higher the current level of unemployment in the MSA or state when the property is located, the higher the default risk. All these impacts are similar across both fixed rate and adjustable rate mortgage groups.

In contrast, when we consider the impact of the level of the original interest rate or the level of the original payment, the signs of the coefficient estimates are reversed between fixed and adjustable rate groups. However, the sign differences make sense: for fixed rate loans, holding original balance constant, higher original interest rates mean higher fixed payments and higher default risk. For

13

adjustable rate loans, the higher original rate probably implies that the risk of a payment shock when the original rate adjusts to market rates is lowered, along with default risk.

## Baseline Survival Curve Estimates

To illustrate the differences between insured and non-insured loans, it is useful to compare the implied baseline survivor functions for the strata corresponding to our estimated set of models[4].   Figures 4 and 5 shows the implied baseline survival curves resulting from our stratified Cox PH model; estimates reflect the survival probability at month t, evaluated at the mean value covariates across the sample population. Effectively, these baseline survival curve estimates illustrate the fundamental differences in performance between insured and non-insured loan groups, controlling simultaneously and equally for all the effects we have been able to attribute to covariates.

Figure 5. Parametric Baseline Survival Curve Estimates, Fixed Rate Loans

---
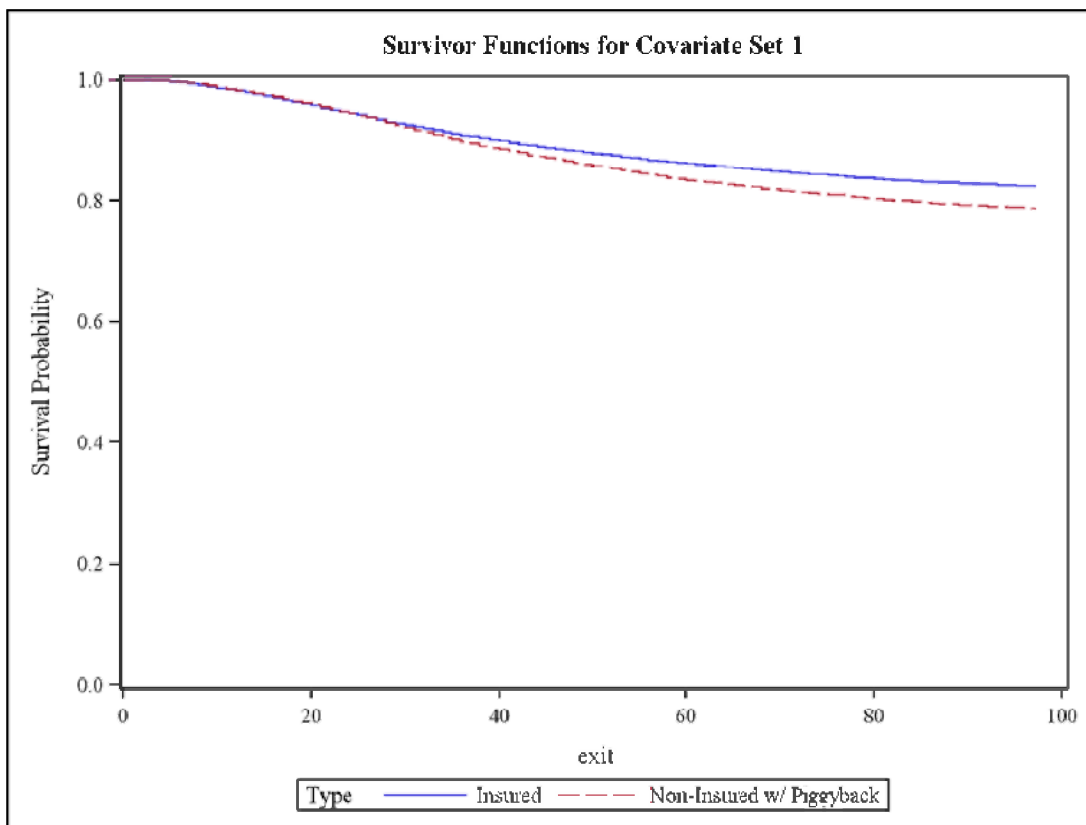
[4] The baseline hazards and survival functions are estimated as arbitrary functions of time through implementation of a restricted maximum likelihood estimation of the $\alpha_c(t)$ function, in which the covariates for explanatory variables are restricted to their previously estimated values.

Figure 6. Parametric Baseline Survival Curve Estimates, Adjustable Rate Loans
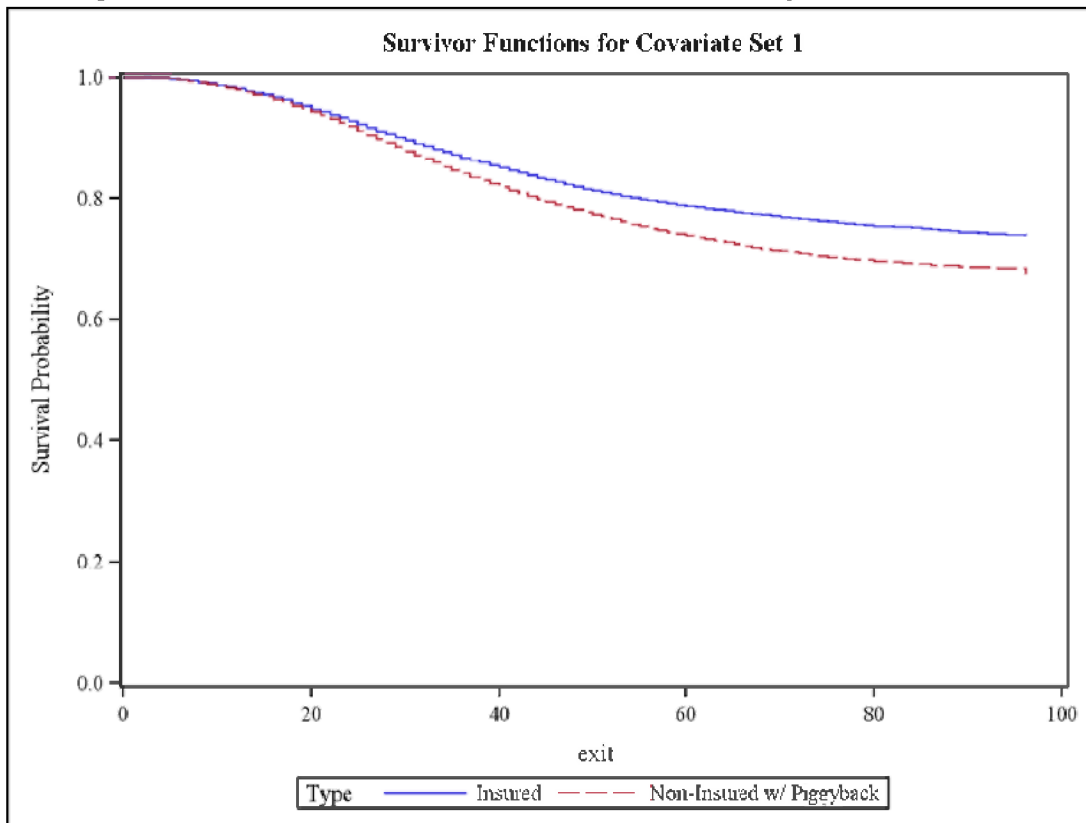
In these curves, the higher default risk associated with the non-insured (with piggyback) loans is very clear – at times even more so than in the empirical survival curves (which did not control for the effect of covariates). For both fixed rate and adjustable rate mortgages, controlling for the impact of covariates results in implied baseline (strata specific) survival curve estimates in which insured loans continue to demonstrate lower extreme delinquency and default risk than non-insured (with piggyback) loans.

Tables 9 and 10 respectively present the estimated numerical baseline survival rates and cumulative default rates, by strata, for selected months-since-origination. Overall, across both fixed and adjustable rate loans, the proportion of non-insured loans surviving to 72 months was .798, compared to .833 for insured loans. Significantly, as shown in Table 10, this difference implies that the baseline cumulative default rate of non-insured loans is 20.98% percent higher than that of insured loans.

15

Table 9. Estimated Baseline Survival Rates, S(t)

Proportion Surviving to Selected Months

Rate Type	Type	Months					
		12	24	36	48	60	72
All	Insured	0.983	0.943	0.903	0.873	0.851	0.833
	Non-Insured w/ Piggyback	0.983	0.942	0.890	0.851	0.820	0.798
	Percent Difference (Non-Insured relative to Insured)	0.04%	-0.13%	-1.44%	-2.52%	-3.65%	-4.20%
Fixed Rate	Insured	0.983	0.946	0.910	0.884	0.863	0.846
	Non-Insured w/ Piggyback	0.983	0.946	0.900	0.865	0.835	0.815
	Percent Difference (Non-Insured relative to Insured)	0.08%	0.04%	-1.13%	-2.15%	-3.22%	-3.66%
Adj. Rate	Insured	0.983	0.930	0.869	0.820	0.788	0.767
	Non-Insured w/ Piggyback	0.981	0.920	0.841	0.782	0.740	0.710
	Percent Difference (Non-Insured relative to Insured)	-0.19%	-0.99%	-3.16%	-4.62%	-6.10%	-7.32%

Table 10: Estimated Baseline Cumulative Default Rates, F(t)

Cumulative Proportion Defaulting by Selected Months

Rate Type	Type	Months					
		12	24	36	48	60	72
All	Insured	0.017	0.057	0.097	0.127	0.149	0.167
	Non-Insured w/ Piggyback	0.017	0.058	0.110	0.149	0.180	0.202
	Percent Difference (Non-Insured relative to Insured)	-2.15%	2.09%	13.47%	17.40%	20.79%	20.98%
Fixed Rate	Insured	0.017	0.054	0.090	0.116	0.137	0.154
	Non-Insured w/ Piggyback	0.017	0.054	0.100	0.135	0.165	0.185
	Percent Difference (Non-Insured relative to Insured)	-4.60%	-0.65%	11.38%	16.32%	20.23%	20.10%
Adj. Rate	Insured	0.017	0.070	0.131	0.180	0.212	0.233
	Non-Insured w/ Piggyback	0.019	0.080	0.159	0.218	0.260	0.290
	Percent Difference (Non-Insured relative to Insured)	10.78%	13.11%	20.99%	21.08%	22.66%	24.02%

c. Diagnostics: Evaluating the Proportional Hazards Assumption

The assumption of the proportional relationship between hazards and covariates that is implied by the Cox model specification should be subjected to an empirical assessment. To perform such an assessment, it is increasingly common to construct residuals along the lines proposed by Schoenfeld (1982). Instead of a single residual for each individual observation, Schoenfeld's method results in

constructing separate residuals for each covariate, for each individual loan, using only those loans that defaulted (were not censored.)

Since the Schoenfeld residuals are, in principle, independent of time, a plot that shows a non-random pattern against time is evidence of violation of the proportional hazards assumption. Appendix C provides plots of the estimated, scaled Schoenfeld Residuals against rank time. The minimal departures from a general, random zero-slope pattern vs. time provide reasonable support for the proportional hazards specification used in our analysis.

5. Conclusions

The analysis conducted by Promontory generally confirms the results presented in Genworth's 2010 study, and shows that, controlling for various factors, mortgages with piggyback second lien loans have historically experienced higher lifetime rates of severe delinquency than insured mortgages. This conclusion is supported by tabular analysis, graphical vintage curve analysis and by the results from conducting an analysis using statistical methods of survival analysis.

We present the results from estimation from both simple and extended versions of stratified Cox proportional hazards models, the latter estimated across and by US census region. Risk factor parameter estimates are generally in line with expectations as to sign, although variability in the magnitude of estimates exists across regions. We also compare the implied baseline survival curves from the estimated models to smoothed Kaplan-Meier estimates of the empirical survival function. Our modeling approach allows us to produce separate baseline survival estimates for insured and non-insured (with piggyback) mortgages. These baseline curves have been controlled for the impact of risk factors on performance in a way that cannot accomplished by simple tabular or graphical analysis of empirical data

Overall, our analysis supports the assertion that the historical performance of first lien MI-insured loans has been associated with lower rates of extreme delinquency or default, when compared to non-insured first lien loans accompanied by a piggyback second lien, and when controlling for various risk factors.

In closing, it is important to note that the stratified survival analysis regression methodology we deploy does not measure the impact that MI-related underwriting may have on adjusting the factors which are controlled for in the study, such as LTV. Any impact that MI may have on mitigating the risk associated with such factors is likely to be embedded in the model covariates, and would not be reflected in our estimated baseline performance differences between insured and non-insured loans.

The above point should serve to emphasize the importance of the multi-pronged approach that we have taken to consider the impact of MI, and should stimulate further research on this important issue.
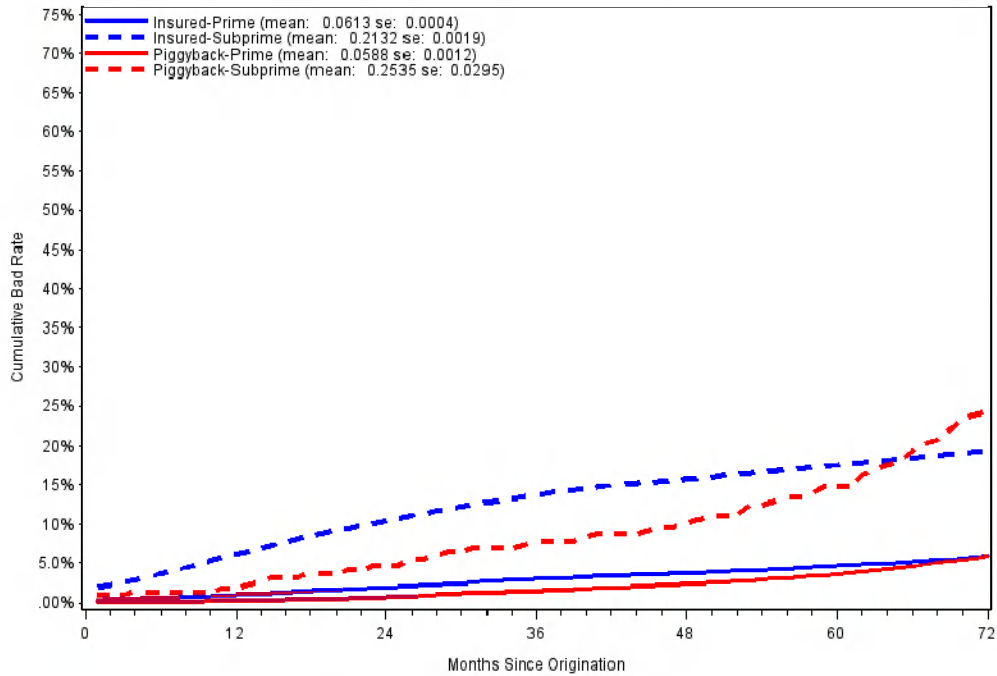
References

Cox ,D.R. (1972) "Regression Models and Life Tables." *Journal of the Royal Statistical Society*, Series B, #34. pp 187-220.

Cox, D.R., D. Oakes (1984), *Analysis of Survival Data*, London, UK: Chapman and Hall.
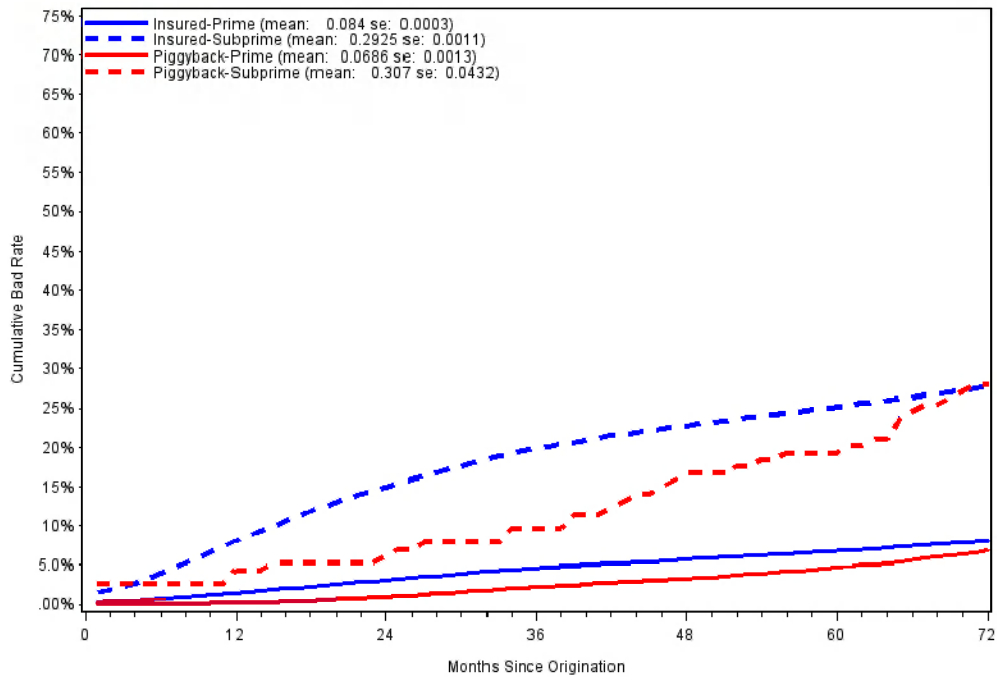
Hosmer, D.W., Jr.; Lemeshow, S. (1999) *Applied Survival Analysis: Regression Modeling of Time to Event Data*, New York, NY: John Wiley & Sons.

Kalbfleisch, J.D.; Prentice, R.L. (1980), *The Statistical Analysis of Failure Time Data*, New York, NY: John Wiley & Sons.

Kaplan, E.L. ; Meier, P. (1958) "Nonparametric Estimation from Incomplete Observations." *Journal of the American Statistical Association*, 53, pp. 457-481.

Kiefer, N.M. (1988) "Economic Duration Data and Hazard Functions." *Journal of Economic Literature*, 26, pp. 646-679.

Lawless, J.E. (1982), *Statistical Models and Methods for Lifetime Data*, New York, NY: John Wiley & Sons.

Schoenfeld, D. (1982) "Partial residuals for the proportional hazards regression model." *Biometrika,* 69, pp. 239-241.

Therneau, T. M.; Grambsch, P. M. (2000) Modeling Survival Data: Extending the Cox Model. New York: Springer-Verlag.
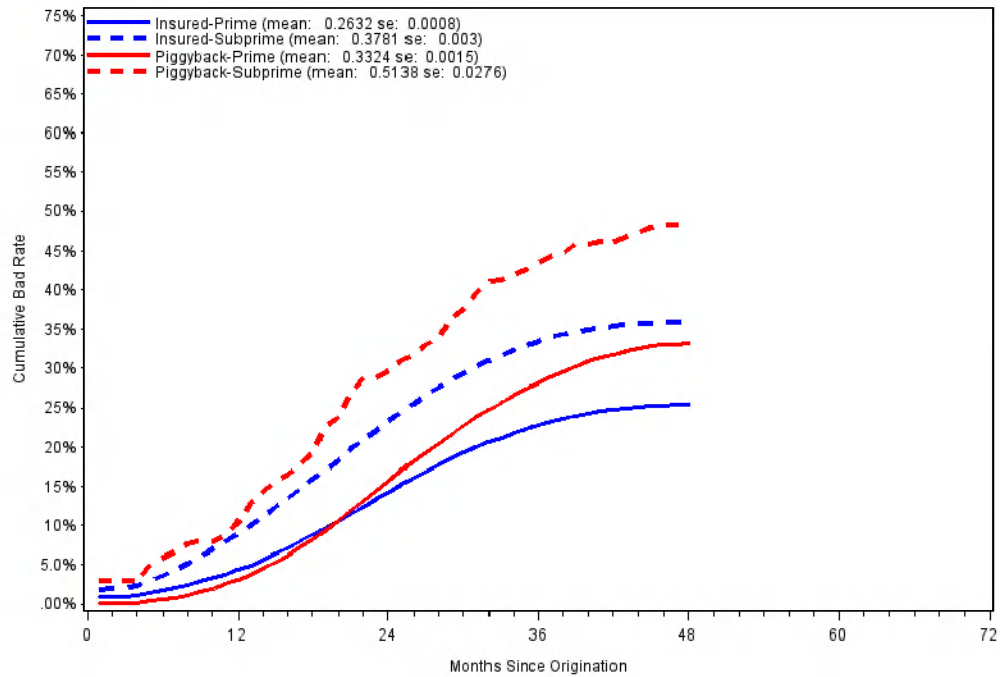
Appendix A: Vintage Curves

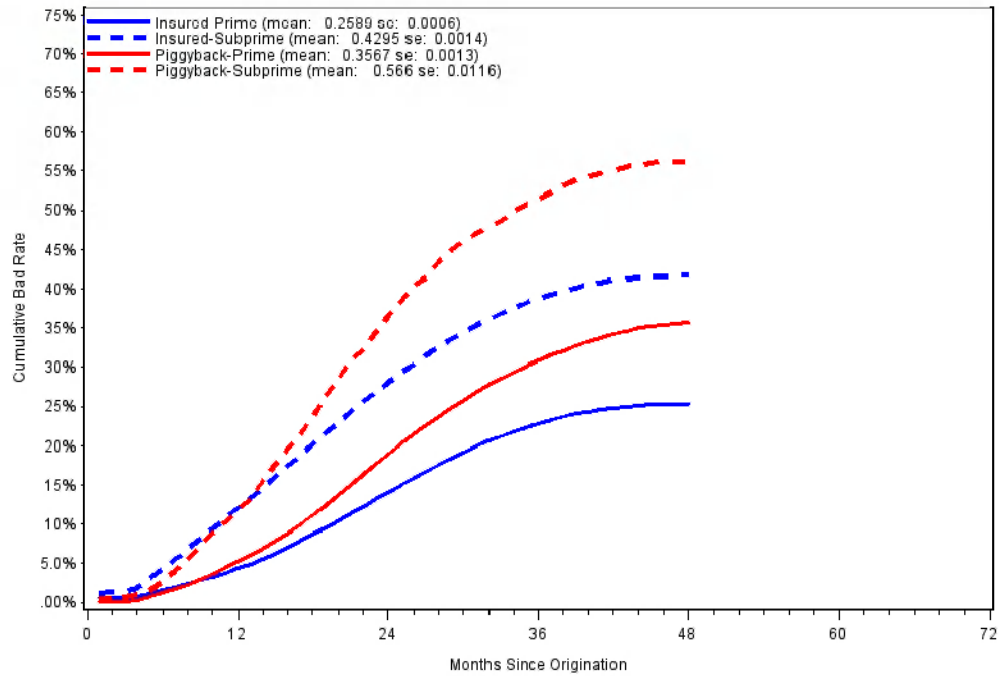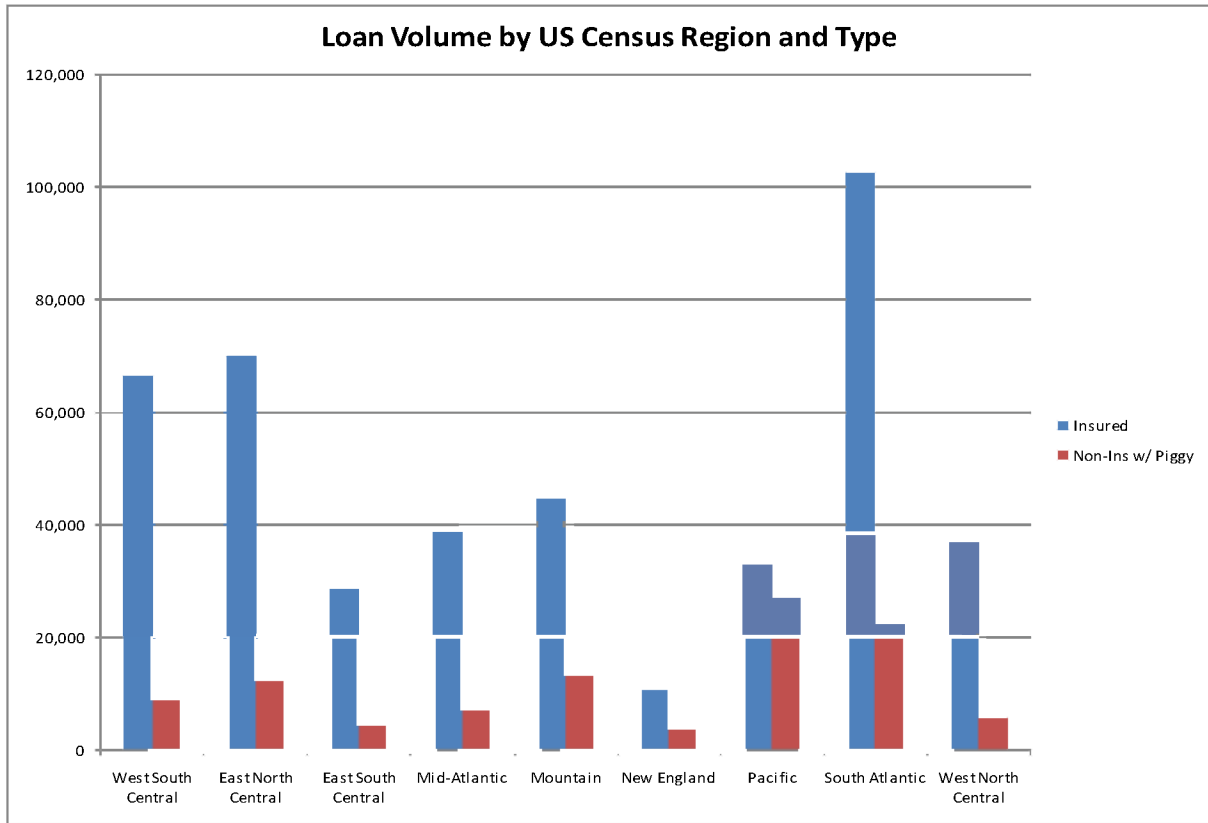### Cumulative Bad Rates for 2003 Vintage and CLTV LE90

Cumulative Bad Rates for 2003 Vintage and CLTV GT90

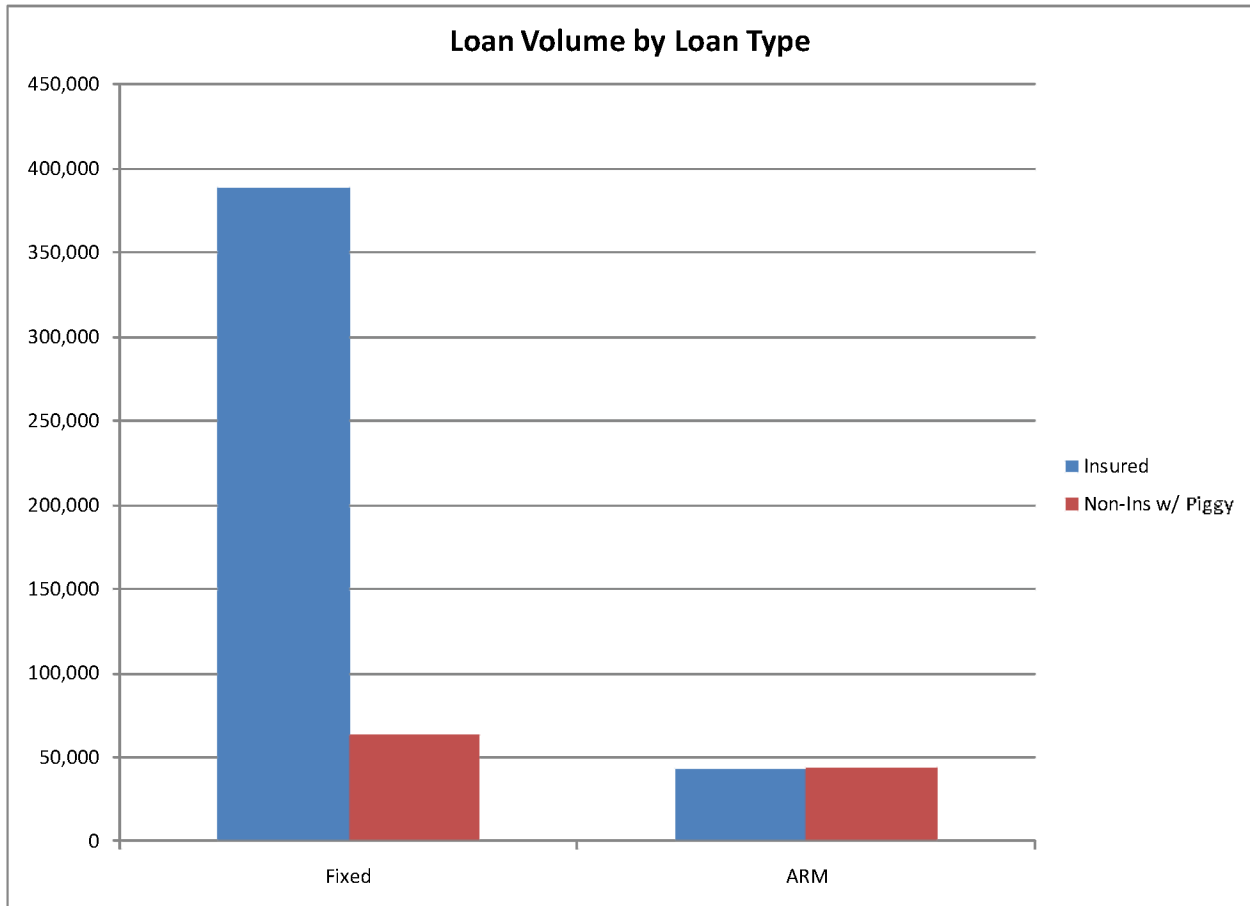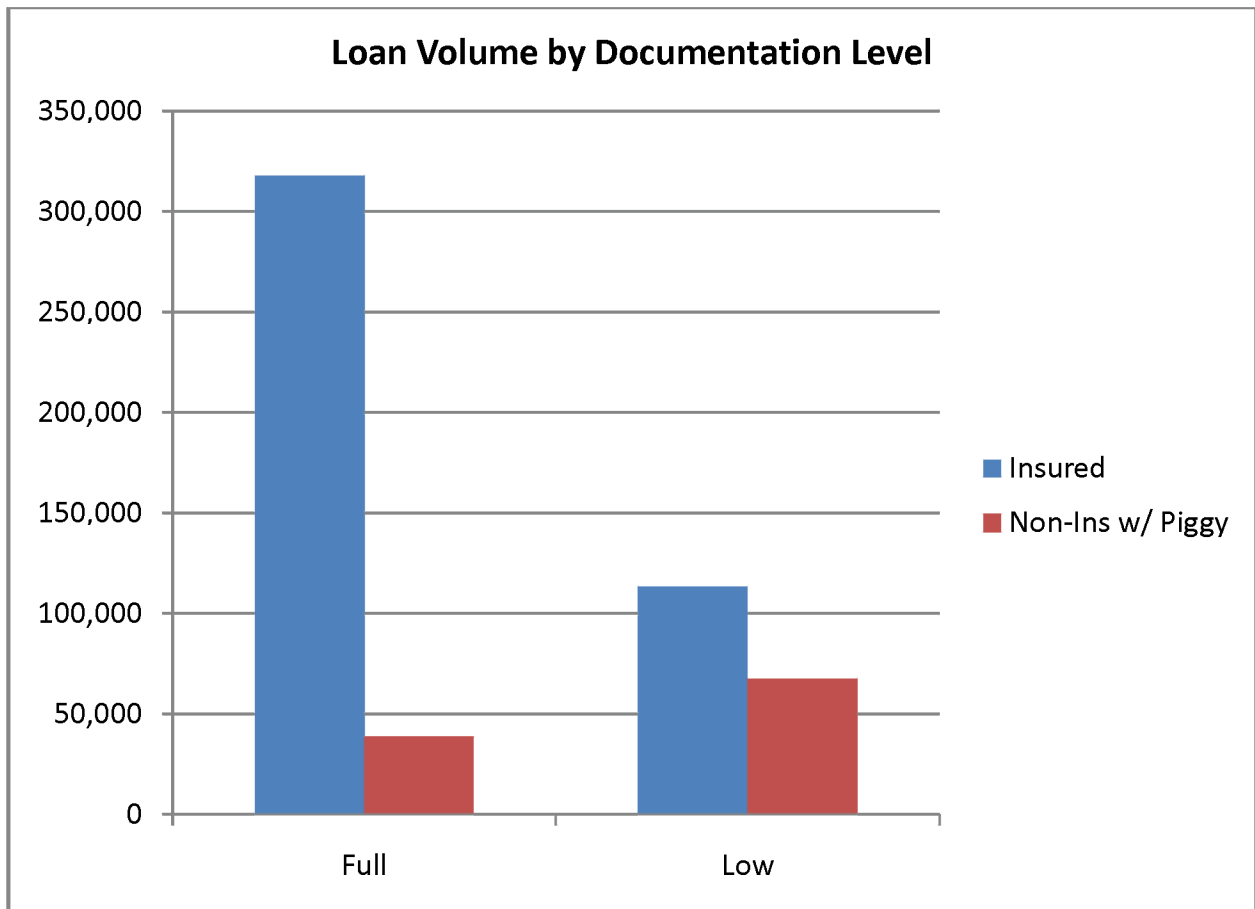Cumulative Bad Rates for 2004 Vintage and CLTV LE90

Insured-Prime (mean: 0.1078 se: 0.0006)
Insured-Subprime (mean: 0.2576 se: 0.0026)
Piggyback-Prime (mean: 0.1548 se: 0.0015)
Piggyback-Subprime (mean: 0.4169 se: 0.0197)

Cumulative Bad Rates for 2004 Vintage and CLTV GT90

Insured-Prime (mean: 0.1244 se: 0.0005)
Insured-Subprime (mean: 0.3422 se: 0.0013)
Piggyback-Prime (mean: 0.1438 se: 0.0012)
Piggyback-Subprime (mean: 0.3838 se: 0.0244)

20

Cumulative Bad Rates for 2005 Vintage and CLTV LE90

Insured-Prime (mean: 0.1777 se: 0.0008)
Insured-Subprime (mean: 0.3016 se: 0.0031)
Piggyback-Prime (mean: 0.3029 se: 0.0013)
Piggyback-Subprime (mean: 0.5265 se: 0.0197)

Cumulative Bad Rates for 2005 Vintage and CLTV GT90

Insured-Prime (mean: 0.1754 se: 0.0007)
Insured-Subprime (mean: 0.4051 se: 0.0016)
Piggyback-Prime (mean: 0.2496 se: 0.0011)
Piggyback-Subprime (mean: 0.4383 se: 0.0187)

21

Cumulative Bad Rates for 2006 Vintage and CLTV LE90

Insured-Prime (mean: 0.24 se: 0.0009)
Insured-Subprime (mean: 0.3189 se: 0.0034)
Piggyback-Prime (mean: 0.3924 se: 0.0013)
Piggyback-Subprime (mean: 0.5246 se: 0.0261)

Cumulative Bad Rates for 2006 Vintage and CLTV GT90

Insured-Prime (mean: 0.2073 se: 0.0007)
Insured-Subprime (mean: 0.4049 se: 0.0016)
Piggyback-Prime (mean: 0.3484 se: 0.0011)
Piggyback-Subprime (mean: 0.6094 se: 0.0126)

22

Cumulative Bad Rates for 2007 Vintage and CLTV LE90

Legend:
- Insured-Prime (mean: 0.2632 se: 0.0008)
- Insured-Subprime (mean: 0.3781 se: 0.003)
- Piggyback-Prime (mean: 0.3324 se: 0.0015)
- Piggyback-Subprime (mean: 0.5138 se: 0.0276)

Cumulative Bad Rates for 2007 Vintage and CLTV GT90

Legend:
- Insured-Prime (mean: 0.2589 se: 0.0006)
- Insured-Subprime (mean: 0.4295 se: 0.0014)
- Piggyback-Prime (mean: 0.3567 se: 0.0013)
- Piggyback-Subprime (mean: 0.566 se: 0.0116)

23

Appendix B: Survival Analysis Modeling Dataset Summary

Loan Volume by US Census Region and Type

Loan Volume by Loan Type

Loan Volume by Owner-Occupied Status

Legend:
- Insured (blue)
- Non-Ins w/ Piggy (red)

Categories: Other, Owner-Occupied

Loan Volume by Purpose

Loan Volume by Documentation Level
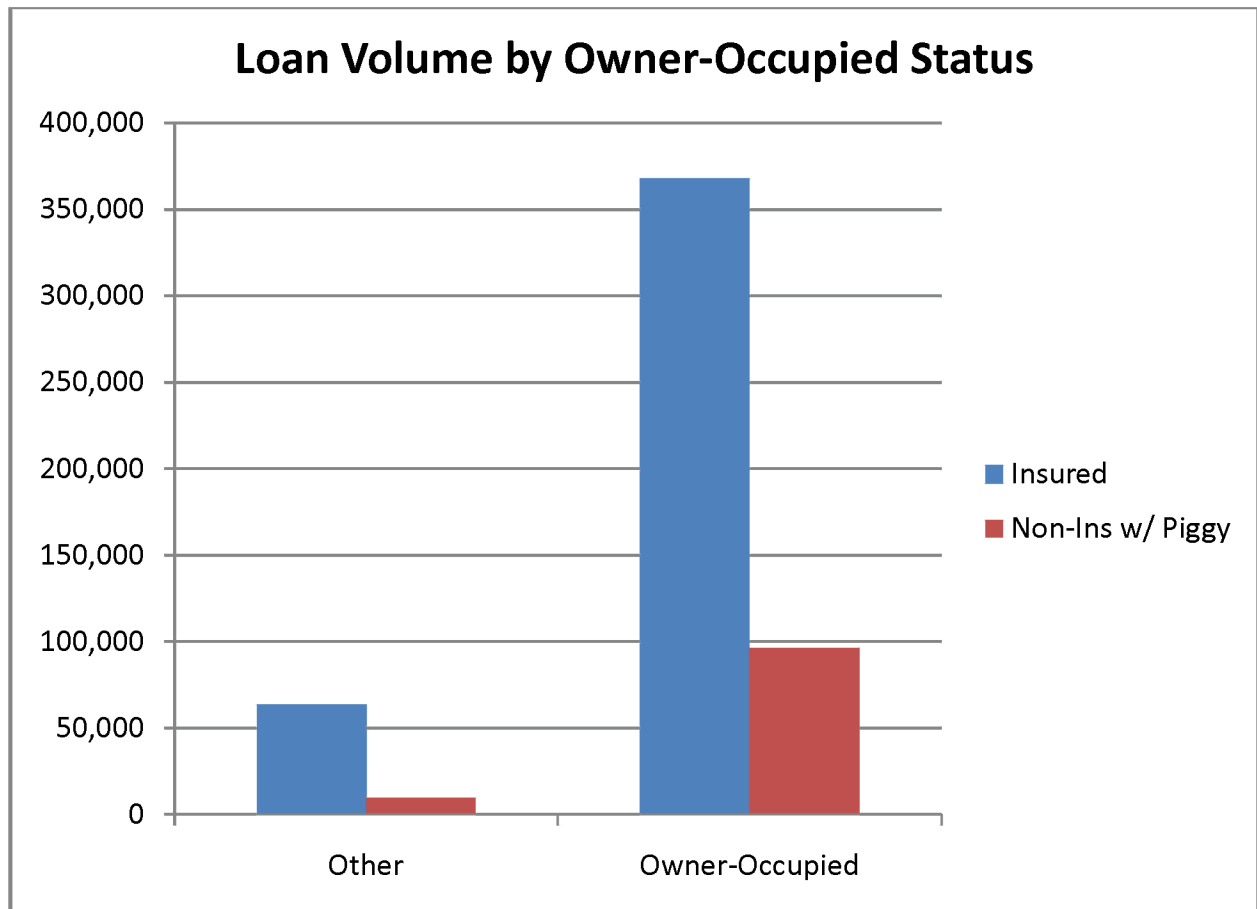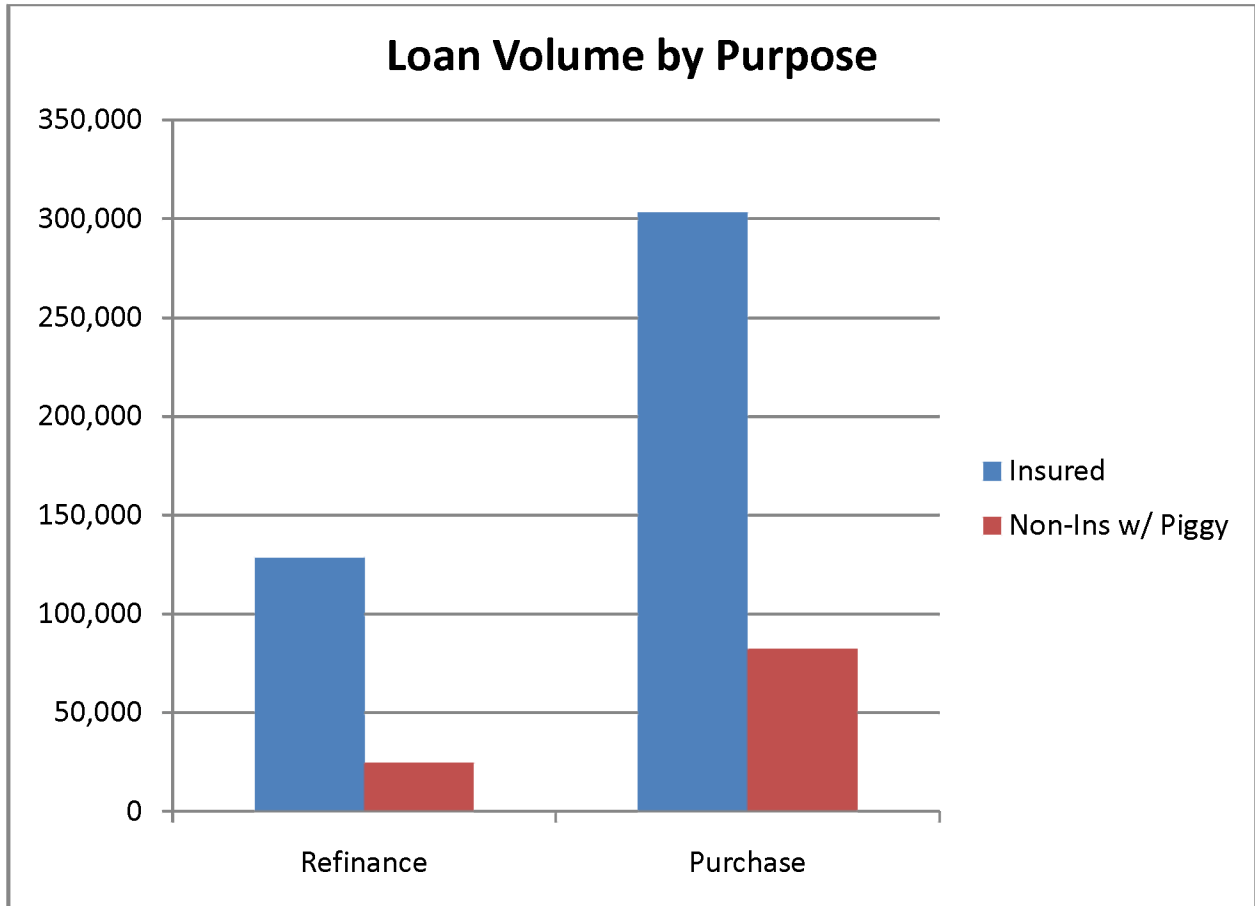
Combined LTV at Origination
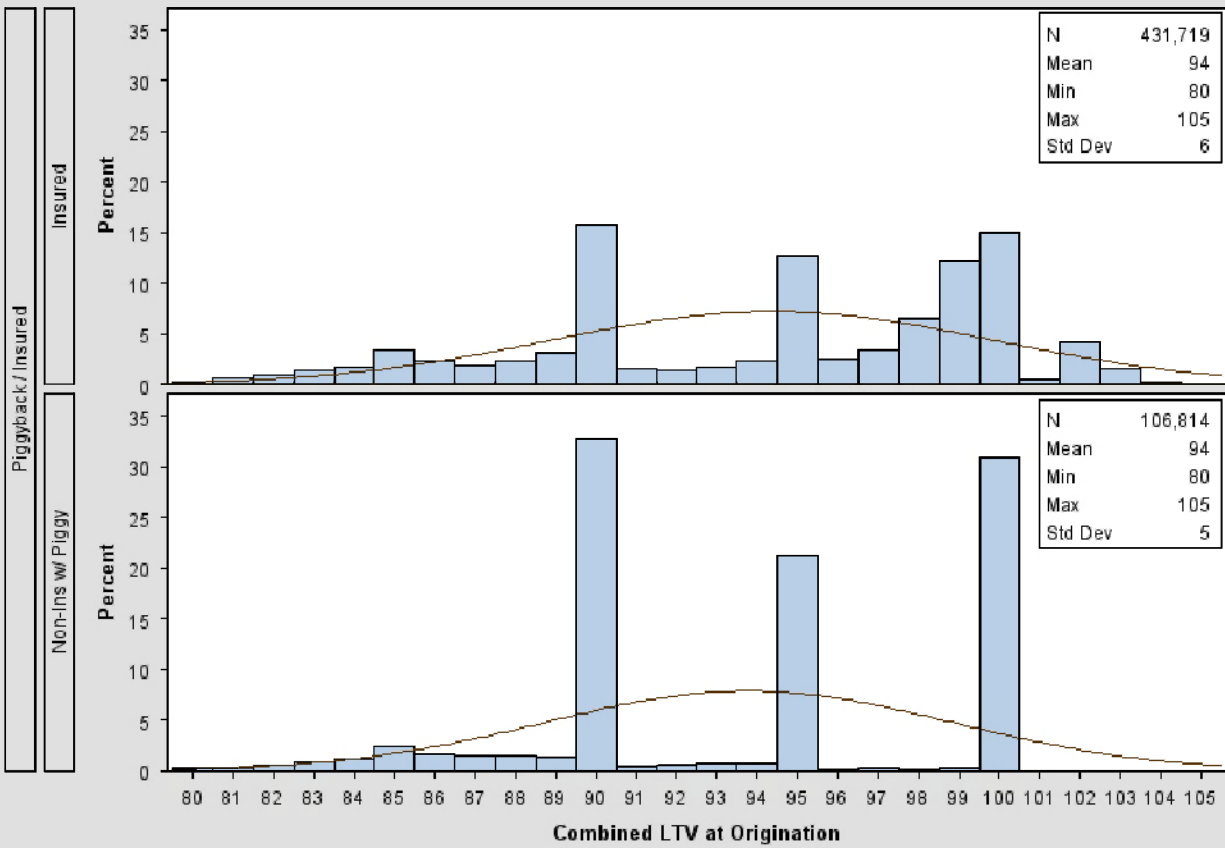
FICO Score at Origination
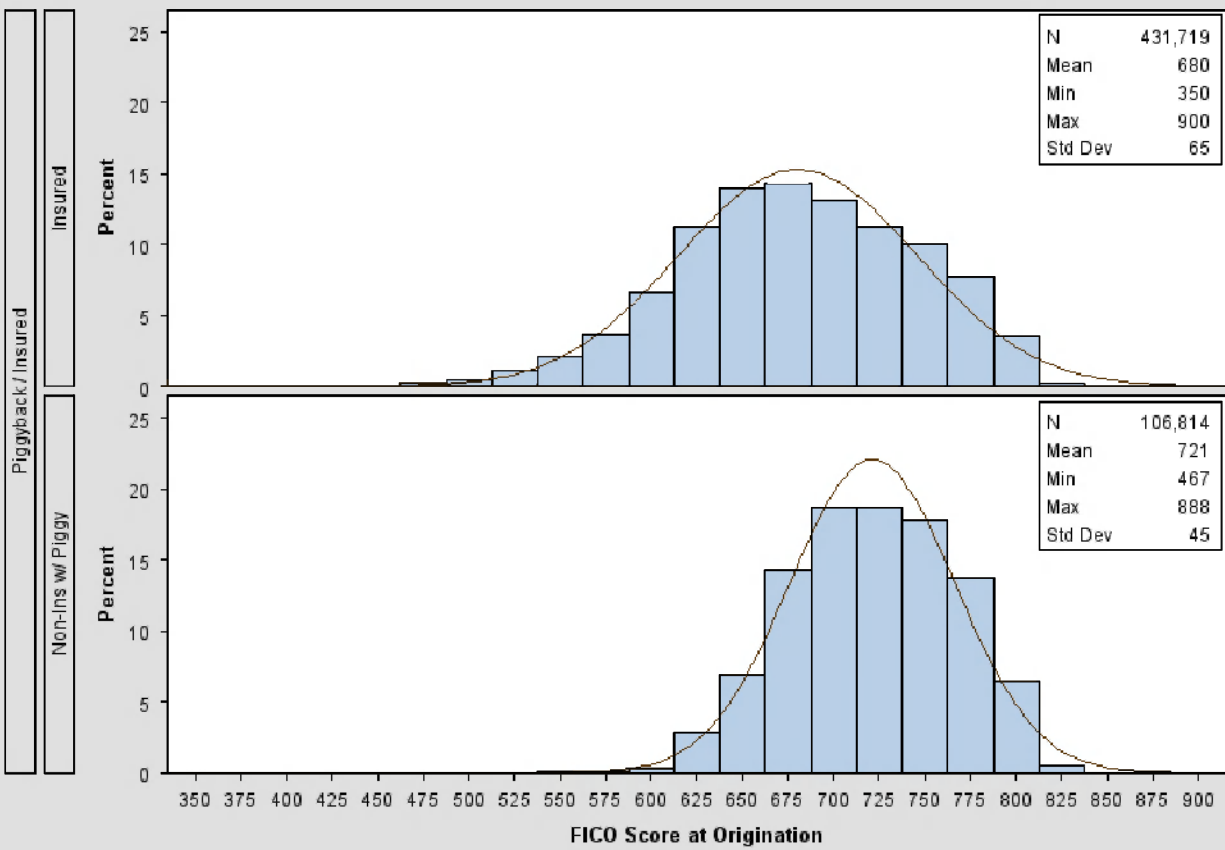
Appendix C: Scaled Schoenfeld Residual Plots

The Schoenfeld residual, r_{ik} is the covariate value, X_{ik}, for the ith loan which actually defaulted at time t, minus the expected value of the covariate for the risk set at time t (i.e., a weighted-average of the covariate, weighted by each loan's likelihood of defaulting at t).

Because they will vary in size and distribution, the Schoenfeld residuals are usually scaled before being analyzed. The k-dimensional vector of **Scaled Schoenfeld Residuals, SR,** for the ith loan is defined as:

$SR= \boldsymbol{\beta} + D*Cov(\boldsymbol{\beta})*r_i'$

where

$\boldsymbol{\beta}$=the estimated Cox model coefficient vector

D= the number of loans defaulting, and

r_i= the vector of Schoenfeld residuals for loan i.

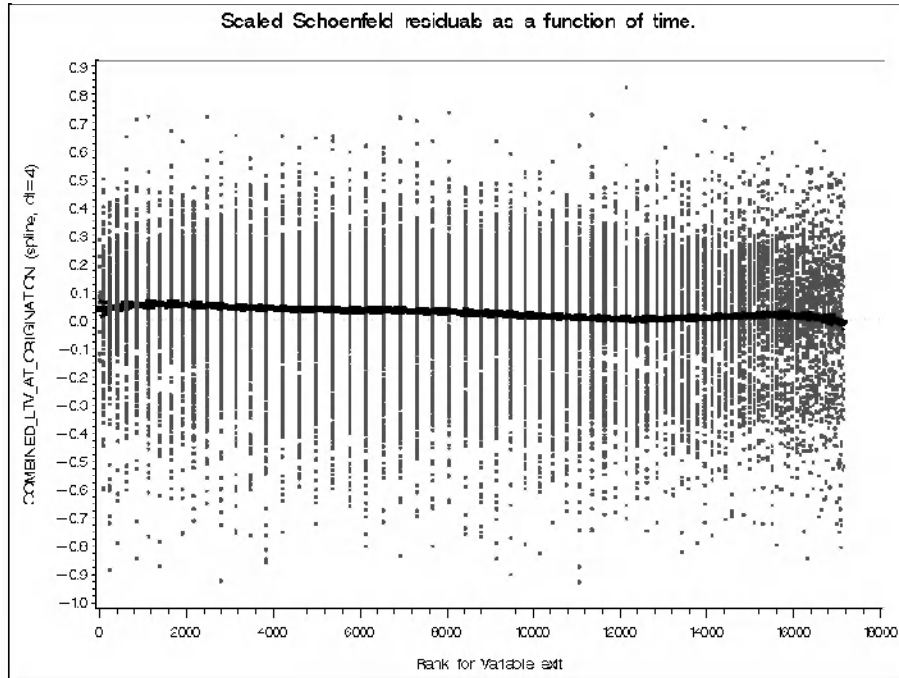## Plots for Fixed-Rate Loans, by Covariate

Documentation Level

Scaled Schoenfeld residuals as a function of time.

Loan Purpose

Scaled Schoenfeld residuals as a function of time.

Occupancy Status

Scaled Schoenfeld residuals as a function of time.

Combined LTV at Origination

Scaled Schoenfeld residuals as a function of time.

FICO Score at Origination

Scaled Schoenfeld residuals as a function of time.

Original Interest Rate

Scaled Schoenfeld residuals as a function of time.

Rate Differential (t)

Scaled Schoenfeld residuals as a function of time.

Original Payment

Scaled Schoenfeld residuals as a function of time.

Change in Payment (t)

Scaled Schoenfeld residuals as a function of time.

Change in Value (t)

Scaled Schoenfeld residuals as a function of time.

Unemployment Rate (t)

Scaled Schoenfeld residuals as a function of time.
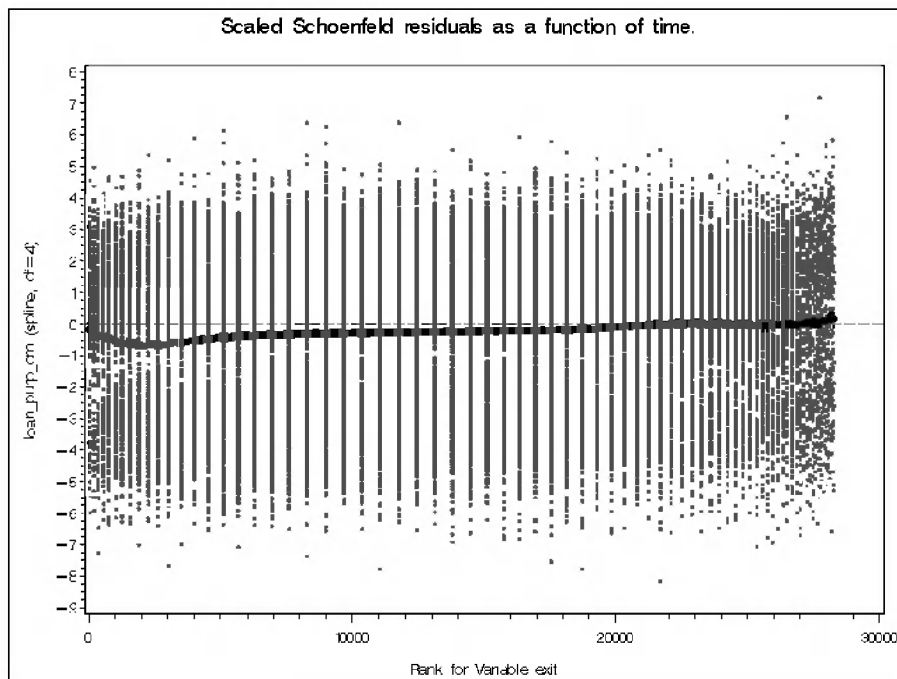
Plots for Adjustable-Rate Loans, by Covariate

Documentation Level

Loan Purpose

Occupancy Status

Scaled Schoenfeld residuals as a function of time.

Combined LTV at Origination

Scaled Schoenfeld residuals as a function of time.

FICO Score at Origination

Scaled Schoenfeld residuals as a function of time.

Original Interest Rate

Scaled Schoenfeld residuals as a function of time.

39

Rate Differential (t)

Scaled Schoenfeld residuals as a function of time.

Original Payment

Scaled Schoenfeld residuals as a function of time.

Change in Payment (t)

Scaled Schoenfeld residuals as a function of time.

Change in Value (t)

Scaled Schoenfeld residuals as a function of time.

Unemployment Rate (t)

Scaled Schoenfeld residuals as a function of time.

Exhibit D
Promontory Report -
The Role of Private Mortgage Insurance in the U.S. Housing Finance System
November, 2010

The Role of Private Mortgage Insurance in the U.S. Housing Finance System

Table of Contents

I.   Executive Summary

In the wake of the recent financial crisis, policymakers in the U.S. have begun to reassess the structure of the U.S. housing finance system and the federal government's role in supporting the flow of capital to the housing sector. Private mortgage insurers (PMIs) rank among the lesser known yet critical components of the current housing finance system. In order to facilitate continued discussion of housing finance reform, Genworth Financial has asked Promontory Financial Group to prepare this report on the role of PMIs in the current U.S. housing finance system. This 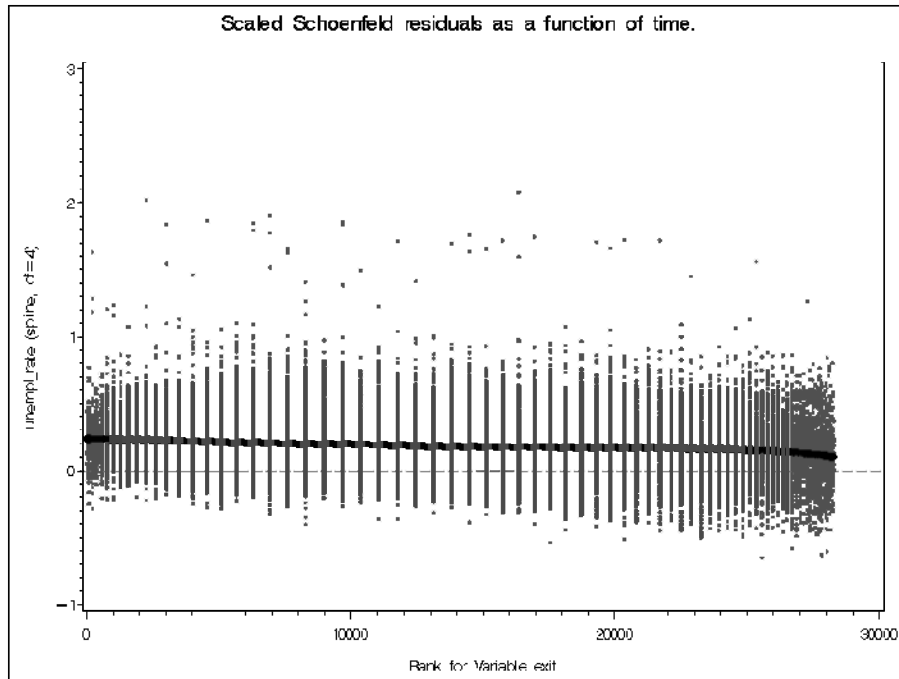document is intended to serve as a detailed reference guide with pertinent commentary for interested parties seeking current and historical perspective on the role of PMIs.

Characteristics of Private Mortgage Insurance

All other things being equal, the risk of loss from a mortgage loan is higher when the borrower makes a smaller down payment. Private mortgage insurance (PMI) enables lenders, loan purchasers, and investors to mitigate default risk on low-down-payment residential mortgages by transferring a portion of this risk to third-party PMIs, which specialize in managing this risk over the long term. PMI takes four basic forms: flow insurance, bulk insurance, pool insurance, and reinsurance.

Flow insurance provides coverage on an individual loan basis (under standard terms set forth in a master policy) and is purchased at the time a loan is originated. When a borrower applies for a mortgage loan to finance more than a certain percentage of the value of the home (*i.e.*, a high loan-to-value mortgage), the lender may require that the loan be covered by PMI.   While the lender generally selects the mortgage insurance carrier, it passes the cost of coverage on to the borrower. The lender (or any party that subsequently purchases the loan) receives the insurance benefit if the borrower defaults. In bulk transactions, the insurer agrees to provide coverage on each loan in a larger group of loans that generally have already been originated. These loans may have flow

insurance already (particularly if the loans are high loan-to-value), in which case the bulk insurance provides a second layer of protection for losses not covered by the existing insurance. Pool insurance involves the insurance of multiple mortgages that are aggregated for purposes of calculating coverage and claims. Under such an arrangement, the insurer will generally cover all losses in the pool up to an aggregate limit of losses. PMIs generally issue pool insurance in connection with mortgage securitizations. Finally, private mortgage reinsurance, in which the primary insurer passes a portion of the risk to a third-party insurer, has generally been written by "captive" reinsurers affiliated with lenders.

Utility of Private Mortgage Insurance in the Marketplace

A significant motivation for lenders to seek primary mortgage insurance arises from the loan purchasing standards of Fannie Mae and Freddie Mac (the GSEs). Under the federal laws governing the GSEs' activities, neither entity may purchase a mortgage above 80% loan-to-value (LTV) unless the lender provides one of several enumerated credit enhancements, of which PMI is the most common. For so-called "private-label" (*i.e.*, non-GSE) asset-backed securitizations, PMI may facilitate favorable credit ratings for issued securities. Finally, banks may desire insurance for loans held on balance sheet in order to manage their own credit risk exposure in accordance with supervisory guidance or reduce the amount of regulatory capital that they must hold against high-LTV mortgages. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 directs regulators to consider mortgage insurance as one of various risk mitigants that might qualify a loan for exemption from securitization risk retention requirements. This additional regulatory recognition may spur additional demand for PMI.

Like most insurance companies, PMIs are subject to a state-by-state regulatory regime, and many states have enacted legislation specifically tailored to mortgage insurance. States limit the ability of PMIs to take on risk through restrictions such as contingency reserve requirements; capital requirements; investment restrictions; risk concentration restrictions; and restrictions on engaging in activities other than mortgage-related insurance. The GSEs provide an additional layer of de facto regulation. Finally, while federal law generally leaves the prudential regulation of PMIs to the states, PMIs are subject to certain consumer protection laws, including the Homeowners Protection Act and the Real Estate Settlement Procedures Act.

In comparing the regulatory framework for PMIs with that of other regulated financial institutions, PMIs' contingency reserves—a long-term, countercyclical regulatory capital requirement—stand out as distinctive. The basic rationale for contingency reserves can be stated simply: PMIs contend with cyclical volumes of claims that generally stay within certain parameters but occasionally spike, with potentially catastrophic consequences for the insurer. The contingency reserve framework addresses this risk by requiring PMIs to keep in reserve 50% of premiums for ten years, in anticipation of potentially massive defaults. To a large extent, this and other aspects of the state prudential framework for PMIs reflect lessons learned from the Depression-era collapse of many institutions that offered PMI. The regulatory framework has been fairly consistent since the modern PMI industry re-emerged in 1957.

Any assessment of the framework's effectiveness must identify the episodes of severe industry stress since 1957 and consider their causes and consequences. Such episodes occurred in the 1980s and early 1990s and again today. In the 1980s and early 1990s, a combination of rolling regional recessions, poor economic and housing market conditions, imprudent underwriting patterns, and—for one carrier—massive exposure to a single failed real estate investment scheme

contributed to significant industry-wide losses. However, of the 14 PMIs in existence in 1980, only one was unable to fully repay its policyholders. The industry as a whole absorbed its full share of mortgage losses as expected.

The current U.S. housing downturn represents the most adverse scenario for PMIs since the Great Depression. While the smallest insurer has been in run-off mode since July 2008, a recent credit rating agency report expresses a tentative view that the six rated insurers will be able to pay future claims in full.[1] These six PMIs have been operating at a loss since 2007 but continue to insure new loans. Current challenges for the industry include competition from the Federal Housing Administration (FHA) and, in some cases, concerns about exceeding capital constraints. The current housing downturn will provide a rare and valuable benchmark for assessing the adequacy of PMIs' reserves and other risk management practices against the needs of the future housing finance system.

Comparison to Other Forms of Mortgage Credit Risk Mitigation

By assuming much of the incremental credit risk associated with high-LTV mortgages, PMI promotes the flow of credit from lenders and investors that might not otherwise have the capacity or desire to assume this risk. In this way, PMI increases the total amount of private capital available for lending to borrowers unable to afford (or unwilling to provide) a 20% down payment. Likewise, pool-level PMI on securitizations containing lower-LTV mortgages encourages lending and investment in these instruments as well. PMI thus promotes homeownership by individuals who would not otherwise be able to afford it, an objective of U.S. housing finance policy since the New Deal.

---

[1] See Moody's Investors Service, "US Mortgage Insurance: Developing Outlook," *Industry Outlook* (August 17, 2010).

PMI can be compared with various other forms of credit risk mitigation, including: self-insurance by lenders; risk assumption by GSEs, bond insurers, or derivatives counterparties; and government mortgage insurance. From a credit availability standpoint, each of these forms of credit risk mitigation can support the provision of credit by shouldering default risk. But from an economic stability perspective, these forms of credit risk mitigation are not equally capable of bearing the severe tail risk associated with high-LTV mortgages. The following characteristics of PMIs help them manage the risks involved in their business and can serve as a point of comparison with other players:

- *Contingency reserves.* PMIs build contingency reserves during normal times and draw them down only when losses exceed statutory thresholds or insurance regulators otherwise authorize reductions.

- *Geographic diversification.* Geographic diversification serves as a bulwark against regional housing slumps by enabling PMIs to use premiums collected in more stable regions to offset losses incurred in distressed regions.

- *Lender diversification.* Because PMIs insure loans originated by many different lenders, they are less vulnerable than individual lenders to lender-specific operational or other problems affecting loan quality.

- *Delayed loss realization.* Because the covered loss amount is not established and payable until foreclosure, PMIs can build up reserves as a loan first goes delinquent, while continuing to generate premiums from other policies to offset the expected loss.

- *Acquaintance with relevant risks.* By virtue of their close involvement in underwriting, loss mitigation, and claims management activities, PMIs are relatively well positioned to understand the risks associated with high-LTV mortgage loans.

- *Incentives to avoid foreclosure.* While not a form of institutional risk management per se, a financial institution's incentives to modify loans or take other measures to avoid foreclosure impact financial stability. Because PMIs do not generally incur claims obligations unless a borrower defaults, the interests of PMIs are closely aligned with those of borrowers in this area.

While certain other financial institutions share some of these characteristics, few or none currently share all of them.

Among the various alternatives to PMI, government mortgage insurance offers the closest comparison. FHA and Veterans Administration (VA) mortgage insurance programs in particular provide significant competition for PMIs. On the most basic level, public and private insurers differ in that government insurers must adhere to the particular means and ends assigned to them by legislators, while PMIs primarily serve their shareholders. This points toward a second, equally basic, difference: obligations of the government insurers are backed by the full faith and credit of the United States. This has important implications for the role of government insurance in the housing finance system. While an explicit federal government guarantee puts taxpayer funds at risk, the government insurers, particularly the FHA, have special capabilities to continue writing large volumes of new policies during severe housing recessions. Government mortgage insurance, or government reinsurance against catastrophic losses, may have a useful role to play in preserving the availability of affordable high-LTV mortgages during severe housing downturns. However, government mortgage insurance can also cause destabilizing imbalances in normal times to the extent government insurers fail to build sufficient reserves or charge sufficient risk premiums.

II.   Introduction

In the wake of the recent financial crisis, policymakers in the U.S. have begun to reassess the federal government's role in supporting the flow of capital to the housing sector. The Federal Housing Finance Agency's (FHFA) decision in September 2008 to place Fannie Mae and Freddie Mac into conservatorship is the most immediate, though certainly not the only, impetus for this discussion. For the past forty years, the two government sponsored enterprises (GSEs) have guaranteed timely repayment of principal and interest on bonds backed by residential mortgages, helping fuel the tremendous growth of the secondary mortgage market. While the GSEs operated as private companies during this time, they benefitted from an implicit federal government guarantee (in addition to other effective government subsidies). With their entry into conservatorship, the GSEs' federal backing became explicit, and they have since drawn approximately $148 billion from a Treasury line of credit.[2]

Because the GSEs are just one element in a complex mortgage finance system, the debate concerning their fate raises broader questions about U.S. housing policy. Both the Obama Administration and the U.S. Congress have begun to gather information and perspectives with a view toward legislative action in 2011. The Treasury Department formally solicited public comment on a range of housing-related questions in April 2010. Building on this outreach effort, the Treasury Department and the Department of Housing and Urban Development (HUD) jointly hosted an initial conference on the future of housing finance in mid-August. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires the Treasury Department to submit to Congress by January 31, 2011 its recommendations for ending the GSE conservatorships.[3]

---

[2] See Nick Timiraos, "Housing Ills Cloud Debate on Fannie," *Wall Street Journal*, Aug. 16, 2010, http://online.wsj.com/article/NA_WSJ_PUB:SB10001424052748704296704575431531544841658.html.

[3] Pub. L. 111-203, § 1074.

Meanwhile, the House Financial Services Committee and Senate Banking Committee have held several hearings on housing finance reform this year and plan to hold more.

Private mortgage insurers (PMIs) rank among the lesser known yet critical components of the current housing finance system. Since 1957, modern PMIs have assumed credit risk on high loan-to-value (LTV) residential mortgages, thereby encouraging lenders and investors to provide credit to borrowers who do not make a full 20% down payment. PMIs now insure the vast majority of loans over 80% LTV purchased by the GSEs.

The recent housing finance crisis is causing policymakers to reevaluate the role of mortgage insurance in a reconstituted housing finance market. For example, the House Financial Services Committee held a hearing on the role of private mortgage insurance (PMI) on August 29, 2010. In order to facilitate continued discussion, Genworth Financial has asked Promontory Financial Group to prepare this report on the role of PMIs in the current U.S. housing finance system. This document is intended to serve as a detailed reference guide with pertinent observations for interested parties seeking current and historical perspective on the role of PMIs.

The remainder of this report is organized as follows: Section III describes the major types and features of PMI. Section IV discusses the economic and regulatory factors that encourage the use of PMI. Section V reviews the major regulatory restrictions to which PMIs are subject, discusses the rationales for these restrictions, and examines their effectiveness in ensuring long-term industry resilience. Section VI compares PMI to alternative forms of mortgage credit risk mitigation or avoidance, specifically: lender avoidance of high-LTV mortgages, lender self-insurance, GSE insurance, bond insurance, credit derivatives, and government insurance programs.

III.   Characteristics of Private Mortgage Insurance

Lenders and investors face a higher risk of loss from mortgages that, all other things being equal, have higher LTVs.   Borrower default on such mortgages is likely to lead to higher losses due to the narrow margin between the money lent and the value of the collateral.   In addition, higher LTV mortgages are generally believed to carry a higher probability of default compared with lower-LTV mortgages.[4]   PMI enables lenders, loan purchasers, and investors to mitigate default risk on high-LTV residential mortgages by transferring a portion of this risk to third-party PMIs.[5]

In the U.S., lenders commonly set the threshold for requiring PMI at 80% LTV.   The 80% figure derives from the statutes governing loan purchases and guarantees by Fannie Mae and Freddie Mac, the two large GSEs that dominate the U.S. secondary mortgage market.   As explained in section IV.a., the GSEs may only purchase a high-LTV mortgage if the originator provides one of three kinds of credit enhancements, of which PMI is by far the most feasible and popular. Accordingly, lenders that anticipate selling loans to the GSEs abide by the 80% threshold when determining whether to require PMI.

Lenders that plan to hold mortgages on their books or sell them to parties other than the GSEs may choose to require PMI for mortgages above or below 80% LTV, according to their risk

---

[4] For a comprehensive survey of relevant literature on the relationship between LTV and mortgage default rates, as well as independent statistical analysis of both FHA and conventional mortgages, see GAO, *Mortgage Financing: Actions Needed to Help FHA Manage Risks from New Mortgage Loan Products*, GAO-05-194 (Washington, D.C., February 2005), http://www.gao.gov/new.items/d05194.pdf.

[5] Although insurers briefly experimented with PMI for commercial mortgages, they incurred heavy losses and exited this line of business.   Unlike in the residential mortgage context, where PMI is frequently required for all loans above a certain LTV (see below), commercial mortgage lenders and borrowers purchased mortgage insurance only in particularly high-risk circumstances.   This adverse selection of risk, coupled with the relatively small size of the commercial mortgage insurance market, prevented the insurers from generating a sufficient premium base over which to spread losses. Roger Blood, "Mortgage Default Insurance: Credit Enhancement for Homeownership," *Housing Finance International* (2001): 55, http://www.housingfinance.org/uploads/Publicationsmanager/0109_Mor.pdf.

appetites, capital needs, and the competitive environment. There are relevant regulatory standards here as well. For example, the U.S. banking agencies have stated that they expect first-lien mortgages or home equity loans on owner-occupied, 1-to-4-family residential properties to have appropriate credit support, such as mortgage insurance or readily marketable collateral, where LTVs reach or exceed 90%.[6] In addition, bank regulatory capital requirements incorporate supervisory expectations that high-LTV loans be prudently underwritten.

PMI takes four basic forms, as described below: flow insurance, bulk insurance, pool insurance, and reinsurance. We discuss captive reinsurance separately.

a.   Flow Insurance

Flow insurance is a form of primary insurance, meaning that it provides coverage on an individual loan basis at origination. When a borrower applies for a high-LTV mortgage loan, the lender may require flow PMI to offset the increased risk associated with the smaller down payment. The insurance premiums may be structured in either of two ways. First, the applicable mortgage contract may obligate the borrower to pay insurance premiums to the servicer as part of the borrower's monthly mortgage obligation. The servicer then remits these amounts to the insurer. Alternatively, some lenders build the cost of PMI into the borrower's interest rate (so-called "lender-paid mortgage insurance"). In either event, the lender (or any party that subsequently purchases the loan) receives the insurance benefit if the borrower defaults.[7] Between 1990 and 2008, 12.6% of all single family mortgage originations in the U.S. had flow insurance.[8]

---

[6] OCC, FRB, FDIC, and OTS, Interagency Guidance on High-LTV Residential Real Estate Lending (Oct. 8, 1999), 3, http://www.federalreserve.gov/boarddocs/srletters/1999/sr9926a2.pdf.

[7] PMI should not be confused with single premium credit insurance products, such as credit life, credit disability, credit unemployment, and credit property insurance. The events that may trigger a claim and the nature of the payout under these policies differ from PMI. Single premium credit life,

PMIs have been described as a "second set of eyes" in the loan underwriting process, meaning that they exercise an independent influence in this process, rather than relying solely on lender judgment. As such, PMIs can impose additional market discipline on lenders. Some degree of reliance on lenders is inevitable, particularly in collecting documents from the borrower-applicant. But in most other respects, PMIs have the ability not only to impose their own underwriting guidelines but also to review individual loan files.[9]

The extent to which PMIs actually do so varies by insurer, by lender, and over time. In some cases, the loan undergoes largely separate (and more or less simultaneous) underwriting by the lender and the insurer. However, in many cases the insurer delegates its underwriting function to "approved" lenders with satisfactory origination and servicing procedures and histories. PMIs monitor the performance of delegated lenders by, among other things, reviewing individual loans on a sample basis and rescinding coverage after-the-fact where the lender has failed to meet contractual underwriting expectations. Conversely, lenders sometimes outsource their own underwriting functions to affiliates of PMIs on a fee basis. In structuring underwriting arrangements, PMIs and lenders are motivated by the sometimes competing objectives of speed-to-close, procedural simplicity and transparency to the borrower, cost effectiveness, and quality control.

The underwriting criteria of PMIs resemble those used by lenders and the GSEs. They include measures of borrower creditworthiness, the size of the down payment, the appraised value

---

credit disability, and credit property insurance are now largely prohibited in the U.S. See Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Pub. L. 111-203, § 1414(d).

[8] FHFA, "State of the Private Mortgage Insurance Industry: Implications for U.S. Mortgage Markets and the Enterprises," *Mortgage Market Note* 09-4 (August 20, 2009), 4, http://fhfa.gov/Default.aspx/webfiles/14779/MMNOTE_09-04%5B1%5D.pdf.

[9] PMIs can also impose underwriting discipline by tracking loan performance by lender. That is, PMIs can track default rates across lenders and alert underperforming lenders to potential areas of concern.

of the property, the purpose of the loan, and the structure and interest rate of the loan. PMIs take

into account their internal risk thresholds,[10] as well as the competitive environment, when calibrating

their underwriting criteria. However, because most mortgages on which flow insurance is written

are ultimately sold to the GSEs, both lenders and PMIs have, to varying degrees, deferred to GSE

underwriting standards, particularly after the introduction of GSE automated underwriting systems.

While reliance on the GSE automated underwriting systems facilitated quick and inexpensive

underwriting decisions by lenders and PMIs in recent years, it is now generally acknowledged that

the lack of transparency in these systems also obscured relevant risks. Accordingly, PMIs are

unlikely to rely to the same extent on third-party underwriting systems in the foreseeable future.

Once flow insurance has been issued, the insurer cannot revise the premium amount or

other terms during the life of the policy.

Extent and Duration of Coverage

The insurer's master policy sets forth the terms of insurance. If the borrower becomes

delinquent on the mortgage while the PMI policy is in force, the owner or servicer of the loan must

file a preliminary notice with the insurer. Only upon foreclosure does the owner or servicer

generally submit the final insurance claim. The claim typically includes a percentage of the

outstanding principal and accrued interest on the loan. It also includes various expenses incurred by

the lender during the foreclosure process, such as legal expenses, upkeep of the property, and

---

[10] Over time, PMIs' sophistication in evaluating and pricing the risks associated with individual loans, as well as portfolio-level risk, has grown. For additional detail on the kinds of risk management tools employed by modern PMIs, see, for example: Kristin Chen, "The Role of Mortgage Insurance in Risk Management," *International Journal of Real Estate Finance* 1, no. 2 (2000), 10-13; Roger Blood, "Managing Insured Mortgage Risk," in *The Secondary Mortgage Market: Strategies for Surviving and Thriving in Today's Challenging Markets*, ed. Jess Lederman (Chicago, Probus, 1992), 635-660; and William H. Lacy, "Risk Management: Key to Success for the 1990s," in *The Secondary Mortgage Market: Strategies for Surviving and Thriving in Today's Challenging Markets*, ed. Jess Lederman (Chicago, Probus, 1992), 661-678.

property taxes and insurance. State laws generally provide that an individual private mortgage insurer may cover no more than about 25% to 30% of an otherwise claimable amount. While at one time this restriction may have served to ensure a certain apportionment of risk between lender and insurer,[11] state laws now permit PMIs to provide higher levels of coverage via reinsurance arrangements, including reinsurance by affiliates of the primary insurer. For example, a primary insurer may provide flow insurance covering 40% of the gross claim amount so long as 10% to 15% of the coverage (depending on the state) is reinsured by an affiliate or third party.[12]

Upon filing of the claim, the insurer generally chooses between two options:

(a) Pay the stated coverage percentage and allow the lender to retain title to the property; or

(b) Pay 100% of the gross claim and take title to the property.

While theoretically an insurer might choose option "b" if, for example, it believes the property is worth significantly more than the foreclosure sale price, this is rare in practice; real estate management is not a core competency of PMIs. Both options are set aside if a third party pays a high price for the property at the foreclosure auction, in which case the insurer pays the difference, if any, between the claim amount and the foreclosure sale price (*i.e.*, the lender's actual loss).[13]

Within and among these possible outcomes, potential losses to PMIs and insured lenders vary according to the contractual coverage level, the remaining loan balance, and the value of the

---

[11] See Chester Rapkin et al., *The Private Insurance of Home Mortgages: a Study of the Mortgage Guaranty Insurance Corporation* (University of Pennsylvania: Institute for Environmental Studies, December 1967), 35.

[12] Most or all of the PMIs maintain multiple insurance subsidiaries for precisely this purpose. Today, secondary mortgage market investors willing to pay for upwards of 40% coverage can obtain it and thereby insulate themselves from losses in virtually all scenarios.

[13] PMIs require lenders to adhere to specific foreclosure bidding guidelines designed to encourage this result. See, *e.g.*, MGIC, MGIC Bidding Instructions (rev. June 2010), http://www.mgic.com/pdfs/71-42970_bidding.pdf; PMI, PMI Loss Mitigation & Claims Reference Manual (rev. March 2010), 9, http://www.pmi-us.com/media/pdf/resourcecenter/claims_forms/pmi_dcrefmanual.pdf.

collateral, among other variables. In some cases, the resulting insurance payout, combined with the liquidation value of the mortgage collateral, is sufficient to make the lender whole, or even yield a modest profit for the lender. But in other cases the lender may experience material loss, particularly where the collateral value has plummeted.

Under federal law, flow insurance policies automatically terminate when the borrower acquires, through periodic loan payments, an equity stake in the home greater or equal to 22% of its original sale price or original appraised value. The borrower may also elect to cancel insurance when this ratio reaches 20%.[14] For very high-LTV mortgages, this often occurs 10-15 years into the loan term.[15] For mortgages with an original LTV closer to 80%, this may occur after only a few years (depending on interest rate). In addition, GSE policies permit borrowers to cancel PMI based on *current* appraised value, with minimum LTV requirements varying between 70% and 80%, depending on loan seasoning and property type.[16] Rapid home price appreciation leading up to the recent credit crisis enabled many high-LTV borrowers to cancel PMI fairly quickly.

Loss Mitigation

PMIs take a keen interest in loss mitigation and foreclosure prevention. This interest arises both from the PMIs' first-loss exposure and from the fact that foreclosure is typically the only trigger for claims payments under PMI policies. Various corrective steps may be taken after a borrower becomes delinquent, short of foreclosure, to minimize losses to all parties. These steps include, for example, borrower counseling, loan modifications, partial forbearance, and short sales. Both the servicer and the insurer must receive permission from the other to renegotiate the terms of

---

[14] 12 U.S.C. § 4902.

[15] However, due to home sales and refinancings (particularly in a declining interest rate environment) the average life of a loan is typically much shorter than its stated term.

[16] See, *e.g.*, "MI Cancellation: Questions and Answers," Fannie Mae, accessed September 1, 2010, https://www.efanniemae.com/sf/guides/ssg/relatedservicinginfo/pdf/micancellation.pdf, 4.

a mortgage. This may occur on a loan-by-loan basis or, more often, through conditional delegations of authority. For example, the insurer may delegate to the servicer its authority to approve loan modifications for borrowers that meet certain criteria. PMIs also contact borrowers directly and negotiate solutions where the servicer could not, including during periods of intense market stress when servicers cannot keep up with high call volumes.[17] PMIs continue to make substantial investments in operational infrastructure to support their foreclosure prevention efforts.

b.   Bulk Insurance

In addition to providing primary insurance at each loan's origination, PMIs may also provide it on a bulk basis after origination. In bulk transactions, the insurer agrees to provide coverage on each loan in a larger group of loans that have already been originated. These loans may have flow insurance already (particularly if the loans are high-LTV), in which case the bulk insurance provides a second layer of protection for losses not covered by the existing insurance. In a typical bulk transaction, loan level coverage could extend down to 50% LTV loans. Coverage is frequently subject to a deductible (borne by the lender) and a limit on losses borne by the insurer, both expressed as a percentage of the total portfolio. For example, on a $100 million portfolio of loans, the insurer might provide coverage on each loan in the portfolio with an LTV greater or equal to 50%, subject to a 1% ($1 million) deductible and an absolute limit of 5% ($5 million). PMIs typically underwrite bulk transactions by reviewing sample loans from the group. Insurance premiums relating to these transactions are paid by lenders, loan purchasers, or investors. Bulk insurance was most commonly utilized in connection with riskier loans, such as subprime, Alt-A, or low documentation loans. Accordingly, the prevalence of bulk insurance has declined as the origination of such loans has declined in recent years.

---

[17] As discussed in section VI.b., PMIs sometimes have stronger incentives to avoid borrower default than lenders or servicers.

c.   Pool Insurance

Pool insurance involves the insurance of multiple mortgages that are aggregated for purposes of calculating coverage and claims. Under such an arrangement, the insurer will generally cover all losses in the pool up to an aggregate limit of losses—generally between 5% and 25% of the original principal balance in the pool.[18] As described above, sometimes the insurer will also limit coverage on each loan, giving the policy characteristics of both bulk insurance and pool insurance. (This arrangement is known as "modified pool insurance.") PMIs generally issue pool insurance in connection with mortgage securitizations. Mortgages in the pool may also have flow insurance.

d.   Traditional Reinsurance

Under a traditional reinsurance arrangement, the primary insurer transfers a portion of its risk to an independent reinsurer in order to accomplish certain risk management objectives, such as meeting regulatory capital requirements or decreasing loss exposure. Reinsurers traditionally do not share substantial common ownership with the primary insurer or the beneficiary of the primary insurance policy. In the world of PMI, reinsurance arrangements meeting these criteria are not readily available.

e.   Captive Reinsurance

Instead, most private mortgage reinsurance is written by "captive" reinsurers affiliated with the lender. The mechanics of captive reinsurance are straightforward. The primary insurer "cedes" a portion of the periodic insurance premium to the reinsurer in exchange for the reinsurer's commitment to share losses. In some cases the reinsurer also pays an upfront fee to the primary insurer. The reinsurer shares losses on either a "quota share" basis (*i.e.*, pro rata) or an "excess of

---

[18] Quintin Johnstone, "Private Mortgage Insurance," 39 Wake Forest Law Review 783 (winter 2004), 802.

loss" basis, whereby the primary insurer absorbs initial losses and often also subsequent losses above a certain intermediate threshold.

In recent years, excess of loss arrangements were far more common than quota share arrangements. Under a typical arrangement known as a 5-5-25 excess of loss arrangement, the reinsurer receives 25% of the primary insurance premiums, and its obligation to pay is triggered if losses exceed 5% of the primary insurer's original risk exposure on policies issued in a given year. (The 5% threshold can also be defined with reference to the *number* of claims filed in a given year.) If this attachment point is met, the reinsurer is responsible for the next 5% of losses. Beyond this detachment point, the reinsurer has no obligation.[19] Beginning in 2008, the GSEs capped the amount of premiums that PMIs could cede under captive reinsurance arrangements to 25% of gross premiums (or gross risk).[20] This move aimed to preserve capital within the primary PMI industry.

Reinsurance does not absolve the primary insurer of its obligation to its insured—that is, the primary insurer remains liable for all coverage if the reinsurer fails to pay.[21] Accordingly, PMIs impose certain financial requirements on captive reinsurers, including:

- Initial capitalization requirements;

- Dividend restrictions;

- A prohibition on new business unless a 10-to-1 risk to capital ratio is maintained; and

---

[19] In a number of circumstances, PMIs agreed to excess of loss arrangements in which more than 25% of premiums were paid to reinsurers. As market conditions have deteriorated, however, PMIs have increasingly balked at these "deep-cede" arrangements.

[20] See, *e.g.*, Freddie Mac news release "Freddie Mac Changes Mortgage Insurer Eligibility Rules to Cap Premium Cedes on Captive Reinsurance," February 14, 2008, http://www.freddiemac.com/news/archives/corporate/2008/20080214_capture.html.

[21] Section VI.c. considers whether the government could play a useful role in smoothing steep housing recessions by providing catastrophic reinsurance to PMIs.

- Requirements that funds be held in trust and that books be cross-collateralized.[22]

In the years immediately preceding the recent financial crisis, strong loan performance meant that PMIs received little actual loss coverage from captive reinsurance arrangements. But the reinsurance landscape has changed significantly since the mortgage crisis began. PMIs have recently realized material recoveries from captive reinsurance, drawing on (and sometimes exhausting) trusts containing years of premium reserves accumulated by the captives. In consequence, many captive reinsurers are now in run-off mode, and the use of captive reinsurance has fallen precipitously. It is unclear whether and under what conditions the captive reinsurance market will revive.

---

[22] These contractual requirements are generally incorporated into GSE eligibility guidelines. See Freddie Mac Private Mortgage Insurer Eligibility Requirements, Section 707; Fannie Mae Qualified Mortgage Insurer Approval Requirements, Section 7(E).

IV.   Utility of Private Mortgage Insurance in the Marketplace

This section describes the principal reasons why mortgage lenders, purchasers, and investors seek mortgage insurance. The reasons differ depending on whether the lender intends to sell the loan and to whom, but regulatory requirements often play a major role. New risk-retention regulations to be written by federal financial regulators under the Dodd-Frank Act may provide additional inducement for market participants to seek PMI.

a.   GSE Requirements

The most significant motivation for lenders to seek primary mortgage insurance arises from GSE loan purchasing standards. Under the federal laws governing the GSEs' activities, neither entity may purchase a high-LTV mortgage not insured by the government unless one of three conditions is met:

(1) The seller retains at least a 10% participation in the loan;

(2) The seller agrees to repurchase or replace the loan in the event of default; or

(3) The portion of the unpaid principal balance above 80% is insured by a qualified mortgage insurer, as defined by the GSE.[23]

Of these three options, sellers generally choose the third (mortgage insurance) because the others involve seller retention of risk on sold loans (with attendant regulatory capital consequences for banks). The particular level of PMI coverage required by the GSEs depends on the LTV of the loan. With the exception of 15- and 20-year fixed-rate mortgages, Freddie Mac typically requires the following mortgage insurance coverage:

- 12% coverage for LTVs greater than 80% but less than or equal to 85%;

---

[23] 12 U.S.C. §§ 1717(b)(5)(C) (Fannie Mae), 1454(a)(2) (Freddie Mac).

- 25% coverage for LTVs greater than 85% but less than or equal to 90%; and

- 30% coverage for LTVs greater than 90%.[24]

Fannie Mae's requirements are similar, except that it also requires 35% coverage for LTVs greater than 95%.[25] These levels of insurance effectively reduce the GSEs' loss-given-default to a level comparable to an 80% LTV loan.

The GSE purchasing standards are critical to the vitality of the PMI industry in two respects. First, they provide the PMIs' primary source of business. Absent the requirement for third-party mortgage insurance, the GSEs might choose to adopt this insurance role themselves or pursue other loss mitigation strategies,[26] in which case the PMIs would be relegated to insuring non-agency ("private label") securitizations and loans held in lender portfolios. Perhaps less obviously, the GSE purchasing standards help minimize an inherent challenge of the PMI industry: adverse selection. Without an external incentive or requirement to obtain mortgage insurance on all, or nearly all, high-LTV loans, lenders tend to insure only their worst credits and self-insure the rest.[27] This situation would put extreme pressure on the PMI business model by driving up loss probabilities in ways that can be difficult for parties other than the lender to monitor and price for. By imposing an across-

---

[24] Freddie Mac, Mortgage Insurance Coverage Options Matrix (rev. Dec. 2008), http://www.freddiemac.com/learn/pdfs/uw/flexmi.pdf.

[25] Fannie Mae, Selling Guide: Fannie Mae Single Family (rev. Aug. 2010), 821, https://www.efanniemae.com/sf/guides/ssg/sg/pdf/sel081210.pdf.

[26] Section VI.b. considers the relative suitability of GSEs and PMIs to manage high-LTV mortgage default risk. Section VI as a whole compares PMI with other forms of mortgage credit risk mitigation.

[27] See James Graaskamp, "Development and Structure of Mortgage Loan Guarantee Insurance in the United States," *Journal of Risk and Insurance* 34, no. 1 (March 1967): 57. See also infra n.5 (noting that adverse selection poses a significant obstacle to the development of a commercial mortgage insurance market).

the-board mortgage insurance requirement on high-LTV loan purchases, the GSEs reduce lender opportunities to withhold the strongest credits (and related premium income) from insurers.[28]

b. Purchaser and Investor Preferences

The risk tolerances of non-GSE purchasers or investors can also lead lenders or securitizers to seek PMI, including both primary and pool-level insurance. By reducing the risk profile of mortgage-backed securities (MBS), PMI can increase the transferability of mortgage assets in the secondary market—including both high-LTV mortgages and lower-LTV mortgages. Historically, PMI accomplished this in significant part by facilitating favorable credit ratings for securitized loan portfolios. According to a recent securities analyst report, about 4% of all outstanding private label securitizations (by volume) have PMI coverage.[29]

However, because the recent financial crisis has led to ratings downgrades of the PMIs themselves, the ability of PMIs to deliver credit rating enhancements for securitizations has been compromised in the short term. In addition, large numbers of insurance rescissions are causing both rating agencies and investors to anticipate reduced cash flows from existing PMI coverage. PMIs may rescind coverage for fraud or misrepresentation, failure of the lender to follow prescribed underwriting guidelines, or missing documentation in the loan file.[30] Rescission rates of 20%-25% have been common in recent quarters, compared with long term historical rates of 5%-10%.[31] These elevated rates appear to reflect the significant levels of lender fraud and misrepresentation

---

[28] In contrast, PMIs operating in Canada do not face significant adverse selection issues, since Canadian law requires that all mortgages with LTVs greater or equal to 80% be insured.

[29] Amherst Securities Group LP, "PMI in Non-Agency Securitizations," *Amherst Mortgage Insight* (July 16, 2010), 1. Within this universe, PMI coverage of option ARMs is especially high, at over 8% of outstanding balances. While a small part of the private label securitization market overall, PMI coverage has played a major role in many individual securitizations. Ibid., 2, 11.

[30] See Amherst Securities Group, "PMI in Non-Agency Securitizations," 3, 12.

[31] See Moody's Investors Service, "US Mortgage Insurers' [sic] Remain Weakly Capitalized," *Special Comment* (August 17, 2010), 6.

that occurred in the overheated market. At any rate, in order to address rating agency and investor concerns moving forward, PMIs may need to demonstrate that they have taken action to ensure that the loans they insure meet applicable standards at policy inception.

> c.   Bank Supervisory and Regulatory Capital Requirements

Lenders may also seek PMI for loans held on balance sheet. Aside from simply managing their own credit risk exposure, regulated lenders may obtain PMI to satisfy supervisors' risk management expectations and to reduce the amount of regulatory capital they must hold against high-LTV mortgages.

Supervisory guidance issued by bank regulators has encouraged the use of mortgage insurance as a credit risk mitigant. For example, the U.S. banking agencies have stated that they expect first-lien mortgages or home equity loans on owner-occupied, 1-to-4-family residential properties to have appropriate credit support, such as mortgage insurance or readily marketable collateral, where LTVs reach or exceed 90%.[32] The Interagency Guidelines for Real Estate Lending Policies echo this expectation, calling on banks to establish internal LTV limits in their lending policies and reflect guarantees such as mortgage insurance in their underwriting standards.[33] Along similar lines, the Joint Forum has recently recommended that national supervisors "take steps to require adequate mortgage insurance in instances of high LTV lending."[34]

Banking regulators also encourage the use of mortgage insurance through regulatory capital standards, with the potential capital benefits of PMI varying among both existing and proposed

---

[32] OCC, FRB, FDIC, and OTS, Interagency Guidance on High-LTV Residential Real Estate Lending (Oct. 8, 1999), 3, http://www.federalreserve.gov/boarddocs/srletters/1999/sr9926a2.pdf.

[33] See 12 C.F.R. part 365 (FDIC); 12 C.F.R. part 208, subpart E (FRB); 12 C.F.R. part 34, subpart D (OCC); and 12 C.F.R. § 560.101 (OTS).

[34] The Joint Forum, "Review of the Differentiated Nature and Scope of Financial Regulation: Key Issues and Recommendations," January 2010, 51, http://www.bis.org/publ/joint24.pdf?noframes=1.

bank capital regimes. The Basel Committee on Banking Supervision (BCBS) published the first Basel Capital Accord, commonly called Basel I, in 1988.[35] Basel I assigns assets one of five risk weights, ranging from 0% to 100%. A higher risk weight means that more capital must be held against the asset. As a general matter, the benefits of insurance or guarantees against counterparty default are significantly limited under Basel I. While banks may in some cases substitute a guarantor's risk-weighting for that of the original counterparty (up to the amount of the guarantee), doing so will generally decrease the bank's capital requirements only where the guarantor is an OECD government entity or a bank incorporated in an OECD country.

However, Basel I provides significant capital relief for insurance on high-LTV loans through other means. Specifically, by helping certain high-LTV mortgage loans qualify as "prudently underwritten" under the supervisory guidance described above, PMI enables banks to apply a 50% risk weight to these loans, rather than the otherwise-applicable 100% (or higher) risk weight.[36] In this way, the U.S. banking agencies' regulatory capital guidelines implementing Basel I reinforce relevant real estate lending guidance.

The BCBS began reassessing its capital rules in 1999, culminating in the international adoption of the Basel II framework in June 2004.[37] Basel II aims to be more sensitive than Basel I to the credit risks presented by specific exposures, including both residential mortgages and the PMIs that insure them. However, general concerns over competition and safety and soundness

---

[35] BCBS, "International convergence of capital measurement and capital standards," July 1988 (updated April 1998). BCBS publications can be viewed on the BCBS website: http://www.bis.org/list/bcbs/index.htm.

[36] See, *e.g.*, 12 C.F.R. part 3, Appendix A, § 3(a)(3)(iii) (OCC).

[37] BCBS, "International Convergence of Capital Measurement and Capital Standards: A Revised Framework," June 2004.

have delayed full implementation of Basel II in the U.S.[38]

The global financial crisis has spurred the BCBS to reexamine Basel I and II, an effort commonly referred to as Basel III.[39] Although work continues, the BCBS has issued a series of proposals for comment, including a proposed loosening of the requirements for guarantors to be eligible as credit risk mitigants. This would be accomplished by eliminating the requirement that they be externally rated A- or better, a move designed to avoid the "cliff effects" that can occur when a guarantor slips below an A- rating.[40]

The PMI industry would benefit from and is actively seeking additional changes to Basel III. These changes include requiring additional capital for high-LTV loans and treating such loans as a separate asset class with a higher correlation factor; using original LTVs (not current property

---

[38] See Richard J. Herring, "The Rocky Road to Implementation of Basel II in the United States" (July 2007), http://fic.wharton.upenn.edu/fic/papers/07/0731.pdf. Although the U.S. banking agencies released final rules implementing Basel II's internal ratings-based (IRB) approach for the largest banks in 2007, the agencies required these banks to calculate capital based on both Basel II and Basel I during a multi-year parallel run phase, which has yet to conclude. Risk-Based Capital Standards: Advanced Capital Adequacy Framework—Basel II; Final Rule, 72 Fed. Reg. 69288 (Dec. 7, 2007). To pacify smaller domestic banks ineligible for utilizing the IRB approach, the banking agencies had initially embarked upon revisions to Basel I known as Basel IA. Risk-Based Capital Guidelines; Capital Adequacy Guidelines; Capital Maintenance: Domestic Capital Modifications; Proposed Rules and Notice, 71 Fed. Reg. 77446 (Dec. 26, 2006). But regulators later scrapped Basel IA, instead opting for the standardized approach to Basel II. Risk-Based Capital Guidelines; Capital Adequacy Guidelines: Standardized Framework; Proposed Rule, 73 Fed. Reg. 43982 (July 29, 2008). The standardized approach under Basel II has yet to be finalized in the U.S. The IRB approach to Basel II, as implemented in the U.S., permits a bank to take into account the credit risk mitigation benefits of guarantees like PMI and credit derivatives in its estimation of the probability of default (PD) and loss-given-default (LGD), subject only to the application of overall floors on certain PD and LGD assignments. 72 Fed. Reg. 69356. Under the proposed Basel II standardized approach, risk weights for residential loans depend upon LTV and range from 20% to 150%. 73 Fed. Reg. 44040.

[39] See BCBS, "Enhancements to the Basel II framework," July 2009; BCBS, "Strengthening the resilience of the banking sector," Dec. 2009; BCBS, "International framework for liquidity risk measurement, standards and monitoring," Dec. 2009; and BCBS, "Countercyclical capital buffer proposal," July 2010. See also BCBS press release, "Group of Governors and Heads of Supervision announces higher global minimum capital standards," Sept. 2010.

[40] BCBS, "Strengthening the resilience of the banking sector," 59.

values) and "through-the-cycle" rather than "point-in-time" probability of default models; improving the accuracy of loss-given-default models for high-LTV loans; reducing reliance on credit scores (which reflect historical performance during favorable economic periods); and requiring mortgage insurance on high-LTV loans.[41] International regulators are currently considering these changes, particularly the creation of a separate asset class for high-LTV loans with a corresponding higher correlation factor, but they have not yet been formalized in a BCBS proposal.

d.   Impact of the Dodd-Frank Act

Under section 941 of the Dodd-Frank Act, federal regulators must promulgate rules requiring "any securitizer to retain an economic interest in a portion of the credit risk for any residential mortgage asset that the securitizer, through the issuance of an asset-backed security, transfers, sells, or conveys to a third party."[42] This so-called "skin in the game" requirement is designed to ensure that companies that package and sell investment securities backed by residential mortgages have strong incentives to control the quality of these mortgages. While the Dodd-Frank Act generally requires regulators to impose a risk retention requirement of at least 5%, it provides for certain exceptions. For example, loans that meet specific "low credit risk" underwriting criteria to be promulgated by the federal banking agencies must be subject to a risk retention requirement below 5%. In addition, the agencies must exempt securitizations composed solely of "qualified residential mortgages" from the risk retention requirement altogether. The term "qualified

_____

[41] See Genworth Financial, Inc., Comment Letter in response to the BCBS Consultative Paper on Strengthening the Resilience of the Banking Sector, April 15, 2010; Mortgage Insurance Companies of America, Comment Letters in response to the BCBS Consultative Paper on Strengthening the Resilience of the Banking Sector, April 16, 2010. These comment letters can be viewed at http://www.bis.org/publ/bcbs165/cacomments.htm.

[42] Relevant agencies include the federal banking agencies, Securities and Exchange Commission (SEC), Department of Housing and Urban Development (HUD), and Federal Housing Finance Agency (FHFA). They must jointly issue the rules within 270 days of the Act's enactment, which occurred on July 15, 2010.

residential mortgage" must be defined by the agencies, "taking into consideration underwriting and product features that historical loan performance data indicate result in a lower risk of default." As an example of such a product feature, the legislation mentions "mortgage guarantee insurance or other types of insurance or credit enhancement obtained at the time of origination, to the extent such insurance or credit enhancement reduces risk of default."

While the full implications of section 941 for PMIs will not be known until the agencies promulgate implementing regulations, mortgage insurance may play an important role in the delineation of qualified residential mortgages. If so, securitizers and originators could have strong incentives to secure PMI as an alternative to mandatory risk retention. Such incentives could significantly bolster the PMI industry's strategic position in the marketplace not only by increasing new business, but also by reducing potential adverse selection; any regulatory incentive to insure broad categories of mortgage loans reduces the likelihood that securitizers and originators will direct only their worst credits toward the PMIs.

V.   Regulation of Private Mortgage Insurers

PMIs are subject to a regulatory regime specifically tailored for mortgage insurance. While federal law imposes certain consumer protection requirements, it leaves the prudential regulation of PMIs to the states. This section begins with a brief overview of the major categories of regulatory restrictions imposed on PMIs. It then considers the rationale for these restrictions, with particular emphasis on the historical justification for PMI contingency reserves. Last, this section considers the extent to which the regulatory framework has functioned effectively during the past two housing cycles.

a.   Regulatory Framework

The regulation of PMIs for risk and solvency occurs on the state level. While some of the details vary by state, the types of restrictions are relatively uniform.[43] In addition, because various states apply their restrictions extraterritorially to the insurer's consolidated operations throughout the U.S., the stricter state laws often govern the nationwide operations of PMIs in practice. Standard restrictions include the following:

- *Reserve Requirements.* PMIs must maintain several types of reserves:
  (1) "Contingency reserves" provide for major losses that might be incurred in a housing recession. PMIs must retain 50% of net earned premiums, as defined by state insurance laws, in a contingency reserve. The funds cannot be released for 10 years unless the insurer experiences high losses during a given year (typically 35% of premiums or more), in which case the insurer temporarily draws down the reserve to pay claims. State regulators may also authorize special releases from contingency reserves. The contingency reserve requirement is designed to prevent insurers from

---

[43] See generally Johnstone, "Private Mortgage Insurance," 808-818.

declaring excessive dividends or otherwise dissipating reserves that might be needed to pay claims in a highly adverse loss scenario.

(2) "Loss reserves" (sometimes referred to as "case basis loss reserves") cover against expected claims in the short term. Loss reserves must equal expected losses on delinquent loans of which the insurer is aware, as well as delinquent loans of which the insurer might not yet be aware.

(3) Finally, insurers must maintain "unearned premium reserves" in the amount of any premiums paid before the coverage period.

- *Capital Requirements.* PMIs must generally maintain risk-to-capital ratios not exceeding 25 to 1. Through much of the credit cycle, this requirement has little or no practical effect, because the contingency reserve requirement translates into a stricter risk-to-capital ratio. Certain requirements imposed by the GSEs and, indirectly, by the rating agencies may also translate into stricter standards.[44] However, the risk-to-capital ratio can assume heightened importance in adverse loss scenarios, including the 1980s and currently. Most state regulators are authorized to exercise discretion in administering the capital requirements, including through temporary waivers. Such forbearance enables capital-constrained insurers to generate additional revenue from new business. Otherwise, an insurer exceeding the maximum risk-to-capital ratio would be precluded from doing so.

- *Investment Restrictions.* State insurance regulators also restrict the ways in which PMIs may invest their reserves, including limitations on the amount of investments in any particular security. While PMIs are generally free to invest in a wide range of instruments, including

---

[44] See Dwight Jaffee, "Monoline Restrictions, With Applications to Mortgage Insurance and Title Insurance," *Review of Industrial Organization* 28, no. 2 (2006): 91. In the years leading up to the recent financial crisis, PMI capital ratios in the high single-digits were commonplace.

stocks, bonds, notes, and other evidence of indebtedness,[45] real estate investments are often off limits.[46]

- *Concentration Restrictions.* PMIs must limit their exposure to a single census tract, typically to no more than 10% of aggregate policyholders surplus.

- *Monoline Restrictions.* PMIs generally may not engage in activities other than mortgage-related insurance. However, PMIs may be *affiliated* with a variety of other firms.

The GSEs provide an additional layer of de facto requirements. To qualify for approval by the GSEs, mortgage insurers must comply with the laws of the states in which they are domiciled and do business, as well as certain NAIC Model Act provisions, such as those providing for minimum contingency and loss reserves. Both GSEs divide PMIs into two classes based upon the availability and level of external credit ratings. "Type I" insurers are rated by at least two of the three established rating agencies (S&P, Moody's, and Fitch), with no rating less than AA-/Aa3.[47] Insurers that fail to meet the criteria for Type I, including unrated insurers, are classified as "Type II" insurers and are typically subject to geographic concentration limits, liquidity requirements, and heightened risk-to-capital requirements, among other things.[48] In 2008, the GSEs suspended the automatic imposition of these additional requirements as many PMIs suffered ratings downgrades.[49]

---

[45] See Johnstone, "Private Mortgage Insurance," 815 n. 129.

[46] See, *e.g.*, 10 Cal. Code of Regs. § 2521 ("No mortgage guaranty insurer may invest in notes or other evidences of indebtedness secured by a mortgage or other lien upon real property.")

[47] In order to achieve high ratings, PMIs have historically been required to pass a "stress test" simulating Depression-level economic conditions. Blood, "Mortgage Default Insurance," 51.

[48] Fannie Mae Qualified Mortgage Insurer Approval Requirements (rev. Dec. 31, 2003), 6, https://www.efanniemae.com/is/mis/pdf/mi_approval_reqs.pdf; Freddie Mac Private Mortgage Insurer Eligibility Requirements (rev. Jan. 2008), G-7, http://www.freddiemac.com/singlefamily/pdf/mireqs.pdf.

[49] See, *e.g.*, "Freddie Mac keeps insurers at top level post review," Reuters, June 20, 2008.

While federal law generally leaves the prudential regulation of PMIs to the states, the Homeowners Protection Act and the Real Estate Settlement Procedures Act (RESPA) impose certain consumer protections. The RESPA provisions relating to PMI are intended to, among other things, foster price competition among PMIs by broadly prohibiting them from paying kickbacks to lenders.[50] The Homeowners Protection Act generally requires automatic termination of PMI on single-family, owner-occupied homes (except for certain "high risk" mortgages) when the borrower acquires 22% equity in the home and gives the borrower the right to demand cancellation at 20% equity. Lenders must provide borrowers with initial and annual disclosures to this effect. These provisions aim to ensure that borrowers do not continue to pay PMI premiums for longer than necessary.

b. Rationale for State Prudential Framework

Several of the above-mentioned prudential restrictions resemble similar restrictions imposed on other financial institutions. Banks, for example, face formal and informal concentration restrictions, capital requirements, and permissible activities restrictions. But in comparing the restrictions imposed on PMIs with those imposed on other regulated financial institutions, PMIs' contingency reserves stand out as distinctive. No other type of financial institution is subject to more stringent reserve requirements than PMIs, and contingency reserves might be viewed as the centerpiece of these requirements.

The basic rationale for contingency reserves can be stated simply. To a greater extent than other insurers, PMIs contend with cyclical volumes of claims that generally peak quite infrequently but with potentially catastrophic consequences for the insurer. From an actuarial perspective, PMI portfolios are difficult to diversify, since the events they insure against—housing defaults—tend to

---

[50] See Johnstone, "Private Mortgage Insurance," 818-822.

occur in waves. The contingency reserve framework addresses this reality by requiring PMIs to accumulate large reserves in anticipation of massive defaults.

Early History of PMI

A working knowledge of the history of PMI in the U.S. is essential to fully appreciate the cyclical nature of PMI and the role of prudential regulation in managing the associated risks. As one scholar of PMI regulation has observed, "[i]t was not ever thus, and each restraint represents experience acquired at great cost."[51] In a nutshell, the original business of mortgage insurance arose as an essentially unregulated appendage to the title insurance industry in New York State in the late 19th century, grew to substantial scale by the 1920s, and totally collapsed during the Great Depression. The governor of New York commissioned a post-mortem report on the industry, which was submitted by George Alger in 1934.[52] The "Alger Report" remains the definitive early history of PMI. And while its thoughtful recommendations for regulating PMIs were disregarded at the time (New York State opted to outlaw PMI in 1938), they became the foundation for state regulation of PMIs when the industry finally re-emerged in 1957.

As the Alger Report describes, a handful of companies in New York State began issuing insurance against mortgage defaults as early as the late 1880s and early 1890s. Their authority to conduct this business apparently derived from a misinterpretation of an 1885 statute governing the permissible activities of title insurers. However, in 1904 New York law was amended to convey explicit authority under the title insurance statute for licensed companies to guarantee mortgages, as well as bonds. At first the authority to insure mortgages extended only to loans originated and

---

[51] Graaskamp, "Development and Structure of Mortgage Loan Guarantee Insurance in the United States," 48.

[52] Report to his Excellency Herbert H. Lehman, Governor of the State of New York, by George W. Alger, Appointed under the Executive Law to Examine and Investigate the Management and Affairs of the Insurance Department with Respect to the Operation, Conduct, and Management of Title and Mortgage Guarantee Corporations under its Supervision (New York, 1934).

owned by third parties. But in 1911 New York began to permit these companies to originate, purchase, and sell mortgages (and to insure the same against default and/or title defects).

By 1930, 50 companies were licensed by the New York Insurance Department to operate as PMIs.[53] Most also offered title insurance. These companies sold both individual loans and loan pools to investors, with guarantees of interest and principal. They generally retained servicing responsibilities on these loans and deducted their servicing and insurance premiums from the mortgage payments before passing the remainder on to the investors. (Mortgage securitization, as it is called now, had already been around for some time.) The New York PMIs were primarily in the business of selling mortgages to investors and, as far as Alger could determine, lacked any actuarial basis for calculating premiums. (For example, their fee invoices to investors generally did not distinguish between insurance premiums and servicing fees.) Alger thus believed that they were "in no true sense" insurance companies but, rather, investment companies.

The New York PMIs remained lightly regulated despite their significant role in the housing finance system. New York law required title and mortgage insurers to maintain a reserve fund set at two-thirds of paid-in capital. This fraction bore no necessary relation to the size of a company's insurance portfolio; a company could grow through retained earnings to many times its original size without supplementing its reserve fund. In addition, the entirety of this fund could be (and for many firms was) invested in mortgages, meaning that the insurer would suffer its most severe investment losses precisely when its claims obligations were highest. To the extent an insurer needed to draw on its reserve fund, it could not issue new policies until the fund was replenished. However, New York abolished this latter restriction in 1929, a move that might have made a difference to PMIs that adhered to the statutory reserve requirement in the first place; Alger

---

[53] During this same period the New York Banking Department also licensed mortgage insurers. Such companies fell outside the scope of Alger's investigation.

reported that most did not. New York did impose one impressive-sounding prudential requirement: PMIs could not insure mortgages over 66.67% LTV.[54] However, lax appraisal standards and declining property values limited the effectiveness of this restriction. PMIs were also prohibited from insuring a single mortgage greater than 10% of their capital and surplus.[55]

New York PMIs prospered during the postwar period until the Great Depression. But with such small reserves, they could not survive the wave of defaults that ensued. In August 1933, the New York Insurance Department took over 18 insurers, representing most of the industry, for rehabilitation or liquidation. These companies never re-opened, and in 1938 New York made PMI illegal.

The disastrous early experience of the PMI industry revealed in dramatic fashion the extent to which PMIs are exposed to long tail events in the housing market. In normal times, PMIs experience losses that are minimal both in frequency and magnitude. But during those rare periods when homeowner defaults spike and collateral values plummet, PMIs must pay out massively. This early episode also showed the danger of permitting lightly regulated entities to engage in the business of PMI without liquid reserves commensurate with the risk they assumed. In this spirit, Alger concludes his report with his own recommendations for industry reform. He places special emphasis on one recommendation in particular: that New York adopt a maximum risk-to-capital ratio "adequate to insure against another major depression."[56]

---

[54] As originally written in 1913, this restriction applied to mortgages sold by the insurer. In 1929 it was extended to insurance on mortgages sold by third parties.

[55] Although New York was the epicenter of the PMI industry, other states also licensed PMIs. The Alger Report describes the regulatory environment in these other states as similarly lax, with the notable exceptions of California and Oregon. Both states imposed a 20-to-1 risk-to-capital standard.

[56] Alger further expressed his preference for a ratio not exceeding 10 to 1. California's then-existing 20-to-1 ratio, he observed, had proved inadequate. Another notable recommendation contained in the report was to restrict PMIs' affiliations with other companies. The report describes numerous examples of: PMIs influencing captive or otherwise affiliated banks to accept imprudent risks; banks and nonbanks influencing captive or otherwise affiliated PMIs to accept imprudent risks; affiliated

The Federal Housing Administration (FHA) was created in 1934 in order to stimulate construction financing during the Great Depression. It was the only mortgage insurer in the U.S. until the Veterans Administration (VA) began insuring mortgages for returning World War II veterans in 1944. Together, the government insurers pioneered the 30-year, fully amortizing, high-LTV mortgage. (In the 1920s, mortgages generally lasted between 3 and 11 years, commonly amortized only partially or not at all, and typically had LTVs between 50% and 67%.[57]) But "conventional" mortgages (*i.e.*, those not insured by the government) continued to comprise a large majority of the housing market through the 1940s and 1950s. This was due partly to the restrictive interest rate ceilings and maximum loan amounts, cumbersome procedures, and other coverage limitations of the FHA programs.[58] Accordingly, an entrepreneur named Max Karl saw an opportunity for a private company to provide an alternative to FHA insurance.[59] In 1957, he persuaded the state of Wisconsin to license the first private mortgage insurer in twenty-five years, the Mortgage Guaranty Insurance Corporation (MGIC). MGIC's innovative product was a 10 year guarantee against default, covering 20% of the loan balance, accrued interest, and expenses. Its

---

PMIs and banks misleading investors as to which entity or entities stood behind a given financial commitment; and PMIs using subsidiaries to dump problem assets in ways that hid losses from investors. In Alger's view, strict limitations on ownership of PMIs would reduce the potential for controlling interests to corrupt the business integrity of PMIs, and similar limitations on ownership of banks and other subsidiaries by PMIs would reduce the opportunity for PMIs carry out improper schemes or exercise a negative influence on regulated banking subsidiaries.

[57] Rapkin et al., *The Private Insurance of Home Mortgages: a Study of the Mortgage Guaranty Insurance Corporation*, 14-15. For a detailed history of the evolution of fixed-rate mortgages in the U.S., see Richard Green and Susan Wachter, "The American Mortgage in Historical and International Context," *Journal of Economic Perspectives* 19, no. 4 (2005), 93-114, http://repository.upenn.edu/cgi/viewcontent.cgi?article=1000&context=penniur_papers.

[58] See Rapkin et al., *The Private Insurance of Home Mortgages: a Study of the Mortgage Guaranty Insurance Corporation*, 2, 16.

[59] See Bobby Baker, "Magic Max: How Mr. Karl Created a Booming Industry from a Little Company," *Wall Street Journal*, March 14, 1973.

success gave rise to an additional 11 (smaller) PMI competitors by 1964.

Unlike their predecessors several decades earlier, which were essentially mortgage sellers offering ancillary guarantees, the new PMIs were licensed as monoline insurers.[60] The spirit, if not the letter, of Alger's recommendations informed the new PMI statutes created by several states to regulate these new entities.[61] The earliest comprehensive statutes required contingency reserves in the amount of 50% of annual earned premiums, to be withdrawn only after 15 years, unless loss rates necessitated otherwise. Risk-to-capital ratios were set at 25 to 1. Loss reserves and unearned premium reserves were also required. Two early statutes (California and Illinois) restricted permissible coverage to 20% of outstanding loan balance (capped in California at 80% of actual loss, which factored in recovery on the collateral). According to one thorough study of the era, this "serve[d] to divide the risk between insurer and lender, creating an incentive for each to act prudently in evaluating loan applications."[62] These two states also imposed a concentration limit of 10% of policyholders surplus. In short, while the calibration of certain standards has evolved on the margins, the basic legal framework created around 1960 to protect against the insolvency of PMIs remains in force today.

---

[60] On the economic justification for imposing monoline requirements on title and mortgage insurers, see Jaffee, "Monoline Restrictions, With Applications to Mortgage Insurance and Title Insurance."

[61] Interestingly, some of the more comprehensive state statutes closely resembled model language proposed by the industry itself. See Rapkin et al., *The Private Insurance of Home Mortgages: a Study of the Mortgage Guaranty Insurance Corporation*, 34.

[62] Ibid., 35. It is not clear where the 20% figure came from, if not the actual practices of MGIC at the time. As mentioned in section III.a., modern reinsurance arrangements have rendered such restrictions (now set somewhat higher at 25%-30%) largely irrelevant. But in practice, lenders generally retain material risk under modern PMI policies due to contractual coverage limits and captive reinsurance arrangements.

c.   Effectiveness of Regulatory Framework

The state prudential framework was designed to ensure that PMIs could fulfill their claims obligations over the long term. Accordingly, any assessment of the framework's effectiveness must identify the episodes of severe industry stress since 1957 and consider their causes and consequences.   Such episodes occurred in the 1980s and early 1990s and are taking place again today. This subsection briefly considers the industry experience during these periods.

The 1980s and early 1990s

A combination of rolling regional recessions, poor housing market conditions, imprudent underwriting patterns, and, in one case, massive exposure to a single failed real estate investment scheme contributed to significant industry-wide losses in the 1980s:

- *Housing market.* The U.S. housing market in the 1980s and early 1990s experienced a rolling series of predominantly regional recessions—beginning with the farm and Rust Belt states in the early 1980s, followed by the energy-producing states in the mid-1980s, and finally New England and California in the early 1990s.[63] Some of the most severe conditions of this period occurred in the "oil patch" states of Arkansas, Louisiana, Mississippi, and Oklahoma, where 30-year, fixed-rate, first-lien mortgages on owner-occupied single family properties originated in 1983 and 1984 had a 10-year cumulative default rate of 14.9%. (The housing recession in these states was so severe that it become the benchmark loss experience against

---

[63] See generally David C. Wheelock, "What Happens to Banks When Housing Prices Fall? U.S. Regional Housing Busts of the 1980s and 1990s," *Federal Reserve Bank of St. Louis Review* 88, no. 5 (September/October 2006), 413-429, http://research.stlouisfed.com/publications/review/06/09/Wheelock.pdf; FDIC, "FYI Revisited; U.S. Home Prices: Does Bust Always Follow Boom," *FYI: An Update on Emerging Banking Issues* (May 2, 2005), http://www.fdic.gov/bank/analytical/fyi/2005/050205fyi.html.

which the Office of Federal Housing Enterprise Oversight, a predecessor of the FHFA, stress-tested the GSEs' financial strength after 2001.[64])

- *Underwriting standards.* The early 1980s marked a rapid shift in PMIs' insurance portfolios from almost exclusively fixed-rate mortgages with mostly sub-90% LTVs to substantial numbers of "innovative" adjustable-rate 90%+ LTV mortgages. Many borrowers defaulted shortly after their first interest rate resets, as has been the case recently.[65]

- *Failed investment scheme.* Several PMIs had significant exposure to mortgages and MBS originated by an enormous real estate syndication company, Equity Programs Investment Corp. (EPIC), that collapsed in 1985. Ticor Mortgage Insurance Company alone had a $166 million exposure to EPIC.[66] Unlike the general housing market conditions and underwriting patterns that affected the PMI industry as a whole, Ticor's massive exposure to EPIC is generally regarded as an idiosyncratic risk management lapse principally on the part of one insurer.[67]

---

[64] See Department of Housing and Urban Development, Office of Federal Housing Enterprise Oversight, Final Rule: Risk Based Capital, 66 Fed. Reg. 47730, at 47732 (September 13, 2001).

[65] See Andrea R. Priest, "Overaggresiveness of Mortgage Insurers Haunts Industry," *American Banker*, July 25, 1986; Greenhouse, Steven, "Mortgage Insurers' Shaky House," *San Fransicsco Chronicle*, September 23, 1985.

[66] See Bruce Keppel, "Ticor Briefs State on Potential Loss: Ailing Real Estate Syndication Firm Causes Concern," *Los Angeles Times*, August 24, 1985. For additional background on the EPIC fiasco, see Thomas N. Herzog, "History of Mortgage Finance With an Emphasis on Mortgage Insurance," Society of Actuaries monograph (2009), 34-36, http://www.soa.org/library/monographs/finance/housing-wealth/2009/september/mono-2009-mfi09-herzog-history.pdf. A highly detailed account of EPIC's collapse also appears in *In re: Epic Mortgage Insurance Litigation*, 701 F. Supp. 1192 (E.D. Va. 1988).

[67] The industry responded by creating and funding a company, Policyholders Benefit Corporation, to provide replacement mortgage insurance for loans which had been insured by Ticor. Policyholders Benefit Corporation was liquidated in 2001 following run-off of Ticor legacy policies and settlement of legacy claims up to a certain stop-loss limit.

These factors yielded about eight consecutive years of industry losses from the early 1980s until 1990,[68] as well as considerable industry restructuring. Of the 14 PMIs in existence in 1980, only one (Ticor) was unable to fully repay its policyholders. Another, Pamico Mortgage Insurance Company, was ordered by its regulator to cease new policy issuances in the mid-1980s but ultimately paid its claims in full. Two other PMIs, Verex Assurance Inc. and Investors Mortgage Insurance Company, entered voluntary run-off when their parent companies declined to contribute additional capital. Meanwhile, a series of acquisitions by GE Capital Mortgage Insurance (now Genworth Financial) and Commonwealth Mortgage Assurance Company (now Radian Guaranty Inc.) contributed to further consolidation. Finally, two new players, Triad Guaranty Insurance Corporation and Amerin Guarantee Corporation, entered the industry in 1988 and 1993, respectively. By 1994 the industry was comprised of 9 companies.[69]

The industry's experience in the 1980s and early 1990s is enlightening in several respects. First, it illustrates the importance of strong underwriting and risk management to the long term health of PMIs. Like other players in the housing finance system, PMIs face competitive pressures that, at times, can lead them to under-price (or assume excessive) risk. Virtually no amount of reserving will fully immunize PMIs from imprudent risk taking. Yet, in spite of an industry-wide deterioration of underwriting quality in the early 1980s, the industry as a whole successfully met its claims obligations, paying out over $6 billion during this decade and another $8 billion in the 1990s. While economic conditions in the 1980s and early 1990s may not represent a sufficiently rigorous test of industry resilience—certainly these conditions fall short of the national Depression-level scenario that George Alger would have expected modern PMIs to survive—this era nevertheless

---

[68] See Blood, "Managing Insured Mortgage Risk," 636.

[69] See Herzog, "History of Mortgage Finance With an Emphasis on Mortgage Insurance," 33-38. Our discussion of industry developments in this paragraph also draws from discussions with industry participants.

provides a useful benchmark. At a minimum, it seems to show that the industry can withstand a period of prolonged regional housing depreciation and elevated foreclosure levels at a time when industry underwriting standards are somewhat lax. With one relatively minor exception (Ticor), the PMI industry performed as expected by absorbing its full share of mortgage losses in the 1980s and early 1990s. And despite the above-mentioned entry, exit, and consolidation of various industry players during these years, existing policyholders experienced little disruption.

This era also illustrates the difference between an insurer's solvency and its willingness or capacity to write new business. As the risk-to-capital ratios of certain PMIs approached regulatory limits in the mid-1980s, two insurers were forced by regulators into run-off mode, and two others elected to cease issuance of new policies. With the exception of Ticor, these insurers paid their claims in full (and, as noted above, the remaining insurers cooperated in covering some of Ticor's obligations as well). This raises the question whether solvency is the best metric for evaluating the effectiveness of the state prudential framework, or whether capacity to continue writing steady volumes of new insurance through a housing downturn (with or without regulatory capital forbearance by supervisors) should be expected.

The answer may depend on the severity and duration of the downturn. While policy-writing capacity under stress is a desirable countercyclical mechanism, it comes at a cost. Contingency reserves are designed to ensure solvency in highly adverse scenarios. When these scenarios materialize, PMIs become capital constrained and must reduce the pace of new policy issuance. Otherwise, the insurer exposes itself to a serious risk of insolvency in the event the economy worsens even further—a possibility that other market participants do not permit PMIs to ignore. As capital increases, new business can increase accordingly. For PMIs to maintain constant policy-issuing capacity through the cycle without becoming capital constrained, they would need to amass sufficient reserves to withstand a more severe downturn. Only then could they continue to write

new business without depleting reserves to unsafe levels. But maintenance of larger capital buffers requires higher premiums, a cost borne by the borrower. Thus, in calibrating solvency requirements for PMIs, the states must strike a balance between safety and cost.[70]

The Recent Financial Crisis

The current U.S. housing downturn represents the most adverse scenario for PMIs since the Great Depression. Unlike the regional housing recessions of the 1980s and early 1990s, today's slump is national in scope, with states like Florida, Nevada, Arizona, and California particularly hard hit. National 90-day delinquency rates on residential mortgage loans, which had generally hovered around 1% during the two decades preceding 2007, rose precipitously to around 5% during the first quarter of 2010. Delinquencies have been especially high in the subprime segments of the market, reaching the mid teens early this year (and, for ARMs in particular, the high teens).[71]

The current size and state of the PMI industry, discussed further below, owes partly to the unfavorable market conditions that have taken hold since 2007. But competitive factors that developed before the recent downturn also played an important role. Specifically, in the half-dozen years immediately preceding the recent housing collapse, PMIs lost significant market share to piggyback lending.[72] Piggyback lending is the practice of simultaneously originating an 80% LTV first-lien mortgage and a second-lien mortgage financing some or all of the rest of the purchase

---

[70] As discussed further below, government mortgage insurance can help resolve this dilemma by filling the void when adverse market conditions force PMI contraction. Alternatively, government reinsurance might place a floor under the potential losses of PMIs and thereby increase the capacity of PMIs to issue new policies through the cycle.

[71] Extensive current and historical data on U.S. housing market conditions is available through HUD's website at http://www.huduser.org/portal/periodicals/ushmc.html. Additional statistics, including state-specific data, are published by the Federal Reserve Bank of New York on a quarterly basis: http://data.newyorkfed.org/creditconditions/.

[72] See, *e.g.*, William B. Gwinner and Anthony Sanders, "The Sub Prime Crisis: Implications for Emerging Markets," World Bank policy research working paper (September 2008), 8-9, http://ihfp.wharton.upenn.edu/SubprimeReadings/Gwinner%20TheSubprimeCrisis.pdf.

price.[73]   A common form of piggyback (or simultaneous second) mortgages was the 80-10-10 mortgage, composed of an 80% LTV first mortgage, a 10% junior mortgage (typically adjustable rate and shorter term than the first mortgage, but with interest-only payments), and a 10% down payment. Variations with much lower down payments were also common.

By splitting what would otherwise be a 90% LTV mortgage loan into an 80% LTV first mortgage and a 10% LTV second mortgage, lenders accomplished at least two objectives. First, lenders ensured that they could sell the main portion of the loan (*i.e.*, the first mortgage) to the GSEs without securing mortgage insurance. While the GSEs cannot purchase a 90% LTV mortgage without insurance (or other credit enhancements), they routinely purchased uninsured 80% LTV first mortgages without regard to the existence of a piggyback mortgage.[74] Second, lenders were able to offer piggyback loans to borrowers at lower prices than insured loans, thereby achieving a competitive advantage in the marketplace. Piggyback lenders could do so because monthly payments for piggyback loans did not include mortgage insurance premiums.[75] However, this "advantage" came at the cost of significant credit risk exposure on the second mortgage, which lenders often retained on balance sheet without any credit enhancement. In retrospect, many piggyback lenders radically underpriced these second mortgages in relation to the risks they posed. While profits from piggybacks padded lender balance sheets in the short term, the impending wave of defaults had the opposite effect.

---

[73] See Robert B. Avery, Kenneth Brevoort, and Glenn Canner, "The 2006 HMDA Data," *Federal Reserve Bulletin* (December 2007), A84,
http://www.federalreserve.gov/pubs/bulletin/2007/pdf/hmda06final.pdf; FHFA, "State of the Private Mortgage Insurance Industry: Implications for U.S. Mortgage Markets and the Enterprises," 6.

[74] In fact, the GSEs charged the same guarantee fee for 80% LTV first mortgages with piggybacks as they did for those without piggybacks. In other words, the GSEs did not incorporate the cumulative LTV (CLTV) of all mortgages on the same property into their fee schedules.

[75] In addition, while borrowers have long been permitted to deduct interest payments on second mortgages for federal income tax purposes, PMI premiums were not tax deductible until 2006.

While PMIs avoided many of the worst-performing loans during the credit bubble, they nevertheless gained considerable exposure to mortgage risk in recent years, including, in some cases, material subprime exposure. And like virtually all players in the housing finance system, PMIs have suffered serious losses. The hardest-hit insurer, Triad Guaranty Insurance Corp., has been in run-off mode since July 2008.[76] Triad was among the smaller players in the industry, and its underwriting practices were generally viewed as lax. In addition, Triad relied heavily on deep-cede captive reinsurance arrangements and modified pool insurance, particularly in the Alt-A market, placing it in a particularly precarious position in relation to other PMIs.[77] The other six PMIs have been operating at a loss since 2007[78] but continue to satisfy all of their claims paying obligations.

Piggyback loans no longer threaten PMIs' market share, but a confluence of factors has restrained the pace of new policy issuance. First, the GSEs have increased the fees that they charge lenders for purchasing high-LTV loans. Many PMIs have increased their own rates as well. Second, both the PMIs and the GSEs have tightened their underwriting standards. In contrast, the FHA's fees and underwriting standards remained generally at pre-crisis levels until quite recently.[79] These differences, coupled with statutory increases in FHA loan limits, have contributed to a dramatic

---

[76] Due to its uncertain claims-paying ability, the Illinois Insurance Department has ordered Triad to pay 40% of all current claims in "deferred payment obligations"—essentially IOUs. A summary of the Illinois Director of Insurance's Corrective Order, effective June 1, 2009 is available at http://www.tgic.com/dpo.php.

[77] See Bear Stearns, "Triad Guaranty Inc.: Premiums versus Claims – the Jury's Still out" (March 21, 2007), 9. See also Moody's Investors Service, "US Mortgage Insurers' [sic] Remain Weakly Capitalized" (August 17, 2010).

[78] See FHFA, "State of the Private Mortgage Insurance Industry: Implications for U.S. Mortgage Markets and the Enterprises."

[79] The FHA did decide to stop making loans to borrowers with FICO scores below 580. "The 2009 HMDA Data: The Mortgage Market in a Time of Low Interest Rates and Economic Distress," Federal Reserve Board (Sept. 20, 2010), 21. Recent increases in FHA premiums and new statutory authority for the FHA to change its premium structure may reduce FHA's competitive advantage. See generally Testimony of David H. Stevens, Assistant Secretary of Housing and FHA Commissioner, before the House Committee on Financial Services (September 22, 2010), http://financialservices.house.gov/Media/file/hearings/111/HUD_Testimony092210.pdf.

increase in FHA market share relative to PMIs during the current downturn.[80]   Finally, in some

cases, capital constraints or concerns about approaching such constraints have also caused PMIs to

reduce new policy issuance.[81]   However, capital forbearance from state insurance regulators, waiver

of minimum ratings requirements by the GSEs, and increasing industry confidence regarding

anticipated losses have lessened the potential impact of regulatory capital constraints.

It is perhaps too early to predict with confidence how the industry will fare in the current

downturn. State foreclosure moratoria and federally subsidized mortgage modification programs

may be forestalling many insurance claims for the moment, and the U.S. economy remains weak. A

recent credit rating agency report expresses a tentative view that the six rated insurers (Triad is no

longer rated) will be able to pay future claims in full.[82]   Among these firms, differences in past

underwriting standards are evident across several metrics, including risk-to-capital ratios, which

ranged from 15.4 to 24.3 at year-end 2009. Recent positive developments include new capital raises

by several PMIs, as well as the existence of a new entrant to the industry, Essent Guarantee Inc.

Backed by $600 million in startup capital, Essent's emergence indicates that the markets continue to

have some level of confidence in the long term viability of the PMI business model.

In short, while one relatively small insurer might or might not be actuarially insolvent, the

conditions of the remaining firms are viewed by some experts as reasonably stable, if still uncertain,

with significant variance by company. The current housing downturn will provide a rare and

---

[80] See "The 2009 HMDA Data: The Mortgage Market in a Time of Low Interest Rates and Economic Distress," Federal Reserve Board (Sept. 20, 2010), 19-20.

[81] See, for example, Standard & Poor's, "Significant Operating Losses Continue to Pressure U.S. Mortgage Insurers' Capital Adequacy Ratios," Ratings Direct (August 21, 2009), http://www2.standardandpoors.com/spf/pdf/media/Significant_Operating_Losses_10_03_09.pdf.

[82] See Moody's Investors Service, "US Mortgage Insurance: Developing Outlook," *Industry Outlook* (August 17, 2010).

valuable benchmark for assessing the adequacy of PMIs' reserves and other risk management practices in the future.

VI.   Comparison to Other Forms of Mortgage Credit Risk Mitigation

By assuming much of the credit risk associated with high-LTV mortgages, PMI promotes the flow of credit from lenders and investors that might not otherwise have the capacity or desire to assume this risk. In this way, PMI increases the total amount of private capital available for lending to borrowers unable to afford, or unwilling to provide, a 20% down payment. Likewise, pool-level PMI on securitizations containing lower-LTV mortgages encourages lending and investment in these instruments as well. Much of the modern secondary mortgage market has been made possible by various forms of credit risk mitigation, including GSE guarantees, PMI, government mortgage insurance, and structural credit enhancements on private label securitizations.

This section compares PMI to other forms of credit risk mitigation and avoidance, with particular attention to the comparative advantages of each alternative in supporting credit availability and economic stability. The principal alternatives include:

- Avoidance of high-LTV lending;

- Self-insurance by lenders;

- Risk assumption by GSEs, bond insurers, or derivatives counterparties; and

- Government mortgage insurance.

In comparing these other forms of credit risk mitigation and avoidance with PMI, this section attempts to distinguish between "inherent" differences and "contingent" differences. The purpose of this distinction is to separate the necessary or fundamental features of various alternatives from the features that they merely happen to display at the moment, often due to regulatory requirements or similar institutional considerations. Doing so makes it easier to see the range of plausible options for reducing or distributing high-LTV mortgage default risk in the housing finance system.

a.   Avoidance of High-LTV Lending

The recent spike in mortgage defaults across the country has increased public awareness that loose underwriting practices (*e.g.*, "no-doc" loans) and unconventional payment terms (*e.g.*, option ARMs) pose serious risks to both lenders/investors and borrowers. In a more general sense, all agree that excessive credit availability contributed to the recent financial crisis and that lenders must refocus on "responsible" lending. Many view some level of borrower down payment as a component of responsible lending. On a functional level, down payments protect credit providers by decreasing borrower incentives to "walk away" from a depreciating home and by mitigating losses in the event of default. As noted in section III, high-LTV loans generally carry a higher likelihood of default and higher losses-given-default compared with other loans.

However, there is a difference between responsible credit and risk-free credit. Mortgage lenders have originated large volumes of high-LTV loans for many decades, and the vast majority of these loans have performed well. Critics might legitimately question whether the risks associated with an extremely high-LTV loan—say, 100% LTV—are reasonable. Indeed, PMIs generally will not underwrite insurance on such "extreme" high-LTV loans. But while reasonable people will differ in defining the absolute lowest level of down payment that lenders should require from certain borrowers, few would suggest that the risks associated with high-LTV lending outweigh the rewards in general.

In part this reflects the significance of the rewards. A broad policy consensus dating back to the New Deal has favored promotion of affordable homeownership in the U.S. This consensus is premised on the benefits of homeownership to individual homeowners and the local community. For the individual homeowner, monthly mortgage payments represent a forced savings vehicle, with the potential to build significant wealth over the long term due to the leveraged nature of the investment. For the larger society, homeownership is understood to increase civic engagement,

since homeowners have a vested interest in the quality of local schools, infrastructure, and other aspects of the community that renters may lack. While the risks to the taxpayers of a housing finance system backed by implicit or explicit government guarantees have come under serious scrutiny in recent times, broad support for homeownership as a social good persists.

It is beyond question that the availability of high-LTV mortgage credit has expanded opportunities for homeownership. For some potential borrowers, the unavailability of high-LTV mortgages would only delay homeownership for a brief period, but for others it would delay homeownership for many years or perhaps indefinitely. In relation to median home prices in many U.S. cities today, a full 20% down payment, plus closing costs and applicable reserve and escrow requirements, equates to an impressive sum for would-be purchasers of all ages.

The policy argument in favor of responsible high-LTV lending also rests on the premise that the associated risks, both to individual lenders and the larger financial system, can be managed. This is where a properly functioning PMI industry can play a critical role. As monoline financial institutions whose primary focus is understanding, pricing, and holding capital against high-LTV mortgage default risk, PMIs provide a mechanism to increase the risk-absorbing capacity of the housing finance system. Absent such a mechanism, the willingness and capacity of modern lenders to originate high-LTV mortgages would almost certainly decline.

b. Risk Retention or Assumption by Other Financial Institutions

Various other players in the private sector currently retain or assume high-LTV mortgage default risk to some degree. These players include mortgage lenders, GSEs, monoline bond insurers, and institutional derivatives counterparties. From a credit availability standpoint, any party that shoulders default risk plays an important role in supporting the provision of credit. But from an economic stability perspective, all parties are not equally capable of bearing the severe tail risk associated with high-LTV mortgages. The recent financial crisis has illustrated that willingness to

assume risk does not always correlate with capacity to assume risk, and large disparities of this sort can pose systemic risks for the housing finance system and larger economy.

The following characteristics of PMIs, some discussed already, help them manage the risks involved in their business and can serve as a point of comparison with other players:

- *Contingency reserves.* As discussed in section V, PMIs maintain contingency reserves designed to absorb heavy losses in a severe housing downturn. PMIs build these reserves during normal times and draw them down only when losses exceed statutory thresholds or otherwise prompt insurance regulators to authorize reductions.

- *Geographic diversification.* All existing PMIs operate nationally (and some internationally). Geographic diversification serves as a bulwark against regional housing slumps by enabling PMIs to use excess premiums collected in stable regions to offset losses incurred in distressed regions. While PMIs are not required to operate nationwide (and in this sense their geographic diversification may be contingent), this appears to be an enduring feature of the industry.

- *Lender diversification.* Because PMIs insure loans originated by many different lenders, unforeseen weaknesses in the quality of loans originated by a small number of lenders—whether due to undetected operational or other problems at these lenders—pose smaller risks to PMIs than they do to individual lenders that self-insure.

- *Delayed loss realization.* PMIs enjoy a structural advantage in managing the timing of losses. Because PMIs' claims obligations do not arise until after foreclosure—a process drawn out over many months and, in some cases, years—they have extra time to provision against delinquent loans and other expected losses (*e.g.*, by increasing required loss reserves) and to generate earnings from new business in the meantime.

- *Acquaintance with relevant risks.* As discussed in section III, PMIs often delegate their day-to-day review underwriting functions to lenders. However, the insurer controls its own underwriting criteria and monitors lenders' adherence to these criteria. The insurer also engages at the loan level in loss mitigation efforts and claims management. All of these activities assist PMIs in understanding the risks associated with high-LTV mortgage loans.

- *Incentives to avoid foreclosure.* While not a form of institutional risk management per se, a financial institution's incentives to modify loans or take other measures to avoid foreclosure impact financial stability. The Obama Administration's active sponsorship of sustainable loan modification programs illustrates the important role of foreclosure avoidance measures in stabilizing a stressed housing market: foreclosures contribute to excess housing supply, which further depresses property values. Foreclosure avoidance also impacts the interests of troubled borrowers, for whom the consequences of foreclosure can be devastating. In this area, the interests of PMIs are closely aligned with those of borrowers. Like all insurance companies, PMIs seek to avoid paying claims if the policy entitles them to avoid it, and this often means finding a way to avoid foreclosure.

The discussion that follows considers the extent to which other players share these characteristics.

Lenders

Mortgage originators currently bear risk on both insured and uninsured high-LTV mortgages that they retain on balance sheet. They also retain risk on first- and second-lien mortgages that they sell and/or securitize, often through structural credit enhancements such as retained securitization

interests and overcollateralization.[83] To some extent risk retention, or self-insurance, is an appropriate role for originators, since they are best positioned to evaluate the borrower's creditworthiness and the various local factors that contribute to loan quality. But in other respects, the lender may have limited capacity to manage default risk. Some lenders operate nationwide, but others operate only in one region or community. Geographically concentrated lenders may have difficulty mitigating exposure to local economic conditions. In addition, an individual lender's concentration in its own loans renders it more susceptible to idiosyncratic operational or other risk-management failures affecting loan quality than PMIs or other players that aggregate lender risks. Furthermore, lenders of all sizes cannot match PMIs' flexibility in managing the timing of losses. Lenders rely on borrower payment streams to maintain liquidity and account for losses when "incurred." Thus, unanticipated levels of delinquencies impact their businesses immediately.

From a prudential perspective, non-bank lenders are not subject to capital requirements and could, therefore, pose significant risks to the financial system if they became major repositories for high-LTV mortgage credit risk. In contrast, federally regulated lenders are subject to regulatory capital requirements, but these requirements do not operate in the same way as PMIs' contingency reserves. Bank capital requirements are formulated as ratios of capital to risk-weighted assets—essentially a much more sophisticated version of PMIs' risk-to-capital ratios. Unlike contingency reserves, these requirements do not result in massive reserve accumulations in good times. While the BCBS has recently proposed a framework of countercyclical capital buffers that will increase the banking system's resilience during economic downturns, these buffers simply adjust the required capital ratios through the economic cycle and do not represent a fundamental rethinking of risk-based capital regulation. On the other hand, the current design of bank capital regimes is a

---

[83] Overcollateralization describes the practice of issuing MBS with an aggregate face value lower than the face value of the associated mortgage collateral. Depending on the performance of the collateral, some or all of the overcollateralization amount may be released back to the issuer.

contingent feature of banks; these regimes could be revised if for whatever reason policymakers and/or regulators desired to shift more high-LTV mortgage credit risk to bank balance sheets. But without major changes to the current prudential framework, PMIs' system of contingency reserves appears to leave them significantly better equipped to manage the long term catastrophic risk associated with high-LTV mortgage lending.

From a foreclosure prevention perspective, lender incentives vary. With respect to first-lien mortgages held on balance sheet, lenders have strong incentives to maximize the net present value (NPV)[84] of their loans through modifications and other mitigation measures.[85] This incentive is actually weakened by the presence of PMI, since insurance reduces the lender's potential loss-given-foreclosure. (This is one reason why PMIs play such an active role in loss mitigation.) Alternatively, where the lender sells its loans into the secondary market and assumes the role of servicer, its incentives become more complicated. Specifically, while investors can contractually permit the lender to modify loans in ways that maximize the NPV of a loan portfolio, the servicer may perceive a greater risk of investor lawsuits if it is aggressive in modifying loans than if it errs on the side of inaction. Institutions that service first-lien mortgages while retaining related second-lien mortgages on balance sheet may have even stronger incentives to abstain from modifications.[86] Thus, while PMIs' overall contribution to foreclosure prevention incentives in the portfolio lending context seems mixed, they may have a more straightforwardly positive role to play in preventing foreclosures on securitized mortgages.

---

[84] A modification increases a loan's NPV where the expected value of future principal and interest (adjusted to reflect the likelihood of re-default) exceeds the lender's net proceeds from immediate foreclosure. In some cases, immediate foreclosure maximizes NPV.

[85] In the context of piggyback loans, however, lenders often have strong incentives to resist modifications, since second-lien holders generally have less invested in the loan and, therefore, less room to make concessions to the borrower before impairing their own NPV.

[86] See infra n.85.

GSEs

While GSEs are prohibited by law from fully bearing the additional default risk associated with high-LTV mortgages, they share certain inherent characteristics with PMIs. Their duopoly status gives them a geographically diverse risk portfolio, albeit one limited to the U.S., and they are also diversified by lender. They have significant underwriting experience and generally conservative underwriting practices. While lenders originate loans purchased by the GSEs, the latter set the underwriting criteria and have mechanisms for monitoring compliance with those criteria. Their role in the current housing finance system and their influence over lenders and servicers enables them to monitor loan performance and influence mitigation efforts. As guarantors of MBS, the GSEs have strong incentives to favor loss mitigation outcomes that maximize NPV if left to their own devices. One might expect them to manifest a bias in favor of foreclosure prevention while under government conservatorship. Both enterprises have implemented the federal Home Affordable Modification Program (HAMP), which provides financial incentives for lenders/investors and servicers to avoid foreclosure. All servicers of mortgages owned or guaranteed by the GSEs must participate in the HAMP.

Nevertheless, there are impediments to GSE-assumption of this default risk. Unlike PMIs, the GSEs lack flexibility in managing the timing of losses, since they must make timely payments to investors whether or not the loans are performing, and because, like lenders, they account for losses when "incurred." They also lack a countercyclical reserve such as the PMI contingency reserve, although, as with federally regulated lenders, this is a contingent difference that could be remedied. But perhaps most significantly, the GSE duopoly already serves as the repository of most credit default risk in the U.S. housing market. Adding more default risk on high-LTV mortgages would further concentrate risk in entities whose highly publicized failures necessitated a substantial

52

taxpayer bailout during the current financial crisis. Broader dispersion of this risk seems more appropriate.

Monoline Bond Insurers

While the primary conventional mortgage bond insurers are the GSEs,[87] private sector bond insurers, such as Ambac and MBIA, also provide insurance akin to pool insurance on asset-backed securities, including MBS. At first blush, the monoline bond insurers seem to share a number of desirable features with PMIs. They are, for example, required to maintain contingency reserves.[88] They are also quite diversified geographically, both in the U.S. and abroad, and diversified by lender. As insurers, they have strong incentives to support foreclosure prevention measures that maximize the NPVs of individual loans.[89]

But while bond insurers do not face inherent structural impediments to diligent and knowledgeable oversight of mortgage lenders and servicers, their underwriting oversight was especially weak in the years preceding the recent financial crisis, even by the declining standards of the boom-era mortgage industry.[90] This may reflect the bond insurers' relative inexperience. These firms initially guaranteed only municipal and state government-issued securities, which both

---

[87] FHA and VA mortgages are generally purchased and securitized by other private issuers, and most of the resulting securities are guaranteed by Ginnie Mae. A wholly-owned government corporation, Ginnie guarantees the timely payment of interest and principal on MBS backed by federally insured loans (primarily those issued by the FHA and VA). Ginnie itself does not purchase mortgages. For a description of circumstances in which Ginnie incurs losses, see http://www.ginniemae.gov/about/ann_rep/annual_financials05.pdf, 34.

[88] See, *e.g.*, NY CLS Ins. § 6903. Most monoline bond insurers are subject to New York state law.

[89] However, the incentives of PMIs to avoid foreclosure may be somewhat stronger. In the primary insurance context, a PMI's obligation to pay is triggered by borrower default. In contrast, a bond insurer's obligation to pay is triggered by issuer default. Foreclosures do not necessarily increase the probability of issuer default and may actually reduce this probability where foreclosure maximizes individual loan NPVs.

[90] See NY State Insurance Dept. Circular Letter No. 19 (2008), "Best Practices for financial guaranty insurers," 9-10.

investors and credit rating agencies assumed to approach a "zero underwriting loss" business model. During the recent credit bubble, however, the bond insurers ventured from their monoline roots and began to guarantee other classes of securities backed by riskier underlying assets, such as subprime mortgages.[91]

Yet the bond insurers did not appear to adjust their pricing and level of due diligence on the underlying assets to fully reflect the shift in risk. Bond insurers' credit ratings began to slip with the first sign of the housing market collapse, as credit rating agencies realized that bond insurers did not, in fact, have a near "zero underwriting loss" business model and ratcheted up capital levels necessary to maintain triple-A ratings. Since that time, credit ratings have continued to deteriorate. Many bond insurers are now in run-off mode, due both to capital constraints and their inability to attract business without strong credit ratings.[92] Others have opted to split their less risky municipal bond insurance businesses from their remaining financial guarantee businesses.[93] The New York State Insurance Department has also taken steps to increase capital requirements for bond insurers and to improve underwriting and risk management standards.[94] The suitability of bond insurers to shoulder high-LTV mortgage default risk in future secondary market transactions will depend partly on the results of these reform efforts.

Finally, similar to the GSEs, the bond insurers do not enjoy the benefits of delayed loss realization.

---

[91] In addition to direct guarantees, bond insurers created minimally-capitalized special purpose vehicles that entered into credit default swaps with counterparties that were themselves backed by the bond insurers. See ibid. Issues associated with credit default swaps are discussed more fully below.

[92] See, *e.g.*, Ambac Financial Group, Inc. 2009 Form 10-K, 59-60.

[93] See, *e.g.*, MBIA Inc. 2009 Form 10-K, 49.

[94] See NY State Insurance Dept. Circular Letter No. 19 (2008), "Best Practices for financial guaranty insurers."

Derivatives Counterparties

Credit derivatives, such as credit default swaps (CDS), represent another vehicle for transferring mortgage credit risk. In a CDS, the "purchaser" buys credit protection from the "seller" relating to an underlying reference asset or pool of assets. In exchange for premiums paid by the purchaser, the seller agrees to compensate the purchaser for certain losses if an agreed upon "credit event" occurs.

While not historically regulated as one, a CDS is functionally an insurance product, and its terms can be structured to resemble pool mortgage insurance. Therefore, the main distinction between PMI and CDS is the nature of the counterparty. Historically, *any* party could provide credit protection in an uncleared CDS, so long as it found a willing purchaser and met certain investor-protection-oriented "eligibility" standards. This was, of course, the main deficiency of CDS compared to pool mortgage insurance; unlike PMIs, many CDS sellers have been essentially unregulated. Even where the effective protection seller was a regulated bond insurer, the special purpose entity (SPE) serving as the legal counterparty could prove unreliable. Differences in counterparty regulation, such as capital and reserve requirements, as well as the existence of completely unregulated counterparties, have made credit derivatives a less reliable alternative to PMI, especially during severe tail risk events associated with the housing market.

Under the Dodd-Frank Act, many CDS will be subject to a central clearing requirement, in which case the central counterparty will impose credit standards and collateral requirements on the seller. At present, the derivatives market has not constructed a framework of minimum counterparty standards comparable to the state regulatory framework for PMIs. Given the identities and histories of the institutions responsible for creating the new CDS clearing framework, it seems unlikely that the regulatory framework for central CDS counterparties will resemble the framework applicable to PMIs. Thus, although we cannot yet compare the two sets of solvency and liquidity

standards, we feel reasonably confident in predicting that they will be different from each other, notwithstanding the strong similarity between the two regulated product sets.

c.   Government Insurance

Among the various alternatives to PMI, government mortgage insurance offers the closest comparison.   FHA and VA mortgage insurance programs in particular provide significant competition for PMIs.[95] But important differences between the government and private insurance programs exist along multiple dimensions, including:

- Eligible borrowers;

- Eligible lenders;

- Extent of coverage;

- Minimum down payment;

- Premium cost and timing of required payments;

- Size and structure of eligible loans;

- Underwriting standards;

- Processing time;

- Eligible properties;

- Statutory capital requirements;

- Loss mitigation activities; and

- Authority to rescind coverage.

---

[95] The Rural Housing Service and several states also sponsor mortgage insurance programs, although these are much smaller in scale. See Johnstone, "Private Mortgage Insurance," 784 n. 4.

A few key features of the government programs deserve mention here. The major FHA programs[96] provide essentially a full guarantee, including 100% of the principal balance and most costs associated with borrower default. The FHA will currently insure mortgages with down payments as low as 3.5%, and borrowers may finance the FHA's insurance premiums into the loan. But while the principal FHA programs do not have borrower income limitations, they do cap the size of eligible loans, with caps pegged to median home prices in specific regions (the current upper limit is $729,750, although caps in most regions are substantially lower). The VA program, in contrast, applies only to veterans and (sometimes) their spouses. For all but the smallest loans, the VA insures only 25% of the loan amount, subject to a cap. The VA does not generally require a down payment.[97] Appendix A describes additional features of these programs.

To a significant extent, the specific features of these government programs reflect contingent political judgments about their proper roles, and many features could be changed with the stroke of a legislative pen. For example, the FHA could shift to a partial guarantee structure akin to a typical PMI policy (which could improve incentives for FHA lenders to exercise underwriting discipline) without necessarily changing its basic identity as a government insurer. But product differences among the public and private insurers also reflect underlying inherent differences. On the most basic level, public and private insurers differ in that government insurers must adhere to the particular means and ends assigned to them by legislators, while PMIs primarily serve their shareholders. The particular missions served by the government insurers are subject to frequent change—and some perceive a disconnect between the FHA's current loan limits and its putative mission of serving low-income borrowers—but the simple fact that Congress can assign a

---

[96] The largest of these programs is backed by the single-family Mutual Mortgage Insurance Fund.

[97] For additional program details, see http://portal.hud.gov/portal/page/portal/HUD/program_offices/housing. http://www.benefits.va.gov/homeloans/. For a high level summary of program differences as of 2004, see Johnstone, "Private Mortgage Insurance," 822-826.

mission to government insurers renders them powerful tools for advancing specific social objectives that PMIs cannot profitably address.[98]

This points toward a second, equally basic, difference: obligations of the government insurers are backed by the full faith and credit of the United States. This has important implications for the role of government insurance in the housing finance system. In light of recent experiences with the GSEs' "implicit" guarantee, it almost goes without saying that an explicit federal government guarantee puts taxpayer funds at risk. This factor alone may provide a reason to avoid unnecessary reliance on government insurance in segments of the market where PMI thrives. But it also points to an important comparative strength of government mortgage insurance. As discussed in section V.c., many PMIs were forced to scale back new business drastically in the 1980s and to some extent again recently due to high loss exposures and looming capital constraints (among other factors). Though large contingency reserves enable PMIs to continue paying claims in highly adverse economic scenarios, they do not always permit PMIs to continue incurring additional risk. In these circumstances, the government insurers, particularly the FHA, can step in to absorb the additional risk and smooth out the bottom of the cycle.

This occurred in the 1980s and again today. In 1984, PMIs had three times the market share, measured by number of insured mortgages, as the FHA. But by 1987, the FHA had well over twice the market share as the PMIs, which had become capital constrained. By 1992, the PMIs' market share again surpassed that of the FHA. A similar pattern has begun to emerge over the past several years. In 2008, the PMIs again had three times the market share as the FHA.[99] But today the

---

[98] For a detailed discussion of the ways in which differences in insurance coverage between private and government insurers reflect the different purposes and financial realities faced by these players, see Rapkin et al., *The Private Insurance of Home Mortgages: a Study of the Mortgage Guaranty Insurance Corporation*, 46.

[99] See Dwight Jaffee and John Quigley, "Housing Policy, Subprime Mortgage Policy, and the Federal Housing Administration" (University of California, Berkeley, August 2007), 16,

situation has reversed itself, with FHA loans now comprising 75% of the insured mortgage market.[100]

However, the FHA has been able to write new policies at this heightened level only by dropping far below its statutory 2% capital requirement. By the end of 2009, the capital ratio of the FHA's Mutual Mortgage Insurance Fund had dropped to about 0.5%, and the agency has not committed to a fixed timetable for remedying the deficiency.[101] In addition, the FHA's increased market presence over the past two years might be attributed not only to PMIs' decreased policy writing capacity but also to the FHA's below-market pricing on certain loans. This may be having the effect of crowding out some of the healthier PMIs that are otherwise positioned to write larger volumes of policies. (Recent increases in FHA premiums and new statutory authority for the FHA to change its premium structure should help to address these problems.) Thus, while historical experience suggests that government mortgage insurance may have a useful role to play in preserving the availability of affordable high-LTV mortgages during severe housing downturns, care must be taken to ensure that the government builds up sufficient long-term reserves and charges sufficient risk premiums to reasonably protect the taxpayers. This is a somewhat challenging task within the politically-charged field of housing finance.

---

http://elsa.berkeley.edu/users/quigley/pdf/JQ_Housing_Policy_to_Lucas_080807.pdf. However, the FHA's expanded market presence has increased its risk profile and engendered doubts about its future solvency. See Nick Timiraos, "Red-Ink Fears Prompt Mortgage Backer to Raise Fees," *Wall Street Journal*, August 24, 2010, http://online.wsj.com/article/SB10001424052748704340504575447673683601094.html.

[100] See Testimony of Marti Rodamaker, on behalf of the Independent Community Bankers of America, before the House Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises (July 29, 2010), http://www.icba.org/files/ICBASites/PDFs/RodamakerTestimony72910.pdf.

[101] See Testimony of Mathew J. Sciré, Director, Financial Markets and Community Investment, GAO, before the Senate Committee on Banking, Housing, and Urban Affairs (September 23, 2010), http://www.gao.gov/new.items/d101066t.pdf.

To the extent a countercyclical role for the government in the mortgage insurance market is considered desirable, direct provision of mortgage insurance by the government is only one of several options. In Canada, for example, PMIs may secure government reinsurance, for a premium, against 90% of their risk-in-force. Under this arrangement, the Canadian government pays out only if the primary insurer becomes insolvent. From the perspective of insured mortgage lenders and investors in Canadian mortgage instruments, the additional security against insurer credit risk provided by the government reinsurance facilitates more favorable regulatory capital treatment for insured assets (*i.e.*, a 0% sovereign risk weighting, rather than a higher private counterparty risk weighting, applies to the reinsured portion of the asset), which itself reflects the added safety of the insurance. From the primary insurer's perspective, the government backstop potentially expands its customer base without fundamentally altering its risk tolerance; because the government backstop is triggered only after the primary insurer fails, moral hazard is minimized.

Alternatively, the government could provide catastrophic coverage structured as traditional excess-of-loss reinsurance to PMIs. This alternative might further reduce cyclicality in the mortgage insurance industry by absorbing losses and preserving additional underwriting capacity for primary insurers on a going-concern basis. On the other hand, a greater degree of government supervision of primary insurers may be necessary to compensate for the moral hazard inherent in excess-of-loss reinsurance. While a full comparison of different options for public/private risk sharing is beyond the scope of this paper, these examples illustrate that a system of separate and competing public and private insurers is far from the only option.

VII.   Conclusion

In describing the role of PMIs in the U.S. housing finance system, this report has considered the nature and varieties of PMI, their market justifications, the relevant regulatory framework, and the relationship between PMI and other forms of mortgage credit risk mitigation or avoidance. While the report does not focus on policy options for the future, it provides relevant information and concepts for those considering the role that PMIs should play. Two key points should be kept in mind. First, high-LTV mortgage lending is relatively risky, and by assuming these risks, mortgage insurance enables more lenders and investors to supply capital for these mortgages. Second, PMIs are subject to distinctive regulatory requirements designed to ensure that they withstand Depression-level housing market scenarios. Other financial institutions might not be similarly equipped to manage long-tail mortgage default risk.

Because PMIs are so heavily reliant on GSE purchasing standards, they have a strong interest in the outcome of GSE reform. But the PMIs' business model pre-dated their role in insuring agency-related mortgages, and PMIs continue to offer credit protection on lender-retained loans and private label securitizations. That said, government requirements and incentives for the purchase of PMI help PMIs avoid adverse selection problems. To the extent policymakers desire to encourage or mandate use of PMI in the future, many options exist. For example, primary mortgage insurance coverage commonly extends to 25%-30% of a given claim, but other levels of coverage are possible. In addition, while traditional reinsurance is not generally available for PMIs, a government reinsurance backstop could be one means of providing stability in a severe housing crisis.

Appendix A: Comparison of Private and Government Mortgage Insurance and Guarantee Programs

Factor	Private Mortgage Insurance	Government Programs
Minimum down payment	Required by a few states	The Housing Emergency Recovery Act of 2008 (HERA) raised the down payment on FHA-insured mortgages from 3 to 3.5 percent. In some cases VA does not require a down payment.
Loan coverage level	Varies	FHA insures the entire loan balance; VA guarantees a percentage of the loan.
Limit on size of the mortgage insured or guaranteed	None via regulation. But PMI guidelines all impose some cap on size of loans they will insure.	Pursuant to HERA, beginning in 2009, the loan limit for FHA-insured mortgages for one-unit properties is 115 percent of the local area median home price, as determined by HUD, with a floor of 65 percent of $417,000 (or $271,050) and a ceiling equal to 150 percent of the Enterprises' limit. Limits vary by geographic region and for 2 - 4 unit properties. Beginning in 2009, the VA's guarantee of loans above $144,000 is 25 percent of the new Enterprise loan limit base or the limits for the high cost areas.
Up-front mortgage insurance premium	Required; varies with loan characteristics and premium plan.	Required by FHA; VA requires an up-front funding fee.
Monthly premium	Premiums vary based on the size of the down payment, type of mortgage, and amount of insurance coverage.	FHA borrowers pay an annual insurance premium that starts at .5 percent of the loan balance and declines over time. There is no insurance premium for VA mortgages.
Cancellation of insurance	Can usually be canceled when the homeowner acquires 20 percent equity in the home. Under Federal law, MI must be cancelled automatically when the borrower has paid the loan down to 78 percent of the original home value.	For FHA mortgages with terms greater than 15 years, the annual mortgage insurance cancels when the LTV ratio reaches 78 percent, provided the borrower has paid the annual mortgage insurance premiums for at least 5 years.
Deductibility of borrower-paid mortgage insurance	Yes, up to a certain income level, through the 2010 tax year.	Yes, up to a certain income level, through the 2010 tax year.
Income limits	None	None.
Interest rate	Market driven	Market driven
Regulation	State regulated. Regulation extends to reserves for losses, capital, etc.	FHA and VA mortgage programs are administered by agencies of the U.S. government.
Premium Rates	Subject to regulatory approval	Set by statute

Source: FHFA, "State of the Private Mortgage Insurance Industry: Implications for U.S. Mortgage Markets and the Enterprises," August 2009.

Appendix B: Bibliography

1. Alger, George W. *Report to His Excellency Herbert H. Lehman, Governor of the State of New York.* Moreland Commissioner's Report. New York, October 5, 1934.

2. Allen, Donald and Thomas Chan. "The Efficiency of Residential Mortgage Guarantee Insurance Markets." Federal Reserve Bank of St. Louis working paper 1997-013A (1997), 13. http://research.stlouisfed.org/wp/1997/97-013.pdf.

3. Amherst Securities Group LP. "PMI in Non-Agency Securitizations." *Amherst Mortgage Insight* (July 16, 2010).

4. Arthur D. Little, Inc. "The Private Mortgage Insurance Industry: Final Report To the FNMA and FHLMC." April 1975.

5. Avery, Robert B., Kenneth Brevoort, and Glenn Canner. "The 2006 HMDA Data." *Federal Reserve Bulletin* (December 2007), A84. http://www.federalreserve.gov/pubs/bulletin/2007/pdf/hmda06final.pdf

6. Bear Stearns. "The Trouble With Captive Reinsurance: An Analysis of Excess of Loss Structures." Equity research report, March 2003.

7. Bear Stearns. "Triad Guaranty Inc.: Premiums versus Claims – the Jury's Still out." Equity research report, March 21, 2007.

8. Blood, Roger. "Managing Insured Mortgage Risk." In *The Secondary Mortgage Market: Strategies for Surviving and Thriving in Today's Challenging Markets*, edited by Jess Lederman, 635-660. Chicago: Probus Publishing Company, 1992.

9. Blood, Roger. "Mortgage Default Insurance: Credit Enhancement for Homeownership." *Housing Finance International* (2001). http://www.housingfinance.org/uploads/Publicationsmanager/0109_Mor.pdf.

10. Browne, Diana D. "The Private Mortgage Insurance Industry, the Thrift Industry, and the Secondary Mortgage Market: Their Interrelationships." 12 Akron Law Review 631 (1978).

11. Canner, Glenn and Wayne Passmore. "Private Mortgage Insurance." *Federal Reserve Bulletin* 80 (October 1994).

12. Canner, Glenn and Wayne Passmore. "Credit Risk and the Provision of Mortgages to Lower-Income and Minority Homebuyers." *Federal Reserve Bulletin* 81 (November 1995).

13. Canner, Glenn, Wayne Passmore, and Brian Surette. "Distribution of Credit Risk Among Providers of Mortgages to Lower-Income and Minority Homebuyers." *Federal Reserve Bulletin* 86 (1996). http://www.federalreserve.gov/pubs/bulletin/1996/1296lead.pdf.

14. Chen, Kristin. "The Role of Mortgage Insurance in Risk Management." *International Journal of Real Estate Finance* 1, no. 2 (2000).

15. FDIC. "FYI Revisited; U.S. Home Prices: Does Bust Always Follow Boom." *FYI: An Update on Emerging Banking Issues*, May 2, 2005. http://www.fdic.gov/bank/analytical/fyi/2005/050205fyi.html.

16. Federal Housing Finance Agency. "State of the Private Mortgage Insurance Industry: Implications for U.S. Mortgage Markets and the Enterprises." *Mortgage Market Note* 09-4. August 20, 2009. http://fhfa.gov/Default.aspx/webfiles/14779/MMNOTE_09-04%5B1%5D.pdf.

17. Federal Reserve Board. "The 2009 HMDA Data: The Mortgage Market in a Time of Low Interest Rates and Economic Distress (Draft)." To be published in the *Federal Reserve Bulletin* (Sept. 20, 2010). http://www.federalreserve.gov/pubs/bulletin/2010/pdf/hmda2009.pdf.

18. GAO. *Mortgage Financing: Actions Needed to Help FHA Manage Risks from New Mortgage Loan Products.* GAO-05-194 (Washington, D.C., February 2005). http://www.gao.gov/new.items/d05194.pdf.

19. Genworth Financial, Inc. December 31, 2009 Form 10-K, filed February 26, 2010.

20. Graaskamp, James. "Development and Structure of Mortgage Loan Guarantee Insurance in the United States." *Journal of Risk and Insurance* 34, no. 1 (March 1967).

21. Green, Richard and Susan Wachter. "The American Mortgage in Historical and International Context." *Journal of Economic Perspectives* 19, no. 4 (fall 2005). http://repository.upenn.edu/cgi/viewcontent.cgi?article=1000&context=penniur_papers.

22. Gwinner, William B. and Anthony Sanders, "The Sub Prime Crisis: Implications for Emerging Markets," World Bank policy research working paper (September 2008), http://ihfp.wharton.upenn.edu/SubprimeReadings/Gwinner%20TheSubprimeCrisis.pdf.

23. Hearing on "Future of Housing Finance: The Role of Private Mortgage Insurance" before the Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises of the House Committee on Financial Services, July 29, 2010. http://financialservices.house.gov/Hearings/hearingDetails.aspx?NewsID=1339.

24. Herring, Richard J. "The Rocky Road to Implementation of Basel II in the United States" (July 2007). http://fic.wharton.upenn.edu/fic/papers/07/0731.pdf.

25. Herzog, Thomas N. "History of Mortgage Finance With an Emphasis on Mortgage Insurance." Society of Actuaries monograph, 2009. http://www.soa.org/library/monographs/finance/housing-wealth/2009/september/mono-2009-mfi09-herzog-history.pdf.

26. *In re: Epic Mortgage Insurance Litigation*, 701 F. Supp. 1192 (E.D. Va. 1988).

27. Jaffee, Dwight. "Monoline Restrictions, With Applications to Mortgage Insurance and Title Insurance." *Review of Industrial Organization* 28, no. 2 (2006). http://faculty.haas.berkeley.edu/JAFFEE/Papers/094lRIO2006.pdf.

28. Jaffee, Dwight and John Quigley. "Housing Policy, Subprime Mortgage Policy, and the Federal Housing Administration." University of California, Berkeley, August 2007. http://elsa.berkeley.edu/users/quigley/pdf/JQ_Housing_Policy_to_Lucas_080807.pdf.

29. Johnson, Joseph and George Flanigan. "Private Mortgage Guarantee Insurance." *CPCU Annals*, December 1973.

30. Johnstone, Quintin. "Private Mortgage Insurance." 39 Wake Forest Law Review 783 (winter 2004).

31. Lacy, William H., President and CEO of Mortgage Guarantee Insurance Co. "Risk Management: Key to Success for the 1990s." In *The Secondary Mortgage Market: Strategies for Surviving and Thriving in Today's Challenging Markets*, edited by Jess Lederman, 661-678. Chicago: Probus Publishing Company, 1992.

32. MGIC Investment Corporation. December 31, 2009 Form 10-K, filed March 1, 2010.

33. Moody's Investors Service. "US Mortgage Insurance: Developing Outlook." *Industry Outlook* (August 17, 2010).

34. Moody's Investors Service. "US Mortgage Insurers' [sic] Remain Weakly Capitalized." *Special Comment* (August 17, 2010).

35. Mortgage Insurance Companies of America. *2009-2010 Fact Book & Member Directory*. http://www.privatemi.com/news/factsheets/2009-2010.pdf.

36. Mulherin, J. and Walter Muller, III. "Resolution of Incentive Conflicts in the Mortgage Industry." *Journal of Real Estate Finance and Economics* 1, no. 1 (1988).

37. Mulherin, J. and Walter Muller, III. "Volatile Interest Rates and the Divergence of Incentives in Mortgage Contracts." *Journal of Law, Economics, and Organization* 3 (Spring 1987).

38. O'Leary, Erin. "Predatory Lending and its Insurance Consequences." 16 Connecticut Insurance Law Journal 261 (fall 2009). http://www.insurancejournal.org/content/repository/16/5.pdf.

39. PMI. "The Value of Mortgage Insurance: Supporting Sustainable Homeownership that Strengthens Communities." http://www.pmi-us.com/media/pdf/news/Value_of_MI.pdf.

40. Rapkin, Chester, J. Robert Ferrari, Roger Blood, and Grace Milgram. *The Private Insurance of Home Mortgages: a Study of the Mortgage Guaranty Insurance Corporation*. University of Pennsylvania: Institute for Environmental Studies, December 1967.

41. Standard & Poor's. "Lender Captives Benefit Both Lenders And Mortgage Insurers, For A Price." Research report, May 24, 2007. http://ihfp.wharton.upenn.edu/Main%20Course%20Readings%5CModule%20VIII%20-%20Extending%20Mortgage%20Lending%20and%20Housing%20Services%20to%20Lower%20Income%20Groups%5CMortgage%20Insurance/D-S&P%20-%20Lender%20Captives.pdf.

42. Standard & Poor's. "Significant Operating Losses Continue to Pressure U.S. Mortgage Insurers' Capital Adequacy Ratios." Ratings Direct, August 21, 2009. http://www2.standardandpoors.com/spf/pdf/media/Significant_Operating_Losses_10_03_09.pdf.

43. Wheelock, David C. "What Happens to Banks When Housing Prices Fall? U.S. Regional Housing Busts of the 1980s and 1990s." *Federal Reserve Bank of St. Louis Review* 88, no. 5 (September/October 2006): 413-429. http://research.stlouisfed.org/publications/review/06/09/Wheelock.pdf.

44. Zywicki, Todd and Joseph Adamson. "The Law and Economics of Subprime Lending." 80 University of Colorado Law Review 1 (2009).

Exhibit E
Genworth Mortgage Insurance Loss Mitigation Scorecard
4Q 2010

2010 Year-End National Foreclosure Prevention Scorecard
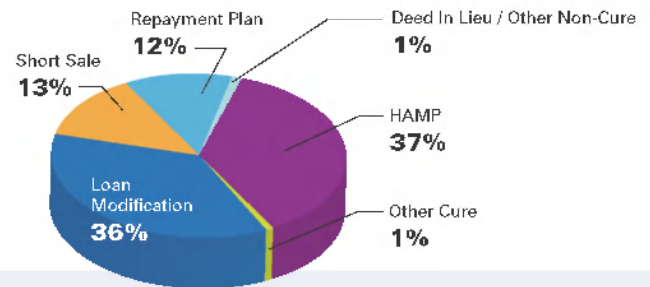
State-by-State Trends in Homeowner Assistance

Genworth Financial

12 Months Ending December 31, 2010 — Q4 10 vs. Q4 09

Top 10 states for workouts*

State	Total Value of Mortgages Saved (State)	# Of Workouts	% Of Homes Rescued	Average Mortgage Amount Saved Per Retention Workout	Leading City for Workouts	Total Value of Mortgages Saved (Leading City)	% Increase in Workouts
California	$777,024,509	3,125	80%	$310,313	Los Angeles	$24,276,921	215%
Florida	$627,003,994	4,349	71%	$203,904	Miami	$62,140,972	83%
Illinois	$435,790,963	2,462	91%	$194,116	Chicago	$110,349,881	167%
New York	$373,498,109	1,528	92%	$264,330	Bronx	$23,083,953	146%
Georgia	$333,260,063	2,137	93%	$167,048	Lawrenceville	$25,746,390	130%
Arizona	$321,173,235	1,929	78%	$213,546	Phoenix	$67,611,551	113%
New Jersey	$301,800,219	1,226	91%	$269,705	Jersey City	$7,146,284	148%
Texas	$276,865,254	2,113	94%	$138,849	Houston	$36,027,469	54%
North Carolina	$220,318,504	1,483	95%	$156,254	Charlotte	$34,359,178	94%
Maryland	$211,953,285	835	90%	$280,733	Baltimore	$18,639,824	126%
NATIONAL	$6,621,524,897	39,211	86%	$195,556	n/a	n/a	100%

Genworth Closes Year Helping Save Nearly $7 Billion in Mortgages and Almost 40,000 Families from Foreclosure through Prevention Efforts

In 2010, Genworth Financial helped save more than $6.6 billion in mortgages from foreclosure – setting a new company high for foreclosure prevention efforts. The company, working with lenders and loan servicers, completed nearly 40,000 workouts enabling 86 percent of these borrowers to keep their homes. On average, $195,556 was saved per workout nationally.

National Workout Types in 12 Months Ending December 2010 (Percentage of Total)

- Repayment Plan 12%
- Short Sale 13%
- Loan Modification 36%
- Deed In Lieu / Other Non-Cure 1%
- HAMP 37%
- Other Cure 1%

Key findings for the 2010 Scorecard:

- Collectively, the top 10 states accounted for 51 percent of workouts nationwide. One in ten mortgages saved were in the state of Florida.

- California accounted for 12 percent ($777,024,509) of total mortgage dollars saved nationally.

- Chicago, Las Vegas, Phoenix, Miami and Orlando topped the charts for mortgage dollars saved nationally.

- 86 percent of Genworth-assisted workouts were "retentions" (or, cures) meaning the borrower was able to keep their home and become current on their mortgage payments.
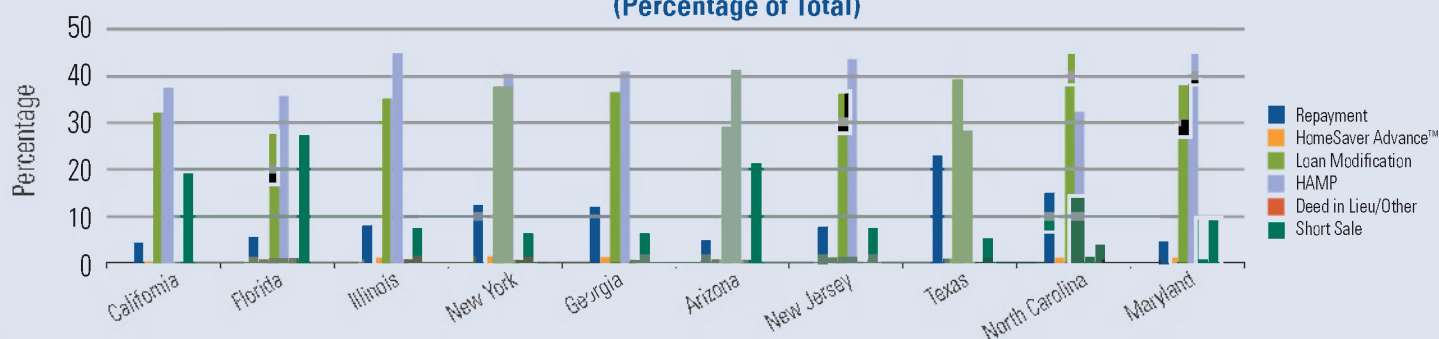
For more information, visit **www.genworth.com/Scorecard.**

*Data from all 50 states available upon request.

Top 20 Leading Cities for Mortgage Dollars Saved

Leading City for Workouts	Total Value of Mortgages	Leading City for Workouts	Total Value of Mortgages
Chicago, IL	$110,349,881	Lawrenceville, GA	$25,746,390
Las Vegas, NV	$82,152,540	Los Angeles, CA	$24,276,921
Phoenix, AZ	$67,611,551	Bronx, NY	$23,083,953
Miami, FL	$62,140,972	Bakersfield, CA	$22,932,656
Orlando, FL	$42,911,002	Philadelphia, PA	$22,869,784
Houston, TX	$36,027,469	Staten Island, NY	$21,972,053
Charlotte, NC	$34,359,178	Brooklyn, NY	$21,577,974
Tucson, AZ	$31,735,804	Albuquerque, NM	$19,574,393
Jacksonville, FL	$31,279,383	Gilbert, AZ	$19,487,312
Mesa, AZ	$29,688,534	Sacramento, CA	$19,349,248

State-by-State Workout Types in 12 Months Ending December 2010
(Percentage of Total)

Legend:
- Repayment
- HomeSaver Advance™
- Loan Modification
- HAMP
- Deed in Lieu/Other
- Short Sale

States (x-axis): California, Florida, Illinois, New York, Georgia, Arizona, New Jersey, Texas, North Carolina, Maryland

Workout Types

Repayment Plan
A borrower makes scheduled payments toward the delinquent amount of the loan in addition to the regular payments to bring the loan current

HomeSaver Advance™
Funds are loaned to the borrower by the investor to bring the loan current

Loan Modification
A borrower brings the loan current by adding past-due amounts to the unpaid principal balance and possibly changing one or more of the terms of the original loan to make the payment more affordable

Home Affordable Modification Program
A loan modification offered through the Federal Government's Home Affordable Modification Program with specific terms, conditions and requirements

Deed-in-Lieu of Foreclosure
A borrower turns over the title of the property to the lender to avoid foreclosure

Short Sale
A borrower avoids foreclosure by selling the property, even when the home's market value is less than the total amount owed

Other Terms

Total Value of Mortages Saved (State)
The total value of mortgage loan balances saved in each state from January 1, 2010 to December 31, 2010

Number of Workouts
The number of delinquent homeowners assisted by Genworth and its lender partners in each state from January 1, 2010 to December 31, 2010

% of Homes Rescued
The percentage of cures for assisted borrowers who were brought current on their loans and able to keep their homes

Average Mortgage Amount Saved Per Retention Workout
The average loan balance saved per workout in each state from January 1, 2010 to December 31, 2010

Total Value of Mortgages Saved (Leading City)
The total value of mortgage loan balances saved in each leading city from January 1, 2010 to December 31, 2010

Leading City for Workouts
The city in each state with the most Genworth-assisted workouts from January 1, 2010 to December 31, 2010

% Increase in Workouts
The percentage increase in the number of delinquent homeowners Genworth assisted in the fourth quarter of 2010, as compared to the fourth quarter of 2009

HomeSaver Advance™ is a trademark of Fannie Mae.

This report reflects statistical data and the various workout options being used by lenders, loan servicers and companies like Genworth to help keep people in homes and avoid foreclosure.

Data from all 50 states available upon request. For more information, visit www.genworth.com/Scorecard.

Exhibit F
NAIC Model Mortgage Guaranty Insurance Act

MORTGAGE GUARANTY INSURANCE MODEL ACT

Table of Contents

Section 1. Title

This chapter may be cited as the Mortgage Guaranty Insurance Act.

Section 2. Definitions

The definitions set forth in this article shall govern the construction of the terms used in this chapter but shall not affect any other provisions of this code.

A. "Mortgage guaranty insurance" is:

(1) Insurance against financial loss by reason of nonpayment of principal, interest or other sums agreed to be paid under the terms of any note or bond or other evidence of indebtedness secured by a mortgage, deed of trust, or other instrument constituting a lien or charge on real estate, provided the improvement on such real estate is a residential building or a condominium unit or buildings designed for occupancy by not more than four families.

(2) Insurance against financial loss by reason of nonpayment of principal, interest or other sums agreed to be paid under the terms of any note or bond or other evidence of indebtedness secured by a mortgage, deed of trust, or other instrument constituting a lien or charge on real estate, providing the improvement on such real estate is a building or buildings designed for occupancy by five (5) or more families or designed to be occupied for industrial or commercial purposes.

(3) Insurance against financial loss by reason of nonpayment of rent or other sums agreed to be paid under the terms of a written lease for the possession, use or occupancy of real estate, provided the improvement on such real estate is a building or buildings designed to be occupied for industrial or commercial purposes.

B. "Authorized real estate security" for the purpose of this chapter means an amortized note, bond or other evidence of indebtedness, not exceeding ninety-five percent (95%) of the fair market value of the real estate, secured by a mortgage, deed of trust, or other instrument which constitutes, or is equivalent to, a first lien or charge on real estate; provided:

(1) The real estate loan secured in such manner is one of a type which a bank, savings and loan association, or an insurance company, which is supervised and regulated by a department of this state or any agency of the federal government, is authorized to make, or would be authorized to make, disregarding any requirement applicable to such an institution that the amount of the loan not exceed a certain percentage of the value of the real estate.

(2) The improvement on such real estate is a building or buildings designed for occupancy as specified by Subsections A(1) and A(2) of this section.

(3) The lien on such real estate may be subject to and subordinate to the following:

(a) The lien of any public bond, assessment or tax, when no installment, call or payment of or under such bond, assessment or tax is delinquent.

(b) Outstanding mineral, oil, water or timber rights, rights-of-way, easements or rights-of-way of support, sewer rights, building restrictions or other restrictions or covenants, conditions or regulations of use, or outstanding leases upon such real property under which rents or profits are reserved to the owner thereof.

C. "Contingency reserve" means an additional premium reserve established to protect policyholders against the effect of adverse economic cycles.

Section 3. Capital and Surplus

A mortgage guaranty insurance company shall not transact the business of mortgage guaranty insurance unless: if a stock insurance company, it has paid-in capital of at least one million dollars ($1,000,000) and paid-in surplus of at least one million dollars ($1,000,000), or if a mutual insurance company, a minimum initial surplus of two million dollars ($2,000,000). A stock company or a mutual company shall at all times thereafter maintain a minimum policyholders' surplus of at least one million five hundred thousand dollars ($1,500,000).

Section 4. Insurer's Authority to Transact Business

No mortgage guaranty insurance company may issue policies until it has obtained from the commissioner of insurance a certificate setting forth that fact and authorizing it to issue policies.

Section 5. Geographic Concentration

A mortgage guaranty insurance company shall not insure loans secured by a single risk in excess of ten percent (10%) of the company's aggregate capital, surplus and contingency reserve.

No mortgage guaranty insurance company shall have more than twenty percent (20%) of its total insurance in force in any one Standard Metropolitan Statistical Area (SMSA), as defined by the United States Department of Commerce.

The provisions of this section shall not apply to a mortgage guaranty insurance company until it has possessed a certificate of authority in this state for three (3) years.

Section 6. Advertising

No mortgage guaranty insurance company or any agent or representative of a mortgage guaranty insurance company shall prepare or distribute or assist in preparing or distributing any brochure, pamphlet, report or any form of advertising to the effect that the real estate investments of any financial institution are "insured investments," unless the brochure, pamphlet, report or advertising clearly states that the loans are insured by mortgage guaranty insurance companies possessing a certificate of authority to transact mortgage guaranty insurance in this state or are insured by an agency of the federal government, as the case may be.

Section 7. Investment Limitation

A mortgage guaranty insurance company shall not invest in notes or other evidences of indebtedness secured by mortgage or other lien upon real property. This section shall not apply to obligations secured by real property, or contracts for the sale of real property, which obligations or contracts of sale are acquired in the course of the good faith settlement of claims under policies of insurance issued by the mortgage guaranty insurance company, or in the good faith disposition of real property so acquired.

Section 8. Coverage Limitation

A mortgage guaranty insurance company shall limit its coverage net of reinsurance ceded to a reinsurer in which the company has no interest to a maximum of twenty-five percent (25%) of the entire indebtedness to the insured or in lieu thereof, a mortgage guaranty insurance company may elect to pay the entire indebtedness to the insured and acquire title to the authorized real estate security.

Section 9. Mortgage Guaranty Insurance as Monoline

A. A mortgage guaranty insurance company which anywhere transacts any class of insurance other than mortgage guaranty insurance is not eligible for the issuance of a certificate of authority to transact mortgage guaranty insurance in this state nor for the renewal thereof.

B. A mortgage guaranty insurance company which anywhere transacts the classes of insurance defined in Section 2A(2) or 2A(3) is not eligible for a certificate of authority to transact in this state the class of mortgage guaranty insurance defined in Section 2A(1); provided, however, a mortgage guarantee insurance company which transacts a class of insurance defined in Section 2A may write up to five percent (5%) of its insurance in force on residential property designed for occupancy by five (5) or more families.

Section 10. Underwriting Discrimination

A. Nothing in this chapter shall be construed as limiting the right of any mortgage guaranty insurance company to impose reasonable requirements upon the lender with regard to the terms of any note or bond or other evidence of indebtedness secured by a mortgage or deed of trust, such as requiring a stipulated down payment by the borrower.

B. No mortgage guaranty insurance company may discriminate in the issuance or extension of mortgage guaranty insurance on the basis of the applicant's sex, marital status, race, color, creed or national origin.

C. No policy of mortgage guaranty insurance excluding policies of reinsurance, shall be written unless and until the insurer shall have conducted a reasonable and thorough examination of (1) the evidence supporting credit worthiness of the borrower, and (2) the appraisal report reflecting market evaluation of the property and shall have determined that prudent underwriting standards have been met.

Section 11. Policy Forms and Premium Rates Filed

A. All policy forms and endorsements shall be filed with and be subject to the approval of the commissioner. With respect to owner-occupied, single-family dwellings, the mortgage guaranty insurance policy shall provide that the borrower shall not be liable to the insurance company for any deficiency arising from a foreclosure sale.

B. In addition, each mortgage guaranty insurance company shall file with the department the rate to be charged and the premium including all modifications of rates and premiums to be paid by the policyholder.

C. Every mortgage guaranty insurance company shall adopt, print and make available a schedule of premium charges for mortgage guaranty insurance policies. Premium charges made in conformity with the provisions of this chapter shall not be deemed to be interest or other charges under any other provision of law limiting interest or other charges in connection with mortgage loans. The schedule shall show the entire amount of premium charge for each type of mortgage guaranty insurance policy issued by the insurance company.

NOTE: Open rating states may delete a portion or all of this provision and insert their own rating law.

Section 12. Outstanding Total Liability

A mortgage guaranty insurance company shall not at any time have outstanding a total liability, net of reinsurance, under its aggregate mortgage guaranty insurance policies exceeding twenty-five (25) times its capital, surplus and contingency reserve. In the event that any mortgage guaranty insurance company has outstanding total liability exceeding twenty-five (25) times its capital, surplus and contingency reserve, it shall cease transacting new mortgage guaranty business until such time as its total liability no longer exceeds twenty-five (25) times its capital, surplus and contingency reserve. Total outstanding liability shall be calculated on a consolidated basis for all mortgage guarantee insurance companies which are part of a holding company system.

Section 13. Rebates, Commissions and Charges

A. A mortgage guaranty insurance company shall not pay or cause to be paid either directly or indirectly, to any owner, purchaser, lessor, lessee, mortgagee or prospective mortgagee of the real property which secures the authorized real estate security or which is the fee of an insured lease, or any interest therein, or any person who is acting as an agent, representative, attorney or employee of such owner, purchaser or mortgagee, any commission, or any part of its premium charges or any other consideration as an inducement for or as compensation on any mortgage guaranty insurance business.

B. In connection with the placement of any mortgage guaranty insurance, a mortgage guaranty insurance company shall not cause or permit any commission, fee, remuneration, or other compensation to be paid to, or received by any insured lender or lessor; any subsidiary or affiliate of any insured; any officer, director, or employee of any insured or any member of their immediate family; any corporation, partnership, trust, trade association in which any insured is a member, or other entity in which any insured or any such officer, director, or employee or any member of their immediate family has a financial interest; or any designee, trustee, nominee, or other agent or representative of any of the foregoing.

C. No mortgage guaranty insurance company shall make any rebate of any portion of the premium charge shown by the schedule required by Section 11C. No mortgage guaranty insurance company shall quote any rate or premium charge to any person which is different than that currently available to others for the same type of coverage. The amount by which any premium charge is less than that called for by the current schedule of premium charges is an unlawful rebate.

D. The commissioner may, after notice and hearing, suspend or revoke the certificate of authority of any mortgage guaranty insurance company, or in his discretion, issue a cease and desist order to any mortgage guaranty insurance company which pays any commission or makes any unlawful rebate in willful violation of the provisions of this chapter. In the event of the issuance of a cease and desist order, the commissioner may, after notice and hearing, suspend or revoke the certificate of authority of any mortgage guaranty insurance company which does not comply with the terms thereof.

Section 14. Compensating Balances Prohibited

Except for commercial checking accounts and normal deposits in support of an active bank line of credit, a mortgage guaranty insurance company, holding company or any affiliate thereof is prohibited from maintaining funds on deposit with the lender for which the mortgage guaranty insurance company has insured loans. Any deposit account bearing interest at rates less than what is currently being paid other depositors on similar deposits or any deposit in excess of amounts insured by an agency of the federal government shall be presumed to be an account in violation of this section. Furthermore, a mortgage guaranty insurance company shall not use compensating balances, special deposit accounts or engage in any practice which unduly delays its receipt of monies due or which involves the use of its financial resources for the benefit of any owner, mortgagee of the real property or any interest therein or any person who is acting as agent, representative, attorney or employee of such owner, purchaser or mortgagee as a means of circumventing any part of this section.

Section 15. Conflict of Interest

A. If a member of a holding company system, a mortgage guaranty insurance company licensed to transact business in this state shall not, as a condition of its certificate of authority, knowingly underwrite mortgage guaranty insurance on mortgages originated by the holding company system or an affiliate or on mortgages originated by any mortgage lender to which credit is extended, directly or indirectly, by the holding company system or any affiliate.

B. A mortgage guaranty insurance company, the holding company system of which it is a part, or any affiliate shall not as a condition of the mortgage guaranty insurance company's certificate of authority, pay any commissions, remuneration, rebates or engage in activities proscribed in Sections 13 and 14.

Section 16. Reserves

A. Unearned Premium Reserves

A mortgage guaranty insurance company shall compute and maintain an unearned premium reserve as set forth by regulation adopted by the commissioner of insurance.

B. Loss Reserve

A mortgage guaranty insurance company shall compute and maintain adequate case basis and other loss reserves which accurately reflect loss frequency and loss severity and shall include components for claims reported and for claims incurred but not reported, including estimated losses on:

(1) Insured loans which have resulted in the conveyance of property which remains unsold;

(2) Insured loans in the process of foreclosure;

(3) Insured loans in default for four (4) months or for any lesser period which is defined as default for such purposes in the policy provisions; and

(4) Insured leases in default for four (4) months or for any lesser period which is defined as default for such purposes in policy provisions.

C. Contingency Reserve

Each mortgage guaranty insurance company shall establish a contingency reserve out of net premium remaining (gross premiums less premiums returned to policyholders net of

reinsurance) after establishment of the unearned premium reserve. The mortgage guaranty insurance company shall contribute to the contingency reserve an amount equal to fifty percent (50%) of such remaining unearned premiums. Contributions to the contingency reserve made during each calendar year shall be maintained for a period of one hundred and twenty months (120), except that withdrawals may be made by the company in any year in which the actual incurred losses exceed thirty-five percent (35%) of the corresponding earned premiums, and no such releases shall be made without prior approval by the commissioner of insurance of the insurance company's state of domicile.

If the coverage provided in this act exceeds the limitations set forth herein, the commissioner of insurance shall establish a rate formula factor that will produce a contingency reserve adequate for the added risk assumed. The face amount of an insured mortgage shall be computed before any reduction by the mortgage guaranty insurance company's election to limit its coverage to a portion of the entire indebtedness.

D. Reinsurance

Whenever a mortgage guaranty insurance company obtains reinsurance from an insurance company which is properly licensed to provide such reinsurance or from an appropriate governmental agency, the mortgage guaranty insurer and the reinsurer shall establish and maintain the reserves required in this chapter in appropriate proportions in relation to the risk retained by the original insurer and ceded to the assuming reinsurer so that the total reserves established shall not be less than the reserves required by this chapter.

E. Miscellaneous

(1) Whenever the laws of any other jurisdiction, in which a mortgage guaranty insurance company subject to the requirement of this act, is also licensed to transact mortgage guaranty insurance, require a larger unearned premium reserve or contingency reserve in the aggregate than that set forth herein, the establishment of such larger unearned premium reserve or contingency reserve in the aggregate shall be deemed to be in compliance with this chapter.

(2) Unearned premium reserves and contingency reserves shall be computed and maintained on risks insured after the effective date of this chapter as required by Sections 16A and 16C. Unearned premium reserves and contingency reserves on risks insured before the effective date of this chapter may be computed and maintained as required previously.

Section 17. Regulations

The commissioner shall have the authority to promulgate rules and regulations deemed necessary to effectively implement the requirements of this chapter.

Exhibit G
Explanation of Mortgage Insurance Capital Requirements

Mortgage Insurance Capital Overview

Genworth Financial

Capital Defined

Capital Is A Fundamental Financial Concept Which Has Several Potential Definitions:

Broad Definition	Accounting / Regulator Definition

Any Form of Wealth Employed By A Corporation Which Is Capable Of Producing More Wealth

– Property/Plant/Equipment

– Human Capital

– Invested Assets Like Cash, Bonds

Assets Remaining After Deduction Of Liabilities

– Net Worth Of A Corporation

– Buffer Against Insolvency

– Capacity To Absorb Unexpected Losses

Focus On The Accounting / Regulator Definition Due To Its Relevance In Determining A Firm's Financial Soundness

Genworth Financial

Forms Of STAT Capital

STAT Capital Can Be Generated / Raised In Several Different Forms

Form Of Capital	Description
Common Capital Stock + Gross Paid In Capital	Equity Ownership In Corporation Entitling Holder To Share Of The Company's Success Through Capital Appreciation / Distributions
Unassigned Surplus / Retained Earnings	Earnings Reinvested In The Company (Not Paid Out In Dividends)
Preferred Capital Stock	Ownership In Corporation That Pays Fixed Dividend & Does Not Get Voting Rights. Liquidation Preference To Common.
Surplus Notes	Debt-Like Instrument Sold To Investors Which Is Subordinate To Policyholder Claims. Stated Interest Rate But Both Interest & Principal Payments Are Contingent Upon DOI Approvals.

Common Characteristic: Each Form Of STAT Capital Is Available To Absorb Incremental Policyholder Claims

Genworth Financial

STAT vs. GAAP Basics

STAT Capital

Policyholder Surplus

Contingency Reserve

($B)

US MI STAT Balance Sheet as of 6/30/10

Assets		
Invested Assets		2.7
Surplus Notes		0.2
Total Invested Assets		2.9
Other Assets		0.4
Total Assets		3.3

Liabilities		
Loss Reserves		1.3
UPR		0.1
Contingency Reserves		0.9
Other Liabilities		0.2
Total Liabilities		2.5
Policyholder Surplus		0.8
Total Liabilities + Equity		3.3

STAT Assets @ Book Value

Surplus Notes Bolster STAT Capital Position Because They Are Subordinate To Policyholder Claims

STAT Loss Reserves Net Of Captive Benefit

Policyholder Surplus Includes Common Stock, Gross Paid In, Unassigned Surplus, Preferred, & Surplus Notes

STAT Regulations Require Re-class of Equity To Contingent Liability

GAAP Capital

Equity

($B)

US MI GAAP Balance Sheet as of 6/30/10

Assets		
Invested Assets		2.7
U/R Gain/ (Loss)		(0.0)
Total Invested Assets		2.7
Other Assets		0.9
Total Assets		3.6

Liabilities		
Loss Reserves		2.0
UPR		0.1
Other Liabilities		(0.3)
Total Liabilities		1.8
Equity		1.8
Total Liabilities + Equity		3.6

STAT Capital Includes Policyholder Surplus + Contingency Reserves

Genworth Financial

Capital Deployment

MI Production Is Capital Intensive For Several Years After Origination

Single Book Profits vs. Capital Required

Illustrative Example: Single Book
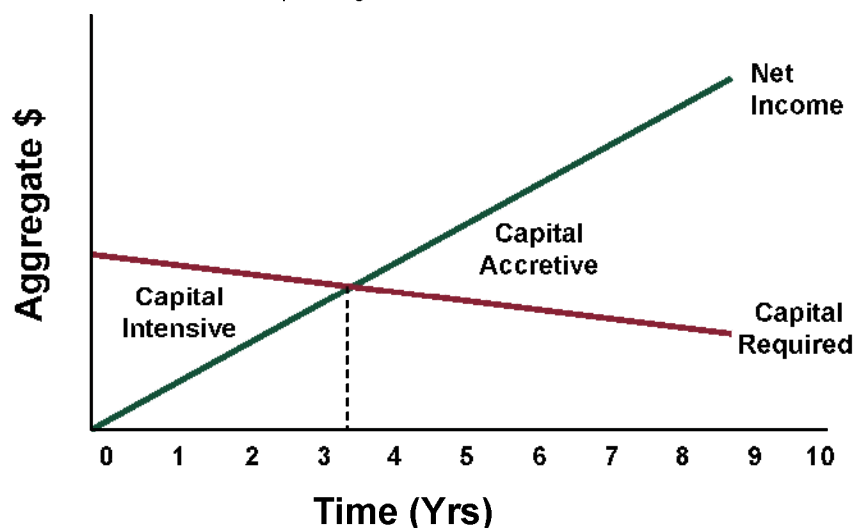
Notes:
Capital Requirements Ignore Contingency Reserve Impact For Simplification

Comments

– **Higher Pricing Accelerates Time To Capital Accretion (~2 to 4 Years Typically)**

– **STAT Capital Requirements Indifferent To Riskiness Of Production**
  - 4% of Risk Irrespective of Characteristics
  - Lapse Results In Lower Requirements Over Time

– **Rating Agency Models Account For Different Risk Attributes**
  - Aggregate Capital Requirements Still Lower Over Time Due To Seasoning

– **Once Accretive, Capital Can Fund New Production… Capital Is Fungible**

Capital Is Deployed When New Production Is Written

Genworth Financial

Why Is Capital Needed?

Companies Across Many Sectors Take Risks With An Expectation On How These Risks Will Behave In The Future:

Banks	Life	P&C	MI
Credit Losses Stemming From The Issuance Of Various Forms Of Credit	Mortality of Insured Policyholders	Damage To Personal (Home/Auto) & Commercial (Equipment)	Credit Losses Stemming From Home Loan Defaults
Volatile But Diversified	***Low Volatility***	***Mixed Volatility***	***High Volatility***

In MI, Historical Data Across Multiple Macro-Economic Cycles Provides The Basis For Genworth's Expectations On Future Claims Activity & Pricing

If Assumptions on Future Claim Activity Prove Wrong, Premiums Charged May Prove Inadequate To Pay Policyholder Claims

Simplified Illustrative Example:

| Inputs:	Scenario A: 3% Claims Rate	Scenario B: 9% Claims Rate
10 Loans @ $100,000 Each	$15,000 Premiums	$15,000 Premiums
25% MI Coverage	$7,500 Losses	$22,500 Losses [$15,000 Unexp]
Ultimate Expected Claims Rate = 3%	$3,000 Expenses	$3,000 Expenses
Priced @ 150 bps Single Premium	$4,500 Operating Income	($10,500) Operating Loss
20% Expense Load		

Capital Is Required To Meet Unexpected Claims

Genworth Financial

How Much Capital Is Needed?

Historical Mortgage Data Fits A Right Skewed & Long Tail Distribution

– More Observations Left Of Mean & Relatively Large Extreme Right Tail Values
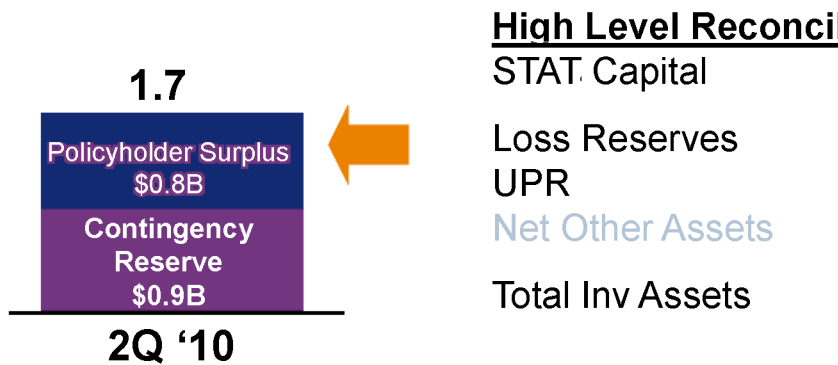
Illustrative Example:
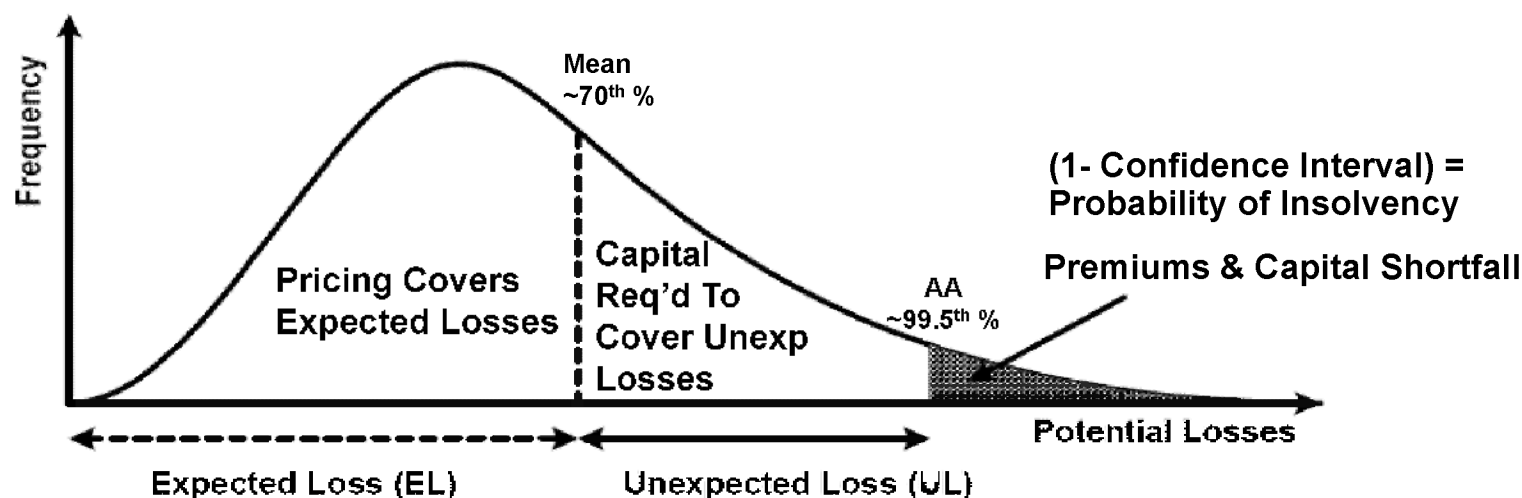
Amount Of Capital Required Dependent On Pricing, Riskiness Of Portfolio (Volatility), & Confidence Interval

Genworth Financial

Capital Versus Liquidity

Capital

A Representation Of A Firm's Net Worth & Ability To Absorb Unexpected Losses

($B)

1.7

Policyholder Surplus
$0.8B

**Contingency Reserve
$0.9B**

2Q '10

High Level Reconcil
STAT Capital

Loss Reserves
UPR
Net Other Assets

Total Inv Assets

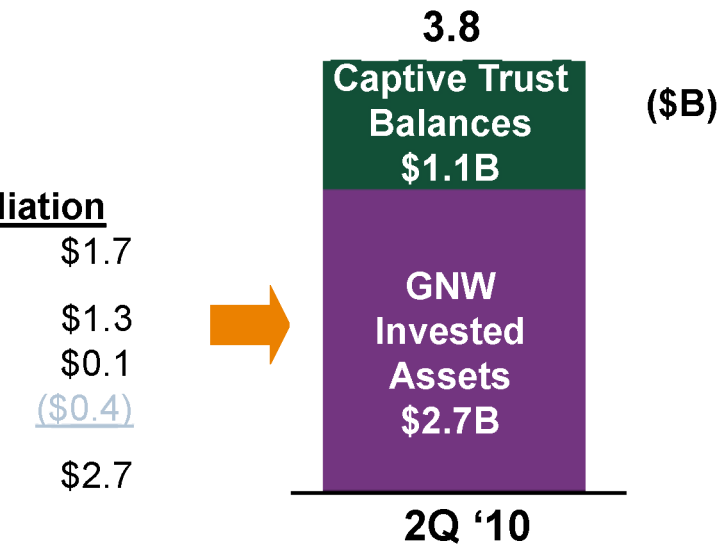## Regulatory Capital Requirements Are Focused On A Mi's Net Worth

Liquidity

A Firm's Ability To Meet Its Immediate Needs For Cash

3.8

Captive Trust Balances $1.1B

($B)

liation

$1.7

$1.3
$0.1
($0.4)

$2.7

GNW Invested Assets $2.7B

2Q '10

Rating Agencies Employ Sources/Uses Models Which Focus On Liquidity

Genworth Financial

U.S. Regulatory Capital

Genworth Financial

U.S. MI Regulatory Capital Regime

Two Components:

Contingency Reserve

- – ½ Of Net Earned Premium Held As Liability For 10 Years
- – Can Release on FIFO Basis If Loss Ratio Exceeds 35%
- – Can Seek Early Release Of Contingency Reserve With Commissioner Approval
- – Production Is Self Funding From Premiums

Contingency Reserve

Illustrative Example: Single Book
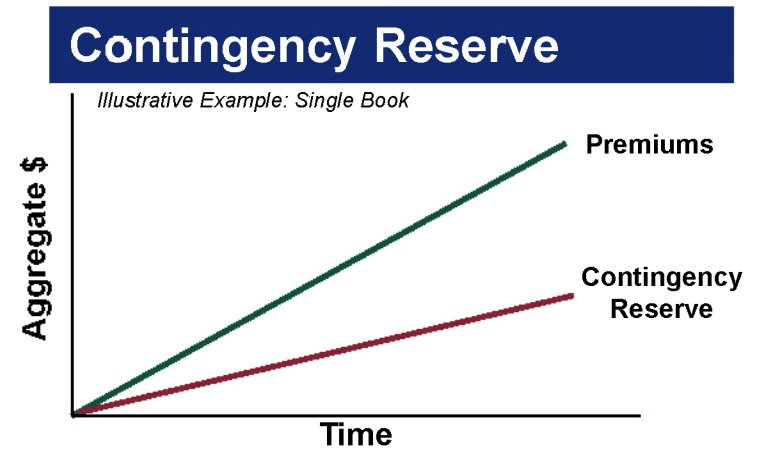
25:1 Risk To Capital Ratio In Order To Write New Business

- – Capital Intensive From Origination Through First Several Years

25:1 RTC Example

Illustrative Example: Single Book

Genworth Financial
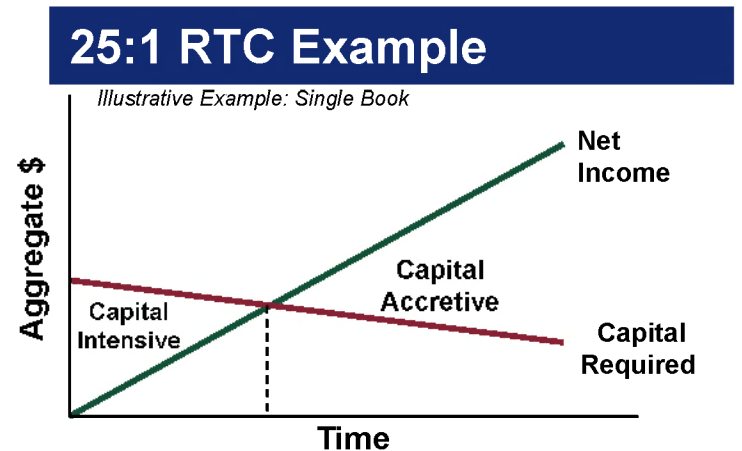
Contingency Reserves

Contingency Reserves Are A Re-class From STAT Policyholder Surplus To A Contingent Liability Account

– However, Considered Capital For STAT Compliance Purposes (i.e. 25:1 RTC Requirements)

Contingency Reserves Required To Cover MI's Long Tail Risk

– Legislation Enacted In 1960's To Resurrect MI Industry Post Great Depression
– 50% of Net Earned Premiums Reserved For A Period Of 10 Years
– Released If Loss Ratio Exceeds 35%

Contingency Reserves Are Fungible & Do Not Account For Lapse

– No Matching Principal… Reserves Are Released On FIFO Basis Based On Aggregate Losses
– Contingency Reserve Is Maintained Even If Loans That Gave Rise To Such Reserve No Longer Exists
  • Does Not Adjust Contingency Reserve Balance For Lapse

Contingency Reserves Are Capital Constraining In Heavy Lapse Environments

($B)		Calendar Years			
		2000	2001	2002	2003
	Persistency	80%	64%	57%	46%
	Risk In Force	30.2	32.9	30.1	26.5
	25:1 RTC Requirements	2.0	1.3	1.2	1.1
	Contingency Reserve Required	2.0	2.3	2.6	2.8

Genworth Financial

25:1 Risk To Capital

## 25:1 Risk To Capital Ratio Is Required To Write New Business

- 13 States Adopted 25:1 RTC Or Similar MPP Regs (AZ, CA, FL, ID, IL, IA, KS, KY, MO, NC, OR, TX, WI)
- Origin of 25:1 Rule Dates Back To 1961 Publication[1] Which Recommended Range Of 12.5:1 to 40:1 Risk To Capital Ratio As Appropriate For Mortgage Insurers
- Although Still The Regulatory Standard, Risk To Capital Does Not Differentiate Between Risk Attributes Which Is A Major Shortcoming Given Changes In Mortgage Marketplace

New Business Is Important To U.S. Housing Recovery & MI Liquidity

- MI Plays Critical Role In Supporting Mortgage Finance In U.S.
- New Business Provides Important Liquidity To Pay Claims, Especially In Times Of Stress
  - May Bolster Capital Position As Well Over Time If New Business Is Accretive (i.e. Profitable)

Importance of New Business Under Stress

Illustrative Example: Single Book Incremental Cash Flows
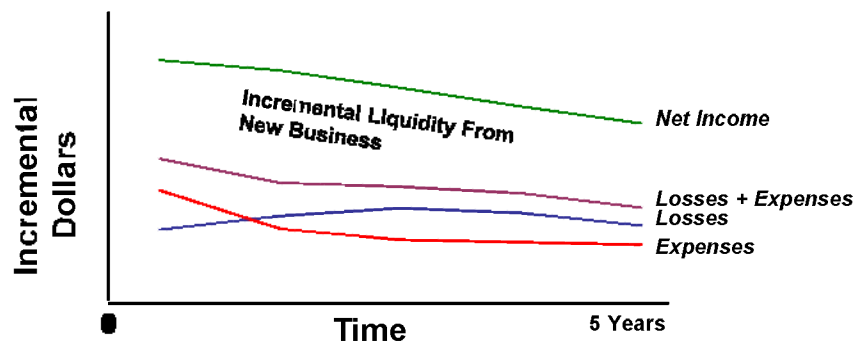
Comments

- Incremental Liquidity (Cash Flow) From New Business Can Be Important, Especially In Times Of Stress To Fund Losses
  - Liquidity Equals Premiums Received Minus Paid Losses & Expenses

(1) In 1961 James A. Graaskamp & Richard M. Heins *Mortgage Loan Guaranty Reconsidered-An Objective Study of Modern Mortgage Loan Default Insurance-Its Economics, Law, Regulation, and Administration as Related to Reserve Adequacy*

Genworth Financial

Rating Agency Capital

Genworth Financial

Rating Agencies

Rating Agencies Provide Ratings To Assist Customers & Investors

- Rating Agencies Assess Both Qualitative & Quantitative Factors In Determining Ratings
    - Qualitative: Competitive Position, Management & Corporate Strategy, Financial Flexibility
    - Quantitative: Capital Adequacy Ratio (CAR), Profitability Profile, Liquidity, Portfolio Credit Risk
- IFS Rating: Insurer Financial Strength Rating Provides Potential Customers With Relative Strength Of Insurer & Probability Of Policy Obligations Being Met
- Credit Rating: Both Short & Long Term Assessments Of Corporate Creditworthiness…. Assessment Of Default Risk
- Therefore, Ratings Can Affect Both Commercial Relationships & Borrowing Costs
    - GSE's Used To Rely On Ratings To Qualify For Type I Insurer, However, Have Moved Away From That Model

Group Methodology: Framework For Assessing The Enterprise & The Individual Parts

- Although Each Rating Agency Has Its Own Methods, There Are Common Characteristics:
    - Establish A Notional (Non-Public) Rating For Each Rated Operating Company
    - Take Into Account Support (Implicit Or Explicit) From The Group
    - Create Final Rating Based On Intrinsic Merits Plus Group Support
- Holding Company Rated 1-3 Notches Below Group Operating Companies Based On Perceived Incremental Default Risk For Unregulated Liabilities

Genworth U.S. MI Ratings:

	Rating	CAR
S&P	BBB-	AAA
Moody's	Baa2	Baa
Fitch	W/D	

Genworth Financial

Rating Agency Models - Basics

Rating Agencies Methods Generally Employ Sources & Uses Modeling

– Liquidity Based Assessment

– Gap Between Stressed Sources & Uses Represents MI's Capital Requirement

Loss Factors Based On Rating Agencies Views Of Future Loss / Economic Conditions

– S&P Loss Factors Consistent With Southern California Recession Experience (1990's) Applied Nationally

– Moody's Stress Loss Estimates Based On Broad Product Performance As Measured By Delinquency Rates Relative To Moody's Non-Conforming RMBS Indexes

– Fitch Stress Loss Factors Are More Subjectively Determined By Vintage Based On Their Views Of Ultimate Performance

Despite Differences, All Methods Share Some Common Characteristics

– Run-Off Portfolio Assessment

– Stress Cash Flows Models

– Deterministic Loss Factors Based on Riskiness of Product Attributes

– Credit For Captive Reinsurance

Rating Agencies Use Stress Cash Flows On Run-Off Portfolio To Asses U.S. MI's Capital Adequacy

Genworth Financial

Recap

CONFIDENTIAL

15

Genworth Financial

Capital Recap

For Regulatory Purposes, Capital Is Defined As Net Worth

Capital Is Needed To Meet Unexpected Losses

How Much Capital Is Needed Is Determined By Future Assessment Of Stress Losses & Corporate Risk Appetite (Confidence Interval)

There Are Two Primary Regulatory Capital Requirements: 25:1 RTC & Contingency Reserves

Rating Agencies Issue An IFS Rating Through Assessment Of Our Qualitative & Quantitative Attributes

To Assess Capital Adequacy, GNW's Run-Off Portfolio Is Evaluated Using Sources & Uses Models

Genworth Financial

Exhibit H
Explanation of Genworth's Reserving Methodology

U.S. Mortgage Insurance
Loss Reserve Overview
May 2009

U.S. Mortgage Insurance Loss Reserve Methodology: Overview

Loss Reserves Consist of Three Components …

- **Case Reserves**
  - Reserves for loans that are currently delinquent and reported as such to us by the lender or loan servicer
  - Calculated by loan based on a **Frequency and Severity Factor Model**

+

- **Incurred But Not Reported ("IBNR")**
  - Reserves for delinquent loans that have not yet been reported

+

- **Loss Adjustment Expense ("LAE")**
  - Reserves for loss mitigation expenses and expenses incurred to settle claim loss

U.S. Mortgage Insurance
Loss Reserve Methodology: Process

FAS 60 Requirement: Liability shall be accrued when insured events occur (*i.e.*, "Triggering Event")

- "Triggering Event" is defined as a Delinquent Loan

- Liability estimate based on past experience and future trends

- Reserve amount based on delinquency age

- Separate calculations for Primary, Bulk and Pool Products

- Case, IBNR and LAE Reserves established monthly and reviewed / updated quarterly, as appropriate

Reserving calculation is best estimate of quantity and cost of delinquencies ultimately becoming paid claims

Genworth's Loss Reserve Methodology is consistent with both GAAP and MI Industry Practice

U.S. Mortgage Insurance
Loss Reserve Methodology: Calculation

Delinquent Loan Balance X   Loan Coverage   X   Frequency   X   Severity   =   Total Loss Reserves

| | | | How Often Does A Delinquency Go To Claim? | What Is Final Settlement Cost Versus Coverage? | |

Example:

| $2.5B | X | 25% | X | 33% | X | 95% | = | $190MM |

Delinquencies Are Classified By Category

- Cat 10   Delq < 4 Months
- Cat 20   Delq > 4 Months
- Cat 30   In Foreclosure
- Cat 40   Title Taken
- Cat 45   Claim Received
- Cat 50   Claim Being Audited

- Reserves increase at each stage of delinquency as the probability of going to claim becomes higher

- IBNR = percentage of Cat 10 through Cat 40 Case Loss Reserves

P&L Impact = Monthly change in Loss Reserves

Genworth Financial

Exhibit I
Description of the Statutory Limitations on
Mortgage Insurance Investment and Dividends

OVERVIEW OF STATE INVESTMENT LAWS FOR MORTGAGE INSURERS

State insurance laws provide for various restrictions on the assets held and investments made by insurers, including mortgage guaranty insurers ("mortgage insurer"), to ensure that they are able to pay claims in periods of cyclical stress. This overview provides a high level summary of these protective safeguards relating to assets and investments. Please note that most asset and investment laws are laws of general applicability and are not specific or unique to mortgage insurers. Additionally, state insurance laws place restrictions on an insurer's ability to dividend money upstream, and this point is addressed in item IV below.

I. <u>Reserves and Capital</u>

In a broad sense, assets held by a mortgage insurer primarily fall into four categories: 1) the statutory contingency reserve ("SRC"); 2) actuarial loss reserves; 3) unearned premium reserves; and 4) surplus as regards policyholders. Typically, a mortgage insurer's state of domicile determines in what form assets may be held and investments made. That having been said, below I will discuss a notable exception where non-domicilary states (California and Illinois) impose certain investment restrictions on any mortgage insurer doing business in those states.

II. <u>Admissible Assets</u>

<u>Permitted Assets Overview</u>

Under North Carolina General Statute Section (N.C.G.S.) 58-7-162 (copy attached), assets for which an insurer may take statutory financial statement credit include:

1) cash;

2) high grade securities, loans, and property, but with severe restrictions (see discussion of particulars below);

3) uncollected premiums not more than 90 days past due;

4) reinsurance recoverables;

5) electronic and mechanical machines and operating systems; and

6) other assets approved by the Commissioner of Insurance.

Assets Not Permitted

Although not an exclusive listing, N.C.G.S. 58-7-163 (copy attached) specifically prohibits an insurer from including the following items in the calculation of assets for statutory financial statement purposes:

1) advances to employees;

2) stock of the insurer, equity therein, or loans secured thereby;

3) the amount by which book value of any asset exceeds the value of the asset as determined by NC law;

4) bonds, notes, or other evidences of indebtedness that are secured by mortgages that are in default, to the extent of the cost or carrying value that is in excess of the value as determined by NC law;

5) surplus notes to the extent that these result in a double counting of such investments on the insurer's balance sheet; and

6) any encumbered asset.

III. Investments

General Requirements for Investments

Pursuant to N.C.G.S. 58-7-167 (copy attached), no security or investment, other than real estate, may be acquired unless it bears interest, receives dividends, or generates income and is not in default in any respect.

N.C.G.S. 58-7-168 (copy attached) requires an insurer's board of directors to approve all investments.

Permissible Investments

Pursuant to N.C.G.S. 58-7-172 and 58-7-173 (copies attached), an insurer may invest in:

1) cash on hand or in a bank account;

2) bonds and other indebtedness that are direct obligations of the U.S. Government for which the full faith and credit of the U.S. Government is pledged for payment of principal and interest;

3) loans insured as to principal and interest by the U.S. Government or by an agency thereof to the extent of the guaranty;

4) bonds or indebtedness by any U.S. state or territory, or by Canada or any Canadian province, that are direct obligations of such governmental units for which the full faith and credit of such governmental unit has been pledged; (note: there is a 40% of admitted assets limit on aggregate Canadian investments per N.C.G.S. 58-7-170(b)(2)).

5) bonds issued by U.S. and Canadian counties and municipalities that are direct obligations of such governmental units for which they have the power to levy taxes;

6) construction bonds issued by U.S. or Canadian governmental units;

7) bonds or indebtedness of or guaranteed by any U.S. or Canadian governmental unit with respect to public utilities and works (water/gas/sewage/electricity/toll roads/bridges);

8) bonds and securities of (a) Fannie Mae when acquired in connection with the sale of mortgage loans to the Association; (b) any federal land bank when the securities are issued under the Farm Loan Act; (c) any federal home loan bank when the securities are issued under the Home Loan Bank Act; (d) the Home Owners Loan Corporation; (e) any federal intermediate credit bank created by the Agricultural Credits Act; (f) the Central bank for Cooperatives; (g) any similar agency of the U.S government of similar financial quality;

9) housing authority bonds if secured by a pledge from the U.S. Government or any agency thereof;

10) obligations issued or assumed by various banks, such as the International Bank for Reconstruction and Development, but no insurer may hold such obligations in any one issuer in an amount greater than 3% of the insurer's admitted assets;

11) bonds or notes of U.S. and Canadian corporations, as valued by the NAIC's Security Valuation Office, but bonds from any one issuer shall not exceed 3% of the insurer's admitted assets (per N.C.G.S. 58-7-170(b)(2), there is a 20% of admitted assets limit for Canadian corporate credit instruments).

12) secured obligations of duly constituted churches, which in the aggregate do not exceed 3% of the insurer's admitted assets;

13) equipment trust obligations, which in the aggregate do not exceed 20% of the insurer's admitted assets:

14) share or savings accounts of savings and loan or building and loan associations;

15) loans with a maturity of less than 12 years secured by the pledge of securities eligible for investment under NC law;

*** For items 2 through 15 above, there are limits imposed by N.C.G.S. 58-7-170(d) (copy attached) for "medium to lower quality obligations", which means those investments designated as 3, 4, 5, or 6 by the NAIC's Securities Valuation Office. These limits range from 20% of

admitted assets generally, to 10% in investments designated as 4, 5, or 6, to 3% for investments designated as 5 or 6, to 1% for investments designated as 6.

16) stocks, common or preferred, of U.S. or Canadian corporations, (or stocks and bonds of foreign corporations under limited circumstances – See N.C.G.S. 58-7-178, copy attached). Per N.C.G.S. 58-7-170(b)(1), total stock investment is limited to 25% of the insurers admitted assets, common stock is limited to 20% of the insurers admitted assets, and the insurer may hold not more than 3% of its admitted assets in one stock issuer, except for depository institutions where the limit is 5% of admitted assets. (Note exception below if the stock is of a subsidiary that is itself a licensed insurer).

17) mortgage backed securities that are designated a 1 or 2 in accordance with the NAIC's Securities Valuation Office (NOTE: California Code Regis. Tit. 10 Section 2521 and Illinois Admin. Code Section 206(d) both prohibit any mortgage guaranty insurer that does business in those states from investing in mortgage backed securities, which precludes Genworth from doing so).

Mortgage Loans

While N.C.G.S. 58-7-179 (copy attached) allows insurers to invest in first mortgage loans, subject to the limits of 58-7-170(c). However, California Code Regis. Tit. 10 Section 2521 and Illinois Admin. Code Section 206(d) prohibit any mortgage insurer doing business in those two states from investing in mortgages other than those obtained in settlement of a claim.

Real Estate

N.C.G.S. 58-7-187 (copy attached) prohibits an insurer from investing in real estate except under the following circumstances:

1) used for principal office and branch offices;

2) acquired in satisfaction of loans, liens, judgments, etc;

3) acquired through trade or offset for sale of other real property if transaction results in net reduction in the insurer's investment in real estate;

4) acquired through gift, merger, or consolidation;

5) when made for investment purposes, the insurer's aggregate investment in real estate shall not exceed the lesser of 5% of the insurer's admitted assets or 15% of the insurer's capital and surplus; Further, the insurer's investment in any one property shall not exceed 1% of the insurer's admitted assets.

Investments in Subsidiaries

N.C.G.S. 58-19-10 (copy attached) permits an insurer to make an unlimited investment in a subsidiary that is also a licensed insurer. Otherwise, the statute limits an insurer's investment in a subsidiary to the lesser of 10% of the insurer's admitted assets or 50% of the insurer's surplus. Note that the subsidiary must be engaged in activity ancillary to the insurance business.

IV. Dividends

N.C.G.S. 58-19-30 (copy attached) prohibits an insurer from paying an extraordinary dividend without 30 days prior notice to the Commissioner of Insurance and the Commissioner has not disapproved the same. The extraordinary dividend threshold is any dividend, taken together with any dividends made in the preceding 12 months, that in the aggregate exceed the greater of 10% of the insurer's surplus or the insurer's prior year's net income. Regarding either ordinary or extraordinary dividends, N.C.G.S. 58-7-130 provides that the Commissioner can halt any dividend if he feels that the dividend would be prejudicial to the insurer or its policyholders. That same statute requires that dividends be paid only from unrestricted surplus.