

# UNITED GUARANTY CORPORATION

# BASEL III RISK-WEIGHTED ASSETS COMMENT LETTER: MORTGAGE INSURANCE ANALYSIS AS OF MARCH 2012

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# INTRODUCTION AND SUMMARY OF RESULTS

The Office of the Comptroller of the Currency, Treasury, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation ("Agencies") published a notice for public rulemaking, Regulatory Capital Rules: Standardized Approach for Risk-weighted Assets; Market Discipline and Disclosure Requirements ("Standardized NPR"), that seeks comment on proposed changes to the Agencies' general risk-based capital requirements for determining risk-weighted assets for banking institutions. This report will concentrate on the proposal for excluding the consideration of private mortgage insurance in calculating the loan-to-value ratio at origination ("LTV") in determining risk-weights for residential mortgage assets.

Risk-weights are used by bank regulators and others in the industry to evaluate the capital adequacy ratio for a bank as proposed by Basel II. The capital adequacy ratio is calculated as the ratio of a bank's core capital divided by risk-weighted assets. A lower risk-weight indicates a lower level of risk and results in lower levels of required capital.

The current methodology under the Basel II framework for residential mortgages assigns a risk-weight between 20 and 150 percent of a mortgage dependent upon the following factors: the presence of government guarantees; the LTV ratio of the mortgage; the lien of the mortgage; and the current status of the mortgage (i.e. current or past due). Under the current methodology, a bank could consider loan-level private mortgage insurance in determining the LTV of the mortgage. For example, if a loan had an LTV ratio of 90% with private mortgage insurance coverage, the LTV ratio of the mortgage for determining risk-weights could be reduced to less than 90% because of the coverage provided by the mortgage insurer. Mortgage insurers provide first-loss coverage up to a pre-determined limit that reduces the realized loss to the investor of the mortgage if the mortgage defaults.

The Standardized NPR proposes risk-weights between 50 and 200 percent of a mortgage dependent upon expanded criteria from the current framework that includes additional underwriting adjustments and requirements at origination of the loan. The Standardized NPR specifically excludes the recognition of primary mortgage insurance when calculating the LTV ratio of a residential mortgage exposure. According to the Standardized NPR, "The agencies believe that, due to the varying degree of financial strength of mortgage providers, it would not be prudent to recognize [private mortgage insurance] for purposes of the general risk-based capital rules<sup>1</sup>."

This report analyzes the credit risk assumed by mortgage insurers under a hypothetical prospective mortgage market as defined by "qualified mortgages" created by the Truth in Lending Act pursuant to section 1412 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. Using recent premium rates and other assumptions, Milliman simulates the required risk-to-capital ratio for a mortgage insurer insuring only "qualified mortgages" to estimate the amount of capital contributions required to support the assumed risk. Milliman's analysis indicates that the credit risk assumed by mortgage insurers will be significantly reduced in a "qualified mortgage" market compared to the historical risk assumed by mortgage insurers. Furthermore, under the assumptions in the model, mortgage insurers would require capital contributions in approximately 1% of the simulated trials under a 75 basis point premium rate.

<sup>&</sup>lt;sup>1</sup> Note: mortgage insurers are regulated by the Department of Insurance for each state and are not subject to capital requirements as proposed by Basel II.

## BACKGROUND AND SCOPE OF ANALYSIS

Private mortgage insurance ("PMI") protects mortgage lenders and investors from potential credit losses stemming from borrower defaults. This credit protection reduces realized credit losses on defaulted mortgages to banks that portfolio the loans and facilitates the sale and transfer of mortgages in the secondary market. The second underwrite provided by the mortgage insurers enhances the quality of the mortgages insured by private mortgage insurers and results in a lower default frequency on insured loans compared to similar loans not insured by private mortgage insurers<sup>2</sup>.

Mortgage guaranty insurers manage mortgage default risk by diverting accumulated premium revenues and capital built up during relatively strong mortgage markets to cover claim losses in relatively weak mortgage markets. Default risk diversification is obtained geographically, temporally, and across levels of borrower credit risk. At the geographic level, insurers achieve diversification by writing business nationally, thereby enabling them to withstand severe regional economic downturns. On the temporal level, insurers are subject to stringent minimum surplus and reserve requirements - including contingency reserve requirements - imposed by state insurance regulators. Mortgage insurers are generally required to hold a risk-to-capital ratio of at least 25 to 1 (for every \$25 dollars of risk in force, the mortgage insurer must hold at least \$1 of capital) to cover unexpected losses. Contingency reserve requirements generally cause insurers to retain premiums earned during periods of economic expansion in order to cover claim losses incurred during periods of protracted economic recession. Geographic and temporal diversification provide a natural hedge against systematic risk inherent in mortgage guaranty insurance; that is, a mortgage guaranty insurance company with prudent pricing and capitalization can reasonably anticipate that sufficient diversification both geographically and temporally will be adequate in protecting the company against mild to severe economic downturns.

During the expansion years of the real estate and mortgage market from 2000 through 2007, the mortgage industry developed and originated alternative mortgage products such as no documentation loans, negative amortization loans, "teaser rate" loans, and others that fueled an expansion in mortgage credit. These products facilitated growth in the housing market and house prices. In 2006 and 2007, mortgages started to default and housing prices began a steep decline that contributed to large losses in the mortgage industry. As a result of these losses, some mortgage insurers became insolvent, breached the 25 to 1 capital requirement, or experienced a significant drain on capital. The mortgage insurance industry responded to these losses by increasing their underwriting and risk management processes. Examples of these enhancements include increased documentation requirements, implementation of higher FICO score and lower LTV limits, refined risk-based premiums, and other actions to mitigate their risk.

The United States government and its regulators have also responded to the recent mortgage crisis by issuing a series of proposals to govern the mortgage market and help prevent a similar crisis from recurring in the housing market. Proposed governing rules for mortgage lending, such as "qualified mortgages" created by the Truth in Lending Act pursuant to section 1412 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, will influence or prohibit the types and features of mortgages that will be originated. Mortgages that meet these proposed requirements have historically been associated with lower levels of default risk compared to mortgages that do not meet the proposed requirements.

The proposed requirements that will govern future mortgage lending along with risk management actions taken by the mortgage insurance industry may decrease the amount of credit risk assumed by the mortgage insurance industry. Using historical data of mortgage performance, this report will analyze the primary drivers of risk for a mortgage insurer after the implementation of these proposed requirements for mortgage lending.

<sup>&</sup>lt;sup>2</sup> The appendix to this report provides a comparison of the cumulative default rate for loans insured by mortgage insurers compared to similar loans not insured by mortgage insurers for recent origination years

At the time this report was written, the definition of a "qualified mortgage" as defined by the Truth in Lending Act or other mortgage reform proposals have not been finalized; however, the Agencies have issued NPR's summarizing the current considerations for a "qualified mortgage" and other reforms. Milliman reviewed these NPR's and current underwriting guidelines within the mortgage insurance industry to develop a definition of "Qualified Mortgages" for this report.

Milliman has been retained by United Guaranty Corporation ("UGC") to independently compare the credit risk profile of Qualified Mortgages to the credit risk profile of an unfiltered dataset of mortgages ("All Loans"). In addition to this comparison, Milliman was retained to simulate a probability distribution of the amount of capital required above cumulative earned premium to cover future obligations for a mortgage insurer that insures only Qualified Mortgages. Milliman defined contributed capital as the amount of capital contributed in excess of premium to meet future obligations with consideration for the timing of cash flows.

Milliman ran the simulation model under a single-book assumption and a multiple-book assumption. A single-book model projects the performance of a portfolio of mortgages originated in a single calendar (i.e. a single book of business) year over a period of 15 projection years. The single book simulation was designed to estimate the amount of capital needed to cover losses without consideration of other sources and uses of funds such as investment income, expenses or taxes.

The single-book analysis does not take into consideration the operating aspects of a mortgage insurance company such as the starting capital position of the company, investment income, expenses, taxes, or diversification. A mortgage insurance company obtains a diversification benefit through writing business across many book years. Therefore, Milliman also created a multiple-book simulation model that takes these aspects into consideration. The multiple-book model projects the performance of 15 consecutive books of business over a period of 15 projection years. The multiple-book model tracks the simulated sources and uses of funds for a mortgage insurance company that insures only Qualified Mortgages.

The results contained in this report are developed from publicly available data sources and do not specifically represent the risk or performance of loans insured by UGC.

### **EXECUTIVE SUMMARY**

Milliman relied on data from CoreLogic's LoanPerformance Servicing Database to develop this analysis. The data includes loan-level performance data and underwriting characteristics for loans originated between 1998 and 2012 with performance through March 31, 2012. Milliman used this data to project ultimate default rate distributions and cash flow timing assumptions for All Loans and Qualified Mortgages. Milliman appended mortgage insurer premium rates and average coverage levels to each loan based on the underwriting characteristics of the loans. The aggregate data was filtered for loans with the following characteristics:

# All Loans

- Loans with a complete performance history;
- Loans with an original combined loan-to-value ratio at origination greater than 80%;
- Loans not insured by the Federal Housing Administration;
- Loans with a valid value for FICO score and combined loan-to-value ratio at origination;
- First lien loans;
- Non-construction loans; and
- Loans with a valid origination date.

Milliman defined Qualified Mortgages as a subset of All Loans that have the following characteristics:

### **Qualified Mortgage**

- Loans with a combined loan-to-value ratio at origination less than or equal to 97%;
- Loans with a FICO score greater than or equal to 620;
- Full documentation loans;
- Fully amortizing loans (i.e. no interest only loans or negative amortization loans);
- Original term of 360 months or less;
- Periodic rate reset cap of 2% or less; and
- Lifetime rate reset cap of 6% or less.

Milliman estimated the ultimate default rate for All Loans and Qualified Mortgages by origination quarter for origination quarters from 1998 Q1 through 2011 Q4. Milliman fit a gamma distribution to the ultimate default rates for each set of loan cohorts to estimate a probability distribution of the potential ultimate default rate outcomes. The table below provides a summary of the empirical data and gamma fits by cohort:

TABLE 1         ULTIMATE DEFAULT RATE DISTRIBUTION BY COHORT								
Confidence	All L	oans	Qualified	Mortgages				
Level	Empirical Data (%)	Gamma Fit (%)	Empirical Data (%)	Gamma Fit (%)				
10%	5.0	3.5	3.1	1.9				
20%	5.9	5.9	3.6	2.9				
30%	7.7	8.2	3.8	3.9				
40%	11.2	10.7	4.4	5.0				
50%	14.4	13.4	5.1	6.1				
60%	15.5	16.5	6.3	7.3				
70%	17.3	20.4	8.3	8.9				
80%	28.6	25.6	12.5	11.0				
90%	40.2	34.2	16.5	14.3				
95%	41.0	42.5	18.0	17.5				
99%	44.8	61.2	18.4	24.6				
Mean Ultimate Default Rate	16.7	16.7	7.4	7.3				
Standard Deviation	12.2	13.2	5.0	5.3				
2007 Ultimate Default Rate	38.2	NA	18.1					
2007 Percentile	88.7	92.8	96.2	95.6				

The mean ultimate default rate for Qualified Mortgages is less than half of the mean ultimate default rate for All Loans in the database. The mean ultimate default rate for All Loans is 16.7% compared to 7.3% for Qualified Mortgages. The ultimate default rate under severe economic conditions as measured by the 99<sup>th</sup> percentile ultimate default rate for Qualified Mortgages is significantly less than the comparable ultimate default rate for All Loans. Using the gamma fit to estimate the tail risk, the 99<sup>th</sup> percentile ultimate default rate for All Loans and Qualified Mortgages is 61.2% and 24.6%, respectively. This means the 1 out of 100 tail event based on the gamma distribution fit to historical data would have resulted in over 60 out of 100 loans defaulting; however, under the new proposed Qualified Mortgage requirements, the 1 out of 100 tail event would have resulted in 25 out of 100 mortgages defaulting.

# Single-Book Simulation

Using a cash flow simulation model developed specifically for mortgage insurance companies, Milliman estimated the capital contributions required to support the simulated losses associated with a single-book of \$10 billion of original loan volume (\$2.5 billion of original risk under 25% mortgage insurance coverage) of only Qualified Mortgages. The single book simulation was designed to estimate the amount of capital needed to cover losses alone, without consideration of other sources and uses of funds such as investment income, expenses or taxes. Milliman ran the single-book model assuming average premium rates of 75 basis points and 70 basis points. Milliman estimated historical premium rates for each loan analyzed in this study using industry rate cards; the average premium rate for Qualified Mortgages originated in 2011 ranged between 70 and 75 basis points.

Milliman analyzed the risk-to-capital ratio from the simulations. The risk-to-capital ratio is equal to the original risk of a given book divided by the simulated contributed capital. Original risk is equal to the amount of new insurance written times the coverage percent of the insured cohort. This ratio conveys approximately how much capital is required to meet future obligations at a given level of confidence. For example, if the risk to capital ratio is 25 to 1 at the 95% confidence level, then in order to have met cash requirements in 95% of the simulated trials, the insurer needs to add capital equal to 4% (1 / 25) of the original risk.

The results of the simulations are summarized in the following table:

TABLE 2 RISK TO CAPITAL RATIO COMPARISON NO REQUIRED CAPITAL OVER CONTINGENCY RESERVE, NO EXPENSES, NO INVESTMENT INCOME, NO TAXES SINGLE-BOOK ANALYSIS ON \$10 BILLION OF ORIGINAL NIW OF QUALIFIED MORTGAGES (\$ THOUSANDS)									
Confidence	Average Coverage Percent: 25% Original Risk: \$2.5 Billion Initial Amount of Capital: \$0								
Level	Premiu 0 7	Premium Rate Premium Rate							
	Contributed Capital	Risk to Capital Ratio	Contributed Capital	Risk to Capital Ratio					
80%	0	NA	0	NA					
90%	0	NA	5,067	493.4					
95%	47,263	52.9	71,236	35.1					
97.5%	114,669	21.8	138,738	18.0					
99.0%	200,877	12.4	223,519	11.2					
99.5%	267,074	9.4	292,444	8.5					
99.9%	435,668	5.7	464,215	5.4					
Percent of Trials with Zero Capital Contribution		92.0%		89.0%					

The last row of the table shows the percent of trials that resulted in a zero capital contribution; in other words, the percent of trials where the cumulative earned premium was adequate to cover cumulative paid losses at any given time. In the single-book analysis, nearly 90% of the trials resulted in zero contributed capital under both sets of premium rates. Therefore, under current premium rates for Qualified Mortgages, 9 out of 10 books of business would not require capital contributions from the mortgage insurer. If capital contributions are required, the simulation analysis indicates a risk-to-capital ratio of 35 to 1 would cover unexpected losses at a 95% confidence level using the lower premium rate of 70 basis points.

# Multiple-Book Simulation

Milliman estimated the capital contributions required to support the potential losses associated with 15 books of Qualified Mortgages for a newly capitalized mortgage insurer after a 15 year period. Each book was assumed to have \$10 billion of original loan volume (\$2.5 billion of original risk under 25% mortgage insurance coverage). This assumption is based on a recent review of industry market share and volume trends. The multiple-book model is designed to simulate the number of times a mortgage insurer would require capital contributions if only Qualified Mortgages were insured and how much capital would be contributed in each case. The multi-book simulation includes various assumptions outlined in the body of this report that were selected to represent the starting financial position and ongoing expenses for a newly capitalized mortgage insurer. Milliman assumed an initial capital level of \$500 million based on capital requirements for newly organized mortgage insurance companies. Capital is not contributed in the model until the \$500 million on initial capital is depleted.

Milliman assumed an 85% correlation between successive book years for ultimate default rates and prepayment speeds. The results of the simulations are summarized in the following table:

TABLE 3 RISK TO CAPITAL RATIO COMPARISON NO REQUIRED CAPITAL OVER CONTINGENCY RESERVE, 20% EXPENSE RATIO, 3% INVESTMENT INCOME, 35% TAX RATE MUTIPLE-BOOK ANALYSIS ON \$10 BILLION OF ORIGINAL NIW OF QUALIFIED MORTGAGES PER YEAR (\$ THOUSANDS)									
Confidence		Av Initial Premium Rate	erage Covera Original Risk Amount of C	ge Percent: 25 : \$37.5 Billion apital: \$500 Mi	% illion Premium Rate				
Level		0.75%			0.70%				
Level	Contributed Capital*	Risk to Contributed Capital Ratio	Risk to Capital Ratio**	Contributed Capital*	Risk to Contributed Capital Ratio	Risk to Capital Ratio**			
80%	0	NA	NA	0	NA	NA			
90%	0	NA	NA	0	NA	NA			
95%	0	NA	NA	0	NA	NA			
97.5%	0	NA	NA	211,877	177.0	52.7			
99.0%	555,779	67.5	35.5	777,770	48.2	29.3			
99.5%	1,029,656	36.4	24.5	1,272,977	29.5	21.2			
99.9%	1,931,488	19.4	15.4	2,165,954	17.3	14.1			
Percent of Trials with Zero Capital Contributions	1,351,466         13.4         13.4         2,163,954         17.5         14.1           II         98.0%         98.0%         97.0%         98.0%								

\* Contributed capital in excess of the \$500 million of initial capital

\*\* Calculated as Original Risk divided by contributed capital plus \$500 million

In the multiple-book analysis, at least 97% of the trials resulted in zero contributed capital under both sets of premium rates. Fewer trials resulted in capital contributions under the multiple book analysis because the mortgage insurance company starts out with \$500 million in initial capital, and the mortgage insurer receives temporal diversification across 15 books of business. If capital contributions are required, the simulation analysis indicates a risk-to-capital ratio of 52.7 to 1 would be adequate to cover unexpected losses at a 97.5% confidence level and a risk-to-capital ratio of approximately 30 to 1 would be adequate to cover unexpected losses at a 99.0% confidence level using the lower premium rate of 70 basis points. The risk-to-capital ratio mentioned in the text includes the \$500 million in initial capital. The 95% confidence level did not require capital contributions.

### APPROACH TO ANALYSIS

### Source of Data

Milliman subscribes to the CoreLogic LoanPerformance Loan Level Servicing Data (CoreLogic Data). The CoreLogic Data contains loan-level underwriting and performance history for prime mortgage loans beginning with performance data in 1998. Note the servicing database is a distinct database from the CoreLogic LoanPerformance Loan Level Securities Database. The securities database includes loans typically classified as "sub-prime" and "alt-a" mortgages that were sold to the public via private-label mortgage-backed securities; the securities database was not used for this analysis. The servicing database includes a majority of prime loans and represents about 80% of the active prime mortgage market, according to CoreLogic.

The data from the servicing database contains underwriting characteristics and loan performance data such as loan status and loan balance from calendar years 1998 through 2012 (the last month of observation for this study is March 2012). Milliman processed the monthly payment records of the CoreLogic Data to obtain the following for each loan:

- the first month the loan appeared in the monthly data;
- the last month the loan appeared in the monthly data;
- the month it became a 90 day delinquency, if any;
- the month it became a Foreclosure, if any;
- the month it became a REO, if any;
- the month its status changed from active to closed; and
- any months its delinquency status changed from a 30, 60, 90, FCL or REO to a status of Current (i.e., all months it cured), if any.

This information was then merged with the origination characteristics (static attributes) dataset and the data were then scrubbed for the following data defects:

• Any loans for which the difference between the origination month and first month the loan appeared in the monthly file was greater than 3 months were removed. This gave us loans for which we know the history from start to finish, or the current state, as we did not wish to speculate on the occurrence of default events that may have occurred between origination and the month at which the Monthly Performance data was first recorded.

The resulting dataset contained fields flagging the event of a 90 day delinquency status and the month it first occurred and similar fields for foreclosure, REO, cure post default and subsequent re-default as well as when the loan terminated.

The purpose of this study is to compare the credit risk profile of Qualified Mortgages to All Loans and to estimate the amount of capital required for mortgage insurers that insure only Qualified Mortgages. Milliman defined the All Loans population and Qualified Mortgage population as follows:

### All Loans

- Loans with an original combined loan-to-value ratio at origination greater than 80%;
- Loans not insured by the Federal Housing Administration;
- Loans with a valid value for FICO score and combined loan-to-value ratio at origination;
- First lien loans;
- Non-construction loans; and
- Loans with a valid origination date.

Milliman defined Qualified Mortgages as a subset of All Loans that have the following characteristics:

## Qualified Mortgage

- Loans with a combined loan-to-value ratio at origination less than or equal to 97%;
- Loans with a FICO score greater than or equal to 620;
- Full documentation loans;
- Fully amortizing loans (i.e. no interest only loans or negative amortization loans);
- Original term of 360 months or less;
- Periodic rate reset cap of 2% or less; and
- Lifetime rate reset cap of 6% or less.

The table below provides the loan and default counts as of March 31, 2012 for each cohort used in this study. The CoreLogic Data does not provide a claim indicator within the dataset, so Milliman developed a definition of default. Default was defined as any terminated loan that reached a 90-day delinquency status or worse and subsequently did not cure from the delinquency. If a loan did cure, Milliman determined whether the loan missed any payment after the cure; if the loan missed payments after the cure the loan was categorized as a default<sup>3</sup>.

TABLE 4									
	LOAN COUNT SUMMARY BY COHORT								
Cohort	Number	Number	Default Rate as of						
Conort	of Loans	of Defaults	March 2012						
All Loans	7,042,718	566,480	8.04%						
Qualified Mortgages	2,699,258	87,209	3.23%						

The data includes 7.0 million loans for the All Loans population and 2.7 million loans for the Qualified Mortgage population. Across all years, Qualified Mortgages represent 38% of the loan population by count. The default rate-to-date on the All Loans population across all years is 8.04%, and the default rate-to-date on the Qualified Mortgage population across all years is 3.23%. The default rate-to-date on Qualified Mortgages is 40% of the default rate-today for All Loans (0.40 = 3.23 / 8.04).

Exhibit 1 provides summaries of the loan count and amount by origination quarter for All Loans and Qualified Mortgages. Exhibit 1 also provides the percent of loans that are Qualified Mortgages for each origination quarter. In origination quarters 2006 Q1 and 2006 Q2 the percent of loans that are Qualified Mortgages fell to a low of 17% by loan amount; after 2008 the percent of loans that were Qualified Mortgages averaged approximately 50% by loan amount.

Milliman appended home price appreciation data to the loan-level database using the Federal Housing Finance Agency (FHFA) home price indices at the core-based statistical area (CBSA) with actual home price indices as of December 31, 2011. Milliman relied on Moody's Economy.com home price index forecasts for home price index values after December 31, 2011.

# Ultimate Default Rate Projections

The CoreLogic Data contains performance information through March 31, 2012; therefore, Milliman projected ultimate default rates by origination quarter for the All Loans cohort and Qualified Mortgage cohort using actuarial methods. The section below provides a description of the methodologies used to estimate the ultimate default rates.

<sup>&</sup>lt;sup>3</sup> This definition of default may result in a higher default rate compared to a mortgage insurance claim indicator, particularly in years with positive home price appreciation.

### A Priori (Econometric) Default Rates

Milliman developed a priori default rates<sup>4</sup> for each loan in the All Loans dataset as of March 31, 2012. These default rates were derived through an examination of the characteristics of each individual loan in the loan-level data. Milliman's a priori default rate model is a composite default rate calculation that combines three significant attributes of mortgage credit risk to estimate the frequency of borrower defaults. The three attributes are:

- 1. Credit worthiness of the borrower;
- 2. Underwriting characteristics of the loan; and
- 3. Macroeconomic influences.

Milliman developed baseline a priori default rates to estimate the default rate of a mortgage loan based upon the credit worthiness of the borrower. The credit worthiness of borrowers is estimated using a combination of two borrower attributes: FICO score and loan-to-value ratio (LTV). Below is a summary of Milliman's view regarding these two borrower characteristics.

- *FICO Score*: Borrowers with low FICO scores are deemed to present a larger credit risk; therefore, borrowers with low FICO scores are assigned a higher default rate; and
- LTV: Mortgages supported by lower collateral investment by the borrower could indicate a lower level
  of assets and/or relative earnings power compared to borrowers with high collateral investment; in
  addition, borrowers with a high LTV loans are subject to greater risk of a future negative equity
  position resulting from declines in home price appreciation or the costs associated with the disposition
  of a delinquent property. Therefore, higher LTV loans are assigned a higher default rate.

Milliman adjusts its baseline a priori default rates to account for the presence of various underwriting characteristics of the loan. Milliman selected risk factor adjustments to the baseline a priori default rates based on a review of historical performance of loans with particular risk factors relative to the performance of loans without the risk factor. The underwriting adjustments are applied using a logistic model.

The equation for the probability of a given response outcome in a logistic model is:

 $P_i = e^{\sum \beta i X_i} / (1 + e^{\sum \beta i X_i})$ , where the Xi are the independent covariates with  $\beta i$  as their associated coefficients.

For purposes of generating the adjustments to the a priori default rates, the underwriting loan characteristics considered were: amortization, interest-only option or negative amortization features, loan purpose, property type, occupancy type, documentation type, loan size, and loan term. Below is a summary of Milliman's view regarding these loan characteristics based on Milliman's review of historical mortgage loan performance:

<sup>&</sup>lt;sup>4</sup> Prior to any experience consideration. A default rate for a given cohort of loans is defined as the sum of original loan balance on defaults for that particular cohort divided by the sum of total original loan balance.

- Amortization: Hybrid mortgages and ARMs are subject to interest rate risk and to potential payment fluctuations with the market. Borrowers with a fixed-rate mortgage are locked into an interest rate for the life of the loan and qualify for their mortgage at known debt-to-income ratios. Hybrid and ARM borrowers may face higher mortgage debt obligations at the rate reset period if the mortgage payment increases without a corresponding proportional increase in borrower income, thereby resulting in an increased probability of default. Accordingly, Milliman has assigned a larger risk factor for ARMs;
- Interest Only/Option ARM/Neg-Am: Borrowers with loans that have payment options such as only
  paying interest (as opposed to paying principal and interest) present a larger credit risk; thus, Milliman
  assigned a larger risk factor to these types of loans;
- Loan Purpose: Cash-out refinance loans can be indicative of financial stress on the borrower; loans
  of this type are assigned a larger risk factor than purchase or term-refinance loans. Industry data
  also indicates rate/term refinance loans are associated with higher default rates compared to
  purchase loans; therefore, Milliman assigns a higher risk factor to rate/term refinance loans compared
  to purchase loans;
- *Property Type:* Loans for 2-4 family homes and manufactured housing have exhibited a greater propensity for default based on industry data and are assigned larger risk factors;
- Occupancy Type: There is an increased likelihood of default with investor-owned loans because, under adverse economic conditions, an individual's loyalty to his/her investment property is significantly lower than their loyalty to their primary residence. The same relationship holds true for second homes, although not to such a severe degree. Therefore, Milliman has assigned larger risk factors to these types of loans;
- Documentation Type: Loans made with reduced documentation are more likely to default than those
  with full documentation provided at closing. Additionally, loans with no documentation (i.e., no
  income or asset verification) have a significantly greater chance of defaulting when compared to a full
  documentation loan. Milliman has assigned a larger risk factor to loans in these categories compared
  to full documentation loans;
- Loan Size: Larger loans have exhibited a greater propensity for default based on industry data. This
  propensity is thought to be due to the more volatile nature of home prices as they get larger and
  further away from the mainstream market. Therefore, loans above the conforming loan limit are
  assigned a larger risk factor; and
- Loan term: Loans with a term less than 30 years are associated with lower historical default rates compared to loans with a term of 30 years; therefore, Milliman assigned a smaller risk factor to these loans. Loans with a term greater than 30 years could be an indication of an affordability product for borrowers; these loans are associated with higher historical default rates compared to loans with a term of 30 years. Milliman assigns a greater risk factor to loans with a term greater than 30 years.

In addition to the underwriting qualities of a mortgage loan, certain economic variables can have a significant impact on mortgage credit risk. Consequently, Milliman has developed an economic- driven default adjustment model, which incorporates specific Home Price Index (HPI) scenarios. The model is calibrated to adjust default rates for a given loan based on location of the collateralizing property and historical and future HPI assumption inputs. For purposes of incorporating HPI, the location of the property is identified at the Core Based Statistical Area (herein referred to as "CBSA", but also commonly referenced as "metropolitan statistical area or "MSA") level. In the event that the loan level data does not indicate that the property is in a CBSA, the property state is used.

To calculate future HPI, Milliman used a settlement pattern that varies by age over twenty future quarters, as generated from industry data. A future weighted-average estimate of home price appreciation/depreciation is then calculated by applying a Milliman selected settlement pattern, based on an analysis of loss emergence in quarters and the corresponding future forecasted HPI for each defined scenario. Milliman then calculated the change in home price from loan origination to this weighted-average home price. The motivation behind using a distribution of resolution dates (as opposed to using a single fixed quarter in the future) was to reflect a probability associated with reaching resolution at different points in time in the future.

After calculating each of the three components described above, Milliman calculated a combined a priori default rate for each loan in the All Loans dataset. These a priori default rates serve as an input for the Bornhuetter-Ferguson projection methods discussed below.

### Ultimate Default Rate Selection

After analyzing the loan-level characteristics and selecting a priori default rates, Milliman relied on judgment and a variety of standard actuarial methodologies to select ultimate default rates by book quarter. Three standard actuarial methodologies were considered in calculating ultimate default rate indications.

The first methodology to be illustrated is the loss development factor ("LDF") method. As a group of loans age, their collective cumulative defaults change. Their collective cumulative default rate similarly changes. This change in value over time is referred to as loss (or default) development. The LDF method is a traditional actuarial approach that relies on historical changes in losses (or defaults) from one evaluation point to another to project the current default rate to an ultimate default rate. Development patterns that have been exhibited by more mature (older) years, along with historical experience, are used to estimate the projected development of the less mature (more recent) years. This method is used with actual cumulative default rates through the first quarter of 2012. Milliman used the historical cohort performance data to develop the unique loss development patterns for All Loans and Qualified Mortgages separately; the loss development pattern for each cohort of loans is similar. As an example of the methodology, the selected loss development factors for the All Loans cohort are shown on Exhibit 2, Page 1. The ultimate default rate derivation for this cohort using the LDF method is shown on Exhibit 2, Pages 2-3. For origination quarter 2007 Q4, the ultimate default rate (49.03%) is equal to the cumulative default rate-to-date (14.25%) multiplied by the cumulative LDF factor (3.441).

In addition to the paid LDF method, Milliman also used the unadjusted and adjusted Bornhuetter-Ferguson ("B-F") method to project ultimate default rates. These methods are commonly used to provide a more stable estimate of ultimate default rates in situations where loss development is volatile, substantial and/or immature. The B-F method calculates an indicated future default rate. The indicated future default rate is calculated directly as the product of the selected a priori ultimate default rate (estimated based on loan characteristics of the loans and the economic risk adjustments discussed above) and a future default percent factor. The future default percent factor is derived from the LDF selection described in the LDF method. The estimated future default rate is added to the cumulative default rate to date to derive an estimated ultimate default rate. Exhibit 2, Pages 4-5 detail the unadjusted B-F ultimate default rate methodology for the All Loans cohort. Using the 2007 Q4 origination quarter as an example, the indicated unadjusted B-F ultimate default rate (20.57%), where the indicated unadjusted future default rate (20.57%) is calculated as the product of the a priori ultimate default rate (29.00%) and the future default percent, as determined by one minus the inverse of the cumulative LDF factor (1-1/3.441).

The adjusted B-F method is identical to the unadjusted B-F method with the exception of an adjustment to the a priori ultimate default rate. The a priori ultimate default rate used in the adjusted B-F method is derived from the selected a priori ultimate default rate, adjusted by an actual-to-expected persistency factor. This persistency adjustment is incorporated to allow for a projection of losses that reflects the variability associated with loan termination rates. The actual persistency is equal to the current loan amount for loans in force for a given origination guarter divided by the original loan amount for loans originated in an origination book guarter. The average historical persistency, also known as the a priori cumulative persistency, is estimated by Milliman using prepayment patterns developed from the Public Securities Association (PSA). The PSA level was selected by examining historical runoff triangles and selecting a long-term average persistency rate for each cohort. The PSA selection for the All Loans cohort is shown on Exhibit 2, Page 6. After applying the adjustment factor to the a priori ultimate default rate, the unadjusted and adjusted B-F methods are identical. The adjusted B-F methodology is demonstrated on Exhibit 2, Pages 7-8 for the All Loans cohort. For origination quarter 2007 Q4, the indicated adjusted B-F ultimate default rate (31.88%) is equal to the cumulative default rate-to-date (14.25%) plus the indicated adjusted future default rate (17.63%), where the indicated adjusted future default rate is calculated as the product of the adjusted a priori ultimate default rate (24.85%) and the future default percent, as determined by one minus the inverse of the cumulative LDF factor (1-1/3.441). The adjusted a priori ultimate default rate (24.85%) is calculated as the unadjusted a priori ultimate default rate (29.00%) times the actual percent in force (48.59%) divided by the expected percent in-force (56.69%).

After considering each of the ultimate default rate indications for each cohort, Milliman made ultimate default rate selections by origination quarter for All Loans; the selected ultimate default rates are summarized on Exhibit 2 Pages 9-10.

Exhibit 3 provides documentation for the development of the selected ultimate default rates for the Qualified Mortgage cohort.

# Default Probability Distribution Comparison

Milliman fit probability distributions to the estimated ultimate default rates. Milliman selected a gamma distribution for both All Loans and Qualified Mortgages. Exhibit 4 Page 1 provides summaries of the distribution for each cohort. The exhibit compares the empirical ultimate default rate distribution against the fitted ultimate default rate distribution for each cohort. The exhibit also shows the calculated percentile of the 2007 ultimate default rate for each cohort. For the time period reviewed, mortgages originated in 2007 typically represent the origination year with the highest level of ultimate default rates.

For All Loans the average ultimate default rate for loans originated in 2007 was 38.2%; this represents the 92.8% percentile under the gamma fit. For Qualified Mortgages the average ultimate default rate for loans originated in 2007 was 18.1%; this represents the 95.6% percentile under the gamma fit. The mean of the All Loans distribution and Qualified Mortgage distributions are 16.7% and 7.3%, respectively. The mean ultimate default rate for Qualified Mortgages is less than half the mean ultimate default rate for All Loans. Exhibit 4 Pages 2 through 5 show the charts of the incremental and cumulative distribution fit for each cohort.

### Premium Rate Comparison

Milliman estimated a mortgage insurance premium rate for each loan in the data. The mortgage insurance premium rates were estimated using publicly available premium rate cards from the mortgage insurance industry from 2007 through 2011. Loans originated prior to 2007 were assigned a premium rate from the 2007 rate cards. Milliman determined the appropriate premium rate for each loan by matching the loan's origination year to the mortgage insurance industry premium rates in effect for that year. For example, if a loan was originated in 2008, the loan would be assigned a premium rate from rate cards published in 2008. If a loan was originated in 2011, the loan would be assigned a premium rate from rate from rate cards published in 2011. The mortgage insurance industry updated premium rates frequently

during this time period to reflect the current risks insured by the mortgage insurance industry. Exhibit 5 Page 1 provides a time series trend of the weighted average premium rate from 1998 through 2011. The exhibit segments the premium rate into the premium rate for Qualified Mortgages (red line), Non-Qualified Mortgages (blue line), and All Loans (black line). Historically, mortgage insurers charged a lower premium rate for Qualified Mortgages compared to Non-Qualified Mortgages. Recent origination quarters show the largest differentiation between premium rates for these two cohorts of loans. For all loans, premium rates have generally increased over the 2007 to 2011 time period.

Exhibit 5 Page 2 provides a chart of the average mortgage insurance coverage percent for Qualified Mortgages (red line), Non-Qualified Mortgages (blue line), and All Loans (black line). Qualified Mortgages originated in 2011 had an average coverage percent of approximately 25%.

### Simulation Methodology

Milliman developed a Monte Carlo simulation model to estimate the capital required to support the potential losses associated with Qualified Mortgages. The cash flow model uses the assumptions discussed below to estimate the financial position of a mortgage insurance company across development years under different ultimate default rate and prepayment speed scenarios. The model takes into consideration specific characteristics of a mortgage insurance company such as contingency reserve requirements, payment timing patterns, and others. The model simulates 10,000 trials of the annual financial position of a mortgage insurance company for operating years 1 through 30.

Milliman assumed an average coverage percent of 25%, and Milliman ran the simulation model assuming annual premium rates of 70 and 75 basis points. As shown on Exhibit 5 Page 1, the average premium rate for Qualified Mortgages originated in 2011 ranged between 70 and 75 basis points. Milliman assumed a payout of simulated losses using the loss development factors derived in the *Ultimate Default Rate Projections* section of this report. Ultimate default rates were simulated in the model using the gamma distribution for Qualified Mortgages discussed in the *Default Probability Distribution Comparison* section of this report.

In the model, premiums are received until coverage is terminated, and premiums are assumed to be earned through the life of the policies. Written premiums by book year decrease for each successive calendar year until all loans are terminated or defaulted for a given book. The simulation model uses PSAs to quantify the tendency of a group of loans to remain in a book of business and persist to pay premium from year to year. Milliman gave consideration to current industry prepayment trends in the data when selecting PSA speeds. Milliman made a PSA selection of 375% PSA based on historical mortgage insurance prepayment speeds and the inherent correlation of prepayment speeds with the selected mean default rate. A 375% PSA expresses a monthly series of annual conditional prepayments rates, beginning at 0.70% per year in the first month and increasing by 0.70% per year in each successive month until month 30, when the series levels out at 20.89% per year until maturity. For the simulation, future prepayment speeds follow a log-normal distribution with means equal to the mean selected PSA for each cohort and a coefficient of variation equal to 40%. Note these PSAs were used solely for projecting future premium levels. Prepayment speeds were assumed to be 70% negatively correlated with the simulated ultimate default rate. Therefore, high simulated default rates typically correspond to low prepayment speeds and vice versa.

Milliman defined contributed capital as the amount of capital contributed in excess of cumulative premium to meet future obligations with consideration for the timing of cash flows. Milliman did not 'reimburse' the mortgage insurer for contributed capital with future profits if future premium exceeded future paid obligations.

Milliman extracted the simulated ultimate default rate, the loss ratio, amount of contributed capital, and calculated the risk-to-capital ratio for each trial. The risk-to-capital ratio is equal to the original risk of a given book divided by the simulated contributed capital. Original risk is equal to the amount of new insurance written times the coverage percent of the insured cohort. This ratio conveys approximately

how much capital is required to meet future obligations at a given level of confidence. For example, if the risk to capital ratio is 25 to 1 at the 95% confidence level, then in order to have met cash requirements in 95% of the simulated trials, the insurer needs to add capital equal to 4% (1 / 25) of the original risk.

## Single-book Simulation

Milliman estimated the capital contributions required to support the potential losses associated with a single-book of Qualified Mortgages on \$10 billion of original loan volume (\$2.5 billion of original risk under 25% mortgage insurance coverage). Capital contributions were calculated in each development year and aggregated for development years 1 through 15 to determine the cumulative amount of contributed capital for each trial. Milliman assumed each book of business was completely run-off after a 15 year period. Milliman defined contributed capital as the amount of capital contributed in excess of cumulative premium to meet future obligations with consideration for the timing of cash flows. Future obligations included paid losses and contingency reserve accumulation. The single book analysis was designed to measure how frequently capital was required in addition to premium to support paid losses for an individual book of business without consideration of the operating aspects of a mortgage insurance company. Consequently, Milliman did not allow for dividends in the model and assumed investment income perfectly offset operating expenses and taxes.

### Multiple-Book Simulation

The single-book analysis does not take into consideration the operating aspects of a mortgage insurance company such as the starting capital position of the company, investment income, expenses, taxes, or diversification. A mortgage insurance company obtains a diversification benefit through writing business across many book years. These aspects are important because mortgage insurers accumulate capital from low ultimate default rate books that may be used to offset capital drain during high ultimate default rate books. Furthermore, investment income, expense, and tax assumptions capture cash flows that impact the capital base. Milliman created a multiple-book simulation model that takes these aspects into consideration.

Milliman estimated the capital contributions required to support the potential losses associated with 15 books of Qualified Mortgages for a newly capitalized mortgage insurer 15 years after the first book of business. Milliman assumed each book of business was completely run-off after a 15 year period. Each book was assumed to have \$10 billion of original loan volume (\$2.5 billion of original risk under 25% mortgage insurance coverage). This assumption is based on a recent review of industry market share and volume trends. The multiple-book model is designed to simulate the number of times a mortgage insurer would require capital contributions if only Qualified Mortgages were insured and how much capital would be contributed in each case. The multi-book simulation did not allow for dividends and includes the following assumptions:

- \$500 million in starting capital;
- 20% Expense Ratio (% of written premium);
- 35% Tax Rate; and
- 3% Investment Yield on Assets.

Milliman assumed an 85% correlation between successive book years for ultimate default rates and prepayment speeds.

These assumptions were selected to represent the starting financial position and expenses for a newly capitalized mortgage insurer and do not represent assumptions for UGC.

Milliman developed the investment yield assumption based on professional judgment and experience. A 3% investment yield may or may not be appropriate for any given mortgage insurer, and Milliman is not able to assess the reasonability of an interest rate of 3% for a mortgage insurer's investment portfolio

without performing a substantial amount of additional work beyond the scope of this report. As such, Milliman expresses no opinion on the appropriateness of the selected interest rate.

Capital contributions were calculated in each development year and aggregated for all development years to determine the cumulative amount of contributed capital for each trial. Milliman defined contributed capital as the amount of capital contributed in excess of cumulative premium and investment income to meet future obligations with consideration for the timing of cash flows. Capital is not contributed in the model until the \$500 million on initial capital is depleted. Future obligations included paid losses, contingency reserve accumulation, taxes, and expenses. Milliman did not allow for dividends in the model.

### Simulation Results

Exhibit 6 provides a summary of the simulation results. Exhibit 6 Page 1 provides the results for the single-book simulation, and Exhibit 6 Page 2 provides the results for the multiple-book simulation.

### Single-book Simulation Results

Exhibit 6 Page 1 lists the simulated risk-to-capital ratio at different percentiles. An  $\alpha$ -percentile is the value at which  $\alpha$ % of the trials resulted in risk-to-capital ratios equal to or greater than the  $\alpha$ -percentile simulated risk-to-capital ratio<sup>5</sup>. For example, the 95th percentile risk-to-capital ratio under the 70 basis point premium rate is 35.1; therefore, 95% of the trials (or 9,500 out of the 10,000 trials) resulted in risk-to-capital ratios at or above 35.1. In other words, for 9,500 trials a mortgage insurance company with an initial risk-to-capital ratio of 35.1 would **not** need capital contributions to cover paid losses.

In the exhibit, the set of columns on the far left shows the simulated ultimate default rates under 75 basis point and 70 basis point premium rates. The ultimate default rate is not influenced by the premium rate, so these two columns are identical. This column provides information on the number of defaults expected at each level of confidence. Milliman assumed a 100% loss severity in the model. The set of columns to the right of the ultimate default rate distributions shows the simulated loss ratio. The loss ratio, equal to paid losses divided by earned premium, provides for a test of premium adequacy. A ratio above 1 indicates ultimate losses were greater than earned premium, and a ratio less than 1 indicates ultimate losses were less than earned premium. The third set of columns shows the dollar amount of contributed capital at each level of confidence. The risk-to-capital ratio is shown in the far right set of columns. The risk-to-capital ratio is equal to the contributed capital divided by the original risk.

The box underneath the simulated percentile tables shows the percent of trials that resulted in a zero capital contribution; in other words, the percent of trials where the premium rate was adequate to cover paid losses. In the single-book analysis, nearly 90% of the trials resulted in zero contributed capital. Therefore, under current premium rates for Qualified Mortgages, 9 out of 10 books of business would not require capital contributions from the mortgage insurer.

# Multiple-book Simulation Results

Exhibit 6 Page 2 summarizes the results of the multiple-book simulation. The multiple-book exhibit adds additional columns for the risk-to-capital ratio. The first column for the risk-to-capital ratio, labeled "Risk to Contributed Capital Ratio", calculates the risk-to-capital ratio as ratio of original risk divided by the amount of required capital in excess of the \$500 million of initial capital for the mortgage insurer. The second column for the risk-to-capital ratio, labeled "Risk to Capital Ratio", calculates the risk to Capital Ratio", calculates the risk-to-capital ratio as ratio of original risk-to-capital ratio, labeled "Risk to Capital Ratio", calculates the risk-to-capital ratio as the ratio of original risk divided by sum of the contributed capital plus the \$500 million in initial capital.

<sup>&</sup>lt;sup>5</sup> The difference between the ultimate default rate percentiles for Qualified Mortgages on Table 1 and the simulated ultimate default rate percentiles on Exhibit 6 Page 1 is the percentiles on Table 1 are from the converged gamma fit while the percentiles from Exhibit 6 Page 1 are developed from 10,000 random simulations.

In the multiple-book simulation, approximately 97% of the trials resulted in zero capital contributions in excess of the \$500 million of initial capital under both the 75 and 70 basis point premium rate assumptions. The reason for the greater number of trials that resulted in zero capital contributions is twofold: first, the mortgage insurer begins the simulation with \$500 million in initial capital and second, the temporal diversification benefit.

The ultimate default rate percentiles in this Exhibit show the average simulated default rate for each of the 15 books of business; the value of the ultimate default rate percentiles are lower than the ultimate default percentiles for the single-book simulation. For example, the 99<sup>th</sup> percentile ultimate default rate for the multiple-book simulation is 19.1%; this compares to a 99<sup>th</sup> percentile ultimate default rate for the single-book simulation of 24.7%. The difference represents the temporal diversification benefit for mortgage insurers. Some books of business for a mortgage insurer will experience severe default rates; however, it is unlikely that all 15 books of business for a mortgage insurance company will result in severe default rates. Therefore, the average ultimate default rate is lower in the tail of the multiple-book simulation compared to the single-book simulation.

The 97.5th percentile risk-to-capital ratio under the 70 basis point premium rate is 52.7 including the \$500 million in initial capital; therefore, 97.5% of the trials (or 9,750 out of the 10,000 trials) resulted in risk-to-capital ratios at or above 52.7. In other words, for 9,750 trials a mortgage insurance company with an initial risk-to-capital ratio of 52.7 would **not** need capital contributions to cover paid losses for multiple-books of Qualified Mortgages. The 95% confidence level did not require capital contributions.

## **QUALIFICATIONS, LIMITATIONS AND DISCLOSURES**

In performing this analysis, we have relied on data and other information available to us through CoreLogic's LoanPerformance databases and publicly available mortgage insurance rate cards. We have not audited or verified this data and information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

The simulated losses discussed in this report are developed using publicly available data of Qualified Mortgages as defined above originated between 1998 and 2011. The ultimate loss rate distributions were not developed to fit any particular mixture of mortgages, notwithstanding the data filters discussed in this report, and may not reflect additional underwriting criteria that may be imposed by a mortgage insurance company. Furthermore, the data used to develop the distributions may not reflect the mix of business written by any given mortgage insurance company. For example, the data used to develop the distributions may have higher or lower average FICO scores compared to the business written by a mortgage insurer. The results presented in this report could differ, perhaps materially, if the mix of business written by a mortgage insurer is different from the mix of business used in this analysis.

Any study of future operating results involves estimates of future contingencies. While our analysis represents our best professional judgment, arrived at after careful analysis of the available information, it is important to note that a significant degree of variation from our projections is not only possible, but is in fact, probable. We have attempted to reflect this variability by providing a range of projected outcomes under various scenarios. However, there is no assurance that the actual ultimate outcomes will fall within the range provided. The sources of this variation are numerous: future national or regional economic conditions, mortgage prepayment speeds, and legislative changes could affect the performance of a mortgage insurer.

A simulation model illustrates the projected impact of actual results varying from projected results due to estimated variability inherent in the insurance process. This variability is referred to as process risk. Our simulation does not reflect the variation of actual results from projections due to parameter risk or specification risk. Parameter risk refers to the risk or uncertainty associated with the selection of the parameters underlying the applicable projection model. Specification risk refers to the risk or uncertainty surrounding the selection of the type of model used for the forecast. We have not attempted to quantify the impact of parameter or specification risk. Additionally, Milliman's analysis is limited to the variability of losses and premiums. Other risks, including but not limited to: operational, asset, liquidity, legal, regulatory and strategic, are outside the scope of our analysis.

The uncertainty associated with our estimates is also magnified by the nature of mortgage insurance. Mortgage insurance results are sensitive to economic factors such as unemployment, housing market conditions, interest rate levels, etc. Past experience may not be indicative of future conditions. A loan underwritten in a given year is generally insured over several calendar years. Therefore, adverse economic conditions in a given calendar year could affect results not only for the current underwriting year, but also for prior underwriting years. Future economic developments that give rise to additional delinquencies and losses will impact ultimate losses. Loss forecasts are significantly more uncertain given the current economic deterioration, elevated default rates and adverse house price trends. The analysis and any conclusions provided in Milliman's deliverables are based on data provided to Milliman by third party sources. Milliman does not warrant the accuracy or completeness of any third party data, and disclaims any and all liability in connection with such third party data. Any errors in the data provided may affect the results of our analysis. Milliman shall not be liable for the results of its analysis to the extent errors are contained in third party data sources.

# Disclosures

Actuarial Standards require us to disclose the following:

### Purpose

The purpose of this analysis is to independently estimate the amount of required capital needed to cover unexpected losses for Qualified Mortgages. Unexpected losses are losses incurred in excess of losses expected to be covered by earned premium. Performance data used in our analysis was evaluated as of March 31, 2012.

## Constraints

There have been no constraints on this project (such as time, availability of data, or access to staff) that materially impacted our ability to provide this analysis to UGC.

### Scope

Our estimates of each cohort's capital requirements with mortgage insurance business under a run-off scenario are characterized as statistically-defined estimates (mean, median, nth percentile) and Monte Carlo simulation distributions.

Our estimates are on an undiscounted with respect to the time value of money.

Our estimates do not include Unallocated Loss Adjustment Expenses (ULAE). ULAE typically includes other claims administration expenses.

### LIMITED DISTRIBUTION OF RESULTS

Milliman's work is prepared solely for the internal business use of United Guaranty Corporation. Except as set forth below, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to legally benefit any third-party recipient of its work product, even if Milliman consents to the release of its work product to a third party. United Guaranty Corporation may distribute or submit for publication the final, Non-draft version of reports that, by mutual written agreement, are intended for general public distribution as well as any summaries, abstracts, or press releases prepared by United Guaranty Corporation subject to Milliman's prior review and approval, which shall not be unreasonably withheld or delayed. United Guaranty Corporation shall not edit, modify, summarize, abstract, or otherwise change the content of any final report and any distribution must include the entire report. Press releases mentioning such reports may be issued by Milliman or United Guaranty Corporation upon mutual agreement of United Guaranty Corporation and Milliman as to their content. Mentions of Milliman work will provide citations that will enable the reader to obtain the full report. Notwithstanding the foregoing, no Milliman report shall be used by United Guaranty Corporation in connection with any offering, prospectus, securities filing, or solicitation of investment. Professional reviewers engaged by United Guaranty Corporation or independent journals to provide peer review of Milliman's work must agree to terms of confidentiality that are reasonable and customary in the industry. Any piece of Milliman draft work to be provided to peer reviewers must receive prior Milliman approval, and Milliman shall not unreasonably withhold such approval. The copyright to all report content shall remain with Milliman unless otherwise agreed.

Any reader of this report must possess a certain level of expertise in areas relevant to this analysis to appreciate the significance of the assumptions and the impact of these assumptions on the illustrated results. The reader should be advised by, among other experts, actuaries or other professionals competent in the area of actuarial projections of the type in this report, so as to properly interpret the projection results.

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If you should have any questions with regard to this analysis or would like to have us consider additional information, please do not hesitate to contact us. We appreciate the opportunity to work with United Guaranty Corporation on this assignment.

Respectfully submitted,

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KAB/JBG/sbs

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# APPENDIX: COMPARISON OF RELATIVE DEFAULT PERFORMANCE FOR PRIVATELY INSURED MORTGAGES TO NON-INSURED MORTGAGES

Mortgage guaranty insurance protects mortgage lenders and investors from potential credit losses stemming from borrower defaults. This credit protection reduces realized credit losses on defaulted mortgages for banks that hold mortgage loans in their portfolio and facilitates the sale and transfer of mortgages in the secondary market. Additionally, the second underwrite provided by the mortgage insurers enhances the quality of the mortgages insured by private mortgage insurers and results in a lower default frequency on insured loans compared to similar loans not insured by private mortgage insurers.

Milliman published a study on the benefit of the second underwrite titled <u>Mortgage Insurance Loan</u> <u>Performance Analysis as of March 31, 2011</u> dated July 28, 2011. The study demonstrated that loans with mortgage insurance defaulted at a lower rate than loans not insured by private mortgage insurers, all else equal. The study was performed on loans originated between 2002 and 2007, and the results of the study were statistically significant. This appendix provides an update to this study using recent empirical default rates from the CoreLogic database for more recent origination years. The CoreLogic Servicing database has fields that identify loans with and without private mortgage insurance.

Milliman analyzed the same data described in this report to evaluate the benefit of the second underwrite provided by mortgage insurers. The data indicates that after 2008, the mortgage insurance industry was more selective in the loans it underwrote and insured, and loans with private mortgage insurance defaulted at a lower rate compared to similar Non-insured mortgage loans.

During the period in which the studied loans were originated, the private mortgage insurance companies delegated approval authority to the Freddie Mac and Fannie Mae ("GSE's") and their automated underwriting systems. It is difficult to separate the impact of the decisions made by Desktop Underwriter (Fannie Mae's automated underwriting system) and Loan Prospector (Freddie Mac's automated underwriting system) from the impact of the private mortgage insurance companies in those loans. Milliman segmented the loans into three cohorts: all loans in the dataset, GSE loans, and Non-GSE loans. The loans used in the appendix exclude loans insured by the Federal Housing Administration.

For this analysis Milliman defined a default as any loan that reached a 90-day delinquency status or worse. Milliman wanted to review the relative performance of privately insured loans compared to Non-insured loans for recent origination years. Using the definition of default described is this report would reduce the number of default incidence in the data for recent origination years because the default definition described in the report is conditional on the loan being terminated.

The table on the next page summarizes the relativity of the cumulative default rate for all loans insured by private mortgage insurers (PMI Loans) to similar loans not insured by private mortgage insurers (Non-PMI Loans) for all loans in the dataset, GSE loans, and Non-GSE loans.

TABLE 5 Default Rate Relativity (PMI to Non-PMI) All Loan Purposes								
Origination Year	All Loans	GSE Loans	Non-GSE Loans					
1998	0.98	1.29	0.30					
1999	0.84	1.05	0.57					
2000	0.57	0.65	0.56					
2001	0.63	0.74	0.54					
2002	0.70	0.89	0.81					
2003	0.95	1.25	0.64					
2004	0.81	1.11	0.88					
2005	0.63	0.86	0.70					
2006	0.60	0.69	0.64					
2007	0.70	0.90	0.73					
2008	0.54	0.74	0.69					
2009	0.16	0.31	0.19					
2010	0.39	0.39	0.51					
2008-2010 Average	0.36	0.48	0.46					
Average of All Years	0.65	0.83	0.60					

The average default rate across all years and all loans is 0.65 for PMI loans compared to Non-PMI Loans. Default rate relativities less than 1 indicate the cumulative default rate on PMI loans is lower than the cumulative default rate on Non-PMI loans. For the 2008 through 2010 origination years the average default rate relativity is 0.36 [0.36 = (0.54 + 0.16 + 0.39) / 3] for all loans. In other words, loans originated between 2008 and 2010 that are insured by private mortgage insurers are defaulting at a rate of approximately 36% of the default rate for similar loans not insured by private mortgage insurers.

The default rate relativity is higher for GSE loans compared to all loans with an average default rate relativity of 0.83. For the 2008 through 2010 origination years the average default rate relativity for GSE loans is 0.48 = (0.74 + 0.31 + 0.39) / 3]. The lower default rate relativity for recent origination years indicates that private mortgage insurers have been more effective in managing credit risk for GSE loans compared to loans not insured by private mortgage insurers.

The average default rate relativity across all years for Non-GSE loans is 0.60. For the 2008 through 2010 origination years the average default rate relativity for Non-GSE loans is 0.46 [0.46 = (0.69 + 0.19 + 0.51) / 3]. For Non-GSE loans private mortgage insurers are providing a second underwrite that reduces the incidence of default.

Appendix Exhibit 1 Pages 1 through 3 provides the details for the figures in the above table. For example Appendix Exhibit 1 Page 1 provides a summary of the loan counts and calculations for the All Loans column. The exhibit shows for both Non-PMI loans and PMI loans the origination year of the loans, the number of loans in the cohort, the number of defaulting loans, the default rate, the average FICO score, and the average CLTV for each cohort. The column on the right of the exhibit calculates the default rate relativity as the ratio of the PMI Loans default rate to the Non-PMI Loans default rate. Appendix Exhibit 1 Pages 2 and 3 provide the summaries of the loan counts and calculations for GSE and Non-GSE loans.

Appendix Exhibit 2 provides charts of the cumulative default rate development for PMI Loans and Non-PMI Loans for origination years 2008 through 2010. The cohorts on the charts are: All Loans, GSE Loans, and Non-GSE Loans. The charts demonstrate PMI Loans are consistently performing better than Non-PMI Loans in terms of default incidence for recent originations.

Milliman reviewed the loans counts in the data for GSE loans without PMI. For recent origination years, the majority of GSE loans without PMI are classified as rate or term refinance loans. Milliman thinks a large portion of these loans may be related to governmental programs such as the Home Affordable Refinance Program ("HARP") and others and may bias the performance difference in PMI loans to Non-PMI loans. Therefore, Milliman re-created the analysis described above using only loans flagged as purchase loans in the data. The table below provides a summary of the results.

TABLE 6         Default Rate Relativity (PMI to Non-PMI)         Purchase Loans Only								
Origination Year	Purchase Loans	GSE Purchase Loans	Non-GSE Purchase Loans					
1998	0.86	1.16	0.32					
1999	0.76	0.98	0.56					
2000	0.54	0.62	0.54					
2001	0.52	0.62	0.50					
2002	0.61	0.84	0.70					
2003	0.92	1.35	0.60					
2004	0.82	1.20	0.89					
2005	0.66	0.93	0.75					
2006	0.63	0.74	0.66					
2007	0.76	0.86	0.77					
2008	0.55	0.83	0.74					
2009	0.10	0.47	0.29					
2010	0.12	0.28	0.29					
2008-2010 Average	0.26	0.52	0.44					
Average of All Years	0.60	0.84	0.59					

The average default rate across all years and all loans for purchase loans is 0.60 for PMI loans compared to Non-PMI Loans. For the 2008 through 2010 origination years the average default rate relativity is 0.26 [0.26 = (0.55 + 0.10 + 0.12) / 3] for all purchase loans. In other words, purchase loans originated between 2008 and 2010 that are insured by private mortgage insurers are defaulting at a rate of approximately 26% of the default rate for similar loans not insured by private mortgage insurers.

The default rate relativity is higher for GSE purchase loans compared to all purchase loans with an average default rate relativity of 0.84. For the 2008 through 2010 origination years the average default rate relativity for GSE purchase loans is 0.52 [0.52 = (0.83 + 0.47 + 0.28) / 3]. The lower default rate relativity for recent origination years again indicates that private mortgage insurers have been more effective in managing credit risk for GSE purchase loans compared to loans not insured by private mortgage insurers.

The average default rate relativity across all years for Non-GSE purchase loans is 0.59. For the 2008 through 2010 origination years the average default rate relativity for Non-GSE purchase loans is 0.44 [0.44 = (0.74 + 0.29 + 0.29) / 3]. For Non-GSE purchase loans private mortgage insurers are providing a second underwrite that reduces the incidence of default.

Appendix Exhibit 3 Pages 1 through 3 provides the details for the figures in the above table for Purchase Loans, GSE Purchase loans, and Non-GSE Purchase loans, respectively.

Appendix Exhibit 4 provides charts of the cumulative default rate development for purchase loans segmented into PMI Loans and Non-PMI Loans for origination years 2008 through 2010. The cohorts on the charts are: Purchase Loans, GSE Purchase Loans, and Non-GSE Purchase Loans. The charts demonstrate purchase loans with PMI are consistently performing better than purchase loans without PMI in terms of default incidence for recent originations.

# United Guaranty Corporation Summary of Qualified Mortgage Filter from the Corelogic Servicing Database by Origination Period

Exhibit 1 Page 1

		Loan Count		Loai	n Amount (\$000's)	
			Percent of Total			Percent of Total
			Number of		Loan Amount for	Number of
		Number of Loans	Loans that are		Loans that are	Loans that are
Origination	Total Number of	that are Qualified	Qualified		Qualified	Qualified
Period	Loans	Mortgages	Mortgages	Total Loan Amount	Mortgages	Mortgages
1998 4	49,611	22,851	46.1%	5,725,397	2,732,034	47.7%
1999 1	42,547	20,242	47.6%	4,962,599	2,464,921	49.7%
1999 2	41,766	18,485	44.3%	4,816,568	2,232,712	46.4%
1999 3	29,921	13,187	44.1%	3,384,091	1,541,201	45.5%
1999 4	20,526	9,359	45.6%	2,258,999	1,049,562	46.5%
2000 1	13,209	5,536	41.9%	1,423,255	594,673	41.8%
2000 2	14,060	6,226	44.3%	1,488,966	659,442	44.3%
2000 3	16,500	8,276	50.2%	1,800,167	922,617	51.3%
2000 4	19,922	10,153	51.0%	2,244,833	1,173,765	52.3%
2001 1	45,921	23,416	51.0%	5,834,443	3,030,121	51.9%
2001 2	65,084	33,856	52.0%	8,438,898	4,511,614	53.5%
2001 3	57,734	28,662	49.6%	7,527,453	3,751,412	49.8%
2001 4	87,637	43,570	49.7%	11,826,282	5,872,753	49.7%
2002 1	76,998	37,835	49.1%	10,395,551	5,108,902	49.1%
2002 2	80,358	37,185	46.3%	10,888,558	5,065,121	46.5%
2002 3	124,631	60,519	48.6%	17,827,570	8,726,207	48.9%
2002 4	172,257	86,357	50.1%	25,563,653	12,831,226	50.2%
2003 1	168,196	85,736	51.0%	25,369,849	12,871,674	50.7%
2003 2	221,225	113,711	51.4%	34,533,311	17,496,587	50.7%
2003 3	216,445	105,323	48.7%	33,991,443	16,080,073	47.3%
2003 4	131,287	53,612	40.8%	20,345,652	7,969,892	39.2%
2004 1	139,650	56,202	40.2%	22,986,818	8,543,585	37.2%
2004 2	161,797	58,452	36.1%	27,135,007	8,951,480	33.0%
2004 3	142,506	44,246	31.0%	24,551,812	6,791,680	27.7%
2004 4	142,820	41,016	28.7%	26,505,813	6,593,991	24.9%

# United Guaranty Corporation Summary of Qualified Mortgage Filter from the Corelogic Servicing Database by Origination Period

Exhibit 1 Page 2

		Loan Count		Loan Amount (\$000's)			
			Percent of Total	al Pero			
			Number of		Loan Amount for	Number of	
		Number of Loans	Loans that are		Loans that are	Loans that are	
Origination	Total Number of	that are Qualified	Qualified		Qualified	Qualified	
Period	Loans	Mortgages	Mortgages	Total Loan Amount	Mortgages	Mortgages	
2005 1	135,002	38,345	28.4%	26,273,959	6,392,548	24.3%	
2005 2	191,910	50,259	26.2%	40,668,737	8,696,218	21.4%	
2005 3	219,159	59,743	27.3%	48,439,563	10,749,097	22.2%	
2005 4	182,415	43,734	24.0%	41,438,093	7,866,798	19.0%	
2006 1	166,643	36,482	21.9%	38,243,128	6,617,219	17.3%	
2006 2	208,784	42,944	20.6%	47,781,799	8,000,315	16.7%	
2006 3	213,740	45,855	21.5%	47,797,681	8,567,663	17.9%	
2006 4	221,985	48,760	22.0%	50,998,310	9,457,489	18.5%	
2007 1	235,067	52,506	22.3%	54,503,199	10,566,419	19.4%	
2007 2	328,919	79,407	24.1%	73,546,025	16,215,588	22.0%	
2007 3	270,302	73,134	27.1%	59,052,588	14,745,176	25.0%	
2007 4	241,225	87,090	36.1%	52,962,735	18,524,466	35.0%	
2008 1	215,990	98,927	45.8%	48,159,892	21,646,510	44.9%	
2008 2	183,927	100,765	54.8%	40,110,502	21,735,600	54.2%	
2008 3	135,285	66,306	49.0%	28,823,982	14,180,982	49.2%	
2008 4	104,383	57,694	55.3%	22,005,413	12,434,001	56.5%	
2009 1	94,543	62,619	66.2%	20,549,779	14,189,257	69.0%	
2009 2	128,748	73,572	57.1%	28,964,725	17,133,840	59.2%	
2009 3	125,941	52,867	42.0%	28,147,816	12,716,120	45.2%	
2009 4	128,809	53,282	41.4%	29,066,803	12,925,881	44.5%	
2010 1	108,373	41,596	38.4%	24,592,015	10,044,831	40.8%	
2010 2	108,889	43,025	39.5%	24,195,057	10,149,633	41.9%	
2010 3	144,347	55,854	38.7%	33,081,277	13,441,125	40.6%	
2010 4	194,636	87,070	44.7%	45,191,533	20,557,354	45.5%	
2011 1	118,853	48,025	40.4%	26,744,387	10,680,775	39.9%	
2011 2	104,753	45,375	43.3%	23,142,935	10,076,550	43.5%	
2011 3	122,813	62,691	51.0%	27,370,748	14,301,147	52.2%	
2011 4	124,669	67,318	54.0%	27,592,861	15,323,035	55.5%	
Total	7,042,718	2,699,258	38.3%	1,401,272,530	505,502,887	36.1%	

\*Annual rate cap of 2% or less, lifetime rate cap of 6% or less

#### United Guaranty Corporation Capital Analysis using Corelogic Servicing Database Loss Development Factors All Loans

	Developmer	nt Quarter																		
Book Year Dollars	<u>1 - 2</u>	2 - 3	3 - 4	4 - 5	<u>5 - 6</u>	6 - 7	<u>7 - 8</u>	8 - 9	<u>9 - 10</u>	<u>10 - 11</u>	<u>11 - 12</u>	<u>12 - 13</u>	<u>13 - 14</u>	<u> 14 - 15</u>	<u> 15 - 16</u>	<u> 16 - 17</u>	<u> 17 - 18</u>	<u> 18 - 19</u>	<u> 19 - 20</u>	<u>20 - 21</u>
Ave	17.03	3.71	2.49	2.07	1.77	1.76	1.55	1.49	1.39	1.33	1.28	1.23	1.19	1.16	1.14	1.12	1.11	1.10	1.09	1.08
Ave x H/L	14.96	3.68	2.49	1.99	1.74	1.69	1.53	1.46	1.37	1.32	1.27	1.22	1.19	1.16	1.14	1.12	1.11	1.10	1.09	1.08
WA	2.74	2.88	2.38	2.00	1.81	1.65	1.49	1.41	1.34	1.28	1.24	1.20	1.17	1.14	1.12	1.11	1.10	1.09	1.09	1.08
Ave '04-'11	17.27	3.72	2.58	2.00	1.74	1.60	1.47	1.40	1.34	1.27	1.23	1.20	1.17	1.15	1.13	1.12	1.11	1.10	1.09	1.08
Ave x H/L '04-'11	14.79	3.70	2.58	1.99	1.74	1.59	1.46	1.39	1.33	1.27	1.23	1.19	1.16	1.14	1.12	1.11	1.10	1.10	1.10	1.09
WA '04-'11	2.60	2.85	2.40	2.02	1.83	1.67	1.50	1.41	1.34	1.29	1.24	1.20	1.18	1.14	1.12	1.11	1.10	1.09	1.09	1.08
Book Year Counts																				
Ave	14.25	3.50	2.37	2.01	1.75	1.69	1.51	1.46	1.38	1.33	1.29	1.23	1.19	1.16	1.14	1.12	1.11	1.10	1.09	1.08
Ave x H/L	12.47	3.43	2.36	1.97	1.73	1.66	1.50	1.44	1.37	1.33	1.28	1.23	1.19	1.16	1.14	1.12	1.11	1.10	1.09	1.08
WA	2.67	2.63	2.23	1.90	1.72	1.59	1.46	1.38	1.33	1.28	1.24	1.20	1.17	1.14	1.12	1.11	1.10	1.09	1.09	1.08
Ave '04-'11	14.65	3.52	2.42	1.93	1.69	1.56	1.44	1.37	1.32	1.26	1.23	1.19	1.16	1.14	1.12	1.11	1.10	1.09	1.09	1.08
Ave x H/L '04-'11	12.54	3.43	2.41	1.92	1.70	1.55	1.43	1.36	1.31	1.26	1.22	1.18	1.15	1.14	1.12	1.11	1.10	1.09	1.09	1.08
WA '04-'11	2.52	2.58	2.24	1.90	1.74	1.60	1.46	1.39	1.33	1.28	1.24	1.20	1.18	1.14	1.12	1.11	1.10	1.09	1.09	1.08
Selection:	14.08	4.47	2.80	2.16	1.84	1.65	1.52	1.43	1.36	1.31	1.26	1.23	1.20	1.18	1.16	1.14	1.13	1.12	1.10	1.09
	Developmer	nt Quarter																		
Book Year Dollars	21 - 22	22 - 23	23 - 24	24 - 25	25 - 26	26 - 27	27 - 28	28 - 29	29 - 30	30 - 31	<u>31 - 32</u>	32 - 33	33 - 34	34 - 35	35 - 36	36 - 37	37 - 38	38 - 39	39 - 40	40 - 41
Ave	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.03	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01
Ave x H/L	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.03	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01
WA	1.07	1.07	1.07	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.02	1.02	1.02	1.02	1.01	1.02
Ave '04-'11	1.08	1.07	1.07	1.06	1.06	1.06	1.05	1.04	1.04	1.04	1.03	1.00								
Ave x H/L '04-'11	1.08	1.08	1.08	1.07	1.07	1.06	1.06	1.05	1.05	1.06										
WA '04-'11	1.08	1.07	1.07	1.07	1.07	1.06	1.06	1.06	1.06	1.06	1.05									
Book Year Counts																				
Ave	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.01	1.02
Ave x H/L	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
WA	1.07	1.07	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.02
Ave '04-'11	1.08	1.07	1.07	1.06	1.06	1.06	1.05	1.04	1.04	1.04	1.03	1.00								
Ave x H/L '04-'11	1.08	1.07	1.07	1.06	1.06	1.06	1.05	1.05	1.05	1.06										
WA '04-'11	1.08	1.07	1.07	1.07	1.07	1.06	1.06	1.05	1.05	1.06	1.05									
Selection:	1.09	1.08	1.07	1.06	1.06	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.02	1.01
	Developmer	nt Quarter																		
Book Year Dollars	<u>41 - 42</u>	42 - 43	<u>43 - 44</u>	44 - 45	45 - 46	46 - 47	<u>47 - 48</u>	<u>48 - 49</u>	<u>49 - 50</u>	<u>50 - 51</u>	<u>51 - 52</u>	<u>52 - 53</u>	<u>53 - 54</u>	<u>54 - 55</u>	<u>55 - 56</u>	<u>56 - 57</u>	<u>57 - 58</u>	<u>58 - 59</u>		
Ave	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00							
Ave x H/L	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01									
WA	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.01	1.01								
Ave '04-'11																				
Ave x H/L '04-'11 W A '04-'11																				
Book Year Counts																				
Ave	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.00							
Ave x H/L	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01									
WA	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.02	1.01								
Ave '04-'11																				
Ave x H/L '04-'11 W A '04-'11																				
Selection:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00		

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database All Loans Paid LDF-Method

	А	В	C = A * B
	Cumulative		Indicated
Book	Default Rate		Ultimate
Year	as of 03/31/2012	LDF	Default Rate
1998 4	4.65%	1.040	4.84%
1999 1	4.89%	1.044	5.11%
1999 2	6.01%	1.049	6.30%
1999 3	7.56%	1.055	7.98%
1999 4	8.29%	1.061	8.80%
2000 1	9.66%	1.068	10.32%
2000 2	11.35%	1.075	12.20%
2000 3	10.37%	1.083	11.24%
2000 4	9.31%	1.093	10.17%
2001 1	5.49%	1.103	6.06%
2001 2	5.04%	1.114	5.62%
2001 3	5.48%	1.127	6.17%
2001 4	4.43%	1.141	5.05%
2002 1	4.71%	1.156	5.44%
2002 2	5.05%	1.173	5.92%
2002 3	4.10%	1.193	4.89%
2002 4	3.63%	1.214	4.41%
2003 1	3.61%	1.238	4.47%
2003 2	3.48%	1.264	4.40%
2003 3	3.92%	1.294	5.07%
2003 4	5.15%	1.327	6.83%
2004 1	5.64%	1.365	7.69%
2004 2	6.42%	1.407	9.03%
2004 3	8.42%	1.455	12.24%
2004 4	10.22%	1.508	15.41%

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database All Loans Paid LDF-Method

	А	В	C = A * B
	Cumulative		Indicated
Book	Default Rate		Ultimate
<u>Year</u>	as of 03/31/2012	<u>LDF</u>	Default Rate
2005 1	12.02%	1.569	18.86%
2005 2	14.66%	1.639	24.04%
2005 3	17.20%	1.719	29.56%
2005 4	20.68%	1.810	37.44%
2006 1	22.10%	1.916	42.35%
2006 2	20.92%	2.039	42.65%
2006 3	20.70%	2.183	45.18%
2006 4	21.07%	2.352	49.56%
2007 1	19.79%	2.553	50.52%
2007 2	17.89%	2.794	49.99%
2007 3	15.82%	3.085	48.79%
2007 4	14.25%	3.441	49.03%
2008 1	9.72%	3.883	37.73%
2008 2	6.04%	4.438	26.79%
2008 3	4.50%	5.148	23.14%
2008 4	3.04%	6.072	18.47%
2009 1	2.26%	7.305	16.53%
2009 2	1.40%	8.991	12.63%
2009 3	1.03%	11.369	11.68%
2009 4	0.67%	14.847	9.89%
2010 1	0.60%	20.167	12.06%
2010 2	0.42%	28.762	11.95%
2010 3	0.26%	43.647	11.21%
2010 4	0.16%	71.858	11.35%
2011 1	0.27%	132.276	35.47%
2011 2	0.14%	286.338	39.07%
2011 3	0.02%	801.215	14.33%
2011 4	0.00%	3583.482	2.08%

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database All Loans Unadjusted BF Method

	A	В	C = A * (1-1/LDF)	D = B + C
	l la a diverta d	Quantulation	المعادما	l la a diverta d
Deels				
BOOK	A Priori Ultimate	Default Rate	Future Rate	BF Indicated
<u>Year</u>	Default Rate	as of 03/31/2012	as of 03/31/2012	Ultimate Default Rate
1998 4	9.97%	4.65%	0.38%	5.03%
1999 1	10.87%	4.89%	0.46%	5.35%
1999 2	12.05%	6.01%	0.57%	6.57%
1999 3	14.17%	7.56%	0.74%	8.30%
1999 4	15.34%	8.29%	0.88%	9.17%
2000 1	16.25%	9.66%	1.03%	10.69%
2000 2	16.91%	11.35%	1.18%	12.53%
2000 3	16.89%	10.37%	1.30%	11.67%
2000 4	15.92%	9.31%	1.35%	10.66%
2001 1	13.23%	5.49%	1.23%	6.73%
2001 2	13.65%	5.04%	1.40%	6.44%
2001 3	13.16%	5.48%	1.48%	6.96%
2001 4	11.91%	4.43%	1.47%	5.89%
2002 1	12.60%	4.71%	1.70%	6.41%
2002 2	13.59%	5.05%	2.01%	7.06%
2002 3	12.00%	4.10%	1.94%	6.04%
2002 4	10.98%	3.63%	1.94%	5.57%
2003 1	10.92%	3.61%	2.10%	5.71%
2003 2	10.78%	3.48%	2.25%	5.74%
2003 3	11.15%	3.92%	2.53%	6.45%
2003 4	13.34%	5.15%	3.29%	8.44%
2004 1	14.97%	5.64%	4.00%	9.64%
2004 2	16.84%	6.42%	4.87%	11.29%
2004 3	19.73%	8.42%	6.17%	14.58%
2004 4	22.99%	10.22%	7.75%	17.97%

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database All Loans Unadjusted BF Method

	А	В	C = A * (1-1/LDF)	D = B + C
	Unadjusted	Cumulative	Indicated	Unadjusted
Book	A Priori Ultimate	Default Rate	Future Rate	BF Indicated
Year	Default Rate	as of 03/31/2012	as of 03/31/2012	Ultimate Default Rate
2005 1	24.74%	12.02%	8.98%	20.99%
2005 2	29.33%	14.66%	11.44%	26.10%
2005 3	30.86%	17.20%	12.90%	30.10%
2005 4	35.21%	20.68%	15.76%	36.44%
2006 1	37.60%	22.10%	17.98%	40.08%
2006 2	38.01%	20.92%	19.37%	40.29%
2006 3	38.79%	20.70%	21.02%	41.72%
2006 4	38.30%	21.07%	22.02%	43.09%
2007 1	40.03%	19.79%	24.35%	44.14%
2007 2	36.37%	17.89%	23.35%	41.25%
2007 3	33.97%	15.82%	22.96%	38.78%
2007 4	29.00%	14.25%	20.57%	34.82%
2008 1	23.51%	9.72%	17.45%	27.17%
2008 2	20.53%	6.04%	15.90%	21.94%
2008 3	21.54%	4.50%	17.36%	21.85%
2008 4	20.41%	3.04%	17.05%	20.09%
2009 1	13.63%	2.26%	11.76%	14.03%
2009 2	13.88%	1.40%	12.34%	13.74%
2009 3	16.46%	1.03%	15.01%	16.04%
2009 4	16.66%	0.67%	15.54%	16.20%
2010 1	17.37%	0.60%	16.51%	17.11%
2010 2	16.62%	0.42%	16.05%	16.46%
2010 3	15.36%	0.26%	15.01%	15.27%
2010 4	13.96%	0.16%	13.77%	13.93%
2011 1	17.01%	0.27%	16.88%	17.15%
2011 2	15.66%	0.14%	15.61%	15.74%
2011 3	12.43%	0.02%	12.41%	12.43%
2011 4	11.19%	0.00%	11.18%	11.18%

United Guaranty Corporation Capital Analysis using Corelogic Servicing Database All Loans Conditional Prepayment Rate

	Development Qu	uarters													
Amount Based	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Average	6.3%	8.0%	10.1%	12.0%	12.6%	13.4%	14.5%	15.3%	15.3%	15.6%	16.3%	15.8%	15.2%	15.5%	15.7%
Average x H/L	5.9%	7.5%	9.7%	11.5%	12.2%	12.9%	14.0%	14.9%	15.0%	15.3%	16.1%	15.5%	14.9%	15.2%	15.5%
Weighted Average	7.5%	8.9%	10.4%	11.7%	12.2%	12.3%	12.7%	13.4%	13.7%	14.4%	15.2%	15.2%	15.9%	16.3%	16.7%
Count Based															
Average	5.9%	7.3%	9.2%	10.9%	11.5%	12.2%	13.3%	14.0%	14.0%	14.4%	15.0%	14.8%	14.4%	14.7%	15.0%
Average x H/L	5.6%	6.9%	8.9%	10.5%	11.1%	11.8%	12.9%	13.7%	13.8%	14.1%	14.8%	14.4%	14.1%	14.5%	14.8%
Weighted Average	7.3%	8.8%	10.4%	11.8%	12.4%	12.6%	12.9%	13.5%	13.6%	14.2%	14.9%	15.0%	15.6%	15.9%	16.3%
Amount Based	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Average	15.1%	14.0%	13.5%	14.0%	13.4%	12.1%	11.4%	11.7%	11.6%	11.3%	11.7%	11.8%	11.7%	10.8%	10.6%
Average x H/L	14.7%	13.6%	13.2%	13.6%	13.0%	11.9%	11.3%	11.6%	11.6%	11.2%	11.4%	11.4%	11.3%	10.6%	10.3%
Weighted Average	17.0%	16.3%	16.1%	17.2%	16.3%	15.2%	14.7%	16.0%	16.0%	15.5%	15.3%	16.1%	16.3%	16.0%	15.6%
Count Based															
Average	14.6%	13.5%	13.1%	13.4%	12.8%	11.7%	11.0%	11.2%	11.0%	10.7%	10.9%	10.9%	10.8%	10.0%	9.7%
Average x H/L	14.2%	13.1%	12.6%	12.8%	12.2%	11.3%	10.8%	11.0%	10.9%	10.4%	10.4%	10.4%	10.3%	9.7%	9.4%
Weighted Average	16.7%	16.0%	15.6%	16.1%	15.4%	14.3%	13.6%	14.5%	14.5%	14.1%	14.0%	14.5%	14.6%	14.4%	13.9%
Amount Based	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Amount Dased	10.9%	10.1%	0.5%	9 70/	0.00/	9 10/	7 70/	7 494	7 0%	9 20/	9 19/	9 10/	9 294	7 99/	7 90/
	10.070	0.7%	0.0%	0.770	0.070	7 99/	7.1%	7.4%	7.3%	0.270	7.99/	7 19/	7.2%	7.0%	7.0%
Weighted Average	15.9%	17.2%	17.1%	15.3%	15.2%	13.7%	11.9%	11.1%	12.7%	12.1%	12.1%	12.1%	11.5%	10.5%	11.1%
Count Based															
Average	9.8%	9.3%	8.6%	7.9%	8.0%	7.5%	7.2%	6.9%	7.5%	7.3%	7.1%	7.6%	7.8%	7.2%	7.1%
Average x H/L	9.4%	8.8%	8.2%	7.6%	7.6%	7.2%	6.9%	6.5%	6.8%	7.0%	6.5%	6.3%	6.4%	6.3%	6.3%
Weighted Average	14.3%	15.4%	15.1%	13.4%	13.4%	12.3%	10.9%	10.3%	11.8%	10.9%	10.9%	11.3%	10.5%	9.6%	10.0%
Amount Based	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Average	7.6%	8 9%	8 1%	8 5%	9.9%	10.7%	5 7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Average x H/I	7.3%	8.8%	8.4%	9.1%	9.8%	10.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Weighted Average	10.2%	12.5%	11.7%	13.2%	15.3%	18.7%	12.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Count Based															
Average	6.8%	8.2%	7.6%	7.7%	9.2%	10.5%	4.9%								
Average x H/L	6.2%	7.7%	7.5%	8.1%	8.4%	9.2%									
Weighted Average	9.0%	11.5%	10.9%	11.9%	14.2%	18.6%	11.2%								
		Dollar Based	Count Based												
		CPR	CPR												
Average of V	Wtd Average 9-36	15.8%	14.8%												
Selected	Long-Term CPR	16%													
Selected	Long-Term PSA	267%													
	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37
St Dev CPR	11%	10%	10%	11%	10%	9%	7%	5%	4%	5%	5%	6%	6%	5%	4%
CV	81%	67%	66%	65%	61%	50%	44%	30%	29%	34%	32%	35%	32%	33%	34%
Average of V	Wtd Average 9-36	47%	46%												
Selected CV	40%														

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database All Loans Adjusted Paid BF Method

	A	В	С	D = B / C	E = A * D	F	$G = E^*(1-1/LDF)$	H = F + G
		Actual	Expected	Actual to				Adjusted
		Percent	Percent	Expected	Adjusted	Cumulative	Indicated Future	BF Indicated
Book	A Priori	In-force	In-force	In-force	Á Priori	Default Rate	Default Rate	Ultimate
Year	Ultimate	as of 03/31/2012	as of 03/31/2012	as of 03/31/2012	Ultimate	as of 03/31/2012	as of 03/31/2012	Default Rate
1998 4	9.97%	13.89%	11.80%	117.65%	11.73%	4.65%	0.45%	5.10%
1999 1	10.87%	12.04%	12.33%	97.69%	10.62%	4.89%	0.45%	5.34%
1999 2	12.05%	12.18%	12.88%	94.55%	11.39%	6.01%	0.53%	6.54%
1999 3	14.17%	11.32%	13.45%	84.17%	11.92%	7.56%	0.62%	8.18%
1999 4	15.34%	13.73%	14.05%	97.73%	15.00%	8.29%	0.86%	9.15%
2000 1	16.25%	14.30%	14.68%	97.43%	15.83%	9.66%	1.00%	10.67%
2000 2	16.91%	17.14%	15.33%	111.79%	18.91%	11.35%	1.32%	12.67%
2000 3	16.89%	14.65%	16.01%	91.47%	15.45%	10.37%	1.19%	11.56%
2000 4	15.92%	13.44%	16.73%	80.35%	12.79%	9.31%	1.08%	10.39%
2001 1	13.23%	11.01%	17.47%	63.01%	8.34%	5.49%	0.78%	6.27%
2001 2	13.65%	9.99%	18.25%	54.71%	7.47%	5.04%	0.77%	5.81%
2001 3	13.16%	11.26%	19.07%	59.04%	7.77%	5.48%	0.87%	6.35%
2001 4	11.91%	13.93%	19.91%	69.93%	8.33%	4.43%	1.03%	5.45%
2002 1	12.60%	12.55%	20.80%	60.34%	7.60%	4.71%	1.03%	5.73%
2002 2	13.59%	13.03%	21.73%	59.97%	8.15%	5.05%	1.20%	6.25%
2002 3	12.00%	15.71%	22.70%	69.22%	8.30%	4.10%	1.34%	5.44%
2002 4	10.98%	18.84%	23.71%	79.48%	8.73%	3.63%	1.54%	5.17%
2003 1	10.92%	23.24%	24.76%	93.86%	10.25%	3.61%	1.97%	5.58%
2003 2	10.78%	29.74%	25.87%	114.98%	12.39%	3.48%	2.59%	6.07%
2003 3	11.15%	32.75%	27.02%	121.20%	13.51%	3.92%	3.07%	6.99%
2003 4	13.34%	28.61%	28.22%	101.36%	13.52%	5.15%	3.34%	8.48%
2004 1	14.97%	34.11%	29.48%	115.71%	17.32%	5.64%	4.63%	10.27%
2004 2	16.84%	34.72%	30.79%	112.74%	18.98%	6.42%	5.49%	11.91%
2004 3	19.73%	34.05%	32.17%	105.85%	20.88%	8.42%	6.53%	14.94%
2004 4	22.99%	40.45%	33.60%	120.39%	27.68%	10.22%	9.33%	19.55%

### United Guaranty Corporation Capital Analysis using Corelogic Servicing Database All Loans Adjusted Paid BF Method

	А	В	С	D = B / C	E = A * D	F	G = E*(1-1/LDF)	H = F + G
		Actual	Expected	Actual to				Adjusted
		Percent	Percent	Expected	Adjusted	Cumulative	Indicated Future	BF Indicated
Book	A Priori	In-force	In-force	In-force	A Priori	Default Rate	Default Rate	Ultimate
Year	<u>Ultimate</u>	as of 03/31/2012	as of 03/31/2012	as of 03/31/2012	<u>Ultimate</u>	as of 03/31/2012	as of 03/31/2012	Default Rate
2005 1	24.74%	42.24%	35.10%	120.34%	29.77%	12.02%	10.80%	22.82%
2005 2	29.33%	44.73%	36.66%	122.02%	35.78%	14.66%	13.95%	28.62%
2005 3	30.86%	45.79%	38.29%	119.57%	36.89%	17.20%	15.43%	32.63%
2005 4	35.21%	43.12%	40.00%	107.81%	37.96%	20.68%	16.99%	37.67%
2006 1	37.60%	43.95%	41.78%	105.18%	39.55%	22.10%	18.91%	41.01%
2006 2	38.01%	43.51%	43.64%	99.69%	37.90%	20.92%	19.31%	40.23%
2006 3	38.79%	42.67%	45.59%	93.61%	36.31%	20.70%	19.68%	40.37%
2006 4	38.30%	46.63%	47.62%	97.92%	37.50%	21.07%	21.56%	42.63%
2007 1	40.03%	51.05%	49.74%	102.63%	41.08%	19.79%	24.99%	44.78%
2007 2	36.37%	50.00%	51.96%	96.24%	35.00%	17.89%	22.48%	40.37%
2007 3	33.97%	47.40%	54.27%	87.35%	29.67%	15.82%	20.06%	35.87%
2007 4	29.00%	48.59%	56.69%	85.71%	24.85%	14.25%	17.63%	31.88%
2008 1	23.51%	52.69%	59.21%	88.98%	20.92%	9.72%	15.53%	25.25%
2008 2	20.53%	49.96%	61.85%	80.78%	16.58%	6.04%	12.85%	18.88%
2008 3	21.54%	40.07%	64.61%	62.01%	13.36%	4.50%	10.76%	15.26%
2008 4	20.41%	49.47%	67.49%	73.30%	14.96%	3.04%	12.50%	15.54%
2009 1	13.63%	73.50%	70.49%	104.26%	14.21%	2.26%	12.26%	14.53%
2009 2	13.88%	81.64%	73.63%	110.87%	15.39%	1.40%	13.68%	15.09%
2009 3	16.46%	81.07%	76.91%	105.41%	17.35%	1.03%	15.82%	16.85%
2009 4	16.66%	84.43%	80.34%	105.09%	17.51%	0.67%	16.33%	16.99%
2010 1	17.37%	86.71%	83.79%	103.48%	17.98%	0.60%	17.09%	17.68%
2010 2	16.62%	87.50%	86.97%	100.61%	16.72%	0.42%	16.14%	16.56%
2010 3	15.36%	92.89%	89.87%	103.36%	15.88%	0.26%	15.52%	15.77%
2010 4	13.96%	95.79%	92.44%	103.62%	14.47%	0.16%	14.27%	14.43%
2011 1	17.01%	95.34%	94.66%	100.72%	17.13%	0.27%	17.00%	17.27%
2011 2	15.66%	95.59%	96.52%	99.04%	15.51%	0.14%	15.46%	15.59%
2011 3	12.43%	98.03%	97.99%	100.04%	12.43%	0.02%	12.42%	12.43%
2011 4	11.19%	99.42%	99.06%	100.36%	11.23%	0.00%	11.22%	11.22%

### United Guaranty Corporation

### Capital Analysis using Corelogic Servicing Database All Loans Ultimate Default Rate Selections Evaluation as of 03/31/2012

		Percent of							
	Original	loans that are			Cum. Default		Indicated Ultimate	Indicated Ultimate	Selected
Book	Loan Amount	Qualified Mortgages	Original Loan	Percent QM	Rate as	LDF Method	Unadjusted BF	Adjusted BF	Ultimate
Year	<u>(\$000s)</u>	(Amount)	<u>Count</u>	(Count)	as of 03/31/2012	Default Rate	Default Rate	Default Rate	Default Rate
1998 4	5,725,397	48%	49,611	46%	4.65%	4.84%	5.03%	5.10%	4.84%
1999 1	4,962,599	50%	42,547	48%	4.89%	5.11%	5.35%	5.34%	5.11%
1999 2	4,816,568	46%	41,766	44%	6.01%	6.30%	6.57%	6.54%	6.30%
1999 3	3,384,091	46%	29,921	44%	7.56%	7.98%	8.30%	8.18%	7.98%
1999 4	2,258,999	46%	20,526	46%	8.29%	8.80%	9.17%	9.15%	8.80%
2000 1	1,423,255	42%	13,209	42%	9.66%	10.32%	10.69%	10.67%	10.32%
2000 2	1,488,966	44%	14,060	44%	11.35%	12.20%	12.53%	12.67%	12.20%
2000 3	1,800,167	51%	16,500	50%	10.37%	11.24%	11.67%	11.56%	11.24%
2000 4	2,244,833	52%	19,922	51%	9.31%	10.17%	10.66%	10.39%	10.17%
2001 1	5,834,443	52%	45,921	51%	5.49%	6.06%	6.73%	6.27%	6.06%
2001 2	8,438,898	53%	65,084	52%	5.04%	5.62%	6.44%	5.81%	5.62%
2001 3	7,527,453	50%	57,734	50%	5.48%	6.17%	6.96%	6.35%	6.17%
2001 4	11,826,282	50%	87,637	50%	4.43%	5.05%	5.89%	5.45%	5.05%
2002 1	10,395,551	49%	76,998	49%	4.71%	5.44%	6.41%	5.73%	5.44%
2002 2	10,888,558	47%	80,358	46%	5.05%	5.92%	7.06%	6.25%	5.92%
2002 3	17,827,570	49%	124,631	49%	4.10%	4.89%	6.04%	5.44%	4.89%
2002 4	25,563,653	50%	172,257	50%	3.63%	4.41%	5.57%	5.17%	4.41%
2003 1	25,369,849	51%	168,196	51%	3.61%	4.47%	5.71%	5.58%	4.47%
2003 2	34,533,311	51%	221,225	51%	3.48%	4.40%	5.74%	6.07%	4.40%
2003 3	33,991,443	47%	216,445	49%	3.92%	5.07%	6.45%	6.99%	5.07%
2003 4	20,345,652	39%	131,287	41%	5.15%	6.83%	8.44%	8.48%	6.83%
2004 1	22,986,818	37%	139,650	40%	5.64%	7.69%	9.64%	10.27%	7.69%
2004 2	27,135,007	33%	161,797	36%	6.42%	9.03%	11.29%	11.91%	9.03%
2004 3	24,551,812	28%	142,506	31%	8.42%	12.24%	14.58%	14.94%	12.24%
2004 4	26,505,813	25%	142,820	29%	10.22%	15.41%	17.97%	19.55%	15.41%

### **United Guaranty Corporation**

### Capital Analysis using Corelogic Servicing Database All Loans Ultimate Default Rate Selections Evaluation as of 03/31/2012

		Percent of							
	Original	loans that are			Cum. Default		Indicated Ultimate	Indicated Ultimate	Selected
Book	Loan Amount	Qualified Mortgages	Original Loan	Percent QM	Rate as	LDF Method	Unadjusted BF	Adjusted BF	Ultimate
Year	<u>(\$000s)</u>	(Amount)	Count	<u>(Count)</u>	as of 03/31/2012	Default Rate	Default Rate	Default Rate	Default Rate
2005 1	26,273,959	24%	135,002	28%	12.02%	18.86%	20.99%	22.82%	22.82%
2005 2	40,668,737	21%	191,910	26%	14.66%	24.04%	26.10%	28.62%	28.62%
2005 3	48,439,563	22%	219,159	27%	17.20%	29.56%	30.10%	32.63%	32.63%
2005 4	41,438,093	19%	182,415	24%	20.68%	37.44%	36.44%	37.67%	37.67%
2006 1	38,243,128	17%	166,643	22%	22.10%	42.35%	40.08%	41.01%	41.01%
2006 2	47,781,799	17%	208,784	21%	20.92%	42.65%	40.29%	40.23%	40.23%
2006 3	47,797,681	18%	213,740	21%	20.70%	45.18%	41.72%	40.37%	40.37%
2006 4	50,998,310	19%	221,985	22%	21.07%	49.56%	43.09%	42.63%	42.63%
2007 1	54,503,199	19%	235,067	22%	19.79%	50.52%	44.14%	44.78%	44.78%
2007 2	73,546,025	22%	328,919	24%	17.89%	49.99%	41.25%	40.37%	40.37%
2007 3	59,052,588	25%	270,302	27%	15.82%	48.79%	38.78%	35.87%	35.87%
2007 4	52,962,735	35%	241,225	36%	14.25%	49.03%	34.82%	31.88%	31.88%
2008 1	48,159,892	45%	215,990	46%	9.72%	37.73%	27.17%	25.25%	25.25%
2008 2	40,110,502	54%	183,927	55%	6.04%	26.79%	21.94%	18.88%	18.88%
2008 3	28,823,982	49%	135,285	49%	4.50%	23.14%	21.85%	15.26%	15.26%
2008 4	22,005,413	57%	104,383	55%	3.04%	18.47%	20.09%	15.54%	15.54%
2009 1	20,549,779	69%	94,543	66%	2.26%	16.53%	14.03%	14.53%	14.53%
2009 2	28,964,725	59%	128,748	57%	1.40%	12.63%	13.74%	15.09%	15.09%
2009 3	28,147,816	45%	125,941	42%	1.03%	11.68%	16.04%	16.85%	16.85%
2009 4	29,066,803	44%	128,809	41%	0.67%	9.89%	16.20%	16.99%	16.99%
2010 1	24,592,015	41%	108,373	38%	0.60%	12.06%	17.11%	17.68%	17.68%
2010 2	24,195,057	42%	108,889	40%	0.42%	11.95%	16.46%	16.56%	16.56%
2010 3	33,081,277	41%	144,347	39%	0.26%	11.21%	15.27%	15.77%	15.77%
2010 4	45,191,533	45%	194,636	45%	0.16%	11.35%	13.93%	14.43%	14.43%
2011 1	26,744,387	40%	118,853	40%	0.27%	35.47%	17.15%	17.27%	17.27%
2011 2	23,142,935	44%	104,753	43%	0.14%	39.07%	15.74%	15.59%	15.59%
2011 3	27,370,748	52%	122,813	51%	0.02%	14.33%	12.43%	12.43%	12.43%
2011 4	27,592,861	56%	124,669	54%	0.00%	2.08%	11.18%	11.22%	11.22%
Total	1,401,272,530	36%	7,042,718	38%	9.67%	25.83%	23.56%	23.29%	22.89%
							Average		16.68%
							Average x H/L		16.37%
							Avg L5 Years		20.61%

Avg L5 Years

#### United Guaranty Corporation Capital Analysis using Corelogic Servicing Database Loss Development Factors QM Loans Only

	Developmen	nt Quarter																		
Book Year Dollars	<u>1 - 2</u>	<u>2 - 3</u>	<u>3 - 4</u>	<u>4 - 5</u>	<u>5 - 6</u>	<u>6 - 7</u>	<u>7 - 8</u>	<u>8 - 9</u>	<u>9 - 10</u>	<u> 10 - 11</u>	<u>11 - 12</u>	<u>12 - 13</u>	<u>13 - 14</u>	<u> 14 - 15</u>	<u> 15 - 16</u>	<u> 16 - 17</u>	<u> 17 - 18</u>	<u> 18 - 19</u>	<u> 19 - 20</u>	<u> 20 - 21</u>
Ave	8.25	3.70	2.51	1.92	1.71	1.72	1.48	1.42	1.40	1.31	1.25	1.23	1.19	1.16	1.15	1.14	1.11	1.10	1.10	1.09
Ave x H/L	6.32	3.46	2.42	1.91	1.69	1.65	1.46	1.41	1.34	1.30	1.25	1.22	1.19	1.16	1.15	1.13	1.11	1.10	1.09	1.09
WA	1.95	2.10	2.06	1.92	1.71	1.55	1.44	1.41	1.36	1.32	1.25	1.20	1.17	1.15	1.13	1.13	1.13	1.11	1.10	1.10
Ave '04-'11	7.77	3.65	2.58	1.88	1.68	1.53	1.41	1.36	1.32	1.28	1.23	1.21	1.18	1.16	1.15	1.14	1.13	1.11	1.11	1.11
Ave x H/L '04-'11	4.67	3.33	2.45	1.87	1.68	1.52	1.40	1.36	1.31	1.27	1.22	1.20	1.17	1.15	1.15	1.14	1.13	1.11	1.11	1.11
WA '04-'11	1.79	1.97	2.06	1.97	1.73	1.59	1.47	1.44	1.38	1.34	1.26	1.21	1.17	1.15	1.14	1.14	1.14	1.12	1.12	1.12
Book Year Counts																				
Ave	5.77	3.20	2.50	1.99	1.71	1.67	1.49	1.44	1.40	1.33	1.28	1.23	1.20	1.16	1.15	1.13	1.12	1.10	1.09	1.09
Ave x H/L	4.95	3.09	2.38	1.94	1.69	1.58	1.47	1.41	1.35	1.31	1.27	1.22	1.19	1.16	1.15	1.13	1.12	1.10	1.09	1.09
WA	1.91	2.03	2.00	1.91	1.69	1.54	1.43	1.39	1.35	1.31	1.25	1.20	1.17	1.15	1.13	1.13	1.12	1.10	1.10	1.09
Ave '04-'11	5.10	3.22	2.54	1.90	1.69	1.53	1.41	1.36	1.32	1.28	1.23	1.21	1.17	1.15	1.15	1.13	1.13	1.11	1.11	1.10
Ave x H/L '04-'11	3.68	3.06	2.37	1.90	1.68	1.51	1.40	1.35	1.31	1.27	1.22	1.20	1.17	1.15	1.15	1.13	1.13	1.11	1.11	1.10
WA '04-'11	1.73	1.87	1.96	1.95	1.72	1.58	1.46	1.42	1.37	1.33	1.26	1.21	1.17	1.15	1.14	1.14	1.14	1.12	1.12	1.12
Selection:	18.74	5.26	3.13	2.35	1.97	1.74	1.59	1.48	1.40	1.34	1.30	1.26	1.23	1.20	1.18	1.16	1.14	1.13	1.12	1.10
	Developmen	nt Quarter																		
Book Year Dollars	21 - 22	22 - 23	23 - 24	24 - 25	25 - 26	26 - 27	27 - 28	28 - 29	29 - 30	30 - 31	31 - 32	32 - 33	33 - 34	34 - 35	35 - 36	36 - 37	37 - 38	38 - 39	39 - 40	40 - 41
Ave	1.08	1.07	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.01	1.01	1.01	1.01	1.01
Ave x H/L	1.07	1.07	1.07	1.06	1.05	1.05	1.05	1.04	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.01	1.01	1.01	1.01	1.01
WA	1.09	1.08	1.08	1.07	1.07	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.03	1.03	1.02	1.02	1.02	1.01	1.01	1.01
Ave '04-'11	1 10	1 09	1 09	1.08	1.09	1.08	1 07	1.07	1.06	1.06	1 04	1 00								
Ave x H/L '04-'11	1 10	1 10	1 10	1.09	1.09	1.09	1.08	1.08	1.00	1.08										
WA '04-'11	1.11	1.10	1.11	1.10	1.10	1.09	1.09	1.09	1.08	1.09	1.09									
Book Year Counts																				
Ave	1.08	1.07	1.06	1.06	1.06	1.05	1.05	1.04	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.01
Ave x H/L	1.08	1.07	1.07	1.06	1.05	1.05	1.05	1.04	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.01
WA	1.08	1.07	1.07	1.06	1.06	1.06	1.05	1.05	1.04	1.04	1.04	1.04	1.03	1.03	1.02	1.02	1.02	1.02	1.01	1.01
Ave '04-'11	1.10	1.09	1.08	1.08	1.08	1.08	1.06	1.06	1.06	1.06	1.04	1.00								
Ave x H/L '04-'11	1.10	1.09	1.09	1.08	1.08	1.08	1.07	1.07	1.07	1.07										
WA '04-'11	1.11	1.10	1.10	1.09	1.09	1.09	1.08	1.08	1.08	1.09	1.08									
Selection:	1.09	1.09	1.08	1.07	1.06	1.06	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.03	1.03	1.02	1.02	1.02	1.02	1.02
	Developmen	nt Quarter																		
Book Year Dollars	41 - 42	<u>42 - 43</u>	43 - 44	44 - 45	45 - 46	46 - 47	47 - 48	48 - 49	<u>49 - 50</u>	<u>50 - 51</u>	<u>51 - 52</u>	<u>52 - 53</u>	<u>53 - 54</u>	<u>54 - 55</u>	<u>55 - 56</u>	<u>56 - 57</u>	<u>57 - 58</u>	<u>58 - 59</u>		
Ave	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00							
Ave x H/L	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.01									
WA	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.02	1.01								
Ave '04-'11																				
Ave x H/L '04-'11																				
WA '04-'11																				
Book Vear Counts																				
	1 01	1 01	1 01	1.01	1.01	1.01	1.01	1 01	1 01	1 02	1 01	1 01	1.00							
	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.01	1.01	1.00							
	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.02	1.01	1 01								
VV A	1.01	1.02	1.01	1.02	1.01	1.01	1.01	1.01	1.01	1.02	1.02	1.01								
A ve 104-111																				
A VE X H/L 104-111																				
VVA U4-11																				
Selection:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00		

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Paid LDF-Method

	А	В	C = A * B
	Cumulative		Indicated
Book	Default Rate		Ultimate
Year	as of 03/31/2012	LDF	Default Rate
1998 4	3.08%	1.038	3.19%
1999 1	3.00%	1.042	3.13%
1999 2	3.76%	1.047	3.94%
1999 3	4.19%	1.053	4.41%
1999 4	5.83%	1.059	6.17%
2000 1	6.51%	1.066	6.94%
2000 2	7.87%	1.073	8.45%
2000 3	6.90%	1.082	7.46%
2000 4	6.46%	1.091	7.05%
2001 1	3.85%	1.102	4.24%
2001 2	3.28%	1.114	3.66%
2001 3	3.69%	1.127	4.15%
2001 4	3.04%	1.142	3.48%
2002 1	3.10%	1.158	3.59%
2002 2	3.03%	1.176	3.56%
2002 3	2.28%	1.197	2.72%
2002 4	2.16%	1.219	2.64%
2003 1	2.16%	1.245	2.69%
2003 2	2.01%	1.274	2.56%
2003 3	2.07%	1.306	2.71%
2003 4	2.65%	1.342	3.55%
2004 1	2.81%	1.383	3.89%
2004 2	2.64%	1.429	3.77%
2004 3	3.34%	1.481	4.94%
2004 4	4.02%	1.541	6.19%

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Paid LDF-Method

	А	В	C = A * B
	Cumulative		Indicated
Book	Default Rate		Ultimate
Year	<u>as of 03/31/2012</u>	LDF	Default Rate
2005 1	4.43%	1.609	7.13%
2005 2	5.09%	1.687	8.58%
2005 3	5.68%	1.776	10.10%
2005 4	6.89%	1.880	12.95%
2006 1	7.91%	2.000	15.81%
2006 2	7.77%	2.141	16.65%
2006 3	7.27%	2.307	16.77%
2006 4	6.97%	2.504	17.45%
2007 1	7.77%	2.740	21.28%
2007 2	7.39%	3.026	22.34%
2007 3	8.09%	3.374	27.28%
2007 4	8.86%	3.806	33.73%
2008 1	5.86%	4.348	25.48%
2008 2	3.76%	5.038	18.96%
2008 3	2.78%	5.935	16.52%
2008 4	1.66%	7.123	11.80%
2009 1	0.89%	8.738	7.82%
2009 2	0.46%	10.993	5.03%
2009 3	0.35%	14.250	4.97%
2009 4	0.19%	19.146	3.55%
2010 1	0.12%	26.871	3.23%
2010 2	0.10%	39.810	3.81%
2010 3	0.05%	63.179	3.21%
2010 4	0.05%	109.748	5.02%
2011 1	0.17%	215.756	37.45%
2011 2	0.09%	507.642	43.99%
2011 3	0.01%	1587.455	16.24%
2011 4	0.00%	8348.026	0.00%

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Unadjusted BF Method

	A	В	C = A * (1-1/LDF)	D = B + C
	Inadiusted	Cumulative	Indicated	Linadiusted
Book	A Priori I Iltimate	Default Rate	Future Rate	BE Indicated
Year	Default Rate	as of 03/31/2012	as of 03/31/2012	Liltimate Default Rate
1 <u>998</u> 4	2.98%	3.08%	0 11%	3 19%
1999 1	3 15%	3.00%	0.13%	3 13%
1999 2	3 69%	3 76%	0.17%	3.93%
1999.3	4 23%	4 19%	0.21%	4 40%
1999 4	4.52%	5.83%	0.25%	6.08%
2000 1	4.59%	6.51%	0.28%	6.80%
2000 2	4.71%	7.87%	0.32%	8.19%
2000 3	5.03%	6.90%	0.38%	7.28%
2000 4	5.23%	6.46%	0.44%	6.90%
2001 1	4.94%	3.85%	0.46%	4.31%
2001 2	5.33%	3.28%	0.54%	3.83%
2001 3	5.33%	3.69%	0.60%	4.29%
2001 4	4.89%	3.04%	0.61%	3.65%
2002 1	5.13%	3.10%	0.70%	3.80%
2002 2	5.54%	3.03%	0.83%	3.86%
2002 3	5.53%	2.28%	0.91%	3.18%
2002 4	5.59%	2.16%	1.01%	3.17%
2003 1	5.88%	2.16%	1.16%	3.32%
2003 2	6.10%	2.01%	1.31%	3.32%
2003 3	6.13%	2.07%	1.44%	3.51%
2003 4	6.95%	2.65%	1.77%	4.42%
2004 1	7.41%	2.81%	2.05%	4.87%
2004 2	7.84%	2.64%	2.35%	4.99%
2004 3	8.94%	3.34%	2.90%	6.24%
2004 4	9.94%	4.02%	3.49%	7.51%

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Unadjusted BF Method

	А	В	C = A * (1-1/LDF)	D = B + C
	Unadjusted	Cumulative	Indicated	Unadjusted
Book	A Priori Ultimate	Default Rate	Future Rate	BF Indicated
Year	Default Rate	as of 03/31/2012	as of 03/31/2012	Ultimate Default Rate
2005 1	10.50%	4.43%	3.97%	8.40%
2005 2	11.20%	5.09%	4.56%	9.65%
2005 3	12.01%	5.68%	5.25%	10.93%
2005 4	13.62%	6.89%	6.38%	13.27%
2006 1	15.18%	7.91%	7.59%	15.49%
2006 2	15.36%	7.77%	8.19%	15.96%
2006 3	15.22%	7.27%	8.62%	15.89%
2006 4	15.56%	6.97%	9.35%	16.31%
2007 1	16.23%	7.77%	10.31%	18.07%
2007 2	15.79%	7.39%	10.57%	17.96%
2007 3	15.72%	8.09%	11.06%	19.15%
2007 4	14.51%	8.86%	10.70%	19.56%
2008 1	12.00%	5.86%	9.24%	15.10%
2008 2	10.75%	3.76%	8.62%	12.38%
2008 3	10.28%	2.78%	8.55%	11.33%
2008 4	9.61%	1.66%	8.26%	9.92%
2009 1	6.97%	0.89%	6.17%	7.07%
2009 2	5.87%	0.46%	5.34%	5.80%
2009 3	5.41%	0.35%	5.03%	5.38%
2009 4	5.10%	0.19%	4.84%	5.02%
2010 1	5.23%	0.12%	5.03%	5.15%
2010 2	4.58%	0.10%	4.47%	4.56%
2010 3	4.97%	0.05%	4.89%	4.94%
2010 4	4.91%	0.05%	4.87%	4.91%
2011 1	4.26%	0.17%	4.25%	4.42%
2011 2	3.73%	0.09%	3.72%	3.81%
2011 3	3.45%	0.01%	3.45%	3.46%
2011 4	3.32%	0.00%	3.32%	3.32%

United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Conditional Prepayment Rate

	Development Qu	arters													
Amount Based	<u>1</u>	<u>2</u>	<u>3</u>	4	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
Average	7.4%	9.1%	11.3%	13.2%	14.1%	14.8%	15.9%	16.6%	16.5%	16.6%	17.0%	16.5%	16.3%	16.8%	17.0%
Average x H/L	7.1%	8.7%	10.9%	12.7%	13.6%	14.4%	15.4%	16.1%	15.9%	16.0%	16.4%	15.8%	15.5%	16.2%	16.6%
Weighted Average	8.5%	10.1%	11.5%	12.8%	14.4%	14.4%	14.6%	15.5%	15.7%	16.0%	15.8%	15.0%	15.1%	16.2%	16.1%
Count Based															
Average	6.6%	8.2%	10.2%	11.9%	12.7%	13.4%	14.4%	15.1%	15.1%	15.3%	15.7%	15.3%	15.2%	15.7%	15.8%
Average x H/L	6.4%	7.8%	9.8%	11.4%	12.2%	13.0%	13.9%	14.6%	14.5%	14.6%	15.1%	14.5%	14.4%	15.1%	15.4%
Weighted Average	8.1%	9.8%	11.3%	12.9%	14.5%	14.5%	14.5%	15.2%	15.1%	15.0%	15.0%	14.4%	14.3%	15.1%	15.0%
Amount Based	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Average	16.1%	15.4%	15.0%	14.7%	14.3%	13.9%	13.1%	13.5%	13.4%	13.0%	13.5%	13.9%	13.9%	12.6%	12.5%
Average x H/L	15.8%	15.1%	14.6%	14.4%	13.8%	13.6%	12.8%	13.2%	13.3%	12.9%	13.4%	13.7%	13.8%	12.5%	12.4%
Weighted Average	15.3%	14.7%	14.0%	13.8%	13.7%	13.2%	13.2%	14.3%	14.7%	14.8%	14.9%	16.0%	17.3%	17.2%	16.9%
Count Based															
Average	15.1%	14.4%	14.0%	13.8%	13.4%	13.0%	12.2%	12.5%	12.3%	11.9%	12.2%	12.6%	12.5%	11.5%	11.3%
Average x H/L	14.9%	14.1%	13.6%	13.5%	13.0%	12.7%	12.0%	12.3%	12.3%	11.8%	12.1%	12.4%	12.4%	11.4%	11.2%
Weighted Average	14.4%	13.8%	13.1%	12.8%	12.7%	12.2%	12.0%	12.7%	13.1%	13.1%	13.3%	14.2%	15.2%	15.1%	14.9%
Amount Based	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Amount Dased	12 7%	12 2%	11 494	10.5%	10.0%	10.0%	0.0%	0.2%	0.5%	10.2%	10 1%	10 1%	11 99/	10.2%	11 2%
	12.770	12.270	11.470	10.3%	10.9%	0.0%	0.0%	0.0%	0.0%	10.2%	0.9%	9.09/	10.0%	0.3%	10.2%
Weighted Average	17.2%	18.4%	18.6%	17.4%	17.2%	15.4%	14.0%	12.4%	14.0%	13.8%	13.9%	14.7%	14.8%	12.7%	14.5%
Count Based															
Average	11.4%	11.0%	10.3%	9.5%	9.8%	9.3%	9.0%	8.6%	8.9%	9.4%	9.1%	9.5%	11.1%	9.8%	10.3%
Average x H/L	11.3%	10.9%	10.2%	9.4%	9.7%	9.1%	8.9%	8.4%	8.3%	9.1%	8.5%	8.0%	9.0%	8.6%	8.9%
Weighted Average	15.3%	16.3%	16.2%	15.0%	15.0%	13.9%	12.5%	11.6%	12.9%	12.5%	12.7%	13.7%	13.6%	12.2%	13.1%
Amount Based	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Average	10.8%	12.8%	11 9%	11 7%	13 3%	13.5%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Average x H/I	10.0%	12.0%	12.2%	13.1%	14.2%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Weighted Average	13.1%	16.0%	15.8%	16.5%	19.4%	22.5%	16.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Coupt Rosed															
Average	0.6%	11 90/	11 20/	10 7%	12 20/	12 6%	7 20/								
Average x H/I	9.0%	11.0%	11.2%	10.7%	12.3%	13.0%	1.2%								
Weighted Average	11.8%	10.7%	14.9%	15.1%	18.2%	23.0%	15.1%								
		Dollar Based	Count Based												
		CPR	CPR												
Average of	Wtd Average 9-36	15.7%	14.2%												
Selected	I Long-Term CPR	16%													
Selected	d Long-Term PSA	267%													
	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37
St Dev CPR	13%	12%	13%	12%	11%	9%	8%	6%	5%	5%	6%	6%	6%	5%	5%
CV	80%	75%	85%	76%	73%	63%	61%	41%	33%	33%	33%	34%	30%	32%	35%
Average of	Wtd Average 9-36	53%	53%												
Selected CV	40%														

# United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Adjusted Paid BF Method

	A	A B C		D = B / C	E = A * D	F	$G = E^*(1-1/LDF)$	H = F + G
		Actual	Expected	Actual to				Adjusted
		Percent	Percent	Expected	Adjusted	Cumulative	Indicated Future	BF Indicated
Book	A Priori	In-force	In-force	In-force	A Priori	Default Rate	Default Rate	Ultimate
Year	Ultimate	as of 03/31/2012	as of 03/31/2012	as of 03/31/2012	<u>Ultimate</u>	as of 03/31/2012	as of 03/31/2012	Default Rate
1998 4	2.98%	13.87%	11.80%	117.53%	3.50%	3.08%	0.13%	3.20%
1999 1	3.15%	10.90%	12.33%	88.41%	2.79%	3.00%	0.11%	3.12%
1999 2	3.69%	10.46%	12.88%	81.21%	3.00%	3.76%	0.14%	3.90%
1999 3	4.23%	8.43%	13.45%	62.67%	2.65%	4.19%	0.13%	4.32%
1999 4	4.52%	9.52%	14.05%	67.76%	3.06%	5.83%	0.17%	6.00%
2000 1	4.59%	10.71%	14.68%	72.96%	3.35%	6.51%	0.21%	6.72%
2000 2	4.71%	10.88%	15.33%	70.99%	3.34%	7.87%	0.23%	8.10%
2000 3	5.03%	9.10%	16.01%	56.84%	2.86%	6.90%	0.22%	7.12%
2000 4	5.23%	9.54%	16.73%	57.01%	2.98%	6.46%	0.25%	6.71%
2001 1	4.94%	9.20%	17.47%	52.66%	2.60%	3.85%	0.24%	4.09%
2001 2	5.33%	7.60%	18.25%	41.62%	2.22%	3.28%	0.23%	3.51%
2001 3	5.33%	8.93%	19.07%	46.82%	2.49%	3.69%	0.28%	3.97%
2001 4	4.89%	12.36%	19.91%	62.05%	3.03%	3.04%	0.38%	3.42%
2002 1	5.13%	11.40%	20.80%	54.82%	2.81%	3.10%	0.38%	3.48%
2002 2	5.54%	11.27%	21.73%	51.86%	2.87%	3.03%	0.43%	3.46%
2002 3	5.53%	13.91%	22.70%	61.27%	3.39%	2.28%	0.56%	2.83%
2002 4	5.59%	17.49%	23.71%	73.78%	4.12%	2.16%	0.74%	2.91%
2003 1	5.88%	21.91%	24.76%	88.48%	5.21%	2.16%	1.02%	3.18%
2003 2	6.10%	29.46%	25.87%	113.89%	6.95%	2.01%	1.49%	3.50%
2003 3	6.13%	34.07%	27.02%	126.11%	7.73%	2.07%	1.81%	3.88%
2003 4	6.95%	29.68%	28.22%	105.17%	7.31%	2.65%	1.86%	4.51%
2004 1	7.41%	34.95%	29.48%	118.54%	8.79%	2.81%	2.43%	5.25%
2004 2	7.84%	34.62%	30.79%	112.43%	8.81%	2.64%	2.65%	5.29%
2004 3	8.94%	34.09%	32.17%	105.97%	9.47%	3.34%	3.08%	6.41%
2004 4	9.94%	44.23%	33.60%	131.63%	13.09%	4.02%	4.59%	8.61%

## United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Adjusted Paid BF Method

	A	В	B C		E = A * D	F	$G = E^*(1-1/LDF)$	H = F + G
		Actual	Expected	Actual to				Adjusted
		Percent	Percent	Expected	Adjusted	Cumulative	Indicated Future	BF Indicated
Book	A Priori	In-force	In-force	In-force	Á Priori	Default Rate	Default Rate	Ultimate
Year	Ultimate	as of 03/31/2012	as of 03/31/2012	as of 03/31/2012	Ultimate	as of 03/31/2012	as of 03/31/2012	Default Rate
2005 1	10.50%	45.87%	35.10%	130.71%	13.72%	4.43%	5.19%	9.62%
2005 2	11.20%	47.31%	36.66%	129.05%	14.45%	5.09%	5.88%	10.97%
2005 3	12.01%	49.79%	38.29%	130.01%	15.61%	5.68%	6.82%	12.51%
2005 4	13.62%	47.47%	40.00%	118.68%	16.17%	6.89%	7.57%	14.46%
2006 1	15.18%	47.27%	41.78%	113.12%	17.17%	7.91%	8.59%	16.49%
2006 2	15.36%	44.62%	43.64%	102.23%	15.70%	7.77%	8.37%	16.14%
2006 3	15.22%	42.22%	45.59%	92.61%	14.10%	7.27%	7.99%	15.25%
2006 4	15.56%	48.77%	47.62%	102.41%	15.93%	6.97%	9.57%	16.54%
2007 1	16.23%	51.08%	49.74%	102.68%	16.67%	7.77%	10.59%	18.35%
2007 2	15.79%	51.11%	51.96%	98.37%	15.53%	7.39%	10.40%	17.78%
2007 3	15.72%	48.47%	54.27%	89.32%	14.04%	8.09%	9.88%	17.97%
2007 4	14.51%	49.29%	56.69%	86.95%	12.62%	8.86%	9.30%	18.16%
2008 1	12.00%	54.89%	59.21%	92.70%	11.12%	5.86%	8.56%	14.43%
2008 2	10.75%	51.99%	61.85%	84.05%	9.04%	3.76%	7.24%	11.01%
2008 3	10.28%	42.04%	64.61%	65.07%	6.69%	2.78%	5.56%	8.35%
2008 4	9.61%	49.82%	67.49%	73.83%	7.10%	1.66%	6.10%	7.76%
2009 1	6.97%	73.43%	70.49%	104.16%	7.26%	0.89%	6.43%	7.33%
2009 2	5.87%	81.06%	73.63%	110.09%	6.47%	0.46%	5.88%	6.34%
2009 3	5.41%	78.19%	76.91%	101.66%	5.50%	0.35%	5.11%	5.46%
2009 4	5.10%	81.12%	80.34%	100.97%	5.15%	0.19%	4.88%	5.07%
2010 1	5.23%	82.36%	83.79%	98.29%	5.14%	0.12%	4.95%	5.07%
2010 2	4.58%	83.23%	86.97%	95.70%	4.39%	0.10%	4.28%	4.37%
2010 3	4.97%	91.06%	89.87%	101.32%	5.03%	0.05%	4.95%	5.00%
2010 4	4.91%	95.03%	92.44%	102.80%	5.05%	0.05%	5.00%	5.05%
2011 1	4.26%	92.87%	94.66%	98.11%	4.18%	0.17%	4.16%	4.34%
2011 2	3.73%	93.38%	96.52%	96.75%	3.61%	0.09%	3.60%	3.69%
2011 3	3.45%	97.67%	97.99%	99.68%	3.44%	0.01%	3.44%	3.45%
2011 4	3.32%	99.54%	99.06%	100.49%	3.34%	0.00%	3.34%	3.34%

### United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Ultimate Default Rate Selections Evaluation as of 03/31/2012

Percent of

	Original	loans that are			Cum. Default		Indicated Ultimate	Indicated Ultimate	Selected
Book	Loan Amount	Qualified Mortgages	Original Loan	Percent QM	Rate as	LDF Method	Unadjusted BF	Adjusted BF	Ultimate
Year	<u>(\$000s)</u>	(Amount)	<u>Count</u>	<u>(Count)</u>	as of 03/31/2012	Default Rate	Default Rate	Default Rate	Default Rate
1998 4	2,732,034	100%	22,851	100%	3.08%	3.19%	3.19%	3.20%	3.19%
1999 1	2,464,921	100%	20,242	100%	3.00%	3.13%	3.13%	3.12%	3.13%
1999 2	2,232,712	100%	18,485	100%	3.76%	3.94%	3.93%	3.90%	3.94%
1999 3	1,541,201	100%	13,187	100%	4.19%	4.41%	4.40%	4.32%	4.41%
1999 4	1,049,562	100%	9,359	100%	5.83%	6.17%	6.08%	6.00%	6.17%
2000 1	594,673	100%	5,536	100%	6.51%	6.94%	6.80%	6.72%	6.94%
2000 2	659,442	100%	6,226	100%	7.87%	8.45%	8.19%	8.10%	8.45%
2000 3	922,617	100%	8,276	100%	6.90%	7.46%	7.28%	7.12%	7.46%
2000 4	1,173,765	100%	10,153	100%	6.46%	7.05%	6.90%	6.71%	7.05%
2001 1	3,030,121	100%	23,416	100%	3.85%	4.24%	4.31%	4.09%	4.24%
2001 2	4,511,614	100%	33,856	100%	3.28%	3.66%	3.83%	3.51%	3.66%
2001 3	3,751,412	100%	28,662	100%	3.69%	4.15%	4.29%	3.97%	4.15%
2001 4	5,872,753	100%	43,570	100%	3.04%	3.48%	3.65%	3.42%	3.48%
2002 1	5,108,902	100%	37,835	100%	3.10%	3.59%	3.80%	3.48%	3.59%
2002 2	5,065,121	100%	37,185	100%	3.03%	3.56%	3.86%	3.46%	3.56%
2002 3	8,726,207	100%	60,519	100%	2.28%	2.72%	3.18%	2.83%	2.72%
2002 4	12,831,226	100%	86,357	100%	2.16%	2.64%	3.17%	2.91%	2.64%
2003 1	12,871,674	100%	85,736	100%	2.16%	2.69%	3.32%	3.18%	2.69%
2003 2	17,496,587	100%	113,711	100%	2.01%	2.56%	3.32%	3.50%	2.56%
2003 3	16,080,073	100%	105,323	100%	2.07%	2.71%	3.51%	3.88%	2.71%
2003 4	7,969,892	100%	53,612	100%	2.65%	3.55%	4.42%	4.51%	3.55%
2004 1	8,543,585	100%	56,202	100%	2.81%	3.89%	4.87%	5.25%	3.89%
2004 2	8,951,480	100%	58,452	100%	2.64%	3.77%	4.99%	5.29%	3.77%
2004 3	6,791,680	100%	44,246	100%	3.34%	4.94%	6.24%	6.41%	4.94%
2004 4	6,593,991	100%	41,016	100%	4.02%	6.19%	7.51%	8.61%	6.19%

8.61%

### United Guaranty Corporation Capital Analysis using Corelogic Servicing Database QM Loans Only Ultimate Default Rate Selections Evaluation as of 03/31/2012

Percent of

	Original	loans that are			Cum. Default		Indicated Ultimate	Indicated Ultimate	Selected
Book	Loan Amount	Qualified Mortgages	Original Loan	Percent QM	Rate as	LDF Method	Unadjusted BF	Adjusted BF	Ultimate
Year	<u>(\$000s)</u>	(Amount)	<u>Count</u>	(Count)	as of 03/31/2012	Default Rate	Default Rate	Default Rate	Default Rate
2005 1	6,392,548	100%	38,345	100%	4.43%	7.13%	8.40%	9.62%	9.62%
2005 2	8,696,218	100%	50,259	100%	5.09%	8.58%	9.65%	10.97%	10.97%
2005 3	10,749,097	100%	59,743	100%	5.68%	10.10%	10.93%	12.51%	12.51%
2005 4	7,866,798	100%	43,734	100%	6.89%	12.95%	13.27%	14.46%	14.46%
2006 1	6,617,219	100%	36,482	100%	7.91%	15.81%	15.49%	16.49%	16.49%
2006 2	8,000,315	100%	42,944	100%	7.77%	16.65%	15.96%	16.14%	16.14%
2006 3	8,567,663	100%	45,855	100%	7.27%	16.77%	15.89%	15.25%	15.25%
2006 4	9,457,489	100%	48,760	100%	6.97%	17.45%	16.31%	16.54%	16.54%
2007 1	10,566,419	100%	52,506	100%	7.77%	21.28%	18.07%	18.35%	18.35%
2007 2	16,215,588	100%	79,407	100%	7.39%	22.34%	17.96%	17.78%	17.78%
2007 3	14,745,176	100%	73,134	100%	8.09%	27.28%	19.15%	17.97%	17.97%
2007 4	18,524,466	100%	87,090	100%	8.86%	33.73%	19.56%	18.16%	18.16%
2008 1	21,646,510	100%	98,927	100%	5.86%	25.48%	15.10%	14.43%	14.43%
2008 2	21,735,600	100%	100,765	100%	3.76%	18.96%	12.38%	11.01%	11.01%
2008 3	14,180,982	100%	66,306	100%	2.78%	16.52%	11.33%	8.35%	8.35%
2008 4	12,434,001	100%	57,694	100%	1.66%	11.80%	9.92%	7.76%	7.76%
2009 1	14,189,257	100%	62,619	100%	0.89%	7.82%	7.07%	7.33%	7.33%
2009 2	17,133,840	100%	73,572	100%	0.46%	5.03%	5.80%	6.34%	6.34%
2009 3	12,716,120	100%	52,867	100%	0.35%	4.97%	5.38%	5.46%	5.46%
2009 4	12,925,881	100%	53,282	100%	0.19%	3.55%	5.02%	5.07%	5.07%
2010 1	10,044,831	100%	41,596	100%	0.12%	3.23%	5.15%	5.07%	5.07%
2010 2	10,149,633	100%	43,025	100%	0.10%	3.81%	4.56%	4.37%	4.37%
2010 3	13,441,125	100%	55,854	100%	0.05%	3.21%	4.94%	5.00%	5.00%
2010 4	20,557,354	100%	87,070	100%	0.05%	5.02%	4.91%	5.05%	5.05%
2011 1	10,680,775	100%	48,025	100%	0.17%	37.45%	4.42%	4.34%	4.34%
2011 2	10,076,550	100%	45,375	100%	0.09%	43.99%	3.81%	3.69%	3.69%
2011 3	14,301,147	100%	62,691	100%	0.01%	16.24%	3.46%	3.45%	3.45%
2011 4	15,323,035	100%	67,318	100%	0.00%	0.00%	3.32%	3.34%	3.34%
Total	505,502,887	100%	2,699,258	100%	3.22%	11.77%	8.47%	8.30%	8.10%
							Average		7.42%
							Average x H/L		7.30%

Avg L5 Years

# **United Guaranty Corporation**

# Capital Analysis using Corelogic Servicing Database Ultimate Default Rate Distribution by for All Loans and QM Loans Corelogic Servicing Data 1998-2012

Confidence	All Lo	ans	QM Loans Only			
Level	Empirical	Gamma Fit	Empirical	Gamma Fit		
10%	5.0%	3.5%	3.1%	1.9%		
20%	5.9%	5.9%	3.6%	2.9%		
30%	7.7%	8.2%	3.8%	3.9%		
40%	11.2%	10.7%	4.4%	5.0%		
50%	14.4%	13.4%	5.1%	6.1%		
60%	15.5%	16.5%	6.3%	7.3%		
70%	17.3%	20.4%	8.3%	8.9%		
80%	28.6%	25.6%	12.5%	11.0%		
90%	40.2%	34.2%	16.5%	14.3%		
95%	41.0%	42.5%	18.0%	17.5%		
99%	44.8%	61.2%	18.4%	24.6%		
Default Rate or Distribution Mean	16.7%	16.7%	7.4%	7.3%		
tandard Deviation	12.2%	13.2%	5.0%	5.3%		

18.1%

96.2%

95.6%

38.2%

88.7%

92.8%

Average Ultimate Default Rate or Distribution Mean
Standard Deviation
2007 Ultimate Default Rate
2007 Ultimate Default Rate Percentile







Exhibit 4







# **United Guaranty Corporation**

Capital Analysis using Corelogic Servicing Database

Risk to Capital Ratio Comparison: Qualified Mortgages

No Required Capital Over Contingency Reserve, No Expenses, No Investment Income, No Taxes

# Single Book Analysis

# (\$000's)

	Ultimate D	efault Rate	Loss	Ratio	Contribute	ed Capital	Risk to Capital Ratio		
Premium Rate	0.75%	0.70%	0.75%	0.70%	0.75%	0.70%	0.75%	0.70%	
Coverage Percent	25%	25.0%	25%	25.0%	25%	25.0%	25%	25.0%	
Original NIW	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	
Original Risk	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	
Confidence Level									
10%	1.9%	1.9%	17.6%	18.8%	0	0	NA	NA	
20%	3.0%	3.0%	25.6%	27.5%	0	0	NA	NA	
30%	4.0%	4.0%	32.5%	34.8%	0	0	NA	NA	
40%	5.0%	5.0%	39.2%	42.0%	0	0	NA	NA	
50%	6.1%	6.1%	46.3%	49.6%	0	0	NA	NA	
60%	7.4%	7.4%	54.1%	57.9%	0	0	NA	NA	
70%	9.0%	9.0%	63.4%	67.8%	0	0	NA	NA	
80%	11.1%	11.1%	75.6%	80.8%	0	0	NA	NA	
90%	14.4%	14.4%	95.0%	101.6%	0	5,067	NA	493.4	
95%	17.5%	17.5%	113.3%	121.2%	47,263	71,236	52.9	35.1	
97.5%	20.9%	20.9%	131.5%	140.8%	114,669	138,738	21.8	18.0	
99.0%	24.7%	24.7%	152.2%	162.7%	200,877	223,519	12.4	11.2	
99.5%	27.4%	27.4%	170.6%	182.5%	267,074	292,444	9.4	8.5	
99.9%	34.9%	34.9%	209.5%	224.1%	435,668	464,215	5.7	5.4	
Average	7.3%	7.3%	52.4%	56.1%	7,943	10,197	314.7	245.2	
Percent of Trials Resulti	ng in Zero Capital	Contribution			92%	89%	92%	89%	

### **United Guaranty Corporation**

# Capital Analysis using Corelogic Servicing Database Risk to Capital Ratio Comparison: Qualified Mortgages No Required Capital Over Contingency Reserve, 20% Expense Ratio, 3% Investment Yield, 35% Tax Rate Multi Book Analysis

(\$000's)

	Ultimate De	fault Rate	Loss Ratio Contri		Contribute	ed Capital	Risk to Contribute	ed Capital Ratio*	Risk to Capital Ratio**		
Premium Rate	0.75%	0.70%	0.75%	0.70%	0.75%	0.70%	0.75%	0.70%	0.75%	0.70%	
Coverage Percent	25%	25.0%	25%	25.0%	25%	25.0%	25%	25.0%	25%	25.0%	
Total NIW for All Books							150,000,000	150,000,000	150,000,000	150,000,000	
Original Risk for All Book	S						37,500,000	37,500,000	37,500,000	37,500,000	
Confidence Level											
10%	3.1%	3.1%	20.8%	22.3%	0	0	NA	NA	-	-	
20%	4.1%	4.1%	26.9%	28.8%	0	0	NA	NA	-	-	
30%	4.9%	4.9%	32.3%	34.5%	0	0	NA	NA	-	-	
40%	5.8%	5.8%	37.3%	40.0%	0	0	NA	NA	-	-	
50%	6.6%	6.6%	42.1%	45.1%	0	0	NA	NA	-	-	
60%	7.6%	7.6%	47.4%	50.7%	0	0	NA	NA	-	-	
70%	8.7%	8.7%	53.6%	57.4%	0	0	NA	NA	-	-	
80%	10.1%	10.1%	61.8%	66.2%	0	0	NA	NA	-	-	
90%	12.4%	12.4%	73.7%	78.9%	0	0	NA	NA	-	-	
95%	14.5%	14.5%	85.4%	91.5%	0	0	NA	NA	-	-	
97.5%	16.6%	16.6%	96.4%	103.2%	0	211,877	NA	177.0	-	52.7	
99.0%	19.1%	19.1%	109.1%	116.9%	555,779	777,770	67.5	48.2	35.5	29.3	
99.5%	20.8%	20.8%	119.7%	128.2%	1,029,656	1,272,977	36.4	29.5	24.5	21.2	
99.9%	25.3%	25.3%	138.8%	148.6%	1,931,488	2,165,954	19.4	17.3	15.4	14.1	
Average	7.3%	7.3%	45.3%	48.6%	14,605	21,383	2,567.6	1,753.7	72.9	71.9	
Percent of Trials Resulting in Zero Capital Contribution		n		98%	97%	98%	97%	98%	97%		

\* Contributed capital in excess of the \$500 million of initial capital

\*\* Calculated as Original Risk divided by contributed capital plus \$500 million

# United Guaranty Corporation Comparison of Empirical Cumulative Default Rates Corelogic Servicing Database All Loans Data as of March 2012

		Non-F	PMI Loans			PMI Loans							
Origination Vear	Loan Count	90-Day or Worse Default	Default	Average	Average	Loan Count	90-Day or Worse Default	Default Pate	Average	Average	Default Rate Relativity (PMI / Non PMI)		
	Loan Count	count	Kale	TICO	GLVI	Loan Count	Count	Kale	nco	CLVI	NOII-FIVII)		
1998	40,065	3,623	9.0%	693	93	9,546	843	8.8%	697	91	0.98		
1999	102,156	12,516	12.3%	686	93	32,604	3,356	10.3%	694	92	0.84		
2000	38,986	8,150	20.9%	680	94	24,705	2,927	11.8%	694	93	0.57		
2001	150,014	16,020	10.7%	697	92	106,362	7,130	6.7%	703	91	0.63		
2002	265,973	24,943	9.4%	702	92	188,271	12,409	6.6%	703	91	0.70		
2003	455,758	41,407	9.1%	708	91	281,395	24,197	8.6%	705	91	0.95		
2004	358,630	57,624	16.1%	710	93	228,143	29,851	13.1%	698	92	0.81		
2005	481,150	146,742	30.5%	714	96	247,336	47,669	19.3%	699	93	0.63		
2006	517,432	208,399	40.3%	711	96	293,720	71,192	24.2%	695	93	0.60		
2007	573,239	209,986	36.6%	708	97	502,274	128,684	25.6%	695	95	0.70		
2008	337,577	77,024	22.8%	697	96	302,008	37,145	12.3%	728	92	0.54		
2009	343,862	27,740	8.1%	729	93	134,179	1,732	1.3%	756	90	0.16		
2010	444,433	10,797	2.4%	736	94	111,812	1,052	0.9%	754	92	0.39		
	Delethetter										0.45		
Average Default Rate	e Relativity		10.10			o / oo c==	0 / 0 0C -		-		0.65		
Iotal for all Years	4,440,365	846,543	19.1%	715	95	2,602,353	368,920	14.2%	713	92	0.74		

\*Average FICO score weighted by original loan balance

# United Guaranty Corporation Comparison of Empirical Cumulative Default Rates Corelogic Servicing Database GSE Loans Data as of March 2012

		Non	-PMI Loans								
		90-Day or Worse					90-Day or Worse				Default Rate
		Default	Default	Average	Average		Default	Default	Average	Average	Relativity (PMI /
Origination Year	Loan Count	Count	Rate	FICO*	CLVT**	Loan Count	Count	Rate	FICO*	CLVT**	Non-PMI)
1998	37,558	2,495	6.6%	696	92	9,040	774	8.6%	697	91	1.29
1999	94,212	8,525	9.0%	689	93	31,281	2,980	9.5%	695	92	1.05
2000	35,123	5,967	17.0%	685	94	23,640	2,591	11.0%	694	93	0.65
2001	138,638	11,309	8.2%	700	91	102,205	6,193	6.1%	703	91	0.74
2002	239,898	15,830	6.6%	706	91	182,254	10,705	5. <b>9</b> %	703	91	0.89
2003	393,044	23,091	5. <b>9</b> %	710	91	250,206	18,332	7.3%	705	91	1.25
2004	249,683	24,106	9.7%	712	93	195,616	21,012	10.7%	697	93	1.11
2005	244,809	46,546	19.0%	718	96	192,350	31,370	16.3%	699	93	0.86
2006	235,990	75,605	32.0%	716	98	217,416	48,001	22.1%	693	94	0.69
2007	324,737	101,428	31.2%	718	98	429,097	105,281	24.5%	694	95	0.79
2008	133,650	20,963	15.7%	735	95	274,795	31,998	11.6%	728	92	0.74
2009	192,379	7,852	4.1%	748	92	130,296	1,637	1.3%	756	90	0.31
2010	249,928	5,058	2.0%	748	93	88,155	695	0.8%	754	92	0.39
Average Default Rat	e Relativity										0.83
Total for all Years	2,887,632	350,178	12.1%	725	94	2,263,123	281,808	12.5%	714	93	1.03

\*Average FICO score weighted by original loan balance

# United Guaranty Corporation Comparison of Empirical Cumulative Default Rates Corelogic Servicing Database Non-GSE Loans Data as of March 2012

		Non	-PMI Loans								
		90-Day or Worse					90-Day or Worse				Default Rate
		Default	Default	Average	Average		Default	Default	Average	Average	Relativity (PMI /
Origination Year	Loan Count	Count	Rate	FICO*	CLVT**	Loan Count	Count	Rate	FICO*	CLVT**	Non-PMI)
1998	2,507	1,128	45.0%	640	97	506	69	13.6%	697	90	0.30
1999	7,944	3,991	50.2%	629	98	1,323	376	28.4%	679	92	0.57
2000	3,863	2,183	56.5%	624	99	1,065	336	31.5%	694	94	0.56
2001	11,376	4,711	41.4%	649	97	4,157	937	22.5%	698	92	0.54
2002	26,075	9,113	34.9%	667	96	6,017	1,704	28.3%	702	92	0.81
2003	62,714	18,316	29.2%	698	93	31,189	5,865	18.8%	709	91	0.64
2004	108,947	33,518	30.8%	707	94	32,527	8,839	27.2%	704	92	0.88
2005	236,341	100,196	42.4%	711	95	54,986	16,299	29.6%	702	91	0.70
2006	281,442	132,794	47.2%	707	95	76,304	23,191	30.4%	700	92	0.64
2007	248,502	108,558	43.7%	697	96	73,177	23,403	32.0%	701	93	0.73
2008	203,927	56,061	27.5%	668	97	27,213	5,147	18.9%	728	91	0.69
2009	151,483	19,888	13.1%	695	96	3,883	95	2.4%	758	89	0.19
2010	194,505	5,739	3.0%	719	96	23,657	357	1.5%	752	92	0.51
Average Default Rat	e Relativity										0.60
Total for all Years	1,552,733	496,365	32.0%	701	96	339,230	87,112	25.7%	710	92	0.80

\*Average FICO score weighted by original loan balance







# United Guaranty Corporation Comparison of Empirical Cumulative Default Rates Corelogic Servicing Database Purchase Loans Data as of March 2012

	Non-PMI Loans										
Origination Year	Loan Count	90-Day or Worse Default Count	Default Rate	Average FICO*	Average CLVT**	Loan Count	90-Day or Worse Default Count	Default Rate	Average FICO*	Average CLVT**	Default Rate Relativity (PMI / Non-PMI)
1998	26,740	2,750	10.3%	694	94	6,928	616	8.9%	697	93	0.86
1999	80,693	10,525	13.0%	686	95	27,197	2,701	9.9%	696	93	0.76
2000	35,156	7,342	20.9%	681	95	22,803	2,552	11.2%	695	93	0.54
2001	95,677	11,625	12.2%	698	93	72,671	4,579	6.3%	705	93	0.52
2002	154,813	16,856	10.9%	702	93	112,963	7,563	6.7%	704	93	0.61
2003	221,937	22,924	10.3%	710	94	150,952	14,296	9.5%	706	94	0.92
2004	244,152	40,169	16.5%	714	94	160,705	21,663	13.5%	700	94	0.82
2005	343,077	102,253	29.8%	719	96	175,253	34,554	19.7%	703	94	0.66
2006	366,650	136,849	37.3%	717	97	215,614	50,923	23.6%	697	95	0.63
2007	381,404	125,169	32.8%	715	97	363,057	90,602	25.0%	697	96	0.76
2008	209,965	42,199	20.1%	704	96	208,532	23,052	11.1%	730	93	0.55
2009	116,187	9,981	8.6%	709	96	76,575	662	0.9%	758	90	0.10
2010	113,359	3,420	3.0%	713	97	54,213	202	0.4%	761	91	0.12
Average Default Rate	e Relativity										0.60
Total for all Years	2,427,636	532,186	21.9%	713	96	1,720,707	254,295	14.8%	714	94	0.67

\*Average FICO score weighted by original loan balance

# United Guaranty Corporation Comparison of Empirical Cumulative Default Rates Corelogic Servicing Database GSE Purchase Loans Data as of March 2012

		PMI Loans									
Origination Year		90-Day or Worse Default Count	Default Rate	Average FICO*	Average CLVT**		90-Day or Worse Default Count	Default Rate	Average FICO*	Average CLVT**	Default Rate Relativity (PMI / Non-PMI)
	Loan Count					Loan Count					
1999	73,602	6,934	9.4%	691	94	26,137	2,401	9.2%	696	93	0.98
2000	31,456	5,258	16.7%	686	94	21,875	2,271	10.4%	695	93	0.62
2001	87,684	8,005	9.1%	702	93	70,108	3,993	5.7%	705	93	0.62
2002	135,907	9,794	7.2%	707	93	109,496	6,656	6.1%	704	93	0.84
2003	185,425	11,208	6.0%	712	93	133,230	10,901	8.2%	706	94	1.35
2004	159,572	14,836	9.3%	716	94	136,864	15,278	11.2%	699	94	1.20
2005	168,399	30,362	18.0%	724	96	138,698	23,240	16.8%	702	95	0.93
2006	166,795	49,555	29.7%	723	98	164,736	36,162	22.0%	694	96	0.74
2007	218,505	61,018	27.9%	725	98	313,335	75,484	24.1%	696	97	0.86
2008	83,530	10,337	12.4%	739	94	189,802	19,542	10.3%	731	93	0.83
2009	18,404	325	1.8%	759	91	75,320	626	0.8%	758	90	0.47
2010	11,136	86	0.8%	761	92	42,091	88	0.2%	761	90	0.27
Average Default Rat	te Relativity										0.84
Total for all Years	1,394,149	209,553	15.0%	720	95	1,499,480	197,239	13.2%	714	94	0.88

\*Average FICO score weighted by original loan balance

# United Guaranty Corporation Comparison of Empirical Cumulative Default Rates Corelogic Servicing Database Non-GSE Purchase Loans Data as of March 2012

		90-Day or Worse					90-Day or Worse				Default Rate
		Default	Default	Average	Average		Default	Default	Average	Average	Relativity (PMI /
Origination Year	Loan Count	Count	Rate	FICO*	CLVT**	Loan Count	Count	Rate	FICO*	CLVT**	Non-PMI)
1998	2,053	927	45.2%	639	98	337	49	14.5%	698	92	0.32
1999	7,091	3,591	50.6%	628	98	1,060	300	28.3%	680	93	0.56
2000	3,700	2,084	56.3%	625	100	928	281	30.3%	696	94	0.54
2001	7,993	3,620	45.3%	640	98	2,563	586	22.9%	701	94	0.50
2002	18,906	7,062	37.4%	658	97	3,467	907	26.2%	705	94	0.70
2003	36,512	11,716	32.1%	699	95	17,722	3,395	19.2%	712	93	0.60
2004	84,580	25,333	30.0%	711	94	23,841	6,385	26.8%	708	93	0.89
2005	174,678	71,891	41.2%	716	95	36,555	11,314	31.0%	707	93	0.75
2006	199,855	87,294	43.7%	713	96	50,878	14,761	29.0%	704	94	0.66
2007	162,899	64,151	39.4%	704	97	49,722	15,118	30.4%	703	94	0.77
2008	126,435	31,862	25.2%	679	98	18,730	3,510	18.7%	730	92	0.74
2009	97,783	9,656	9.9%	695	97	1,255	36	2.9%	755	91	0.29
2010	102,223	3,334	3.3%	706	98	12,122	114	0.9%	758	91	0.29
Average Default Rat	e Relativity										0.59
Total for all Years	1,033,487	322,633	31.2%	705	96	221,227	57,056	25.8%	712	93	0.83

\*Average FICO score weighted by original loan balance





