STATE OF SOUTH DAKOTA	)	**IN CIRCUIT COURT**
	) ss:	
COUNTY OF HUGHES	)	**SIXTH JUDICIAL CIRCUIT**

STATE OF SOUTH DAKOTA, EX REL. LARRY DEITER, DIRECTOR OF INSURANCE OF THE STATE OF SOUTH DAKOTA,	)	32CIV18-125
Petitioner,	)	**REPORT REGARDING UNEARNED PREMIUM FOR USE IN CALCULATION OF CLASS 4 UNEARNED PREMIUM CLAIMS**
v.	)	
RELIAMAX SURETY COMPANY,	)	
Respondent.	)	

COMES NOW Larry Deiter, Liquidator ("the Liquidator") of ReliaMax Surety Company ("ReliaMax"), and hereby files with the Court the final report of assessments, formulae, and calculation methodology developed by a contractor for the calculation of unearned premium in this liquidation as follows:

1. This informational filing follows this Court's approval of the Liquidator's Application No. 2 to employ a firm to establish the assessments, formulae, and calculation methodology for unearned premium in this estate pursuant to the Liquidator's duties under SDCL Ch. 58-29B;

2. Pursuant to the Court's previous approval of the Liquidator's Application No. 2, Deloitte Consulting LLP ("Deloitte") was retained as an independent actuarial firm to assess and present the needed formulae and final calculation methodology to allow the Liquidator to adjudicate unearned premium claims in a reasonable, consistent, and defensible manner for affected Class 4 claimants;

3. Deloitte has produced a final report, titled "ReliaMax Surety Unearned Premium Reserve Valuation Approach" (the "Deloitte Report");

4. In its unredacted form, the Deloitte Report contains proprietary information which is a valuable asset of the liquidation estate and its creditors as potential beneficiaries. In order to maintain trade secrets, to maximize the value of these assets for the benefit of all creditors, and to preserve the undisclosed and proprietary information contained within the Deloitte Report, the Liquidator is submitting a redacted form of the report in Exhibit A.

5. The Liquidator has determined that the assessments, formulae, and final calculation methodology developed by Deloitte and summarized in Exhibit A are necessary for the liquidation to proceed in adjudicating Class 4 unearned premium claims. The Liquidator intends to use the Deloitte Report to adjudicate Class 4 unearned premium claims;

6. Attached hereto as Exhibit B is an affidavit of Michael FitzGibbons, Special Deputy Liquidator of ReliaMax, which is filed in support of this filing;

Respectfully submitted this 12th day of July, 2019.

Frank A. Marnell
Attorney for Liquidator of ReliaMax Surety
124 S. Euclid Avenue, 2nd Floor
Pierre, SD 57501
(605) 773-3563

Mallori M. E. Barnett
Attorney for Liquidator of ReliaMax Surety
124 S. Euclid Avenue, 2nd Floor
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that copy of the Liquidator's filing was served upon ReliaMax Surety Company in Liquidation via regular U.S. Mail, postage prepaid, to the company's mailing address at 3801 W. Technology Circle, Sioux Falls, SD 57106.

Dated this 12th day of July, 2019 in Pierre, South Dakota.

Frank A. Marnell
Attorney for Liquidator of ReliaMax Surety
124 S. Euclid Avenue, 2nd Floor
Pierre, SD 57501
(605) 773-3563

ReliaMax

ReliaMax Surety

Unearned Premium Reserve
Valuation Approach

Deloitte Consulting LLP
May 31, 2019

Exhibit A

Deloitte.

Deloitte Consulting LLP
111 S. Wacker Drive
Chicago, Il 60601
USA
Tel: 312-486-3075
www.deloitte.com

May 31, 2019

Mr. Josh Andersen
General Counsel
ReliaMax Surety Company, in Liquidation
3801 W. Technology Circle
Sioux Falls, SD 57106

Dear Mr. Andersen:

Deloitte Consulting LLP is pleased to submit the actuarial report regarding our analysis of ReliaMax Surety Company, in Liquidation's unearned premium reserves at time of liquidation. This actuarial report supports our recommended methodology to earn premium and calculate unearned premium to be returned to policyholders.

We are members of the Casualty Actuarial Society and the American Academy of Actuaries and meet the qualification standards to issue this actuarial report.

We have enjoyed working with ReliaMax Surety on this analysis. If you have any questions after reviewing this report, please do not hesitate to contact us.

Sincerely,

Michael Green, ACAS, MAAA
Principal
Deloitte Consulting LLP
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Table of Contents

I. OVERVIEW

Deloitte Consulting LLP ("Deloitte Consulting", "us", "we", or "our") was retained by ReliaMax Surety Company, in Liquidation ("ReliaMax Surety", "Entity", or "Company") to assess the Company's premium earnings patterns and recommend an approach for the company to earn premiums and calculate unearned premiums attributable to the policyholders. This report has been created to support that recommendation and to document our independent analysis. All actual earning calculations were performed by ReliaMax Surety.

All information presented in this report is using data through July 27, 2018 and displayed in thousands of US dollars unless otherwise stated.

BACKGROUND

Company Background

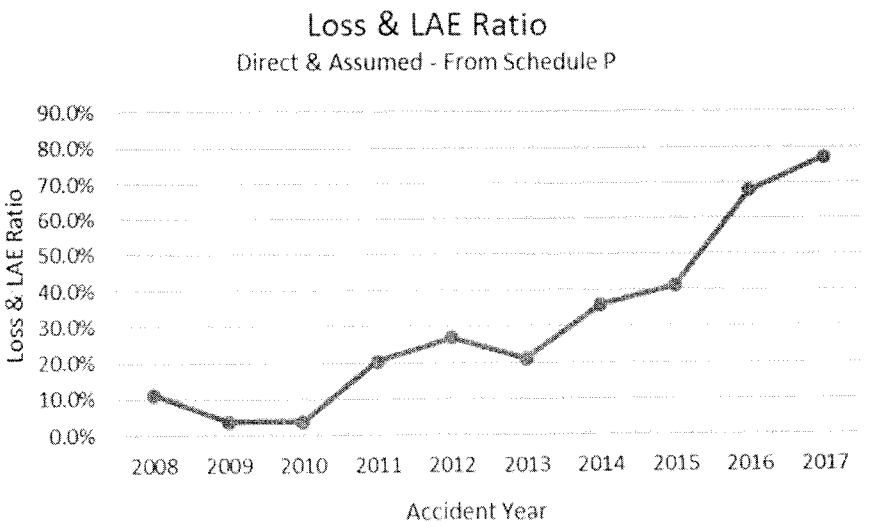
ReliaMax Surety was founded in 2006 by acquiring HEMAR Insurance Company of America ("HEMAR") from Sallie Mae. HEMAR underwrote surety bonds insuring lenders of student loans. ReliaMax Surety continued to offer surety bonds to insure student loan lenders, and its affiliates expanded to originate and service loans.

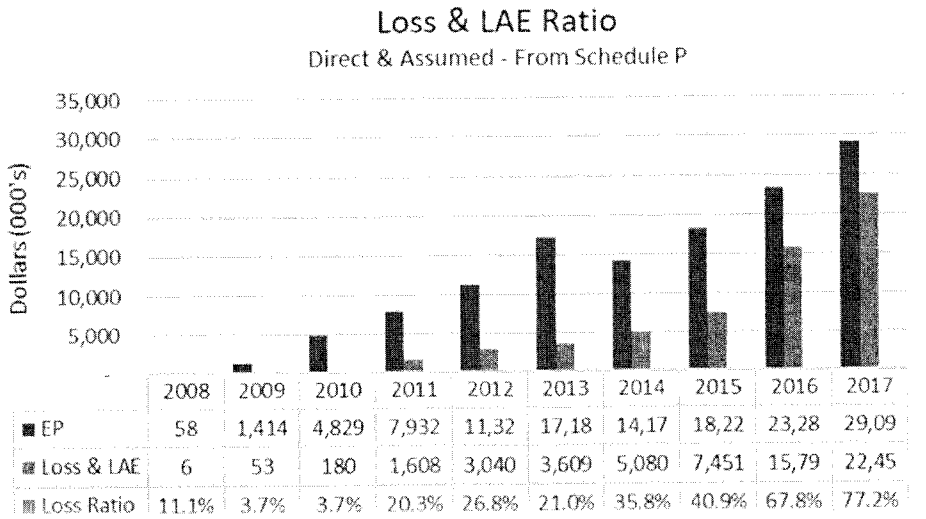
Since the loans insured were generally of long duration loans (commonly 20 years) in which claims may not occur for many years into the policy, and ReliaMax Surety collected a significant amount of premium at the time of loan disbursement, ReliaMax Surety holds a large amount of premium that is intended to cover future claims. Because the claims do not occur equally throughout the policy period, ReliaMax Surety was authorized by administrative rule to earn premium in proportion to expected loss and expense emergence:

> 20:06:25:01.01. Accounting methods for certain surety bonds. Insurers writing surety bonds guaranteeing to lending institutions the repayment of student loans made by lending institutions may, in lieu of compliance with SSAP60 of the Accounting Practices and Procedures Manual, develop premium earning patterns that are representative of their claims and expense patterns by loan and program, and compute unearned premium reserves according to those premium earning patterns.
>
> In lieu of compliance with SSAP3 of the Accounting Practices and Procedures Manual, changes in accounting estimates, for this method of accounting only, may be amortized over the remaining life of the student loans utilizing pro-rated current premium earning patterns. In lieu of compliance with SSAP53 of the Accounting Practices and Procedures Manual, such insurers may recognize written premiums when due.

By delaying revenue recognition to align with expected claim emergence, ReliaMax Surety aimed to create consistent measures of company profitability. The initial basis of the ReliaMax Surety earnings patterns were created and utilized by HEMAR. As they grew and conducted their own analysis of claim emergence, ReliaMax Surety began adjusting those initial earning patterns to better align with the data.

The chart below is produced from ReliaMax Surety's 2017 Annual Statement Schedule P and shows a deterioration of results by Accident Year, particularly in 2016 & 2017. These loss ratios are based upon the earned premium methodology ReliaMax Surety had used at the time; it is evident from subsequent analyses that by earning premium too quickly, these initial earning patterns overstated company profitability in the earlier years. As losses began to emerge in response to their greater exposure, their earned premium did not move commensurately. While some of this deterioration in performance may be attributable to challenges in the student loan market, a greater share of that deterioration is related to the reliance on premium earning rules that recognized revenue too quickly.





	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EP	58	1,414	4,829	7,932	11,32	17,18	14,17	18,22	23,28	29,09
Loss & LAE	6	53	180	1,608	3,040	3,609	5,080	7,451	15,79	22,45
Loss Ratio	11.1%	3.7%	3.7%	20.3%	26.8%	21.0%	35.8%	40.9%	67.8%	77.2%

Based on financials as of March 31, 2018 for both ReliaMax Surety and its corporate parent, ReliaMax Holding Company("ReliaMax Holding"), the Director of Insurance of the State of South Dakota petitioned the court for an order of Liquidation. At the time ReliaMax Surety had a policyholder surplus of $19.1 million, but also a receivable of $21.8 million stemming from a series of loans from ReliaMax Surety to

ReliaMax Holding. Collection was determined to be a bad debt. On June 27, 2018 the court approved the petition for liquidation.

II. SCOPE

Deloitte Consulting serves as an independent consultant to ReliaMax Surety under an agreement between the Company's Office of General Counsel and Deloitte Consulting. Our role under such engagement is to evaluate the methodology used by ReliaMax Surety to earn premium and produce a recommended methodology to earn premium for its various products and loan types. This methodology will be used to determine the unearned premium due to policyholders in accordance with the Proof of Claim procedures and to determine the unearned premium ceded to its affiliated reinsurer.

Michael Green is Principal of Deloitte Consulting and was engaged by the Company's Office of General Counsel and the Special Deputy Liquidator on October 2, 2018 to prepare this report. Mr. Green, who is a Member of the American Academy of Actuaries (MAAA) and an Associate of the Casualty Actuarial Society (ACAS), prepared and supervised the various analyses contained in this report. On this project, he was supported by Jennifer Balester, who is a Member of the American Academy of Actuaries (MAAA) and a Fellow of the Casualty Actuarial Society (FCAS) and Todd Witte, ACAS, MAAA. All have met qualification standards as promulgated by the American Academy of Actuaries and attested compliance with the Casualty Actuarial Society's Continuing Education Policy. These organizations have professional standards that, among other provisions, require actuaries to perform only assignments for which they are qualified.

During the course of our analysis, Deloitte Consulting considered the following:

- Product Type;
- Duration of Loan;
- Expenses;
- Industry information where needed to supplement the Entity's own data (HEMAR);
- Earned premium process used in the financials;
- Other variables potentially predictive of claim emergence;

Our final work product for this engagement is the recommended earning methodology, which includes both the earning patterns and business rules needed to calculate unearned premium attributable to the policyholders. We relied upon the Company to apply the recommended methodology to calculate the specific amounts attributable to each policyholder. Deloitte Consulting assisted with the review of these calculations by performing checks of reasonability and consistency of results.

Throughout the project we have shared findings with the Office of the General Counsel and the Special Deputy Liquidator, Michael J. FitzGibbons.

III. SUMMARY OF RESULTS

In this report, we will describe the following recommended changes to the ReliaMax Surety premium earning methodology:

- Adjust baseline 20-year pattern
- Create additional duration specific loan patterns rather than program level assignments
- Improve consistency of earning curve assignments based upon loan maturity and duration data
- Modify expense earnings approach based upon application of latest departmental expense study.
- Develop method for earning premium to improve equity of premium earning for similar risks on different payment plans.

IV. Conditions and Limitations

In estimating loss patterns to be used for earned premium, it is necessary to project the pattern of payments for insured loan defaults. Due to the inherent uncertainty in projecting the amount and timing of claims, other reasonable estimates could be developed from the same data. While our approach is not the only valid approach, we believe that the actuarial techniques and assumptions used in our analysis are appropriate for this purpose.

Distribution and Use

This analysis has been prepared solely for the use of ReliaMax Surety, for filing with the Liquidation Court in Hughes County, South Dakota for approval of the recommendations herein, and as documentation supporting our recommendations. The Liquidation Court may distribute this report to policyholders of the Company as part of the adjudication process. This report may be made available to applicable state insurance regulatory authorities who shall use the report solely in connection with the discharge of their regulatory oversight responsibilities and for no other purpose.

The supporting data, analysis and tables contained in our exhibits are provided to clearly document the assumptions which support the results stated herein. While these exhibits are integral parts of this study and necessary to meet actuarial standards of practice, we understand that ReliaMax Surety has interest in protecting the value of its proprietary data assets. For this reason, we have partitioned the report so that ReliaMax Surety can request that the detailed exhibit packet be filed confidentially with the court.

Deloitte Consulting shall have no liability, regardless of form, to any person or entity other than ReliaMax Surety for any action taken or omitted to be taken by such parties in respect of this report. Third parties should recognize that the furnishing of this report is not a substitute for their own due diligence and may not place any reliance on this report or data contained herein that would result in the creation of any duty or liability by Deloitte Consulting to any third party.

Data Reliance

Deloitte Consulting has relied upon data provided by the Entity for this review. A specific audit to verify the accuracy or completeness of the data is beyond the scope of this engagement. While we have reviewed the data in regard to its reasonableness and consistency for our review, we have relied on such data without audit or verification and our conclusions are based on the assumption that it is accurate and complete. If the underlying information provided is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

V. Analysis & Findings

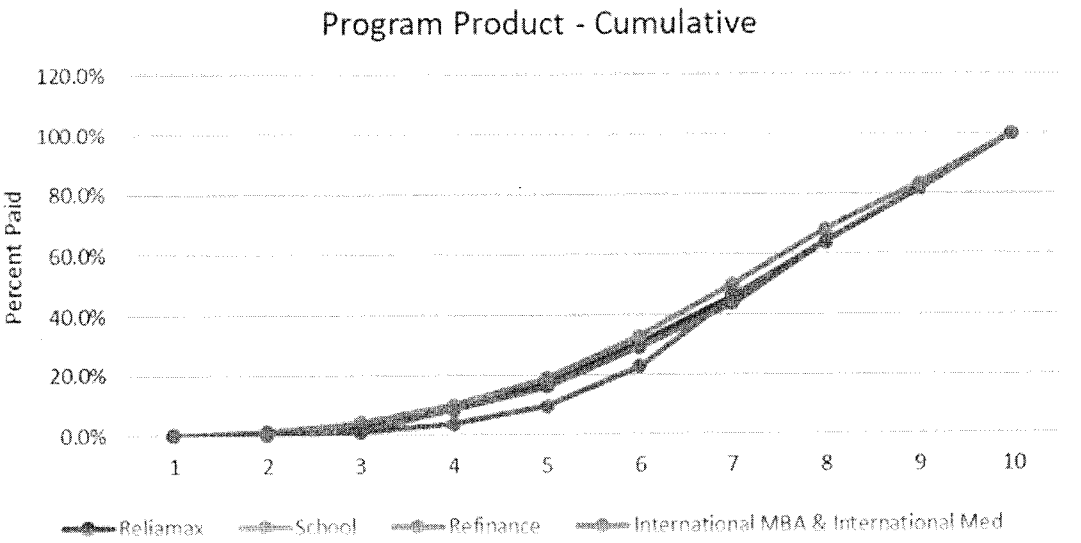
ReliaMax Surety historically used six premium earnings patterns that varied based on product, repayment date, and the duration of the loan. Based on the emergence of actual loss data, these patterns did not accurately project the pattern of loss emergence the company would ultimately see over the lifetime of the loan.

The purpose of this analysis was to determine an appropriate premium earnings curve(s) to apply on an individual loan basis and determine the amount of unearned premium that remains for each policy. Our approach was to analyze the historical loss emergence to determine a base earnings pattern and then adjust this pattern for expenses and premium payment structure. Ultimately, we derived 20 earnings curves that vary by product, loan duration, repayment date, and, for the portfolio product, the average maturity of the loan at time insured by ReliaMax Surety. This section discusses each of these components individually.

Earnings Curves

At the beginning of the project, we received numerous data files from ReliaMax Surety that included data on both ReliaMax Surety and HEMAR Loans. These files had data that showed claim payments by age and enabled us to create paid development triangles. In our analysis, we grouped data by disbursement year. By constructing cumulative loss triangles by disbursement cohort, we are able to determine emergence patterns that are can be directly applied as premium earning patterns for that cohort of policies.

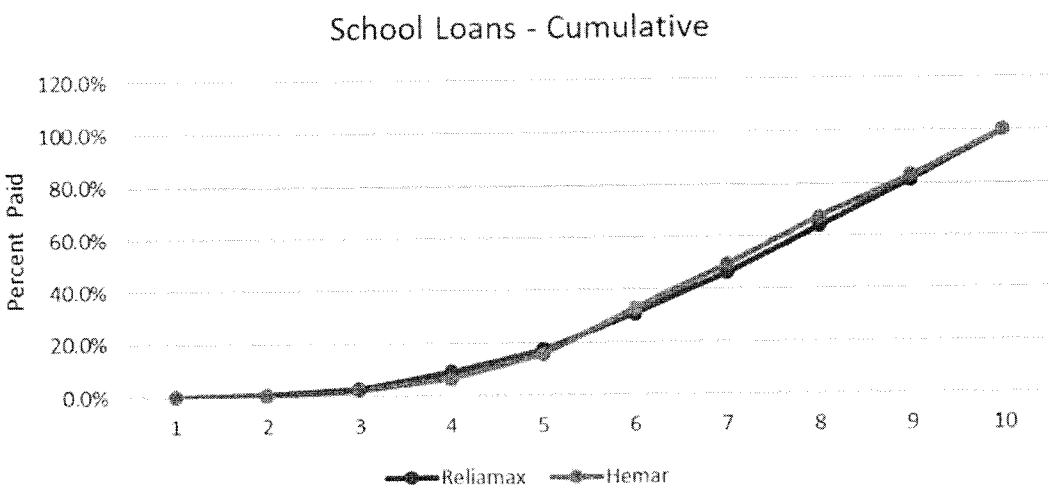
These files also contained numerous descriptive variables related to loan product and customer that allowed us to explore if there were any different emergence patterns. Based on our discussions with management and ReliaMax Surety's prior practice, we first viewed the data according to 5 product groups: School, International MBA, International Medical School, Refinance, and Portfolio. Based on volume, we concluded that portfolio loans did not have sufficient history from which to determine distinct patterns. Also, based on volume, we combined international MBA and International Med. The graph below shows the cumulative percent of losses paid from time of disbursement through age 10 and demonstrates that emergence patterns were reasonably similar across product lines. The data supporting these graphs can be found in Appendix Exhibit G.



Because we knew that re-finance and portfolio had distinct timing features that could affect emergence patterns (immediate repayment and mature loans, respectively), we partitioned these products to the side and combined International MBA and International Med with School loans to begin our analysis.

SCHOOL LOANS

For this segment of School loans (including International MBA and international Med), the most common loan term was 20 years. Given that ReliaMax Surety began operations in 2006, its own data did not extend far enough to determine a complete pattern. To supplement the that data, we used HEMAR data that was based on similar school loans. HEMAR data was available for disbursement years 1986 to 2004 evaluated as of 2004. To determine the reasonableness of this assumption, we tested the pattern of each at similar ages. The graph below displays the cumulative and incremental paid emergence from ages 1-10.



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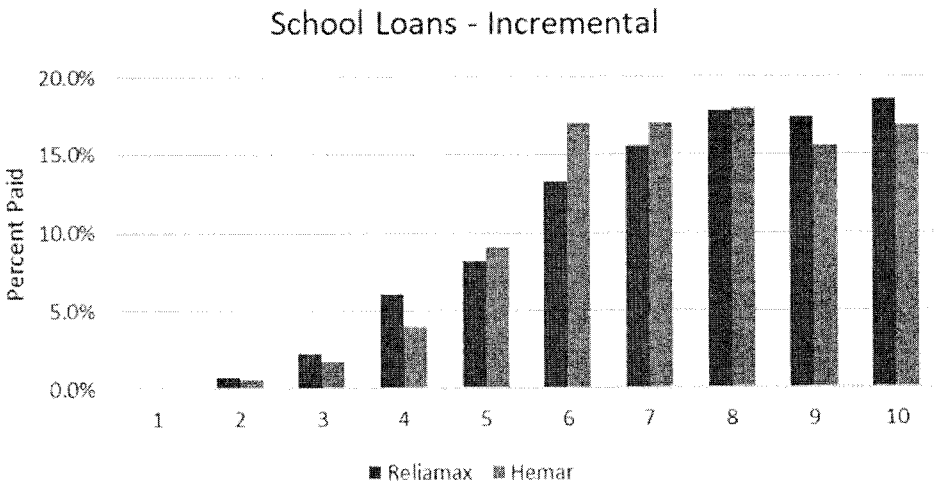


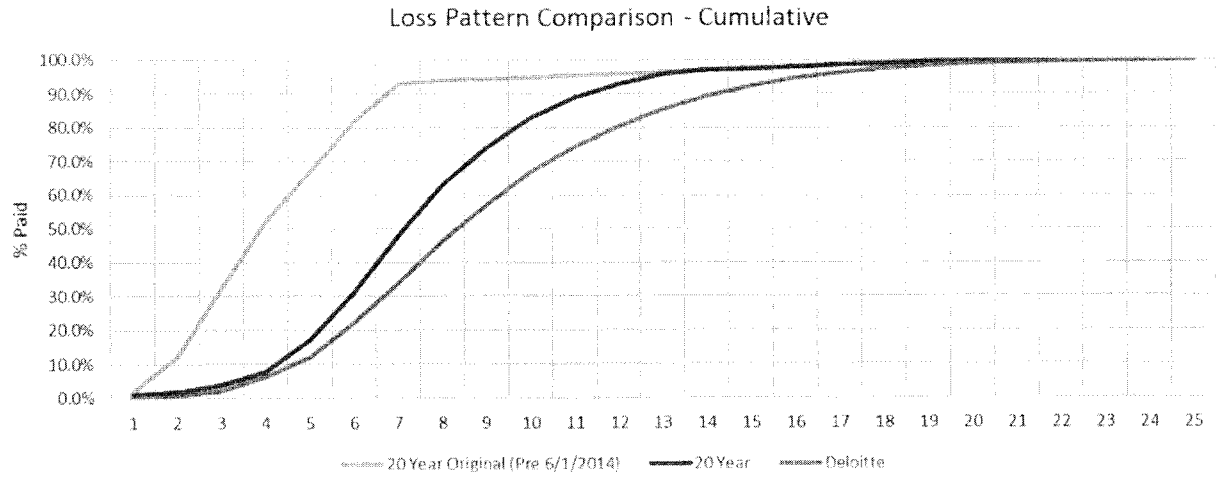
Given the similar emergence pattern, we believe it is appropriate to use the HEMAR data to complete the overall pattern where there was a lack of ReliaMax Surety data. Data supporting these graphs can be found in Appendix Exhibit A.

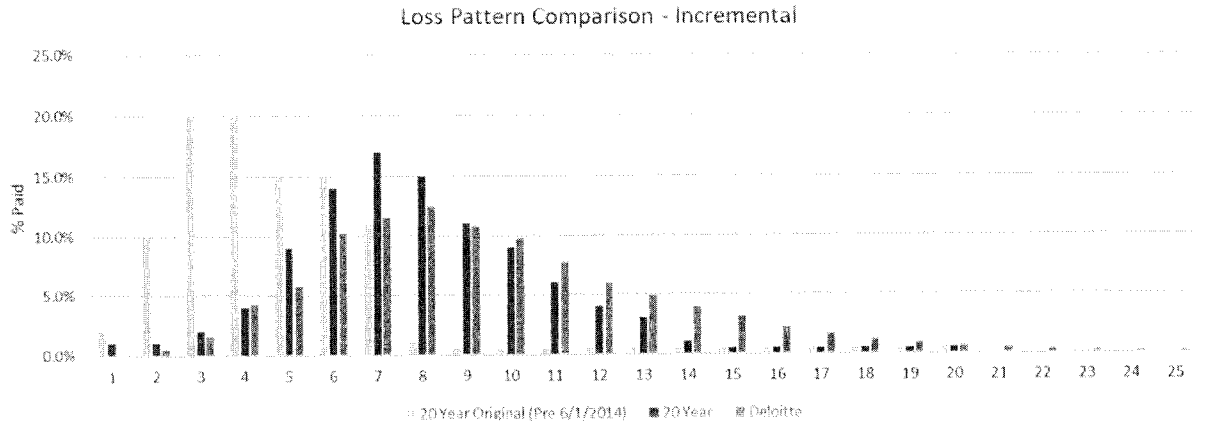
We constructed a cumulative paid loss triangle from both ReliaMax and HEMAR data to determine age-to-age factors for our baseline pattern, as shown in Section 1 Exhibit 1. Except where noted, our selected age-to-age ratios were based upon weighted average link ratios. The weighted average had the advantage of being more responsive to later years for ReliaMax Surety and prevented over-reacting to some points based upon only a few claims.

While ReliaMax Surety's existing earning patterns had fully earned all loans by 20 years, there are reasons why the actual pattern should extend beyond the loan term. For instance, the loan repayment term does not begin until at least six months after leaving school and there are situations where this timing can be temporarily deferred to a later point in time. The empirical data demonstrates that losses continued to develop between ages 18 and 19 (our last observable data points) by a factor of 1.014. In scenarios where the age-to-age factors have not converged to one, it is common for the actuary to include a tail factor for future ages. To account for this emergence, we fit a tail using a decay function, such that a 20-year loan is earned out over 25 years. The effect of this tail methodology is to assume that 1.1% of the losses will be paid between ages 20-25.

The graphic below compares the recommended earnings pattern to the ones used by ReliaMax Surety for this type of loans. These graphs along with the corresponding data table can be found in Section 3, Exhibit 2; note that all of the graphs in this section are displaying percent of paid losses only and make no provision for earnings related to expenses. As can be seen by the graph, the 20-year Original Loss Pattern earned premium too quickly compared to the empirical paid loss data. For example, the original curve earned more than 90% of premium by age 7. In 2014, ReliaMax Surety adjusted that curve and began using a revised curve on a go-forward basis. In this adjusted curve, 90% of premium is not earned until

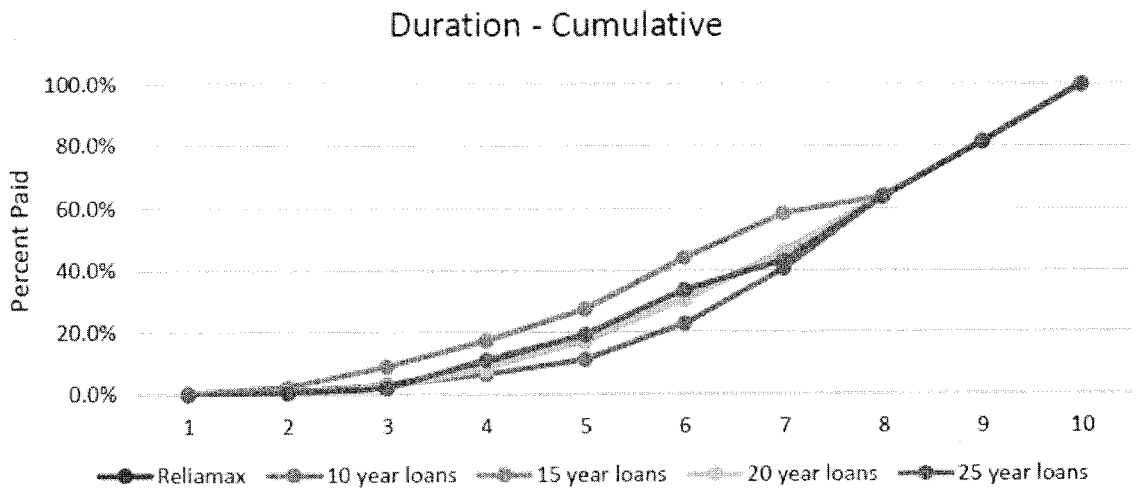
age 12. The Deloitte Consulting curve extends the pattern even further and does not reach 90% until age 15. Per the incremental graph, the biggest variance in emergence occurs between ages 5-8.





Our next step was to adjust this baseline pattern for different loan durations. While ReliaMax Surety had some shorter earnings curves to reflect different durations, all loans for a given program were assigned to a specific curve reflective of the most common duration. In our approach, we used loan term data to more accurately assign loans to earnings curves based upon their duration.

We began by partitioning the data underlying our baseline pattern into 4 different durations (10, 15, 20, 25 years) and tested whether the claims emergence pattern varied between duration lengths as displayed in the graph below (see Appendix, Exhibit I). We observed that for the most part the emergence patterns track similarly. While we observed some evidence that 15-year loans developed more quickly, we also noted that there was not a consistent relationship between loan duration and emergence (i.e 10-year loans do not emerge most quickly & 25 year loans did not emerge the most slowly). We also reasoned that the probability of default at point in time is independent of loan duration, such that we should expect common paid loss emergence across different loan categories. Therefore, we concluded it was appropriate to use all school loan data to create the baseline pattern.



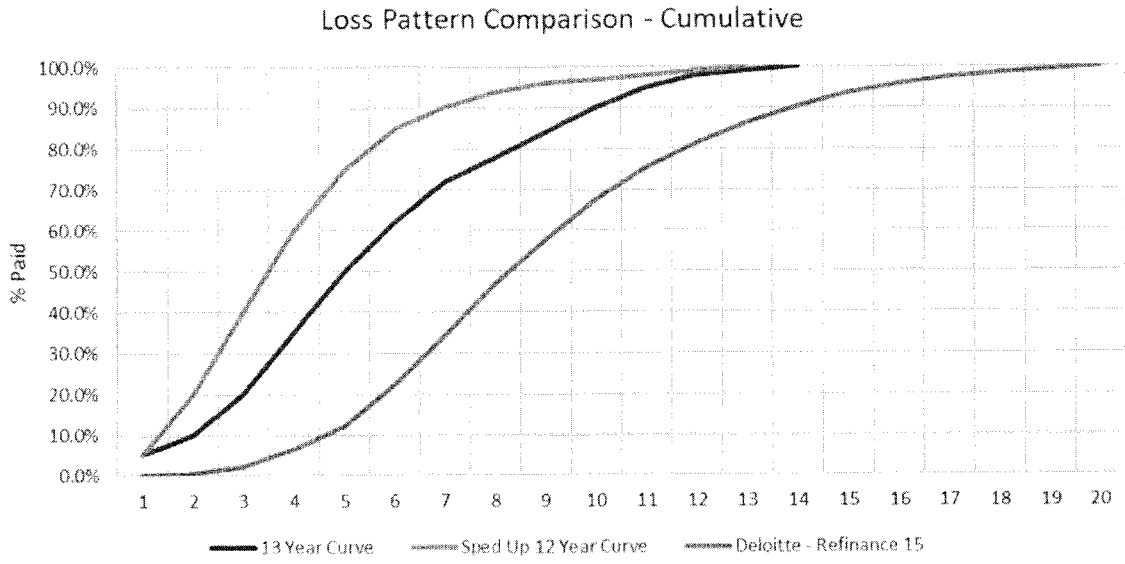
In order to adjust for duration and still preserve the consistent emergence pattern displayed in the age-to-age factors, we adjusted from our baseline pattern by the difference in loan terms. Since we had developed a 25 year pattern for data that was predominantly 20 year loans, we created a 15-year pattern for 10-year loans by using the first 15 age-to-age factors from our baseline curve. Likewise, for 15 years loans, we used the first 20 age-to-age factors from our baseline curve. From these age-to-age factors we could create new cumulative age-to-ultimate factors and percent of ultimate losses paid in each period that are the basis of the earnings curves. To create a longer duration curve for 25 years, we extended our decay function an additional 5 years to create a 30-year pattern. In this way, we were able to align the earning patterns of the curves with the timed period the loan and insurance policy were expected to be in force. The detail of these calculations is presented in Section 3, Exhibit 2

In addition to the analysis discussed above, we also tested other variables to determine if they would impact the overall curve. The variables include the following: Program Level (Undergraduate, Graduate); Credit Risk Grade (A2-B3, C1-C3, D1-F2, Null-Z2); Cosigner Status (Yes, No); Program School Demographic (Domestic, International); Program Sales Channel (Specialty, Credit Union, Other); and Program Manager. As we analyzed these variables and compared to our baseline pattern, we concluded that no material differences emerged for any variable with sufficient data. While these variables impact the likelihood of a claim, they did not materially influence in the timing of claims emergence. We have documented this exploratory analysis in the appendix.

REFINANCE

Refinance Loans differ from traditional school loans because repayments began immediately. We first measured the average time from disbursement to repayment on school loans, which was approximately 3 years. To adjust our 4 baseline earnings curves for immediate repayment, we subtracted the 3 years and linearly interpolated to create 4 corresponding curves of length 12, 17, 22, and 27 that would be appropriate for immediate repayment loans with durations of 10, 15, 20, and 25 years, respectively. The complete set of earning patterns along with graphs comparing them to the ReliaMax Surety's earnings pattern can be found in Section 3, Exhibit 3.

The graph below displays the Deloitte Consulting 15-year loan, which is the most common duration for refinance loans, in comparison to the two curves most frequently applied by ReliaMax Surety. The ReliaMax Surety curves were earning premium much more quickly than the Deloitte Consulting's recommended curve.



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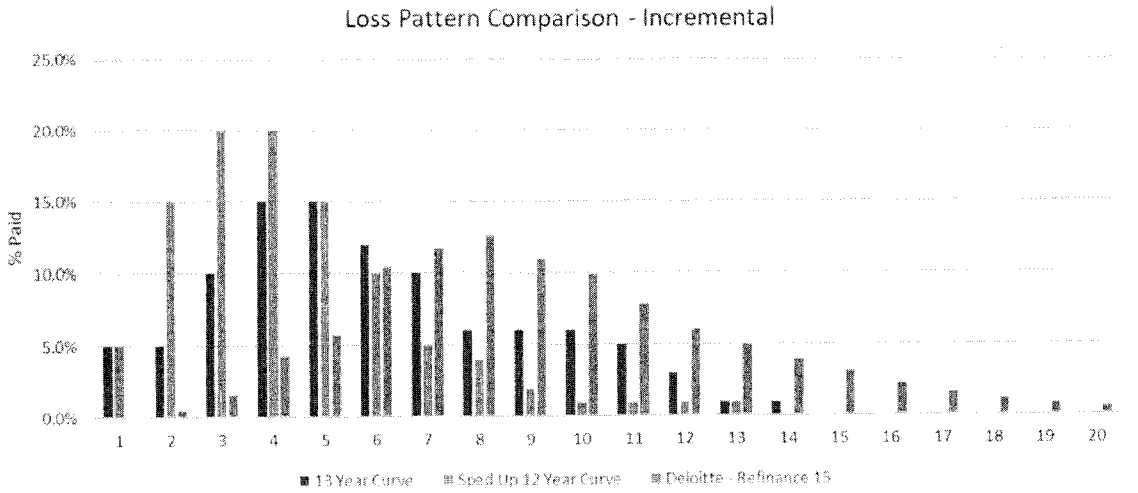


The difference in the refinance earnings curves are a function of the differences observed in the baseline pattern as well as the adjustments made to adapt the curves for the immediate repayment feature. In order to adjust for the immediate repayment feature, ReliaMax Surety appears to have shifted the curve 3 or 4 years to the left rather than linearly interpolate. As a result, ReliaMax Surety curves emerge much more quickly at the start of the curve. They also imply a higher probability of default in ages 0-4 than observed in the refinance data (see Appendix Exhibit G).

ReliaMax Surety had been assigning loans to earning patterns based upon the program. Due to the variability of loan durations found within each program, Deloitte Consulting also recommends that ReliaMax Surety revise its curve assignments to use loan specific duration data. Mapping each loan into one of the four duration groups, will improve accuracy in of application of the earning patterns, and is consistent with the change recommended for school loans.

PORTFOLIO

In recent years, ReliaMax Surety began insuring portfolios of loans, which are blocks of business for which funds had already been disbursed. The key difference with this product is that it provided insurance on seasoned loans for which the customer may be well into repayment and the earning curves. To account for the difference in the maturity of the loan, we recommend constructing earning patterns that start at different points of maturity.

ReliaMax Surety had two portfolio curves, "Medium" and "Fast." The "Fast" Curve was applied to their more seasoned portfolios and as shown by their assignment table below, was the more commonly used curve.

Portfolio - Reliamax Original Assignments

ReliaMax Earning Curve	Program Code	Pattern	Average Disbursement Date	Insured Date	Loan Count	Average Maturity when Insured	Deloitte Group
Portfolio Fast	**1**	7 Year Pattern	12/15/2009	2/2/2017	552	7.14	B
	2	7 Year Pattern	5/19/2009	3/21/2017	501	7.84	B
	3	7 Year Pattern	4/25/2012	6/27/2017	137	5.17	A
	4	7 Year Pattern	10/6/2013	11/16/2017	213	4.11	A
	5	7 Year Pattern	4/6/2004	11/21/2016	4,570	12.64	C
	6	7 Year Pattern	9/18/2006	12/28/2017	672	11.28	C
	7	7 Year Pattern	5/20/2007	12/20/2016	5,613	9.59	C
	8	7 Year Pattern	10/3/2007	10/11/2017	6,932	10.03	C
Portfolio Fast Total			**12/25/2006**	**11/21/2016**	**19,190**	**10.33**	
Portfolio Medium	**9**	10 Year Pattern	7/19/2012	11/26/2014	142	2.35	A
	10	10 Year Pattern	4/19/2013	12/17/2015	308	2.66	A
	11	10 Year Pattern	5/22/2013	9/29/2016	436	3.36	A
	12	10 Year Pattern	6/21/2014	7/31/2017	391	3.11	A
	13	10 Year Pattern	1/16/2007	8/20/2015	1,619	8.60	B
	14	10 Year Pattern	7/12/2007	6/30/2015	750	7.97	B
	15	10 Year Pattern	6/16/2007	11/19/2015	1,940	8.43	B
Portfolio Medium Total			**10/1/2008**	**11/26/2014**	**5,586**	**7.18**	
Grand Total			**5/20/2007**	**11/26/2014**	**24,776**	**9.62**	

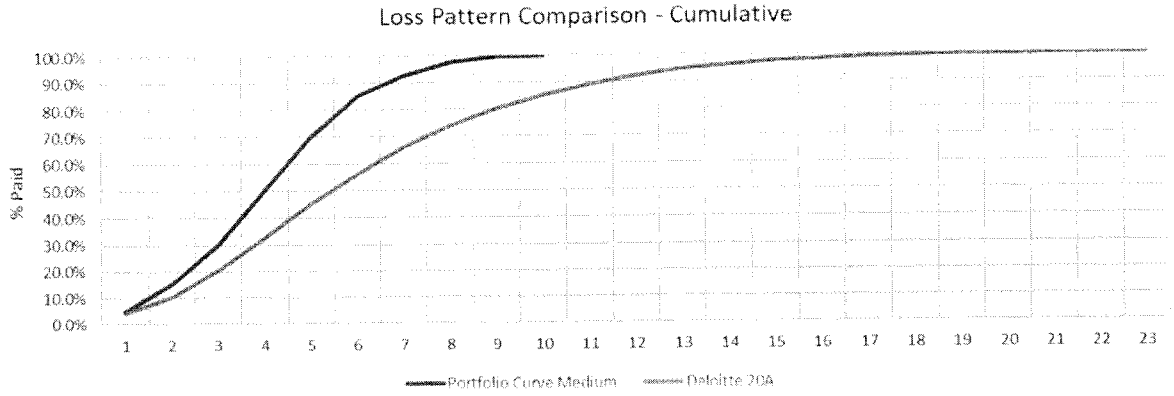
In the table above we noted that ReliaMax Surety's assignment of portfolios to either the 7 year or 10 year was inconsistent when viewed according to loan maturity. In our approach, we calculated the difference between the average disbursement date and the insured date for each portfolio and created three groups that had similar maturity level. We then compared each portfolio's average maturity to each group's average. This difference is shown underneath columns A, B, & C and demonstrates that each program is assigned to the group of portfolios that has the most similar maturity. The table below can be found in Section 3, Exhibit 5.

Portfolio - Deloitte Assignments

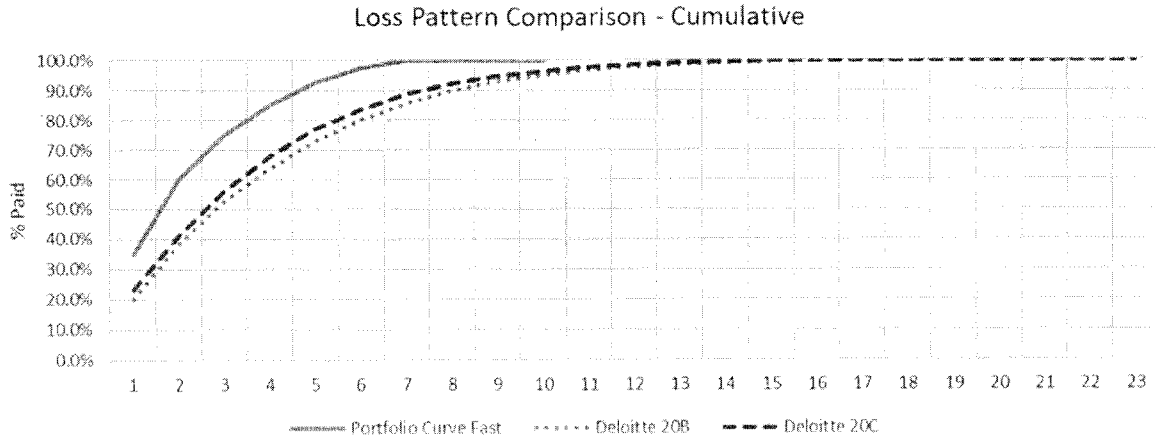
Deloitte Group	Program Code	Average Disbursement Date	Insured Date	Loan Count	Average Maturity when Insured	Weighted Average Maturity	Difference from Group Mean A	B	C
⊟ **A**	9	7/19/2012	11/26/2014	142	2.35	2.36	1.09	5.65	7.62
	10	4/19/2013	12/17/2015	308	2.66	2.93	0.51	5.08	7.05
	12	6/21/2014	7/31/2017	391	3.11	3.27	0.18	4.75	6.71
	11	5/22/2013	9/29/2016	436	3.36	3.57	0.12	4.45	6.41
	4	10/6/2013	11/16/2017	213	4.11	3.48	0.03	4.54	6.50
	3	4/25/2012	6/27/2017	137	5.17	5.50	2.05	2.51	4.48
A Total		**7/8/2013**	**11/26/2014**	**1,627**	**3.33**	**3.45**	Shift 3		
⊟ **B**	1	12/15/2009	2/2/2017	552	7.14	7.19	3.74	0.82	2.79
	2	5/19/2009	3/21/2017	501	7.84	7.79	4.35	0.22	2.18
	14	7/12/2007	6/30/2015	750	7.97	7.95	4.50	0.07	2.03
	15	6/16/2007	11/19/2015	1,940	8.43	8.38	4.93	0.37	1.60
	13	1/16/2007	8/20/2015	1,619	8.60	8.44	5.00	0.43	1.53
B Total		**10/12/2007**	**6/30/2015**	**5,362**	**8.23**	**8.01**	Shift 8		
⊟ **C**	7	5/20/2007	12/20/2016	5,613	9.59	9.69	6.24	1.68	0.29
	8	10/3/2007	10/11/2017	6,932	10.03	10.03	6.58	2.02	0.05
	6	9/18/2006	12/28/2017	672	11.28	11.42	7.98	3.41	1.44
	5	4/6/2004	11/21/2016	4,570	12.64	10.70	7.25	2.68	0.72
C Total		**9/13/2006**	**11/21/2016**	**17,787**	**10.61**	**9.98**	Shift 10		
Grand Total		**5/20/2007**	**11/26/2014**	**24,776**	**9.62**	**8.89**			

Having calculated average maturities for portfolios, we then constructed earnings curves for these portfolios by shifting our baseline patterns by 3, 8, and 10 years respectively and re-scaling each pattern to earn 100%. With 3 maturities and 4 loan duration patterns, this creates a combination of 12 portfolio curves. Section 3, Exhibit 4 displays our final earning patterns for these 4 groups.

In the below graphs, we compare the ReliaMax Surety "Medium" curve to the Deloitte Portfolio A curve, and the ReliaMax Surety "Fast" curve to Deloitte's Portfolio B & C curves. While the shapes of the curves are similar to Deloitte's, the ReliaMax Surety curves recognize premium much more quickly and have very little tail. The ReliaMax Surety curves fully earn premium by age 7 (Fast) and age 10 (Medium). Based on our analysis, we find no evidence to cut-off all earnings at age 10. Therefore, we allowed the portfolio pattern to run out in the same fashion as our baseline curve.



Deloitte.



EXPENSES

Having completed our review of loss emergence data, our next step was to review expenses so that we could earn premium in accordance with both loss and expense patterns. Our aim was to partition the expense data into 3 timing categories: upfront, loss-related, and on-going. Upfront expenses related to policy acquisition would be earned immediately. Loss-related expenses would be earned in proportion to loss-emergence and therefore follow the loss curves. On-going expenses would be earned uniformly over the life of the loan.

ReliaMax Surety had conducted an expense study at the end of 2017, which included a study of workload by department and assigned these tasks into 4 categories: Acquisition, Other Acquisition, Performance Management, and Business Operations. This study was the most recent expense review performed by the company and aligned well with the timing categories we sought for our purposes.

In our review of the expense study, we made no changes to overall expense load. However, we did recommend re-bucketing some expense dollars to better align with the timing categories needed. Specifically, we noted that none of the IT or talent costs had been allocated to any of the different functions; they all had been assigned to business operations category. Since IT functions also support policy acquisition and loss adjustment activities, we re-assigned a portion of these expense dollars from business operations to acquisition and loss adjustment. To determine the portion that was re-assigned, we calculated the % of acquisition and Loss adjustment expense costs incurred by all departments excluding IT and talent. Detail of this expense re-Allocation can be found in Section 2 Exhibit 2.

As we reviewed ReliaMax Surety's 30% expense load, we found that approximately 15% of costs were related to policy acquisition, 5% were related to loss adjustment expenses, and the remaining 10% was related to ongoing business operations. The expenses related to policy acquisition would be earned immediately, the loss adjustment expenses would be earned in proportion to losses, and the Business operation expenses would be earned uniformly over the length of the earnings pattern. The table below shows our selections and corresponds to Section 2 Exhibit 1.

Total Expense Allocation
(U.S.$)

		2014	2015	2016	2017 Proj	4 Year Total	Selected
(1)	Written Premium	23,506,606	21,784,558	34,302,182	31,000,000	110,593,346	
(2)	Acquisition	2,856,965	3,176,339	4,828,098	5,317,048	16,178,450	
(3)	LAE	838,251	1,065,036	1,199,221	1,843,362	4,945,869	
(4)	Business Operations	2,735,622	3,129,789	3,365,277	3,199,171	12,429,858	
(5)	**Total**	**6,430,837**	**7,371,164**	**9,392,596**	**10,359,581**	**33,554,177**	
(6)	Acquisition (Upfront)	12.2%	14.6%	14.1%	17.2%	14.6%	**15.0%**
(7)	LAE (With Losses)	3.6%	4.9%	3.5%	5.9%	4.5%	**5.0%**
(8)	Business Operations (Uniform)	11.6%	14.4%	9.8%	10.3%	11.2%	**10.0%**
(9)	**Total**	**27.4%**	**33.8%**	**27.4%**	**33.4%**	**30.3%**	**30.0%**

Footnotes:

(1), (2), (3), (4)	From ReliaMax Surety Expense Study
(5)	= (2) + (3) + (4)
(6)	= (2) / (1)
(7)	= (3) / (1)
(8)	= (4) / (1)
(9)	= (5) / (1)

In section 3 Exhibit 1, we illustrate how we adapt the loss curves to include the effect of the operational expenses. For each of the 20 earnings curves, the 10% expense load is first divided by the curve length. This expense factor is then added equally to each year of the corresponding incremental loss curve, which is first adjusted by a factor of .90 to reflect that 90% of weight is given to the loss curve and 10% weight is given to the operational expense. The 15% of premium for acquisition costs is earned upfront and the remaining 85% is earned according to the combined loss and expense patterns.

BUSINESS RULES

In the application of the earning patterns, ReliaMax Surety had two business rules that also affected their earnings. These are as follows:

1. If a loan has been paid in full, then the corresponding written premium is fully earned.

2. If a claim has been paid then the corresponding written premium is fully earned

We find these rules to be consistent with the general approach of earning premium in proportional to loss. In both of these scenarios, there is no remaining possibility of a future loss. Therefore, there is no need to create an unearned premium reserve for future claim emergence.

Deductible

A small portion of policies were written on a Deductible basis. These were large deductibles (generally 10% of the disbursement values) that were designed to provide "catastrophic-like" coverage to the policyholder if the sum of the loan defaults were to exceed the policy deductible.

- There are only 5 deductible programs, with 3 insureds and a total of 12 policy years in the deductible program.
- All but one policy had a deductible threshold that was equal to 10% of the disbursements.
- Only one policy has exceeded its deductible; and this is one of the smaller policies that had a deductible of $246K and has claims that now total $248K.
- On average, policies have used up less than a quarter of the deductible level.

Given the lack of data on this program and the remote chance of piecing the deductible layer, we recommend earning 15% upfront for expenses and earning the remainder of premium uniformly over the duration of the policy. Since there is little exposure to loss, it would not make sense to apply loss-based patterns to these policies. Doing so, would result in very little, if any, premium earned. Likewise, for these loans the business rules that earn premium for loans paid in full or claims paid would not apply. The rationale for applying these rules was that there should be no unearned premium when there is no longer any loss exposure. However, since premium is not being earned based on loss exposure, these rules are not applicable.

Stop Loss

Seven programs and 73 policies have a stop loss provision that caps the loss that ReliaMax Surety would have to pay at an agreed upon level, most commonly 15% of aggregate loan disbursement value. Per our review of ReliaMax's stop loss report, we note:

- Only 4 policies have hit the stop-loss threshold
- The average total disbursement in the stop loss program was $4,251K.
- For most policies, the likelihood of hitting the stop loss threshold is remote.

Except for the stop loss provision, these loans behave similarly to ordinary loans. Therefore, we recommend that loans in this program are earned according to the newly established earnings curves. To

account for the policy stop-loss provision, we recommend one additional business rule: If a policy has hit its stop loss limit, then premium for all loans on that policy is fully earned. Since a policy that has reached its stop loss limit no longer has any exposure to future loss, this rule is consistent with the corresponding loan level rule.

PAYMENT PLANS

ReliaMax Surety had multiple payment plans that affected their collection and earning of premium.

- Single: All premium was paid at the time of disbursement of the loan. The premium was calculated as a percent of the disbursement amount.
- Dual: A portion of the premium was paid at the time of disbursement of the loan and the remaining premium was paid when the loan entered repayment. The first premium was calculated as a percent of the disbursement amount and the second premium was calculated as a percent of the outstanding principal and interest at the time of payment.
- Quad: A portion of the premium was paid at the time of disbursement of the loan; a portion was paid when the loan entered repayment; the remaining premium was paid on the first and second anniversaries of repayment. The first premium was calculated as a percent of the disbursement amount and the subsequent premiums were calculated as a percent of the outstanding principal and interest at the time of payment.
- Basis Points: A portion of the premium was paid at the time of disbursement of the loan. Remaining premium would start either immediately or at the time the loan entered repayment and would be made either monthly or annually. The first premium was calculated as a percent of the disbursement amount and the subsequent premiums were calculated as a percent of the outstanding principal and interest at the time of payment.

While single and dual premium plans were the most common, in recent years ReliaMax Surety began offering more basis points payment plans that extended over longer time periods, which created additional complexity for administering their earnings patterns.

In order to achieve a similar unearned premium reserve for similar risk types, regardless of payment structure, we developed an approach that partitions the premium into an insurance charge and a risk charge. The insurance charge was based on the single premium equivalent (SPE) which was the amount that would have been charged had the single payment plan been elected. The risk charge was the additional premium the customer paid ReliaMax Surety for the additional risk of extending payments across multiple years and was calculated as the difference between the expected payment streams and the single premium equivalent.

Future premium was estimated by ReliaMax surety using the terms of the loan to project outstanding principal and interest at future points in time and then applying the premium percentages to these

projected principal and interest balances. The future premiums also had to be adjusted for the risk that future premium payments were either smaller than expected due to prepayment of the loan leading to a smaller than expected outstanding balance or not made at all due to full prepayment of the loan. This risk was quantified using a conditional pre-payment rate, or CPR, curve. This type of adjustment to a financial forecast in common in the mortgage industry, in which expected revenues can be reduced by customer's paying off loan early. For the purposes of this project, we determined CPR curves for ReliaMax to apply to projected future payment streams in order to estimate future value premiums.

Section 4 Exhibit 1 and Exhibit 2 show how we developed CPR curves based upon ReliaMax Surety Data. The company, which began collecting detailed loan balance data in calendar year 2014 for all loans, provided actual and expected loan balances at yearly intervals. From this data, we first partitioned the data to align with how we developed the loss curves, so that school loans, refinance loans, and portfolio loans were analyzed separately. Then, for each data segment we grouped loans by repayment year and monitored how each cohort of repayment year loan balances tracked compared to expectations. We were able to observe consistent patterns and make selections of what portion of projected loan balances are outstanding at each year since repayment. Finally, we calculated the CPR rate as the % yearly changes in this ratio. This rate represents the percent of loan balances that are prepaid in that year. We did this for the eight periods for which we had empirical data and then selected a constant rate that would apply to any remaining time periods.

School loans showed a prepayment rate that averaged approximately 8%. We based our selections on an all year weighted average and used the specific yearly CPR rate for years one through eight. Since we noted a higher CPR rate in the later periods, we selected a tail factor of 10% based on an average of the last three years. Refinance data showed a slightly higher overall prepayment rate, and one that had a more increased more significantly over time. For this reason, we selected a tail factor of 12% and recommend using this factor for period eight and beyond.

In our review of the application of this risk charge methodology to individual loans, we observed significant variance in the risk charge percentage. Risk charge generally increased as expected due to loan duration, interest rate, and time to repayment. However, at the extremes there were a small portion of loans that had high or low risk charges. In order to control for outliers, we reviewed the range of risk charges by payment plan and loan duration and chose to cap at a minimum of 0% and the 95th percentile. Section 4 Exhibit 4 shows the final caps created.

The below steps describe the steps needed to create the risk charge methodology.

Risk Charge Methodology:

Initial Calculations

1. Calculate estimated Future Value (FV) of Premium Payments according to selected payment plan type. This expected future premium is calculated by projecting principal and interest at future

points in time, and then applying appropriate premium rate and adjustment for Conditional Pre-payment rates (CPR).

2. Calculate the Risk Charge (RC) as the difference between the estimated future value and the single premium equivalent, stated as a percent of future value. RC = (FV-SPE)/FV. Cap risk charge % according to table shown Section 4 Exhibit 4.

Earnings

3. Apply 15% to SPE for upfront earnings related to acquisition expense.
4. Apply loss & expense curve to remainder of SPE for each period (i.e. .85*SPE*Loss and Expense Curve).
5. Apply Risk Charge % to Incremental Written Premium for the period.
6. Incremental earned premium for a given period is the sum of steps 3, 4, & 5.

Compare Written Premium vs Earned Premium

7. Sum incremental earned premium (EP) to create cumulative earned premium.
8. Sum actual written premium received by each period to create cumulative WP
9. If at any point, cumulative WP is greater than FV, the additional written premium (i.e., WP – FV) is earned immediately as an additional risk charge. This ensures total EP equals total WP for cases in which written premium exceeds the estimated future value.
10. Calculate total earnings schedule as cumulative earned premium (Step 7) + cumulative additional risk charge earned (Step 9).
11. If at any point the total earnings in Step 10 exceeds premium written to date, limit the earned premium to the total written premium. This ensures that earned premium never exceeds written premium.

VI. Actuarial Methodology

Loss Emergence Patterns

In our analysis, we grouped data by disbursement year, which aligns with the academic year for which the loan was provided. We examined historical changes in the valuation of paid losses at give points in time (e.g., 12 months, 24 months) to determine the pattern of loss emergence. By constructing cumulative paid loss triangles by disbursement cohort, we were able to determine emergence patterns that can be used as premium earning patterns. We developed patterns on a direct basis gross of any reinsurance recoverable or salvage/subrogation.

STATE OF SOUTH DAKOTA	)	**IN CIRCUIT COURT**
	) ss:	
COUNTY OF HUGHES	)	**SIXTH JUDICIAL CIRCUIT**
STATE OF SOUTH DAKOTA, EX REL. LARRY DEITER, DIRECTOR OF INSURANCE OF THE STATE OF SOUTH DAKOTA, Petitioner, v. RELIAMAX SURETY COMPANY, Respondent.	)	32CIV18-125 **AFFIDAVIT OF MICHAEL FITZGIBBONS IN SUPPORT OF LIQUIDATOR'S FILING OF UNEARNED PREMIUM REPORT**

STATE OF ARIZONA)
) ss:
COUNTY OF MARICOPA)

Michael FitzGibbons, of lawful age and being first duly sworn states as follows:

1. I am the duly appointed Special Deputy Liquidator of ReliaMax Surety Company ("ReliaMax"). Under the general supervision of the Court and the Liquidator, my staff and I oversee the day-to-day operations of ReliaMax to timely and efficiently wind down the ReliaMax liquidation estate. I am very knowledgeable about the current affairs, needs, and financial condition of ReliaMax.

2. I have reviewed and support the Liquidator's filing and its exhibits consisting of this Affidavit and the final report of Deloitte Consulting LLP, termed the "Deloitte Report".

3. The assessments, formulae, and final calculation methodology provided in the Liquidator's filing is required for the liquidation of the estate. The Court should acknowledge the Deloitte Report for the Liquidator's use in calculating Class 4 unearned premium claims.

4. Individual Class 4 claims will be adjudicated pursuant to SDCL Ch. 58-29B and the procedure referenced in the Court's Order Appointing Special Referee for Claims and Approval of Procedures Governing Special Referee's Proof of Claim Adjudication Pursuant to Liquidator's Application No. 8.

Unearned Premium Liability and Actuarial Analysis

5. Due to the July 27, 2018 bond cancellation, the ReliaMax liquidation estate has a substantial liability for unearned premium claims to its bondholders. Unearned premium

Exhibit B

claims fall within Class 4 of the liquidation estate, which is subordinate to Classes 1 through 3.

6. ReliaMax's unearned premium liability to Class 4 claimants (bondholders) was initially estimated at $49.6 million in accordance with Management's prior methodologies. Using the assessments, formulae, and calculation methodology for unearned premium in the Deloitte Report, that figure is now estimated at just over $87.6 million. As of December 31, 2018, the estate had about $41.1 million in assets.

7. Based on the above information, Class 4 claims will constitute the largest liability in this estate and will not be paid in full as this liability exceeds remaining assets after payment of claims of Classes 1 through 3.

8. Over its lifespan, ReliaMax wrote bonds with several different premium payment methods and premium earnings patterns depending on the date of bond issuance, among other factors. The calculation of earned premium and therefore the unearned premium liability is a complex matter.

9. It was my opinion in Application No. 2 and remains my opinion that the Liquidator and the Court should not rely on former management's calculation methodology in estimating unearned premium attributable to bondholders. Bondholders have been advised, via the Proof of Claim process, that if they are unaware of their unearned premium claim, the Liquidator will calculate it on their behalf.

10. Due to the size of the unearned premium liability, expected challenges to the unearned premium methodology prescribed by former management, the potential for Proof of Claim objections by numerous bondholders, and the complexity of the calculations, the Liquidator retained Deloitte Consulting LLP ("Deloitte") to assess and present the needed formulae and final calculation methodology to allow the Liquidator to adjudicate unearned premium claims in a reasonable, consistent and defensible manner for affected Class 4 claimants. This approach was approved by the Court in its Order Approving Liquidator's Application No. 2.

11. Deloitte Consulting LLP conducted its analysis and developed its assessments, formulae, and final calculation methodology for ReliaMax in the Deloitte Report.

12. In its unredacted form, the Deloitte Report contains proprietary information to the company and estate which constitutes a valuable asset of the liquidation estate and therefore its creditors as potential beneficiaries. In order to maintain trade secrets, to maximize the value of these assets for the benefit of all creditors, and to preserve the undisclosed and proprietary information contained within the Deloitte Report, the Liquidator is submitting a redacted form of the report in Exhibit A.

13. In my opinion, the Liquidator and the Court should rely on the calculation methodology in the Deloitte Report in determining unearned premium attributable to bondholders' Class 4 claims.

Further Affiant sayeth not.

Dated this 11th day of July, 2019.

Michael J. FitzGibbons, Special Deputy Liquidator
ReliaMax Surety Company, in Liquidation

Subscribed and sworn to before me this 11th day of July, 2019.

SARAH E. ALEXANDER
Notary Public - Arizona
Maricopa Co. / #551135
Expires 09/15/2022
(SEAL)

Sarah E Alexander
Notary Public

My commission expires: 9/15/22