



July 15, 2024

VIA SERFF

The Honorable Trinidad Navarro
Insurance Commissioner
Delaware Department of Insurance
1351 West North Street, Suite 101
Dover, DE 19904

Attention: Tanisha Merced, Deputy Insurance Commissioner

**RE: DCRB Filing No. 2401 – Workers Compensation Experience Rating Plan Revisions
Proposed Effective December 1, 2024**

Dear Commissioner Navarro and Deputy Commissioner Merced:

On behalf of the members of the Delaware Compensation Rating Bureau (DCRB), enclosed is a submission for a plan revision to the Workers Compensation Experience Rating Plan (ERP), and eligibility changes to the Delaware Workplace Safety Program, to be effective 12:01 a.m., December 1, 2024, with respect to new and renewal policies having Rating Effective Dates (RED) on or after that date.

Pertinent rating values consistent with the 2024 proposed filing are provided for Insurance Department review on the justification of the proposed ERP. These values are contained within the supporting information in the filing. Most importantly, this includes Table B, expected loss cost factors that underlie the ERP Table A values, and collectible premium ratios measuring the off-balance of the plan. The DCRB will provide updated values, as appropriate, with its annual residual market rate and voluntary market loss cost filing, which is expected to be filed with the Department of Insurance within the next 30 days, also with a proposed effective date of December 1, 2024. The DCRB requests special consideration on this filing, and is hopeful that the December 1, 2024, Rate and Loss Cost Filing can be prepared and submitted following a decision on this filing, so that the structure of the December 1, 2024, ERP is a settled matter before the actual submission of the annual filing.

An Actuarial Memorandum providing all specific details supporting this filing and updated manual pages are included with this filing submission.

Please note, this filing also incorporates changes based on the recent passage of SB-306, amending § 2379 of the Workers' Compensation Act allowing for changes to the Delaware Workplace Safety Program, which is expected to receive the Governor's signature as soon as this week. Regardless, this certainty does not affect the filing's intent or readiness.

Thank you in advance for your prompt attention and review of this filing. The DCRB is pleased to answer any questions or provide any available supplementary information that you or your staff may require. Please direct any questions to Brent Otto, Vice President of Actuarial Services and Chief Actuary.

Sincerely,

William V. Taylor
President



To: The Honorable Trinidad Navarro, Delaware Insurance Commissioner
From: Brent Otto, FCAS, MAAA, Vice President of Actuarial Services and Chief Actuary
Date: July 15, 2024
Subject: DCRB Filing No. 2401 – Experience Rating Plan Revisions
Proposed Effective Date: December 1, 2024

This actuarial memorandum provides background, explanation, and impacts for the proposed changes to the Workers Compensation Experience Rating Plan (ERP) to guide the Department of Insurance's review of the filing.

Background

As part of its annual filing in Delaware, the Delaware Compensation Rating Bureau (DCRB) prepares and submits exhibits showing the existing ERP's historical effectiveness for identifying risks deserving rating credits and debits. These exhibits also evaluate the consistency between the assigned credits/debits and the subsequent loss experience for those specific risks.

In recent reviews, the DCRB recognized some deterioration in the performance and opportunities to enhance the plan. To improve the accuracy and performance of the plan to better incentivize workplace safety, the DCRB conducted a thorough multi-year research project and presented results at its annual Actuarial Research meetings over the past several years. This research and analysis aimed to identify areas where the current ERP could be refined and optimized to align it with the evolving dynamics and needs of the workers' compensation system.

The current structure of Delaware ERP has been used for many decades. The current variable split point plan has performed relatively well, however our recent research and research performed in other states,¹ including Pennsylvania, supports that this type of plan, when coupled with higher levels of credibility, tends to yield better performance.

Through comprehensive research, the DCRB identified several opportunities for improvement in the ERP, which will result in the following benefits:

- Provides more accurate, fair, and predictive experience rating modifications
- Promotes and incentivizes workplace safety
- More accurately reflects the portion of primary loss and excess losses

¹ New York Compensation Insurance Rating Board, *Technical Actuarial Support Memorandum*, https://www.nycirb.org/officialdocs/exr/technical_actuarial_support_memorandum.pdf

Workers' Compensation Insurance Rating Bureau of California (March 2017) *Workers' Compensation Experience Rating California's 2017 Variable Split Plan*, https://www.casact.org/sites/default/files/2021-02/education_underwriting_2017_presentations_cs20-2.pdf

National Council on Compensation Insurance, Individual Risk Rating Working Group Minutes (June 2021), *Experience Rating Plan Update-Performance Comparison*

- Mitigates the impact of isolated extreme claims on experience modification, especially for smaller risks
- Assigns more appropriate credibility that represents the level of confidence applied to a risk's claim experience
- Provides a better transition for smaller risks that may move between the ERP and the Merit Rating Plan
- Lowers the eligibility to bring more risks into the ERP, a better-performing plan, compared to the simplified Merit Rating Plan used for the smallest risks

Additionally, SB-306 amended § 2379² of the Workers' Compensation Act with changes to the Delaware Workplace Safety Program. This was considered a “cleanup” or “technical” bill with changes designed to better align the program with contemporary standards that enhances its effectiveness in promoting workplace safety. Previously, the program specified an annual premium threshold of \$3,161 for eligibility. The revised language no longer includes this specific amount, focusing instead on qualifying through the uniform experience rating plan. This provides coordination and flexibility for future adjustments without needing additional legislative changes. The updated eligibility will also allow additional small employers to consider joining the workplace safety program.

Recognizing the potential for improvements to the ERP from this research, the DCRB is proposing several revisions to the current plan.

Description of the Current ERP

The current ERP has been in use in substantially its current form for over two decades and includes the following key components within its design:

Experience Period: The experience period for establishing an experience modification can generally be summarized as spanning no more than three (3) years, starting four (4) years prior to the target date and ending one (1) year prior to the target date.

Eligibility: A risk is eligible for experience rating under the ERP if the premium, determined by the audited payrolls or other exposures of the experience period, multiplied by the current DCRB rates, amounts to an annual amount of \$3,161.

Credibility: The credibility in the experience rating modification calculation represents the weight assigned to actual losses. As the size of the employer increases, the credibility also increases. Under the current plan, the credibility ranges from about 5% to 100%.

Expected Losses: The expected loss rates are the average losses per \$100 of payroll by classification, which are used in the experience rating calculations for policies. The payroll in the experience period is multiplied by the Expected Loss Rates (ELRs) to calculate the total expected ratable losses for determining the experience modification factor (mod).

² Senate Bill 306 (<https://legis.delaware.gov/BillDetail/141415>)

These rates are the basis to which an employer's actual losses are compared within the ERP.

Maximum Primary Loss Value (Split Point): In the experience rating formula, an employer's primary component of actual losses and excess component of expected losses are used. The threshold amount that segregates losses into the primary component varies based on the size of the risk. All claims reported as part of a catastrophe event (e.g., COVID-19 claims) are currently excluded from the ERP.

Formula: An arithmetic formula is used to compute experience modifications. The current ERP formula is as follows:

$$\frac{A_p \times C + E \times C \times L + E(1.0 - C)}{E}$$

E

Where,

A_p = Actual primary losses as tabulated in accordance with rules of the ERP, including the applicable split point for limiting losses

E = Expected losses for the risk computed for the applicable experience period

C = Credibility factor obtained from Table B based on the expected losses calculated for the application experience period

L = Limit Charge ratio obtained from Table B. This is applied to the expected losses to determine what percentage of those expected losses are considered excess losses

Formula Component Testing

Experience Period: The experience period utilized in the current ERP aligns closely with industry standards observed in various jurisdictions nationwide. While the DCRB remains open to exploring the potential impact of alternative experience periods in the future, no specific testing or analysis of such alternatives was warranted at present.

Eligibility: Results of lowering the minimum qualifications for experience rating from the current and historical levels were tested. If a risk does not qualify for the ERP, they typically qualify for the Merit Rating Plan. Merit rating is designed to provide a pricing mechanism for the smallest risks. Under the Merit Rating Plan, small businesses can take advantage of incentives and premium savings by operating a safe workplace. In general, however, the ERP more adequately incentivizes safety and risk management by holding organizations more accountable for their loss experience. This creates a sense of responsibility, which is intended to drive risk management activities to maintain a safer work environment. The DCRB is proposing a change in the eligibility threshold, changing it from an annual \$3,161 to \$5,000 over the three-year experience period. This change is estimated to shift 13% more risks from the Merit Rating Plan to the ERP as shown

in Exhibit 8. The risks with loss free experience will receive higher credits compared to the Merit Rating Plan.

Credibility: The performance test of the current ERP reveals that the current plan insufficiently assigns credibility to a risk's individual experience. In the proposed plan, credibility starts at 69%, a significant increase compared to the current lowest level of 5% as shown in Exhibit 6. The primary reason for allowing a significant increase in the credibility for smaller risks is the concurrent reduction in split points for smaller risks, which improves plan performance. The credibility levels for larger risks remain similar to those in the current plan.

Limit Charge: The limit charge is calculated using the established excess loss factor calculation, utilizing empirical data from the experience period, and is updated on an annual basis. The proposed plan maintains the existing methodology for calculating the limit charge.

Expected Losses: The ranges of expected losses were optimized simultaneously with the other variables to improve plan performance with the results shown in Exhibit 2.³ The overall range starts at a lower value due to the lowering of the eligibility threshold and the highest value is also lower compared to the current plan.

Maximum Primary Loss Value (Split Point): As a risk's expected losses increase, the variable split point applied to individual claims also increases as shown in Exhibit 5 (Table B). This effectively recognizes the fact that larger risks tend to have higher absolute losses compared to smaller employers due to the scale of their operations. By adjusting the split point, the plan considers the varying loss potentials associated with different-sized employers. This ensures that the experience modification factor represents the employer's true risk profile, enabling more precise premium calculations. The proposed split points range from \$10,000 to \$300,000.

Formula: The credibility assignments and split points proposed in this filing are applied using the current experience rating modification formula. The focus of the research was first to see if the current parameters could be optimized to achieve target plan performance while maintaining the current formula. The DCRB believes this result was achieved. While formulas in other jurisdictions were also reviewed, the variable split point plans with higher credibility levels showed consistently stronger performance compared to others. Further review of states with variable split point plans determined that our current formula would be identical to the ones in other states when credibility is set at 100%. This indirectly provides validation of our current plan and supports the proposed changes that result in higher credibility values while maintaining the current formula.

Determination of Credibility and Loss Limits

Data was gathered for Policy Years 2015, 2016, 2017, and 2018. The optimization process was performed using the years 2015-2017, and 2018 was used as the "holdout" dataset for testing purposes (further testing was done on 2019 and 2020 as that data became available). First, optimal credibility and split points needed to be found, so risks were grouped into cohorts based on the risk's expected losses in the experience period. Each cohort was then examined using an

³ Exhibit 2 shows the fitted expected losses that have been selected from the curve fit. These fitted values are later fine-tuned through the optimization process.

array of split points at a given credibility. The performance of each split point at a given credibility was tested using a test statistic defined as:

$$\frac{\textit{Variance in modified loss ratios}}{\textit{Variance in manual loss ratios}}$$

This test statistic is a widely used metric for evaluating the performance of ERPs. A lower test statistic indicates a better-performing result. It is derived to measure the maximum dispersion in the manual loss ratio (loss ratio before the application of the mod) and the minimum dispersion in the modified loss ratio (loss ratio after the application of the mod). The plan is deemed “optimized” when the test statistic reaches its lowest value. This optimization process was conducted across the three sets of experience periods (2015, 2016, and 2017).

Exhibit 1 presents heatmaps illustrating the test statistics for each cohort. These heatmaps consider various credibility levels and split points within each cohort. In each cohort, a total of 20 credibility levels and 39 split points were utilized resulting in the calculation of 780 test statistics. The combinations were considered optimized when the test statistic reached its lowest possible value. Within each cohort, the combinations highlighted in pink represent the 5% lowest test statistics. These highlighted combinations serve as the basis for identifying and visualizing the optimal credibility and split points in the subsequent steps.

Second, the optimal credibility and split points needed to be determined. A curve fitting program was utilized, which fits curves to a set of optimal combinations identified in the previous step. Ultimately, the optimal credibility was calculated using the formula $a + b \log(x) + c \log(x)^2 + d \log(x)^3 + e \log(x)^4 + f \log(x)^5$, while the optimal split points were determined using the formula $ax^5 + bx^4 + cx^3 + dx^2 + ex + f$. Exhibits 2 and 3 display the final curves and the corresponding fitted values. These fitted values were further fine-tuned to attain the optimal result.⁴

Exhibits 4 and 5 in this filing present Table B credibility results and loss limits for the current and proposed plans, respectively. Exhibit 6 includes graphs comparing the final credibility curves between the two plans.

Similar to the current ERP, the proposed plan credibility assignments will continue to be determined based on expected losses attributed to each risk rated over the experience period. Through extensive testing of various credibility functions, the proposed ERP incorporates a credibility scale that has demonstrated superior or comparable performance in calculating experience modifications compared to other alternatives evaluated. Significant changes in credibility values can be observed for smaller experience rated risks, where the previous starting point of 5% has been increased to 69%. This coincides with the decrease in the split points for the smaller risks. Credibility assignments increase with employer size in both the current and

⁴ Credibilities were also adjusted to meet the following three necessary criteria.

- a. Credibility must be greater than or equal to zero and less than or equal to 1.00.
- b. Credibility should increase as the size of expected losses underlying the actuarial estimate increases.
- c. Credibility should increase at a non-increasing rate.

proposed ERPs. Under the proposed ERP, credibility values will reach a maximum of 97.4%, compared to 100% under the current plan. It was deemed that no individual risk would be considered fully credible.

The current ERP applies variable split points based on the size of the employer ranging from \$30,405 to \$553,000⁵. In the proposed ERP, variable split points will range from \$10,000 to \$300,000.

By increasing the credibility starting point and adjusting the split point, the proposed ERP becomes more sensitive to the claim frequency for smaller employers compared to the current ERP. Therefore, this reduces the sensitivity to the claim severity for the smaller employers. For larger employers, the proposed ERP maintains a similar level of credibility, but adjusts the split point, resulting in enhanced responsiveness to claim severity.

Impact of Medical-Only Claims

The experience rating modification is intended to predict an employer's future loss experience using its historical loss experience. For instance, an experience rating modification of 0.80 indicates an expectation that the employer's future loss experience will be 20% better than the average employer in the same classification. The experience rating modification aims to incorporate the employer's past loss experience to the extent that it is deemed predictive of future losses. To evaluate the influence of Medical-Only claims on the experience modification factors, performance testing was conducted by varying the Medical-Only claim amounts included in the calculation. The results, as shown in Exhibit 7, indicate that including 100% of Medical-Only claims resulted in the best performance (highest lift and lowest efficiency test). While the other scenarios did not necessarily result in poor performance, they did not improve the performance. Based on this, and the fact that the current plan includes 100% of the Medical-Only claims, there was not adequate statistical support to deviate from the current approach. In addition, recent industry research showed that Medical-Only claims have significant predictive value.⁶ Other states limit the amount of Medical-Only claims to incentivize the reporting of these claims. The DCRB, however, could not find studies that support this argument and believes that such benefit, if any exists, is minimal.

Comparison of Performance for the Current and Proposed Plans

In the evaluation of the experience rating plans, the commonly used quintile test was used to assess performance. This test involves dividing risks into five equal-sized groups, or quintiles, based on experience modification factors. The performance of the ERP is tested by examining the manual loss ratios and the modified loss ratios.

⁵ DCRB Filing No. 2304, Exhibit 21

⁶ NCCI's Experience Rating Plan review revealed that scaling up medical-only losses in the current mod calculation increases the mod's predictive power. For further details regarding the impact of Medical-Only claims, refer to the NCCI's Individual Risk Rating Working Group Minutes (February 2019), titled "Experience Rating Plan Update: Exploration of Treatment of Small Claims."

The ideal quintile test results in modified loss ratios for all quintiles equal to unity (or 100%), indicating that the experience modification factor appropriately accounts for all of the differences in loss experience among risks grouped within the same quintile. This achieves underwriting results that remain consistent regardless of the modification values assigned to different risks. Due to normal volatility within this type of dataset, the ideal result is rarely achieved. Therefore, a target performance goal was set such that all five quintiles would be within +/-5% of unity.

The current ERP performance (Exhibit 9) indicates that the plan's performance is relatively acceptable for the 1st and 5th quintiles. However, the 2nd, 3rd, and 4th quintiles show modified loss ratios exceeding the +/-5% target deviation from unity. Particularly concerning is the significantly high loss ratio observed in the 4th quintile, suggesting that risks with high modifications are paying less than they should. This outcome is undesirable as it indicates that the current rating plan does not adequately adjust premiums for a majority of risks.

The proposed plan results in a notable improvement in accuracy and predictive power. Analyzing the modified loss ratios across the five quintiles, the proposed \$5,000 eligibility requirement (Exhibit 10) showed that, for the combined three-year policy period, the quintile results were all within +/-5% deviation from unity even with adding in more smaller risks.

Initially, the research began with data from policy years 2015-2018. Subsequently, additional policy year data from 2019 and 2020 were included, and a performance test was conducted. The results of the performance test (Exhibit 11) indicated that the quintile test consistently met the +/-5% deviation from unity.

This outcome demonstrates the effectiveness of the variable split point plan by appropriately reflecting the variations in risk and loss experience among different experience groups. Achieving the target deviation ranges across many years indicates that the modified loss ratios align closely with the expected levels, highlighting the plan's ability to fairly adjust premiums for all risks regardless of class or size.

Capping Rules

The current ERP does not impose any capping on the modification factors. With the majority of the observed volatility being from upward changes in modification factors, especially for small risks, the proposed capping rule introduces what is commonly referred to in other states as a maximum modification formula. The formula for the maximum modification is shown in Exhibit 12 and is as follows:

$$\text{Max Mod} = 1.10 + 0.0004 \times (E / G)$$

Where E = Expected Loss, G = State Average Cost Per Claim / 1,000

The maximum modification sets the upper limit for the experience modification factor that can be assigned to a risk. The G value represents the state average cost per claim (in thousands of dollars) for losses used in experience rating. A value of 12 was calculated based on averaging data from the five policy years, as shown in Exhibit 13. Exhibit 14 presents a scatterplot illustrating individual indicated modifications along with a line representing the maximum modification factors.

Exhibit 15 shows the distribution of risks by the size of expected losses. Approximately 7% of the risks are capped by the maximum modification, which is calculated using the formula above. The new capping approach provides added stability to small risks, which will be capped by the maximum modification factors.

Furthermore, the proposed plan balances stability and responsiveness with the application of the capping rule. Since losses can never be below zero, but often can be very large, it makes sense that most of the volatility is seen in the upward movement of modifications. The maximum modification formula addresses this volatility for smaller risks and acts as a safeguard by limiting the influence of a single large claim or a few adverse claims on a risk’s premium.

Transition Rules

These types of plan changes can result in more significant impacts beyond those seen in the yearly updates for some risks. To manage substantial upward changes in experience modifications resulting from the adoption of the proposed plan, a one-year transition rule will be implemented. During this transition period, a swing limit of +40% will apply, along with the use of the maximum modification formula. The final experience modification will be determined by selecting the lower of the two modifications during this transitional phase. After the transition period, only the maximum modification formula will apply, and the swing limit will be eliminated. This transitional approach ensures a smooth adjustment to the proposed plan and prevents extreme fluctuations in the modification factors during the initial phase and until all risks reach their indicated modification under the proposed plan. The examples below show how a risk would be capped both during the “Transition” period and, assuming the same scenario occurred, “After Transition” has ended in year two.

Capping Illustration

Scenario	Expected Loss	Prior Mod	Indicated	Capped Mod (+40%)	Max Mod	Final Capped Mod
Transition	\$12,000	1.02	1.65	1.43	1.50	1.43
After Transition	\$12,000	1.02	1.65	N/A	1.50	1.50



Impacts Resulting from the Proposed ERP

Exhibit 16 presents a comparison of the distribution of indicated modifications between the current and proposed plans. An important observation from the analysis is that risks currently categorized as credit modification types have the potential to receive lower experience modifications with the implementation of the proposed plan. This is observed in the exhibit, which shows a significant 7 percent decrease in the number of risks within the modification range of 0.8 to 1.0. The majority of these risks shifted to lower modification ranges, indicating a more favorable assessment of

their loss experience. The rest of the movement is explained by risks moving to higher modification ranges. Based on this, the modifications for risks will be more widely distributed across the range of values, more appropriately reflecting the varying levels of risk and loss experience among different employers.

Exhibit 17 presents a comparison of the distribution of modifications between the current plan and the proposed plan with maximum modification capping. The maximum modification calculated by formula is applied, and for example, reduced the number of risks with a mod >2.0 by 3%. In Exhibit 17, more risks are distributed in the range greater than 1.50, and the majority of these risks are smaller risks. Small employers are often more susceptible to large swings in their modification factors due to the impact of a few claims. The maximum modification cap ensures that these increases are kept within a manageable range. By capping the mod, small employers can have more predictable and stable workers' compensation premiums.

Exhibit 18 provides an overview of the distribution of policy counts and premium. Some credit risks shifted to debit risks and some debit risks shifted to credit risks, however these shifts were minor and only altered the premium distribution slightly. Overall, the distribution of modification types is expected to remain stable following the proposed change.

Exhibit 19 shows the change in the modification types resulting from the transition to the proposed plan and focuses on the risks that would move from credits to debits. Analyzing Policy Year 2018 data observed that 74% of credit risks would remain as credits and 22% of debit risks would remain as debits. A small percentage of credit risks, specifically 3.5%, would transition from credit to debit risks. Upon further investigation of this group, it was determined that 93% of them experienced a modest change of less than 15% when switching between types. Therefore, only 7% of risks within this group had a change greater than 15%. These findings indicate that most risks maintained their original rating type, and among those that experienced a transition, the majority saw manageable changes showing stability within the plan.

Exhibit 20 demonstrates the impact on premiums for the proposed plan. For the credit risks that remain as credit modifications, there is a decrease in premium of \$3 million. On the other hand, for the debit risks that remain as debits, there is a decrease in premium of \$0.8 million. Impacts on premium for other risk moving categories, such as the 3.5% that moved from credit to debit modifications, have been displayed for completeness. Overall, the transition to the proposed plan is estimated to decrease premiums by \$3.5 million.

Exhibit 21 displays the impact on the distribution of policies subject to the proposed capping procedures. During the transition period, 2% more risks are estimated to be capped by the transition rules or 9% in total being capped. No risks will experience a mod change exceeding 40% during the transition period. Without the capping rules, 7% of risks were estimated to have changes above 40%. The capping rules bring stability for risks both during and after the transition period. Once the transition is complete, annual year-to-year changes are expected to be more stable under the proposed plan.

Unlike the prior impacts above that show the changes from the current plan to the proposed plan, Exhibit 22 simulates the mod and premium changes between Policy Years 2017 and 2018 as if

the new plan was being used historically. Approximately 37% of risks experience a modification change ranging from -25% to 0%, which corresponds to 47% of the total premium. Additionally, about 53% of risks have a projected modification change ranging from 0% to 25%, accounting for 38% of the total premium. This simulated year-to-year result shows stable annual changes with 90% of the risks receiving between +/-25% changes accounting for 85% of the premium.

Implication on Workplace Safety (WPS) Program

In Delaware, the Workplace Safety program focuses on promoting and maintaining safe working environments across various industries. This program should work in concert with the ERP as part of the state's efforts to reduce workplace injuries and illnesses through proactive measures and incentives for employers who prioritize safety.

Under the current program, employers qualify for the WPS if they have an annual Delaware-only premium of \$3,161 or more at residual market rates. The program shares eligibility criteria with the ERP. Additionally, the WPS utilizes the credibility of qualified employers based on the uniform ERP.

Under the updated plan, employers qualify if they qualified for the ERP, which is \$5,000 or more of Delaware only premium at residual market rates over the three-year experience rating period and uses the same credibility 'C' table as the Experience Rating Plan. Exhibit 23 illustrates the distribution of participating employers in the WSP. The updated eligibility criteria are projected to qualify an additional 2,100 employers, a potential for an 15% increase in participation, with approximately 1,320 of these projected to participate based on historical levels.

Based on data from policy years 2019 and 2020, participating employers received approximately \$6.4 million in safety credits, equivalent to 2.4% of the total eligible premium. With the updated eligibility criteria, it is anticipated that they will receive around \$3.5 million in safety credits, representing 1.3% of the total eligible premium. This reduction is more than offset by an increase in average credits from the ERP revisions impacting small risks that automatically receive the ERP factors. These two plans will continue to work in harmony with each other.

In workers' compensation insurance, the total amount of WSP credit received by participating risks is loaded back into the premium rate as a surcharge in a revenue-neutral manner. This adjusted premium rate is known as the post-surcharge rate. The DCRB will adjust the surcharge to accurately reflect the decrease in the average safety credit from 2.4% to 1.3%, and the post-surcharge rates will be adjusted accordingly.

Overall Impact

Exhibit 24 shows combined impacts from the above changes on both the ERP and WPS programs. The overall impact is estimated at a premium reduction of \$700,000. While individual employers will see varying impacts, the overall impacts will be made revenue neutral in conjunction with the annual rate filing.

Collectible Premium Ratios (CPR)

Virtually all ERPs result in at least a nominal “off-balance” when applied to dynamic groups of insureds over time. As part of the annual rate filing process and to address off-balance in the ERP, adjustments are made to the manual rates, so that the average rate after experience rating is in balance with the indicated rates in the filing. Any change in premium resulting from the introduction of a proposed ERP would be offset with corresponding off-balance factors in the rate filing to maintain a revenue neutral position due to the proposed ERP. By making these adjustments, the plan aims to provide a fair and balanced assessment of an employer's risk and appropriately reflect their past loss experience in predicting future losses. The DCRB has assessed the impact on the collectible premium ratios based on the data analyzed throughout the research conducted for this proposed plan. Exhibits 25a and 25b illustrate the average total collectible premium ratios under the current plan (0.9768) and the proposed plan (0.9947), respectively, highlighting the impact of these adjustments in achieving balance and accuracy in premium assessments. The difference in these factors represents the three-year average reduction in premium expected with moving to the proposed plan and estimates the change in rates required to keep the overall premium revenue neutral.

When considering the introduction of a proposed ERP, thorough testing is done to assess its impact. This evaluation encompasses the ERP's ability to produce fair modifications over time and its overall effect on the collectible rates. Exhibit 25c and 25d present a calculation of the expected rates factors (ELCFs) based on the proposed CPR using the current ERP (Exhibit 25a) and proposed CPR under the updated ERP (Exhibit 25b). The ELCFs, when applied to approved classification rates, produced ERP Table A values for use in generating expected losses used in the rating process.

Basic Manual Revisions

Sections of the manual impacted by this proposed ERP have been updated to reflect the changes discussed in this memorandum and have been included in this filing. Changes to other rating programs often tied to the ERP, such as the Merit Rating Plan and WPS, have also been reviewed. Regarding the Merit Rating Plan, no changes were necessary since the eligibility language in the plan does not explicitly reference a premium eligibility value, but states:

“A risk shall qualify for application of the Merit Rating Plan if BOTH of the following conditions are met:

- a) The risk does not qualify for experience rating, and
- b) The risk has exposure greater than zero during each year of the Merit Rating Plan experience period as defined herein.”

Changes were required for the WSP to match revised language from SB 306. The primary change was with eligibility and states, “A risk shall qualify for application of the Workplace Safety Program if the risk currently qualifies for the uniform experience rating plan.”

Closing Comments and Qualifications

The DCRB has intentionally submitted this filing in conjunction with the recently passed SB 306 and associated House Bill substantially before the proposed effective date to assure that all necessary review and discussion of this proposal can be concluded in advance of its implementation. The DCRB and the Department of Insurance would both benefit if the final structure of a proposed ERP and its associated rating values could be determined before the DCRB prepares and submits its December 1, 2024 Rates Filing given the adjustments required to keep the pricing plans in balance. In this scenario, the DCRB would submit, and the Department of Insurance could review a single set of rates reflecting both the necessary changes based on experience analysis and the technical adjustments warranted upon implementing the proposed ERP. For this described efficiency to be realized, a determination on this filing would be needed by early August 2024. Toward that mutual purpose, the DCRB looks forward to assisting the Department of Insurance in any possible way as it reviews and considers this proposal.

This filing has been developed by and under the direction of Brent Otto, FCAS, MAAA and Peter Yoon, ACAS, MAAA. They both meet the Qualification Standards of the American Academy of Actuaries to provide the actuarial opinion contained within this filing.

Please direct all questions to:

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Manual Revision to the Workplace Safety Program Rules and the Experience Rating Plan Rules

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 5,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.558	0.574	0.591	0.609	0.627	0.644	0.663	0.686	0.704	0.725	0.746	0.768	0.792	0.815	0.839	0.865	0.885	0.917	0.940	0.970
2,000	0.382	0.385	0.405	0.428	0.453	0.473	0.499	0.539	0.553	0.582	0.612	0.646	0.676	0.713	0.753	0.785	0.821	0.863	0.909	0.953
3,000	0.256	0.281	0.301	0.321	0.344	0.368	0.394	0.421	0.451	0.482	0.514	0.553	0.591	0.631	0.676	0.723	0.770	0.823	0.879	0.938
4,000	0.240	0.251	0.265	0.281	0.299	0.319	0.341	0.367	0.402	0.431	0.460	0.495	0.534	0.578	0.625	0.679	0.734	0.791	0.856	0.925
5,000	0.193	0.201	0.211	0.223	0.237	0.257	0.278	0.301	0.335	0.357	0.399	0.430	0.472	0.518	0.570	0.626	0.691	0.755	0.831	0.911
6,000	0.166	0.170	0.176	0.185	0.196	0.211	0.235	0.251	0.276	0.306	0.339	0.377	0.423	0.470	0.524	0.582	0.649	0.724	0.808	0.899
7,000	0.188	0.184	0.183	0.187	0.192	0.202	0.216	0.233	0.253	0.280	0.310	0.346	0.388	0.435	0.489	0.551	0.620	0.699	0.788	0.888
8,000	0.223	0.213	0.205	0.202	0.202	0.205	0.214	0.225	0.242	0.264	0.291	0.323	0.363	0.409	0.462	0.524	0.596	0.677	0.771	0.878
9,000	0.254	0.237	0.224	0.214	0.209	0.207	0.210	0.218	0.231	0.248	0.272	0.302	0.340	0.383	0.436	0.499	0.571	0.656	0.755	0.869
10,000	0.296	0.275	0.252	0.236	0.225	0.218	0.216	0.220	0.228	0.241	0.260	0.287	0.323	0.364	0.415	0.477	0.551	0.638	0.741	0.860
11,000	0.338	0.307	0.281	0.260	0.242	0.230	0.223	0.220	0.224	0.234	0.250	0.273	0.306	0.345	0.395	0.457	0.532	0.621	0.726	0.851
12,000	0.385	0.346	0.313	0.286	0.263	0.245	0.233	0.226	0.225	0.230	0.244	0.264	0.294	0.330	0.379	0.439	0.514	0.604	0.713	0.844
13,000	0.433	0.389	0.350	0.317	0.286	0.263	0.245	0.235	0.230	0.231	0.239	0.255	0.283	0.318	0.364	0.423	0.498	0.589	0.701	0.837
14,000	0.484	0.433	0.387	0.347	0.312	0.284	0.261	0.245	0.235	0.233	0.238	0.251	0.275	0.306	0.351	0.409	0.484	0.576	0.690	0.830
15,000	0.526	0.470	0.418	0.372	0.333	0.299	0.272	0.252	0.238	0.231	0.233	0.243	0.265	0.294	0.337	0.394	0.469	0.562	0.679	0.823
16,000	0.580	0.516	0.458	0.406	0.361	0.322	0.291	0.265	0.247	0.237	0.235	0.241	0.260	0.286	0.327	0.383	0.457	0.550	0.669	0.817
17,000	0.634	0.562	0.497	0.440	0.389	0.345	0.308	0.279	0.256	0.242	0.236	0.239	0.255	0.279	0.318	0.372	0.445	0.539	0.659	0.810
18,000	0.697	0.619	0.545	0.482	0.426	0.376	0.334	0.299	0.272	0.253	0.243	0.243	0.255	0.276	0.312	0.364	0.436	0.530	0.651	0.806
19,000	0.755	0.667	0.590	0.519	0.456	0.401	0.354	0.315	0.283	0.261	0.248	0.244	0.253	0.271	0.305	0.355	0.426	0.519	0.642	0.799
20,000	0.814	0.720	0.632	0.556	0.488	0.427	0.376	0.332	0.297	0.270	0.253	0.245	0.251	0.267	0.298	0.348	0.418	0.510	0.634	0.795
21,000	0.924	0.820	0.724	0.637	0.559	0.492	0.432	0.381	0.339	0.306	0.282	0.269	0.270	0.280	0.307	0.352	0.418	0.509	0.631	0.789
22,000	0.986	0.872	0.770	0.677	0.601	0.521	0.456	0.400	0.358	0.317	0.289	0.273	0.271	0.278	0.305	0.347	0.411	0.502	0.624	0.787
23,000	1.055	0.934	0.822	0.723	0.633	0.555	0.484	0.423	0.372	0.331	0.300	0.280	0.275	0.278	0.301	0.341	0.405	0.494	0.618	0.782
24,000	1.122	0.990	0.870	0.764	0.668	0.585	0.509	0.444	0.390	0.343	0.309	0.285	0.276	0.278	0.297	0.336	0.398	0.487	0.611	0.778
25,000	1.184	1.045	0.919	0.806	0.703	0.613	0.533	0.464	0.405	0.355	0.318	0.290	0.280	0.278	0.294	0.332	0.392	0.481	0.605	0.774
30,000	1.517	1.330	1.163	1.014	0.881	0.763	0.658	0.565	0.487	0.418	0.362	0.320	0.293	0.279	0.285	0.312	0.366	0.451	0.577	0.754
40,000	2.257	1.954	1.691	1.460	1.257	1.078	0.920	0.782	0.662	0.556	0.456	0.395	0.341	0.295	0.287	0.295	0.334	0.408	0.534	0.724
50,000	3.078	2.634	2.256	1.925	1.645	1.399	1.185	1.000	0.837	0.696	0.576	0.475	0.397	0.336	0.300	0.292	0.316	0.383	0.504	0.700
60,000	4.064	3.418	2.889	2.443	2.068	1.750	1.471	1.234	1.027	0.850	0.697	0.569	0.465	0.382	0.327	0.301	0.311	0.367	0.483	0.680
70,000	5.152	4.265	3.546	2.969	2.487	2.086	1.741	1.450	1.202	0.988	0.804	0.650	0.523	0.422	0.350	0.309	0.307	0.353	0.465	0.665
80,000	6.413	5.211	4.274	3.529	2.933	2.436	2.022	1.673	1.378	1.126	0.913	0.734	0.585	0.465	0.375	0.321	0.307	0.343	0.449	0.652
90,000	7.876	6.262	5.060	4.134	3.378	2.786	2.298	1.891	1.548	1.260	1.020	0.815	0.643	0.506	0.401	0.333	0.309	0.337	0.437	0.641
100,000	9.515	7.436	5.905	4.758	3.856	3.146	2.577	2.105	1.719	1.392	1.120	0.889	0.700	0.545	0.426	0.346	0.311	0.330	0.426	0.629
150,000	22.188	15.217	11.023	8.225	6.325	4.941	3.915	3.111	2.480	1.976	1.567	1.228	0.952	0.728	0.549	0.409	0.344	0.318	0.400	0.592
200,000	45.849	26.621	17.311	12.060	8.774	6.600	5.068	3.938	3.086	2.424	1.897	1.475	1.131	0.859	0.634	0.478	0.373	0.336	0.386	0.581
250,000	85.627	41.518	24.339	15.747	10.974	8.002	5.996	4.585	3.532	2.745	2.130	1.645	1.253	0.943	0.691	0.513	0.389	0.338	0.378	0.570
300,000	141.148	57.893	30.899	18.953	12.768	9.098	6.681	5.040	3.851	2.968	2.290	1.756	1.335	1.000	0.731	0.535	0.401	0.340	0.373	0.563
400,000	296.035	88.041	40.885	23.544	15.100	10.441	7.517	5.572	4.218	3.215	2.459	1.880	1.420	1.057	0.773	0.559	0.412	0.343	0.375	0.559
500,000	554.733	120.757	50.391	27.197	16.933	11.435	8.101	5.960	4.458	3.382	2.571	1.956	1.471	1.093	0.796	0.573	0.419	0.345	0.374	0.557

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 10,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.655	0.675	0.685	0.699	0.713	0.728	0.746	0.761	0.779	0.794	0.810	0.827	0.844	0.865	0.883	0.902	0.920	0.941	0.959	0.980
2,000	0.542	0.571	0.587	0.603	0.621	0.641	0.657	0.672	0.698	0.714	0.741	0.758	0.785	0.808	0.831	0.856	0.883	0.910	0.937	0.969
3,000	0.437	0.456	0.476	0.497	0.518	0.538	0.561	0.585	0.610	0.636	0.663	0.690	0.718	0.749	0.782	0.813	0.847	0.880	0.919	0.959
4,000	0.361	0.380	0.400	0.420	0.444	0.467	0.491	0.518	0.544	0.573	0.603	0.633	0.667	0.701	0.738	0.775	0.816	0.856	0.901	0.950
5,000	0.308	0.327	0.345	0.366	0.388	0.412	0.437	0.463	0.491	0.520	0.553	0.585	0.622	0.659	0.701	0.742	0.787	0.834	0.885	0.941
6,000	0.285	0.302	0.318	0.337	0.358	0.380	0.404	0.429	0.457	0.487	0.519	0.554	0.590	0.630	0.672	0.717	0.767	0.814	0.872	0.933
7,000	0.274	0.287	0.303	0.319	0.340	0.361	0.383	0.407	0.434	0.463	0.495	0.529	0.567	0.606	0.650	0.698	0.749	0.800	0.865	0.928
8,000	0.262	0.273	0.287	0.302	0.320	0.339	0.361	0.383	0.409	0.438	0.470	0.503	0.542	0.583	0.628	0.677	0.731	0.790	0.853	0.923
9,000	0.253	0.263	0.273	0.287	0.305	0.321	0.341	0.364	0.389	0.416	0.447	0.480	0.519	0.562	0.606	0.657	0.713	0.774	0.842	0.917
10,000	0.260	0.269	0.277	0.288	0.301	0.317	0.334	0.355	0.378	0.405	0.435	0.467	0.503	0.546	0.589	0.642	0.697	0.763	0.833	0.912
11,000	0.286	0.291	0.296	0.303	0.315	0.328	0.342	0.360	0.381	0.405	0.433	0.464	0.501	0.541	0.586	0.636	0.693	0.757	0.828	0.909
12,000	0.328	0.329	0.332	0.335	0.343	0.353	0.365	0.379	0.398	0.419	0.444	0.473	0.507	0.558	0.589	0.637	0.693	0.756	0.827	0.904
13,000	0.333	0.332	0.331	0.333	0.338	0.346	0.356	0.369	0.385	0.406	0.429	0.458	0.492	0.529	0.573	0.621	0.678	0.743	0.817	0.903
14,000	0.361	0.356	0.353	0.352	0.354	0.358	0.367	0.376	0.391	0.409	0.430	0.456	0.488	0.525	0.565	0.614	0.672	0.737	0.812	0.900
15,000	0.425	0.416	0.408	0.404	0.403	0.404	0.409	0.415	0.426	0.441	0.459	0.482	0.511	0.544	0.583	0.628	0.681	0.744	0.805	0.901
16,000	0.539	0.526	0.515	0.507	0.501	0.498	0.498	0.501	0.506	0.517	0.530	0.547	0.570	0.597	0.630	0.668	0.715	0.770	0.834	0.905
17,000	0.512	0.498	0.486	0.478	0.472	0.469	0.469	0.471	0.477	0.488	0.502	0.521	0.543	0.571	0.605	0.646	0.695	0.753	0.821	0.902
18,000	0.543	0.521	0.512	0.499	0.491	0.485	0.483	0.483	0.487	0.496	0.509	0.525	0.546	0.573	0.606	0.646	0.692	0.752	0.819	0.902
19,000	0.548	0.528	0.510	0.496	0.485	0.477	0.473	0.472	0.474	0.487	0.493	0.509	0.533	0.556	0.592	0.631	0.678	0.737	0.811	0.895
20,000	0.584	0.561	0.541	0.524	0.509	0.500	0.493	0.485	0.490	0.495	0.504	0.517	0.535	0.560	0.591	0.630	0.678	0.733	0.804	0.895
21,000	0.610	0.583	0.559	0.540	0.523	0.510	0.501	0.495	0.494	0.497	0.504	0.517	0.533	0.556	0.587	0.621	0.670	0.730	0.804	0.890
22,000	0.636	0.606	0.579	0.556	0.546	0.521	0.510	0.512	0.508	0.500	0.505	0.523	0.538	0.560	0.582	0.624	0.671	0.729	0.799	0.890
23,000	0.676	0.642	0.612	0.585	0.564	0.546	0.532	0.523	0.516	0.514	0.518	0.525	0.539	0.559	0.587	0.620	0.670	0.725	0.799	0.887
24,000	0.712	0.675	0.641	0.613	0.588	0.567	0.550	0.539	0.530	0.527	0.528	0.533	0.546	0.563	0.589	0.622	0.667	0.724	0.801	0.886
25,000	0.728	0.686	0.649	0.617	0.591	0.568	0.549	0.535	0.525	0.519	0.519	0.524	0.534	0.552	0.577	0.612	0.656	0.714	0.788	0.882
30,000	0.893	0.833	0.778	0.731	0.689	0.653	0.622	0.596	0.576	0.560	0.551	0.546	0.549	0.558	0.577	0.605	0.644	0.700	0.775	0.872
40,000	1.263	1.156	1.061	0.978	0.905	0.841	0.785	0.732	0.694	0.659	0.630	0.604	0.593	0.587	0.591	0.604	0.634	0.683	0.756	0.856
50,000	1.697	1.529	1.384	1.261	1.152	1.057	0.975	0.901	0.838	0.783	0.735	0.696	0.665	0.642	0.632	0.633	0.650	0.687	0.751	0.851
60,000	2.145	1.902	1.699	1.526	1.379	1.251	1.141	1.043	0.959	0.884	0.820	0.764	0.718	0.683	0.659	0.649	0.655	0.685	0.743	0.842
70,000	2.668	2.329	2.053	1.824	1.634	1.469	1.327	1.206	1.097	1.004	0.921	0.851	0.790	0.741	0.703	0.681	0.676	0.695	0.745	0.841
80,000	3.230	2.773	2.410	2.116	1.876	1.671	1.498	1.350	1.219	1.108	1.007	0.921	0.848	0.784	0.736	0.704	0.689	0.699	0.744	0.836
90,000	3.854	3.248	2.782	2.412	2.114	1.866	1.659	1.483	1.330	1.198	1.082	0.981	0.895	0.821	0.762	0.720	0.697	0.701	0.739	0.831
100,000	4.555	3.768	3.174	2.719	2.356	2.063	1.819	1.614	1.438	1.287	1.156	1.041	0.941	0.858	0.789	0.739	0.707	0.704	0.738	0.826
150,000	10.031	7.205	5.574	4.411	3.475	2.985	2.495	2.132	1.864	1.590	1.387	1.207	1.052	0.947	0.857	0.772	0.699	0.689	0.712	0.809
200,000	19.107	12.059	8.409	6.256	4.868	3.910	3.218	2.692	2.278	1.946	1.674	1.441	1.247	1.072	0.934	0.834	0.752	0.706	0.711	0.800
250,000	33.028	17.786	11.309	7.914	5.915	4.614	3.716	3.056	2.554	2.156	1.836	1.566	1.344	1.145	0.988	0.871	0.774	0.717	0.713	0.796
300,000	51.492	23.831	13.954	9.317	6.747	5.151	4.082	3.317	2.746	2.301	1.947	1.653	1.409	1.204	1.024	0.895	0.790	0.724	0.705	0.793
400,000	98.582	34.465	17.941	11.259	7.826	5.818	4.526	3.628	2.971	2.469	2.072	1.748	1.483	1.260	1.074	0.923	0.806	0.732	0.705	0.780
500,000	173.488	45.518	21.511	12.802	8.642	6.299	4.834	3.837	3.121	2.578	2.154	1.810	1.529	1.294	1.099	0.940	0.817	0.738	0.714	0.776

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 20,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.620	0.635	0.652	0.668	0.685	0.709	0.716	0.741	0.753	0.773	0.787	0.813	0.828	0.853	0.869	0.892	0.914	0.933	0.953	0.978
2,000	0.454	0.474	0.493	0.515	0.538	0.560	0.586	0.608	0.633	0.660	0.687	0.712	0.740	0.769	0.798	0.830	0.862	0.895	0.933	0.963
3,000	0.331	0.353	0.376	0.400	0.424	0.452	0.478	0.505	0.535	0.567	0.600	0.635	0.668	0.709	0.748	0.786	0.822	0.865	0.910	0.953
4,000	0.237	0.257	0.283	0.308	0.334	0.363	0.392	0.422	0.453	0.490	0.526	0.563	0.602	0.645	0.688	0.733	0.780	0.833	0.885	0.945
5,000	0.158	0.180	0.201	0.230	0.257	0.284	0.317	0.351	0.381	0.420	0.460	0.501	0.546	0.590	0.644	0.692	0.747	0.805	0.867	0.930
6,000	0.151	0.175	0.197	0.220	0.228	0.249	0.283	0.313	0.350	0.390	0.434	0.479	0.522	0.571	0.623	0.668	0.725	0.788	0.858	0.922
7,000	0.123	0.140	0.159	0.181	0.204	0.230	0.259	0.291	0.324	0.361	0.408	0.448	0.493	0.542	0.590	0.647	0.706	0.776	0.846	0.921
8,000	0.092	0.108	0.127	0.141	0.176	0.192	0.223	0.250	0.285	0.322	0.375	0.415	0.460	0.508	0.559	0.624	0.686	0.758	0.835	0.913
9,000	0.067	0.079	0.088	0.106	0.126	0.155	0.185	0.221	0.254	0.282	0.323	0.367	0.420	0.469	0.524	0.591	0.664	0.737	0.812	0.905
10,000	0.077	0.087	0.099	0.115	0.131	0.156	0.178	0.207	0.240	0.276	0.316	0.360	0.405	0.460	0.516	0.580	0.651	0.728	0.810	0.897
11,000	0.040	0.049	0.058	0.067	0.090	0.111	0.129	0.157	0.195	0.226	0.266	0.317	0.367	0.418	0.479	0.550	0.621	0.705	0.792	0.893
12,000	0.027	0.031	0.038	0.048	0.063	0.081	0.104	0.130	0.161	0.197	0.237	0.283	0.333	0.390	0.453	0.522	0.600	0.689	0.782	0.886
13,000	0.025	0.026	0.029	0.037	0.047	0.064	0.083	0.108	0.139	0.172	0.213	0.258	0.308	0.367	0.429	0.502	0.581	0.670	0.770	0.878
14,000	0.044	0.041	0.044	0.049	0.060	0.078	0.092	0.117	0.145	0.178	0.217	0.259	0.311	0.369	0.429	0.495	0.579	0.665	0.764	0.876
15,000	0.043	0.036	0.034	0.036	0.037	0.055	0.071	0.093	0.113	0.152	0.188	0.232	0.277	0.340	0.404	0.472	0.555	0.649	0.754	0.870
16,000	0.060	0.051	0.046	0.045	0.050	0.060	0.074	0.095	0.119	0.150	0.185	0.228	0.271	0.328	0.392	0.465	0.549	0.642	0.741	0.864
17,000	0.068	0.053	0.043	0.037	0.038	0.044	0.055	0.073	0.095	0.124	0.159	0.202	0.250	0.307	0.371	0.445	0.530	0.626	0.736	0.861
18,000	0.087	0.066	0.050	0.040	0.036	0.039	0.047	0.061	0.082	0.112	0.141	0.182	0.235	0.286	0.352	0.432	0.513	0.616	0.726	0.855
19,000	0.133	0.097	0.075	0.059	0.056	0.045	0.054	0.066	0.083	0.106	0.131	0.172	0.219	0.274	0.339	0.414	0.503	0.601	0.719	0.848
20,000	0.161	0.127	0.099	0.078	0.074	0.059	0.059	0.067	0.081	0.107	0.132	0.168	0.214	0.268	0.332	0.407	0.489	0.593	0.711	0.844
21,000	0.195	0.155	0.121	0.106	0.087	0.068	0.069	0.069	0.081	0.104	0.127	0.162	0.205	0.259	0.322	0.396	0.484	0.584	0.703	0.841
22,000	0.208	0.158	0.117	0.094	0.069	0.046	0.038	0.039	0.048	0.068	0.089	0.123	0.167	0.220	0.284	0.361	0.453	0.560	0.687	0.835
23,000	0.241	0.185	0.140	0.112	0.082	0.054	0.043	0.040	0.046	0.063	0.082	0.114	0.156	0.208	0.273	0.349	0.441	0.548	0.676	0.825
24,000	0.314	0.247	0.180	0.156	0.119	0.082	0.059	0.060	0.061	0.074	0.083	0.119	0.159	0.203	0.266	0.341	0.436	0.541	0.669	0.822
25,000	0.340	0.267	0.205	0.165	0.124	0.092	0.065	0.055	0.054	0.069	0.079	0.107	0.145	0.197	0.255	0.331	0.425	0.534	0.662	0.819
30,000	0.526	0.419	0.328	0.266	0.203	0.154	0.108	0.082	0.069	0.070	0.074	0.093	0.126	0.168	0.225	0.299	0.389	0.501	0.637	0.801
40,000	1.001	0.808	0.645	0.527	0.412	0.319	0.234	0.177	0.136	0.116	0.097	0.102	0.114	0.145	0.190	0.255	0.342	0.454	0.596	0.774
50,000	1.567	1.261	1.006	0.817	0.641	0.497	0.368	0.276	0.205	0.161	0.119	0.108	0.105	0.116	0.153	0.210	0.293	0.402	0.550	0.746
60,000	1.980	1.559	1.223	0.974	0.750	0.569	0.408	0.292	0.202	0.141	0.086	0.062	0.052	0.057	0.087	0.141	0.224	0.340	0.499	0.714
70,000	2.921	2.289	1.793	1.434	1.117	0.864	0.643	0.483	0.356	0.266	0.184	0.138	0.107	0.096	0.111	0.151	0.222	0.328	0.483	0.699
80,000	3.876	2.997	2.326	1.811	1.408	1.091	0.838	0.636	0.476	0.352	0.256	0.187	0.142	0.120	0.122	0.151	0.213	0.313	0.464	0.684
90,000	4.820	3.659	2.800	2.155	1.657	1.273	0.972	0.735	0.549	0.401	0.288	0.205	0.148	0.114	0.108	0.130	0.187	0.285	0.438	0.666
100,000	6.101	4.556	3.441	2.625	2.008	1.538	1.176	0.893	0.672	0.498	0.363	0.262	0.189	0.144	0.127	0.139	0.186	0.277	0.427	0.653
150,000	15.911	10.569	7.340	5.224	3.821	2.839	2.128	1.596	1.206	0.905	0.673	0.496	0.361	0.264	0.200	0.174	0.185	0.248	0.380	0.613
200,000	33.257	19.077	12.009	8.018	5.568	3.986	2.911	2.152	1.625	1.198	0.891	0.665	0.485	0.348	0.258	0.203	0.194	0.241	0.356	0.589
250,000	61.148	30.092	17.266	10.791	7.185	4.987	3.559	2.592	1.932	1.415	1.049	0.781	0.569	0.408	0.298	0.226	0.201	0.236	0.343	0.575
300,000	98.430	41.986	22.222	13.223	8.520	5.780	4.051	2.915	2.157	1.572	1.162	0.855	0.624	0.450	0.327	0.242	0.208	0.235	0.336	0.565
400,000	193.005	63.280	29.792	16.697	10.290	6.782	4.661	3.303	2.423	1.753	1.291	0.949	0.692	0.499	0.357	0.263	0.217	0.231	0.327	0.555
500,000	339.271	85.601	36.755	19.495	11.670	7.524	5.091	3.577	2.599	1.873	1.374	1.008	0.734	0.529	0.377	0.275	0.222	0.232	0.323	0.550

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 30,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.668	0.691	0.700	0.713	0.749	0.744	0.759	0.774	0.787	0.818	0.822	0.839	0.868	0.873	0.899	0.909	0.930	0.944	0.959	0.980
2,000	0.559	0.578	0.550	0.608	0.630	0.648	0.663	0.686	0.710	0.724	0.748	0.760	0.785	0.814	0.824	0.863	0.892	0.910	0.944	0.969
3,000	0.422	0.440	0.459	0.479	0.504	0.524	0.547	0.573	0.598	0.625	0.654	0.683	0.710	0.742	0.777	0.809	0.846	0.881	0.919	0.959
4,000	0.347	0.365	0.393	0.407	0.429	0.453	0.478	0.503	0.536	0.560	0.606	0.629	0.658	0.695	0.735	0.772	0.815	0.866	0.901	0.952
5,000	0.289	0.336	0.325	0.372	0.372	0.394	0.434	0.448	0.498	0.508	0.561	0.586	0.624	0.665	0.699	0.750	0.790	0.846	0.892	0.944
6,000	0.254	0.271	0.290	0.311	0.333	0.353	0.379	0.407	0.437	0.469	0.503	0.543	0.580	0.623	0.673	0.717	0.767	0.819	0.879	0.935
7,000	0.219	0.235	0.252	0.272	0.293	0.317	0.343	0.370	0.400	0.433	0.468	0.506	0.548	0.591	0.638	0.689	0.743	0.803	0.863	0.930
8,000	0.215	0.229	0.244	0.263	0.283	0.304	0.329	0.356	0.382	0.418	0.452	0.487	0.532	0.576	0.623	0.675	0.729	0.789	0.855	0.924
9,000	0.294	0.300	0.291	0.318	0.332	0.342	0.354	0.388	0.408	0.426	0.461	0.505	0.538	0.573	0.622	0.675	0.729	0.785	0.853	0.923
10,000	0.311	0.309	0.313	0.321	0.331	0.344	0.362	0.380	0.401	0.427	0.460	0.493	0.530	0.572	0.616	0.671	0.721	0.782	0.844	0.917
11,000	0.346	0.342	0.341	0.344	0.353	0.362	0.370	0.387	0.407	0.427	0.455	0.485	0.519	0.558	0.603	0.654	0.710	0.767	0.840	0.911
12,000	0.262	0.257	0.257	0.261	0.266	0.276	0.290	0.307	0.328	0.354	0.384	0.419	0.458	0.503	0.553	0.618	0.672	0.751	0.826	0.908
13,000	0.390	0.372	0.360	0.360	0.358	0.358	0.368	0.378	0.392	0.411	0.426	0.455	0.491	0.531	0.574	0.627	0.686	0.752	0.810	0.901
14,000	0.386	0.369	0.356	0.348	0.343	0.342	0.347	0.329	0.343	0.385	0.408	0.436	0.452	0.494	0.540	0.602	0.668	0.737	0.808	0.903
15,000	0.394	0.366	0.357	0.341	0.353	0.330	0.338	0.340	0.357	0.375	0.391	0.420	0.452	0.503	0.542	0.599	0.657	0.729	0.807	0.897
16,000	0.472	0.442	0.422	0.410	0.401	0.390	0.384	0.389	0.388	0.406	0.417	0.439	0.465	0.503	0.548	0.607	0.662	0.727	0.807	0.894
17,000	0.484	0.453	0.427	0.406	0.389	0.379	0.374	0.376	0.380	0.390	0.412	0.430	0.458	0.493	0.536	0.591	0.648	0.718	0.800	0.889
18,000	0.498	0.462	0.436	0.412	0.392	0.382	0.375	0.372	0.377	0.386	0.401	0.425	0.453	0.489	0.536	0.584	0.651	0.713	0.795	0.892
19,000	0.591	0.548	0.511	0.480	0.454	0.435	0.422	0.414	0.413	0.417	0.427	0.444	0.468	0.500	0.540	0.589	0.648	0.710	0.793	0.888
20,000	0.631	0.583	0.540	0.506	0.475	0.452	0.435	0.424	0.420	0.421	0.430	0.445	0.467	0.498	0.536	0.585	0.644	0.712	0.791	0.886
21,000	0.751	0.674	0.616	0.586	0.540	0.497	0.477	0.466	0.442	0.438	0.443	0.454	0.469	0.498	0.533	0.581	0.635	0.705	0.789	0.885
22,000	0.748	0.669	0.610	0.563	0.534	0.492	0.470	0.454	0.441	0.436	0.439	0.451	0.465	0.494	0.530	0.576	0.634	0.699	0.782	0.882
23,000	0.804	0.734	0.668	0.619	0.567	0.527	0.494	0.471	0.454	0.445	0.443	0.451	0.464	0.491	0.525	0.570	0.627	0.696	0.780	0.881
24,000	0.861	0.781	0.710	0.648	0.596	0.550	0.514	0.484	0.465	0.452	0.447	0.451	0.465	0.487	0.520	0.564	0.620	0.691	0.775	0.878
25,000	0.906	0.819	0.741	0.675	0.617	0.567	0.527	0.495	0.471	0.455	0.448	0.451	0.461	0.483	0.514	0.558	0.614	0.685	0.770	0.875
30,000	1.185	1.057	0.943	0.857	0.769	0.694	0.623	0.571	0.530	0.499	0.478	0.459	0.472	0.483	0.507	0.545	0.592	0.662	0.752	0.863
40,000	1.825	1.595	1.395	1.222	1.070	0.939	0.825	0.729	0.648	0.582	0.531	0.496	0.473	0.468	0.476	0.506	0.553	0.622	0.717	0.840
50,000	2.552	2.172	1.872	1.614	1.410	1.201	1.039	0.900	0.784	0.694	0.608	0.550	0.507	0.485	0.480	0.497	0.536	0.603	0.695	0.825
60,000	3.574	3.036	2.585	2.203	1.879	1.604	1.371	1.173	1.004	0.862	0.749	0.659	0.588	0.543	0.516	0.517	0.542	0.596	0.685	0.816
70,000	4.385	3.669	3.079	2.596	2.185	1.844	1.557	1.317	1.113	0.944	0.807	0.697	0.609	0.548	0.513	0.504	0.524	0.576	0.666	0.803
80,000	5.696	4.697	3.895	3.243	2.708	2.266	1.898	1.590	1.334	1.122	0.946	0.805	0.692	0.608	0.553	0.529	0.533	0.575	0.657	0.794
90,000	6.853	5.558	4.546	3.740	3.089	2.560	2.124	1.765	1.468	1.222	1.021	0.856	0.727	0.629	0.561	0.525	0.523	0.561	0.643	0.783
100,000	8.538	6.817	5.503	4.479	3.667	3.016	2.487	2.055	1.701	1.410	1.171	0.976	0.821	0.701	0.615	0.562	0.546	0.571	0.645	0.781
150,000	17.628	12.815	9.521	7.356	5.724	4.501	3.575	2.855	2.287	1.836	1.483	1.181	0.955	0.769	0.649	0.548	0.502	0.507	0.582	0.728
200,000	33.150	21.573	14.988	10.854	8.086	6.152	4.749	3.704	2.910	2.295	1.828	1.433	1.132	0.909	0.729	0.591	0.518	0.511	0.559	0.710
250,000	54.087	31.359	20.314	14.009	10.086	7.473	5.652	4.337	3.362	2.623	2.054	1.609	1.260	1.000	0.791	0.629	0.537	0.507	0.562	0.698
300,000	80.549	41.829	25.537	16.978	11.919	8.672	6.468	4.914	3.781	2.935	2.276	1.791	1.401	1.098	0.865	0.692	0.573	0.536	0.558	0.692
400,000	136.054	58.017	32.490	20.593	13.983	9.938	7.283	5.457	4.155	3.197	2.477	1.925	1.498	1.167	0.911	0.722	0.588	0.534	0.554	0.688
500,000	211.466	73.732	38.456	23.436	15.541	10.859	7.858	5.834	4.407	3.370	2.598	2.011	1.560	1.210	0.940	0.740	0.598	0.537	0.552	0.685

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 40,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.752	0.762	0.773	0.785	0.795	0.806	0.818	0.828	0.840	0.853	0.866	0.880	0.890	0.904	0.918	0.932	0.941	0.954	0.972	0.986
2,000	0.618	0.629	0.634	0.658	0.677	0.685	0.713	0.732	0.742	0.767	0.786	0.802	0.821	0.839	0.859	0.884	0.904	0.926	0.951	0.978
3,000	0.627	0.640	0.655	0.669	0.684	0.698	0.714	0.731	0.746	0.762	0.781	0.799	0.819	0.841	0.856	0.878	0.902	0.923	0.944	0.975
4,000	0.546	0.601	0.588	0.602	0.641	0.637	0.664	0.673	0.695	0.732	0.762	0.753	0.779	0.805	0.828	0.856	0.884	0.916	0.937	0.969
5,000	0.531	0.549	0.563	0.579	0.594	0.614	0.630	0.650	0.667	0.690	0.714	0.735	0.762	0.785	0.810	0.839	0.875	0.896	0.931	0.963
6,000	0.497	0.511	0.516	0.538	0.549	0.572	0.588	0.612	0.637	0.664	0.699	0.727	0.748	0.764	0.785	0.819	0.853	0.894	0.929	0.962
7,000	0.437	0.454	0.471	0.488	0.507	0.528	0.545	0.568	0.591	0.616	0.640	0.667	0.698	0.728	0.762	0.795	0.831	0.870	0.915	0.954
8,000	0.404	0.432	0.436	0.466	0.472	0.503	0.513	0.546	0.560	0.594	0.612	0.649	0.672	0.714	0.739	0.783	0.814	0.862	0.903	0.952
9,000	0.394	0.409	0.424	0.439	0.460	0.459	0.494	0.517	0.532	0.570	0.586	0.626	0.652	0.692	0.728	0.763	0.803	0.845	0.894	0.947
10,000	0.365	0.377	0.393	0.408	0.432	0.452	0.468	0.494	0.518	0.543	0.576	0.604	0.638	0.672	0.711	0.749	0.792	0.839	0.891	0.944
11,000	0.356	0.368	0.397	0.400	0.420	0.447	0.467	0.482	0.516	0.543	0.568	0.572	0.632	0.667	0.703	0.744	0.788	0.835	0.885	0.939
12,000	0.297	0.311	0.270	0.317	0.360	0.359	0.404	0.407	0.434	0.485	0.494	0.549	0.570	0.606	0.669	0.713	0.762	0.814	0.867	0.936
13,000	0.238	0.255	0.257	0.274	0.304	0.325	0.349	0.376	0.404	0.423	0.456	0.501	0.539	0.583	0.629	0.682	0.734	0.797	0.859	0.930
14,000	0.214	0.227	0.242	0.258	0.279	0.299	0.322	0.347	0.372	0.403	0.436	0.474	0.515	0.558	0.607	0.659	0.715	0.778	0.847	0.921
15,000	0.234	0.245	0.259	0.274	0.293	0.313	0.334	0.359	0.385	0.415	0.448	0.469	0.510	0.564	0.611	0.674	0.729	0.775	0.833	0.915
16,000	0.199	0.210	0.223	0.238	0.257	0.267	0.298	0.323	0.352	0.382	0.415	0.452	0.488	0.532	0.587	0.637	0.704	0.765	0.838	0.911
17,000	0.184	0.194	0.206	0.234	0.239	0.270	0.280	0.316	0.332	0.373	0.395	0.433	0.483	0.522	0.578	0.627	0.688	0.755	0.833	0.910
18,000	0.157	0.167	0.179	0.193	0.210	0.229	0.251	0.276	0.304	0.336	0.371	0.418	0.467	0.520	0.562	0.618	0.685	0.752	0.823	0.907
19,000	0.163	0.171	0.182	0.196	0.212	0.226	0.248	0.276	0.303	0.334	0.369	0.406	0.442	0.493	0.545	0.602	0.668	0.740	0.814	0.905
20,000	0.175	0.182	0.192	0.203	0.219	0.235	0.256	0.279	0.305	0.335	0.368	0.405	0.448	0.495	0.546	0.597	0.660	0.732	0.812	0.900
21,000	0.152	0.158	0.166	0.177	0.190	0.207	0.227	0.250	0.275	0.306	0.340	0.378	0.421	0.468	0.522	0.581	0.652	0.725	0.804	0.898
22,000	0.138	0.133	0.140	0.150	0.178	0.194	0.213	0.235	0.256	0.286	0.320	0.359	0.408	0.451	0.502	0.573	0.640	0.718	0.802	0.894
23,000	0.140	0.142	0.148	0.157	0.168	0.183	0.204	0.226	0.252	0.282	0.317	0.354	0.396	0.446	0.494	0.560	0.630	0.709	0.793	0.892
24,000	0.145	0.142	0.143	0.153	0.169	0.184	0.202	0.216	0.249	0.278	0.311	0.349	0.389	0.441	0.496	0.557	0.623	0.703	0.790	0.888
25,000	0.153	0.152	0.154	0.160	0.170	0.180	0.197	0.217	0.242	0.270	0.305	0.342	0.385	0.434	0.488	0.550	0.620	0.698	0.789	0.885
30,000	0.170	0.150	0.137	0.129	0.126	0.129	0.137	0.150	0.172	0.195	0.224	0.260	0.303	0.352	0.410	0.472	0.551	0.638	0.742	0.866
40,000	0.256	0.206	0.190	0.136	0.116	0.103	0.117	0.117	0.108	0.124	0.163	0.193	0.232	0.269	0.337	0.407	0.489	0.588	0.703	0.839
50,000	0.490	0.396	0.319	0.259	0.212	0.176	0.152	0.137	0.131	0.134	0.147	0.169	0.200	0.242	0.297	0.365	0.449	0.549	0.674	0.821
60,000	0.561	0.459	0.382	0.323	0.274	0.243	0.231	0.223	0.223	0.223	0.240	0.264	0.306	0.349	0.400	0.455	0.530	0.616	0.723	0.851
70,000	0.779	0.635	0.526	0.443	0.382	0.338	0.309	0.291	0.284	0.287	0.298	0.318	0.346	0.383	0.430	0.486	0.555	0.614	0.736	0.845
80,000	1.038	0.808	0.641	0.514	0.425	0.351	0.301	0.269	0.250	0.243	0.247	0.265	0.289	0.323	0.369	0.428	0.501	0.590	0.698	0.838
90,000	1.341	1.030	0.801	0.631	0.504	0.410	0.342	0.291	0.265	0.247	0.247	0.257	0.278	0.309	0.353	0.410	0.504	0.589	0.686	0.831
100,000	1.658	1.240	0.937	0.715	0.550	0.429	0.340	0.277	0.235	0.207	0.201	0.205	0.223	0.251	0.296	0.355	0.431	0.528	0.650	0.804
150,000	7.412	5.219	3.825	2.874	2.204	1.713	1.345	1.063	0.845	0.676	0.544	0.445	0.373	0.328	0.307	0.315	0.352	0.426	0.548	0.722
200,000	15.953	9.943	6.710	4.770	3.514	2.657	2.046	1.596	1.258	0.998	0.798	0.644	0.528	0.445	0.392	0.371	0.384	0.438	0.545	0.722
250,000	27.442	15.041	9.390	6.337	4.511	3.330	2.521	1.943	1.518	1.196	0.951	0.762	0.617	0.511	0.439	0.400	0.398	0.436	0.536	0.712
300,000	41.534	20.178	11.767	7.612	5.271	3.816	2.848	2.173	1.684	1.320	1.043	0.831	0.669	0.548	0.463	0.415	0.404	0.437	0.531	0.705
400,000	72.531	28.897	15.291	9.377	6.263	4.429	3.253	2.453	1.885	1.468	1.154	0.915	0.731	0.593	0.494	0.433	0.411	0.436	0.523	0.697
500,000	113.100	37.549	18.374	10.764	7.006	4.866	3.529	2.639	2.015	1.560	1.222	0.964	0.768	0.619	0.512	0.444	0.416	0.437	0.520	0.693

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 50,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.737	0.750	0.761	0.774	0.786	0.800	0.810	0.821	0.836	0.848	0.860	0.873	0.886	0.900	0.914	0.928	0.942	0.957	0.970	0.986
2,000	0.640	0.651	0.666	0.685	0.700	0.713	0.732	0.749	0.763	0.781	0.797	0.815	0.836	0.853	0.871	0.894	0.914	0.935	0.955	0.978
3,000	0.559	0.577	0.593	0.611	0.630	0.650	0.669	0.688	0.708	0.729	0.751	0.774	0.796	0.818	0.843	0.868	0.893	0.918	0.945	0.972
4,000	0.499	0.517	0.537	0.556	0.576	0.597	0.619	0.641	0.662	0.687	0.711	0.737	0.761	0.788	0.816	0.842	0.873	0.904	0.934	0.968
5,000	0.448	0.465	0.485	0.507	0.528	0.553	0.576	0.597	0.623	0.648	0.675	0.704	0.731	0.760	0.791	0.822	0.857	0.890	0.925	0.962
6,000	0.413	0.425	0.429	0.457	0.480	0.513	0.525	0.563	0.582	0.622	0.641	0.675	0.694	0.733	0.767	0.804	0.838	0.877	0.916	0.959
7,000	0.362	0.385	0.408	0.432	0.454	0.479	0.503	0.530	0.558	0.586	0.618	0.646	0.682	0.713	0.750	0.787	0.826	0.866	0.909	0.955
8,000	0.326	0.348	0.370	0.394	0.418	0.445	0.471	0.499	0.528	0.559	0.591	0.624	0.659	0.695	0.731	0.772	0.814	0.858	0.902	0.950
9,000	0.296	0.318	0.347	0.371	0.390	0.416	0.444	0.477	0.507	0.534	0.567	0.602	0.641	0.678	0.716	0.757	0.800	0.848	0.896	0.947
10,000	0.271	0.291	0.314	0.339	0.365	0.391	0.418	0.448	0.478	0.511	0.545	0.581	0.619	0.659	0.700	0.744	0.790	0.839	0.889	0.943
11,000	0.245	0.269	0.289	0.314	0.341	0.368	0.397	0.427	0.460	0.489	0.523	0.561	0.601	0.641	0.684	0.731	0.779	0.828	0.882	0.939
12,000	0.232	0.254	0.285	0.301	0.327	0.361	0.383	0.413	0.449	0.477	0.514	0.555	0.594	0.632	0.678	0.725	0.774	0.824	0.879	0.937
13,000	0.217	0.238	0.261	0.287	0.313	0.338	0.367	0.397	0.429	0.465	0.501	0.538	0.577	0.620	0.666	0.711	0.761	0.817	0.874	0.935
14,000	0.194	0.216	0.239	0.263	0.281	0.309	0.338	0.377	0.409	0.444	0.481	0.514	0.558	0.604	0.651	0.700	0.755	0.807	0.869	0.933
15,000	0.169	0.190	0.213	0.237	0.264	0.292	0.321	0.353	0.386	0.421	0.459	0.499	0.541	0.587	0.635	0.686	0.741	0.800	0.862	0.929
16,000	0.154	0.175	0.197	0.222	0.248	0.276	0.305	0.337	0.370	0.406	0.444	0.485	0.528	0.574	0.624	0.676	0.733	0.793	0.857	0.926
17,000	0.131	0.151	0.173	0.197	0.223	0.250	0.281	0.313	0.347	0.384	0.423	0.464	0.509	0.556	0.607	0.662	0.720	0.783	0.855	0.924
18,000	0.117	0.137	0.160	0.184	0.209	0.237	0.267	0.299	0.333	0.370	0.409	0.451	0.496	0.545	0.597	0.652	0.712	0.776	0.845	0.921
19,000	0.107	0.127	0.150	0.173	0.199	0.225	0.255	0.288	0.324	0.360	0.397	0.438	0.483	0.534	0.587	0.643	0.704	0.769	0.841	0.920
20,000	0.100	0.119	0.140	0.163	0.189	0.216	0.245	0.279	0.313	0.348	0.391	0.430	0.476	0.528	0.577	0.633	0.697	0.763	0.835	0.916
21,000	0.096	0.114	0.135	0.158	0.183	0.210	0.239	0.271	0.298	0.343	0.383	0.426	0.471	0.521	0.575	0.632	0.691	0.759	0.833	0.914
22,000	0.091	0.108	0.129	0.151	0.176	0.203	0.232	0.263	0.298	0.335	0.374	0.417	0.462	0.512	0.567	0.625	0.689	0.758	0.832	0.911
23,000	0.081	0.099	0.119	0.141	0.165	0.191	0.220	0.252	0.286	0.323	0.364	0.407	0.453	0.504	0.559	0.618	0.682	0.752	0.828	0.910
24,000	0.082	0.095	0.115	0.137	0.161	0.187	0.216	0.248	0.283	0.319	0.359	0.402	0.449	0.500	0.555	0.615	0.680	0.747	0.825	0.910
25,000	0.075	0.091	0.111	0.132	0.157	0.191	0.212	0.244	0.276	0.313	0.355	0.399	0.446	0.495	0.558	0.611	0.676	0.747	0.823	0.908
30,000	0.047	0.062	0.080	0.101	0.124	0.150	0.179	0.210	0.244	0.281	0.322	0.366	0.414	0.465	0.524	0.586	0.653	0.728	0.810	0.900
40,000	0.024	0.030	0.041	0.055	0.073	0.095	0.121	0.149	0.182	0.218	0.258	0.303	0.352	0.407	0.467	0.534	0.608	0.690	0.783	0.886
50,000	0.022	0.016	0.017	0.023	0.035	0.052	0.073	0.098	0.129	0.163	0.203	0.247	0.292	0.353	0.417	0.483	0.566	0.652	0.755	0.870
60,000	0.049	0.027	0.017	0.011	0.014	0.025	0.041	0.064	0.090	0.122	0.160	0.204	0.253	0.310	0.375	0.448	0.531	0.626	0.733	0.857
70,000	0.128	0.085	0.058	0.043	0.038	0.042	0.053	0.071	0.094	0.124	0.161	0.200	0.250	0.306	0.369	0.441	0.524	0.619	0.720	0.854
80,000	0.187	0.117	0.070	0.041	0.025	0.028	0.033	0.046	0.058	0.085	0.127	0.167	0.207	0.271	0.327	0.409	0.488	0.593	0.709	0.843
90,000	0.318	0.200	0.120	0.068	0.035	0.018	0.014	0.020	0.035	0.058	0.089	0.128	0.175	0.231	0.297	0.373	0.461	0.566	0.687	0.832
100,000	0.475	0.304	0.188	0.110	0.060	0.030	0.017	0.016	0.026	0.046	0.075	0.112	0.157	0.213	0.278	0.354	0.444	0.550	0.675	0.823
150,000	1.812	1.129	0.717	0.457	0.292	0.188	0.125	0.090	0.076	0.079	0.095	0.123	0.161	0.210	0.270	0.343	0.430	0.534	0.660	0.813
200,000	4.659	2.657	1.610	1.014	0.656	0.437	0.300	0.218	0.172	0.152	0.151	0.166	0.194	0.234	0.286	0.352	0.433	0.533	0.655	0.808
250,000	8.422	4.295	2.430	1.460	0.916	0.594	0.398	0.279	0.210	0.174	0.162	0.169	0.190	0.226	0.274	0.337	0.416	0.515	0.640	0.797
300,000	13.082	6.030	3.217	1.867	1.148	0.737	0.491	0.343	0.256	0.209	0.189	0.190	0.207	0.238	0.283	0.343	0.419	0.516	0.638	0.796
400,000	22.848	8.944	4.386	2.431	1.450	0.913	0.601	0.416	0.307	0.245	0.216	0.209	0.221	0.247	0.288	0.344	0.417	0.511	0.632	0.791
500,000	34.943	11.807	5.408	2.878	1.676	1.038	0.675	0.463	0.338	0.266	0.230	0.220	0.228	0.252	0.290	0.344	0.415	0.508	0.629	0.788

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 60,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.696	0.710	0.723	0.737	0.758	0.771	0.785	0.796	0.810	0.825	0.834	0.850	0.866	0.882	0.900	0.918	0.933	0.950	0.965	0.986
2,000	0.589	0.607	0.622	0.639	0.657	0.677	0.693	0.713	0.732	0.753	0.771	0.796	0.817	0.839	0.859	0.883	0.904	0.925	0.949	0.978
3,000	0.600	0.615	0.630	0.607	0.626	0.644	0.697	0.716	0.702	0.725	0.747	0.769	0.811	0.815	0.842	0.865	0.890	0.925	0.943	0.974
4,000	0.568	0.595	0.602	0.617	0.644	0.656	0.672	0.697	0.711	0.729	0.755	0.777	0.793	0.819	0.842	0.863	0.890	0.915	0.936	0.969
5,000	0.503	0.521	0.538	0.557	0.576	0.599	0.617	0.638	0.660	0.683	0.705	0.728	0.751	0.782	0.810	0.839	0.871	0.901	0.930	0.967
6,000	0.483	0.501	0.519	0.538	0.558	0.580	0.599	0.621	0.645	0.668	0.692	0.713	0.745	0.768	0.792	0.831	0.858	0.887	0.921	0.961
7,000	0.466	0.483	0.502	0.521	0.528	0.549	0.583	0.606	0.619	0.642	0.679	0.696	0.724	0.763	0.791	0.816	0.851	0.888	0.924	0.956
8,000	0.449	0.466	0.484	0.504	0.524	0.544	0.569	0.589	0.614	0.641	0.662	0.684	0.719	0.751	0.763	0.802	0.849	0.874	0.915	0.958
9,000	0.464	0.485	0.502	0.517	0.536	0.558	0.580	0.608	0.630	0.646	0.673	0.701	0.731	0.754	0.785	0.820	0.853	0.875	0.921	0.957
10,000	0.446	0.462	0.490	0.508	0.526	0.546	0.558	0.580	0.603	0.635	0.661	0.687	0.704	0.739	0.767	0.801	0.843	0.881	0.918	0.957
11,000	0.413	0.430	0.448	0.467	0.486	0.507	0.529	0.552	0.576	0.604	0.629	0.657	0.688	0.721	0.753	0.788	0.828	0.866	0.908	0.956
12,000	0.384	0.401	0.422	0.438	0.461	0.480	0.505	0.525	0.554	0.578	0.607	0.635	0.669	0.701	0.737	0.773	0.814	0.855	0.904	0.949
13,000	0.390	0.407	0.424	0.442	0.462	0.482	0.504	0.528	0.552	0.573	0.606	0.634	0.666	0.699	0.734	0.770	0.807	0.852	0.903	0.947
14,000	0.362	0.376	0.402	0.419	0.433	0.456	0.477	0.503	0.529	0.550	0.588	0.614	0.648	0.683	0.717	0.758	0.802	0.845	0.894	0.945
15,000	0.358	0.364	0.401	0.406	0.438	0.447	0.467	0.497	0.519	0.542	0.587	0.600	0.642	0.674	0.713	0.752	0.791	0.840	0.889	0.942
16,000	0.322	0.346	0.362	0.374	0.401	0.423	0.440	0.470	0.495	0.525	0.548	0.586	0.626	0.657	0.708	0.734	0.790	0.836	0.890	0.941
17,000	0.320	0.335	0.352	0.371	0.390	0.412	0.435	0.459	0.486	0.514	0.544	0.577	0.611	0.649	0.689	0.732	0.778	0.827	0.888	0.936
18,000	0.379	0.394	0.408	0.424	0.441	0.456	0.479	0.501	0.524	0.550	0.577	0.605	0.638	0.671	0.707	0.746	0.786	0.835	0.883	0.937
19,000	0.355	0.368	0.381	0.397	0.414	0.441	0.453	0.484	0.500	0.533	0.555	0.593	0.619	0.660	0.698	0.739	0.783	0.832	0.883	0.937
20,000	0.326	0.338	0.352	0.367	0.337	0.403	0.424	0.403	0.471	0.501	0.489	0.560	0.596	0.601	0.676	0.721	0.764	0.816	0.877	0.936
21,000	0.349	0.359	0.371	0.385	0.401	0.418	0.438	0.460	0.483	0.509	0.537	0.564	0.594	0.628	0.673	0.713	0.754	0.810	0.865	0.931
22,000	0.264	0.277	0.292	0.308	0.327	0.348	0.370	0.395	0.422	0.452	0.501	0.520	0.556	0.610	0.653	0.689	0.749	0.815	0.863	0.931
23,000	0.257	0.270	0.284	0.298	0.319	0.339	0.361	0.386	0.413	0.442	0.475	0.509	0.547	0.588	0.633	0.682	0.735	0.793	0.855	0.928
24,000	0.232	0.244	0.258	0.272	0.292	0.312	0.335	0.360	0.388	0.422	0.455	0.489	0.531	0.572	0.615	0.666	0.719	0.782	0.848	0.923
25,000	0.180	0.192	0.208	0.219	0.240	0.261	0.284	0.310	0.339	0.371	0.406	0.442	0.513	0.531	0.581	0.636	0.711	0.774	0.835	0.918
30,000	0.077	0.088	0.105	0.119	0.141	0.163	0.191	0.220	0.252	0.283	0.322	0.364	0.414	0.463	0.515	0.581	0.649	0.732	0.816	0.894
40,000	0.060	0.059	0.062	0.070	0.081	0.097	0.116	0.140	0.168	0.200	0.237	0.278	0.325	0.379	0.439	0.506	0.582	0.673	0.768	0.877
50,000	0.101	0.093	0.091	0.095	0.104	0.117	0.135	0.157	0.183	0.213	0.248	0.288	0.333	0.384	0.449	0.507	0.587	0.670	0.765	0.874
60,000	0.149	0.124	0.110	0.103	0.104	0.110	0.122	0.140	0.162	0.189	0.221	0.259	0.303	0.353	0.411	0.478	0.552	0.641	0.743	0.859
70,000	0.180	0.131	0.106	0.091	0.088	0.089	0.096	0.110	0.129	0.153	0.184	0.219	0.263	0.313	0.372	0.442	0.521	0.613	0.722	0.847
80,000	0.183	0.121	0.079	0.054	0.042	0.040	0.047	0.061	0.082	0.109	0.142	0.182	0.229	0.283	0.340	0.415	0.496	0.596	0.709	0.839
90,000	0.292	0.195	0.127	0.085	0.064	0.053	0.050	0.059	0.079	0.106	0.131	0.172	0.220	0.272	0.329	0.404	0.489	0.586	0.699	0.837
100,000	0.458	0.323	0.233	0.175	0.139	0.120	0.115	0.120	0.134	0.155	0.184	0.220	0.251	0.312	0.370	0.428	0.516	0.600	0.708	0.834
150,000	1.293	0.872	0.614	0.453	0.352	0.293	0.260	0.246	0.246	0.258	0.275	0.305	0.342	0.384	0.432	0.491	0.561	0.641	0.738	0.856
200,000	2.386	1.403	0.863	0.546	0.353	0.242	0.164	0.123	0.101	0.098	0.116	0.132	0.172	0.208	0.263	0.330	0.412	0.513	0.639	0.797
250,000	3.851	2.064	1.185	0.703	0.424	0.266	0.155	0.092	0.060	0.042	0.052	0.062	0.099	0.133	0.186	0.255	0.341	0.450	0.588	0.765
300,000	6.436	3.242	1.837	1.125	0.734	0.509	0.378	0.301	0.259	0.237	0.244	0.258	0.282	0.310	0.354	0.411	0.485	0.566	0.675	0.815
400,000	10.202	4.564	2.444	1.471	0.967	0.690	0.532	0.443	0.396	0.371	0.374	0.385	0.406	0.429	0.467	0.519	0.576	0.643	0.732	0.847
500,000	14.538	5.824	2.944	1.706	1.094	0.765	0.582	0.479	0.424	0.394	0.393	0.396	0.421	0.443	0.479	0.529	0.584	0.649	0.736	0.848

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 70,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.936	0.939	0.942	0.945	0.947	0.953	0.954	0.958	0.961	0.964	0.967	0.970	0.973	0.978	0.980	0.984	0.986	0.990	0.993	0.997
2,000	0.898	0.903	0.907	0.913	0.917	0.923	0.927	0.932	0.937	0.942	0.947	0.952	0.957	0.963	0.968	0.973	0.978	0.984	0.989	0.995
3,000	0.865	0.871	0.878	0.884	0.891	0.897	0.903	0.909	0.916	0.923	0.930	0.936	0.943	0.950	0.957	0.964	0.972	0.977	0.984	0.993
4,000	0.847	0.854	0.861	0.873	0.876	0.882	0.890	0.897	0.908	0.911	0.920	0.927	0.934	0.945	0.950	0.958	0.966	0.976	0.983	0.991
5,000	0.822	0.830	0.838	0.846	0.854	0.863	0.874	0.881	0.891	0.897	0.908	0.916	0.924	0.933	0.942	0.952	0.961	0.971	0.980	0.990
6,000	0.788	0.797	0.807	0.816	0.826	0.835	0.845	0.855	0.865	0.875	0.886	0.894	0.905	0.916	0.929	0.940	0.953	0.965	0.976	0.989
7,000	0.819	0.827	0.835	0.844	0.852	0.861	0.869	0.878	0.887	0.895	0.905	0.913	0.922	0.932	0.941	0.951	0.960	0.970	0.980	0.990
8,000	0.809	0.815	0.824	0.833	0.841	0.852	0.861	0.870	0.880	0.887	0.897	0.907	0.916	0.926	0.936	0.947	0.957	0.968	0.979	0.989
9,000	0.801	0.811	0.818	0.827	0.836	0.846	0.855	0.866	0.875	0.885	0.893	0.904	0.915	0.925	0.935	0.945	0.956	0.966	0.977	0.988
10,000	0.792	0.801	0.811	0.820	0.832	0.841	0.851	0.861	0.871	0.881	0.890	0.900	0.910	0.920	0.931	0.943	0.954	0.965	0.977	0.988
11,000	0.787	0.797	0.806	0.816	0.825	0.833	0.845	0.855	0.863	0.876	0.884	0.895	0.908	0.917	0.929	0.940	0.951	0.963	0.975	0.988
12,000	0.783	0.792	0.802	0.812	0.822	0.832	0.842	0.852	0.862	0.873	0.883	0.894	0.905	0.917	0.928	0.939	0.951	0.963	0.975	0.988
13,000	0.777	0.787	0.797	0.807	0.817	0.827	0.838	0.848	0.859	0.870	0.881	0.891	0.903	0.914	0.926	0.938	0.950	0.962	0.974	0.987
14,000	0.770	0.780	0.789	0.799	0.810	0.821	0.832	0.843	0.854	0.865	0.876	0.887	0.896	0.911	0.920	0.935	0.948	0.960	0.973	0.987
15,000	0.754	0.765	0.776	0.787	0.798	0.809	0.820	0.830	0.843	0.855	0.867	0.879	0.892	0.904	0.917	0.933	0.944	0.957	0.973	0.986
16,000	0.746	0.759	0.768	0.781	0.793	0.804	0.816	0.826	0.839	0.851	0.863	0.876	0.889	0.902	0.915	0.928	0.942	0.956	0.970	0.985
17,000	0.719	0.730	0.742	0.754	0.767	0.779	0.792	0.805	0.818	0.831	0.846	0.859	0.874	0.888	0.913	0.917	0.941	0.955	0.966	0.985
18,000	0.713	0.749	0.737	0.772	0.762	0.795	0.808	0.800	0.833	0.829	0.858	0.871	0.884	0.897	0.911	0.925	0.939	0.954	0.969	0.984
19,000	0.711	0.723	0.735	0.748	0.760	0.794	0.786	0.799	0.812	0.843	0.856	0.869	0.884	0.910	0.924	0.938	0.953	0.968	0.984	0.984
20,000	0.707	0.718	0.730	0.743	0.755	0.770	0.783	0.796	0.810	0.822	0.837	0.851	0.866	0.881	0.897	0.913	0.930	0.946	0.968	0.984
21,000	0.726	0.737	0.749	0.761	0.773	0.786	0.798	0.811	0.824	0.837	0.850	0.864	0.862	0.892	0.906	0.909	0.935	0.945	0.963	0.983
22,000	0.722	0.734	0.746	0.754	0.767	0.779	0.792	0.808	0.821	0.835	0.847	0.861	0.875	0.888	0.903	0.918	0.935	0.945	0.966	0.981
23,000	0.717	0.728	0.741	0.753	0.765	0.778	0.791	0.804	0.818	0.831	0.845	0.858	0.873	0.888	0.902	0.907	0.924	0.942	0.961	0.980
24,000	0.691	0.704	0.716	0.729	0.743	0.756	0.770	0.784	0.798	0.812	0.827	0.843	0.858	0.874	0.890	0.907	0.924	0.942	0.965	0.983
25,000	0.692	0.705	0.717	0.730	0.743	0.757	0.770	0.784	0.799	0.813	0.828	0.843	0.858	0.875	0.891	0.908	0.925	0.942	0.961	0.980
30,000	0.678	0.691	0.704	0.718	0.732	0.745	0.759	0.774	0.789	0.804	0.820	0.835	0.852	0.868	0.886	0.903	0.921	0.939	0.959	0.979
40,000	0.651	0.665	0.679	0.693	0.708	0.723	0.739	0.755	0.771	0.788	0.805	0.822	0.839	0.857	0.876	0.895	0.914	0.934	0.955	0.977
50,000	0.108	0.120	0.135	0.152	0.172	0.194	0.218	0.245	0.274	0.307	0.343	0.383	0.426	0.474	0.528	0.586	0.652	0.725	0.806	0.897
60,000	0.091	0.099	0.110	0.123	0.140	0.160	0.182	0.207	0.236	0.267	0.303	0.342	0.386	0.436	0.490	0.552	0.621	0.699	0.787	0.886
70,000	0.077	0.079	0.086	0.096	0.110	0.128	0.148	0.172	0.200	0.231	0.266	0.306	0.350	0.400	0.457	0.521	0.593	0.675	0.769	0.876
80,000	0.110	0.100	0.098	0.101	0.109	0.123	0.140	0.161	0.189	0.215	0.248	0.290	0.334	0.385	0.437	0.504	0.577	0.661	0.756	0.870
90,000	0.130	0.111	0.103	0.102	0.107	0.117	0.132	0.152	0.176	0.204	0.236	0.274	0.317	0.366	0.422	0.487	0.562	0.647	0.747	0.864
100,000	0.150	0.118	0.099	0.092	0.092	0.099	0.111	0.128	0.151	0.178	0.210	0.247	0.290	0.340	0.397	0.463	0.541	0.629	0.733	0.855
150,000	0.989	0.827	0.739	0.692	0.671	0.666	0.672	0.683	0.699	0.718	0.739	0.761	0.784	0.807	0.832	0.857	0.882	0.909	0.937	0.967
200,000	1.521	1.092	0.874	0.762	0.705	0.681	0.675	0.681	0.695	0.712	0.733	0.756	0.779	0.804	0.829	0.855	0.881	0.908	0.936	0.966
250,000	2.225	1.409	1.034	0.849	0.757	0.715	0.700	0.702	0.712	0.729	0.749	0.771	0.794	0.818	0.842	0.867	0.892	0.917	0.943	0.970
300,000	3.118	1.771	1.201	0.934	0.804	0.743	0.718	0.714	0.722	0.736	0.755	0.777	0.799	0.823	0.847	0.871	0.895	0.919	0.945	0.971
400,000	4.726	2.333	1.444	1.058	0.876	0.791	0.754	0.743	0.747	0.760	0.777	0.797	0.819	0.840	0.863	0.885	0.907	0.929	0.951	0.974
500,000	6.574	2.898	1.672	1.167	0.939	0.831	0.784	0.767	0.768	0.779	0.795	0.813	0.833	0.854	0.874	0.895	0.915	0.935	0.955	0.976

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 80,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.697	0.710	0.724	0.755	0.766	0.793	0.791	0.803	0.812	0.826	0.851	0.873	0.873	0.890	0.901	0.914	0.931	0.956	0.970	0.985
2,000	0.610	0.627	0.641	0.663	0.685	0.699	0.719	0.727	0.750	0.771	0.794	0.809	0.827	0.840	0.868	0.884	0.909	0.934	0.955	0.977
3,000	0.553	0.575	0.593	0.611	0.629	0.648	0.667	0.688	0.706	0.730	0.756	0.775	0.797	0.820	0.842	0.865	0.891	0.918	0.945	0.972
4,000	0.503	0.524	0.542	0.560	0.582	0.603	0.619	0.644	0.668	0.688	0.714	0.734	0.764	0.791	0.819	0.845	0.876	0.906	0.936	0.966
5,000	0.450	0.478	0.484	0.511	0.539	0.551	0.578	0.610	0.622	0.651	0.685	0.703	0.731	0.767	0.792	0.825	0.861	0.894	0.926	0.963
6,000	0.426	0.444	0.464	0.487	0.509	0.532	0.556	0.578	0.606	0.632	0.660	0.689	0.717	0.747	0.781	0.813	0.851	0.886	0.921	0.959
7,000	0.381	0.403	0.424	0.444	0.469	0.493	0.516	0.544	0.569	0.597	0.628	0.658	0.691	0.724	0.758	0.794	0.832	0.871	0.912	0.956
8,000	0.359	0.380	0.400	0.422	0.445	0.471	0.496	0.521	0.549	0.572	0.609	0.641	0.668	0.703	0.746	0.784	0.819	0.864	0.907	0.951
9,000	0.329	0.349	0.370	0.393	0.416	0.441	0.466	0.494	0.523	0.553	0.584	0.618	0.653	0.691	0.727	0.767	0.811	0.855	0.900	0.949
10,000	0.303	0.324	0.345	0.370	0.391	0.416	0.445	0.473	0.500	0.533	0.565	0.598	0.636	0.673	0.713	0.754	0.799	0.845	0.894	0.945
11,000	0.272	0.292	0.314	0.340	0.361	0.387	0.414	0.445	0.473	0.505	0.539	0.577	0.613	0.652	0.694	0.740	0.785	0.835	0.888	0.943
12,000	0.255	0.278	0.297	0.319	0.346	0.369	0.396	0.428	0.456	0.488	0.525	0.559	0.598	0.639	0.682	0.729	0.776	0.828	0.881	0.939
13,000	0.244	0.264	0.285	0.307	0.331	0.357	0.384	0.413	0.444	0.477	0.512	0.549	0.588	0.630	0.673	0.720	0.768	0.822	0.876	0.936
14,000	0.224	0.244	0.265	0.287	0.311	0.337	0.364	0.393	0.425	0.458	0.495	0.532	0.573	0.616	0.661	0.709	0.760	0.816	0.872	0.934
15,000	0.215	0.233	0.254	0.276	0.300	0.325	0.353	0.382	0.414	0.447	0.482	0.521	0.562	0.605	0.651	0.700	0.753	0.808	0.868	0.932
16,000	0.193	0.212	0.232	0.254	0.278	0.303	0.331	0.355	0.387	0.422	0.469	0.503	0.549	0.585	0.633	0.689	0.746	0.803	0.863	0.930
17,000	0.167	0.185	0.205	0.228	0.253	0.279	0.307	0.338	0.371	0.405	0.443	0.484	0.527	0.573	0.622	0.675	0.731	0.792	0.857	0.928
18,000	0.156	0.174	0.195	0.217	0.241	0.267	0.295	0.326	0.359	0.394	0.432	0.473	0.516	0.563	0.613	0.667	0.724	0.786	0.853	0.924
19,000	0.144	0.162	0.181	0.205	0.227	0.253	0.283	0.312	0.345	0.382	0.419	0.462	0.506	0.552	0.604	0.659	0.717	0.781	0.849	0.922
20,000	0.141	0.152	0.178	0.193	0.223	0.242	0.276	0.301	0.339	0.370	0.408	0.450	0.495	0.543	0.595	0.651	0.711	0.775	0.845	0.919
21,000	0.139	0.155	0.173	0.193	0.216	0.243	0.268	0.298	0.330	0.366	0.406	0.448	0.490	0.538	0.586	0.646	0.704	0.773	0.842	0.917
22,000	0.124	0.140	0.157	0.177	0.200	0.225	0.252	0.282	0.315	0.351	0.389	0.431	0.477	0.526	0.578	0.636	0.702	0.765	0.837	0.916
23,000	0.119	0.134	0.151	0.169	0.191	0.216	0.244	0.273	0.306	0.342	0.380	0.422	0.468	0.518	0.571	0.629	0.692	0.760	0.833	0.915
24,000	0.119	0.133	0.149	0.167	0.188	0.212	0.238	0.268	0.300	0.335	0.374	0.416	0.462	0.511	0.565	0.624	0.686	0.755	0.830	0.913
25,000	0.117	0.130	0.145	0.162	0.181	0.206	0.232	0.260	0.292	0.328	0.367	0.408	0.454	0.504	0.558	0.618	0.682	0.751	0.827	0.910
30,000	0.132	0.138	0.148	0.161	0.177	0.196	0.219	0.246	0.276	0.309	0.346	0.387	0.432	0.482	0.537	0.594	0.661	0.736	0.816	0.902
40,000	0.117	0.108	0.105	0.107	0.115	0.128	0.146	0.168	0.195	0.227	0.264	0.306	0.353	0.406	0.466	0.533	0.607	0.690	0.783	0.886
50,000	0.128	0.104	0.090	0.083	0.084	0.091	0.105	0.124	0.148	0.179	0.215	0.257	0.305	0.360	0.422	0.502	0.580	0.660	0.760	0.875
60,000	0.197	0.143	0.106	0.081	0.067	0.062	0.066	0.078	0.097	0.124	0.157	0.198	0.246	0.302	0.366	0.441	0.525	0.622	0.732	0.860
70,000	0.328	0.222	0.144	0.089	0.051	0.029	0.020	0.022	0.034	0.055	0.085	0.124	0.173	0.230	0.298	0.378	0.469	0.575	0.697	0.835
80,000	0.560	0.387	0.259	0.165	0.098	0.054	0.026	0.014	0.015	0.028	0.052	0.086	0.131	0.187	0.255	0.335	0.430	0.544	0.671	0.826
90,000	1.229	0.887	0.622	0.453	0.306	0.222	0.145	0.102	0.090	0.075	0.094	0.108	0.153	0.197	0.256	0.333	0.418	0.533	0.664	0.816
100,000	1.684	1.206	0.859	0.606	0.420	0.286	0.190	0.126	0.086	0.067	0.066	0.082	0.112	0.158	0.219	0.295	0.389	0.503	0.640	0.810
150,000	4.903	3.260	2.192	1.489	1.012	0.682	0.455	0.299	0.194	0.129	0.096	0.088	0.101	0.134	0.185	0.257	0.349	0.465	0.609	0.785
200,000	9.321	5.648	3.587	2.341	1.551	1.037	0.694	0.464	0.313	0.217	0.162	0.139	0.142	0.168	0.213	0.279	0.366	0.476	0.614	0.787
250,000	15.929	8.826	5.275	3.287	2.106	1.365	0.884	0.568	0.359	0.225	0.144	0.104	0.095	0.113	0.161	0.220	0.316	0.426	0.579	0.765
300,000	22.824	11.702	6.648	4.008	2.508	1.594	1.014	0.638	0.392	0.233	0.135	0.083	0.066	0.079	0.123	0.181	0.278	0.392	0.551	0.749
400,000	36.638	16.780	8.958	5.221	3.196	2.012	1.279	0.809	0.504	0.304	0.179	0.106	0.073	0.073	0.103	0.160	0.252	0.364	0.527	0.727
500,000	51.597	21.419	10.865	6.143	3.698	2.306	1.461	0.928	0.583	0.359	0.215	0.130	0.087	0.080	0.102	0.154	0.243	0.352	0.514	0.722

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 90,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.763	0.681	0.799	0.797	0.802	0.808	0.819	0.837	0.857	0.865	0.880	0.882	0.890	0.911	0.921	0.936	0.954	0.959	0.964	0.977
2,000	0.563	0.565	0.581	0.656	0.631	0.646	0.668	0.674	0.737	0.750	0.769	0.755	0.786	0.833	0.858	0.880	0.912	0.919	0.940	0.969
3,000	0.465	0.455	0.475	0.520	0.516	0.560	0.578	0.582	0.626	0.651	0.663	0.703	0.727	0.739	0.790	0.816	0.845	0.885	0.920	0.962
4,000	0.449	0.465	0.487	0.505	0.524	0.545	0.566	0.581	0.610	0.635	0.659	0.689	0.716	0.746	0.779	0.820	0.844	0.882	0.921	0.954
5,000	0.314	0.333	0.354	0.376	0.400	0.425	0.451	0.479	0.538	0.539	0.571	0.606	0.641	0.679	0.720	0.761	0.817	0.852	0.904	0.954
6,000	0.282	0.299	0.319	0.341	0.363	0.388	0.424	0.441	0.480	0.502	0.544	0.579	0.609	0.655	0.690	0.741	0.787	0.836	0.886	0.947
7,000	0.230	0.250	0.271	0.294	0.319	0.345	0.373	0.402	0.436	0.468	0.503	0.541	0.583	0.624	0.669	0.717	0.768	0.821	0.874	0.935
8,000	0.204	0.234	0.239	0.261	0.289	0.315	0.350	0.380	0.412	0.438	0.473	0.513	0.560	0.606	0.650	0.706	0.757	0.808	0.870	0.935
9,000	0.191	0.184	0.229	0.251	0.274	0.329	0.328	0.357	0.412	0.423	0.460	0.517	0.542	0.587	0.647	0.697	0.749	0.796	0.860	0.930
10,000	0.229	0.240	0.255	0.273	0.293	0.315	0.339	0.366	0.395	0.427	0.462	0.499	0.540	0.583	0.631	0.681	0.736	0.787	0.854	0.923
11,000	0.191	0.203	0.250	0.235	0.255	0.307	0.301	0.357	0.359	0.393	0.452	0.468	0.529	0.571	0.621	0.670	0.718	0.787	0.852	0.921
12,000	0.180	0.191	0.204	0.220	0.239	0.260	0.284	0.310	0.340	0.373	0.409	0.449	0.492	0.539	0.590	0.645	0.706	0.783	0.847	0.921
13,000	0.198	0.208	0.219	0.234	0.251	0.271	0.293	0.318	0.347	0.379	0.411	0.452	0.494	0.540	0.590	0.644	0.705	0.773	0.834	0.915
14,000	0.239	0.245	0.254	0.266	0.333	0.348	0.365	0.386	0.365	0.395	0.427	0.464	0.504	0.548	0.597	0.671	0.708	0.766	0.836	0.915
15,000	0.247	0.251	0.367	0.373	0.381	0.303	0.321	0.339	0.364	0.392	0.422	0.458	0.497	0.542	0.638	0.646	0.704	0.758	0.831	0.918
16,000	0.454	0.404	0.406	0.411	0.418	0.428	0.440	0.456	0.474	0.495	0.520	0.548	0.606	0.639	0.655	0.699	0.748	0.801	0.836	0.915
17,000	0.343	0.342	0.344	0.348	0.359	0.366	0.379	0.396	0.416	0.443	0.470	0.497	0.532	0.575	0.639	0.666	0.719	0.791	0.859	0.920
18,000	0.301	0.301	0.303	0.308	0.316	0.327	0.342	0.360	0.381	0.406	0.475	0.468	0.505	0.547	0.620	0.667	0.721	0.759	0.832	0.920
19,000	0.299	0.297	0.295	0.299	0.308	0.319	0.333	0.351	0.373	0.394	0.423	0.458	0.495	0.537	0.584	0.637	0.715	0.761	0.833	0.911
20,000	0.208	0.206	0.208	0.213	0.222	0.234	0.340	0.270	0.374	0.322	0.354	0.456	0.433	0.534	0.533	0.633	0.689	0.757	0.828	0.901
21,000	0.164	0.163	0.166	0.172	0.182	0.196	0.213	0.231	0.257	0.286	0.321	0.360	0.407	0.456	0.552	0.573	0.670	0.718	0.826	0.895
22,000	0.146	0.138	0.137	0.139	0.146	0.159	0.173	0.194	0.219	0.247	0.282	0.321	0.368	0.445	0.481	0.563	0.650	0.712	0.813	0.894
23,000	0.147	0.139	0.139	0.136	0.142	0.155	0.164	0.185	0.212	0.241	0.271	0.307	0.360	0.413	0.466	0.532	0.610	0.684	0.799	0.889
24,000	0.150	0.141	0.136	0.135	0.141	0.150	0.164	0.183	0.205	0.232	0.265	0.308	0.353	0.401	0.459	0.526	0.600	0.688	0.779	0.887
25,000	0.159	0.145	0.137	0.134	0.136	0.143	0.154	0.171	0.192	0.220	0.252	0.309	0.354	0.387	0.446	0.528	0.603	0.681	0.770	0.879
30,000	0.124	0.102	0.087	0.078	0.075	0.078	0.086	0.101	0.122	0.148	0.181	0.221	0.269	0.323	0.387	0.459	0.542	0.637	0.743	0.862
40,000	0.258	0.191	0.155	0.121	0.096	0.080	0.073	0.074	0.084	0.094	0.127	0.155	0.198	0.258	0.316	0.396	0.484	0.586	0.706	0.840
50,000	0.377	0.288	0.217	0.161	0.118	0.087	0.068	0.058	0.059	0.068	0.088	0.118	0.158	0.209	0.272	0.348	0.440	0.548	0.675	0.825
60,000	0.577	0.450	0.348	0.266	0.203	0.155	0.120	0.098	0.087	0.088	0.099	0.121	0.155	0.201	0.260	0.333	0.423	0.531	0.667	0.816
70,000	0.844	0.642	0.483	0.356	0.258	0.182	0.126	0.087	0.063	0.053	0.056	0.073	0.102	0.145	0.205	0.280	0.373	0.488	0.628	0.797
80,000	1.137	0.878	0.675	0.517	0.393	0.297	0.224	0.171	0.135	0.114	0.108	0.115	0.137	0.173	0.225	0.293	0.356	0.472	0.627	0.787
90,000	1.526	1.146	0.855	0.631	0.457	0.324	0.223	0.148	0.095	0.062	0.047	0.048	0.066	0.101	0.152	0.223	0.317	0.432	0.584	0.770
100,000	2.163	1.606	1.189	0.873	0.632	0.446	0.306	0.201	0.124	0.073	0.043	0.033	0.043	0.071	0.120	0.190	0.283	0.405	0.560	0.755
150,000	6.550	4.640	3.367	2.481	1.849	1.386	1.042	0.783	0.588	0.441	0.334	0.259	0.213	0.194	0.201	0.235	0.300	0.399	0.541	0.736
200,000	17.110	11.128	7.584	5.334	3.837	2.796	2.050	1.505	1.099	0.796	0.568	0.400	0.283	0.207	0.172	0.176	0.205	0.298	0.464	0.693
250,000	27.524	16.463	10.591	7.145	4.982	3.549	2.559	1.856	1.344	0.967	0.688	0.482	0.336	0.239	0.188	0.179	0.215	0.303	0.450	0.681
300,000	36.186	20.119	12.357	8.071	5.499	3.851	2.741	1.966	1.410	1.003	0.704	0.485	0.329	0.225	0.167	0.155	0.189	0.276	0.427	0.665
400,000	54.721	27.467	15.824	9.933	6.579	4.517	3.173	2.257	1.610	1.144	0.803	0.554	0.376	0.255	0.185	0.162	0.188	0.269	0.417	0.642
500,000	74.096	34.149	18.732	11.382	7.385	4.997	3.475	2.453	1.741	1.234	0.865	0.597	0.405	0.274	0.195	0.166	0.187	0.265	0.411	0.637

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 100,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.748	0.759	0.770	0.782	0.793	0.804	0.816	0.828	0.839	0.852	0.864	0.877	0.892	0.905	0.916	0.930	0.946	0.960	0.972	0.986
2,000	0.653	0.662	0.676	0.691	0.706	0.724	0.741	0.753	0.770	0.787	0.805	0.823	0.844	0.858	0.879	0.895	0.918	0.937	0.960	0.978
3,000	0.636	0.649	0.663	0.678	0.693	0.708	0.726	0.741	0.757	0.771	0.768	0.810	0.829	0.832	0.854	0.888	0.900	0.921	0.950	0.973
4,000	0.586	0.601	0.616	0.632	0.648	0.665	0.682	0.700	0.719	0.738	0.758	0.779	0.800	0.822	0.845	0.869	0.895	0.919	0.945	0.972
5,000	0.545	0.560	0.576	0.598	0.611	0.629	0.648	0.671	0.686	0.708	0.730	0.751	0.775	0.800	0.826	0.856	0.884	0.910	0.937	0.969
6,000	0.516	0.534	0.551	0.570	0.588	0.604	0.622	0.643	0.665	0.684	0.709	0.733	0.756	0.786	0.812	0.840	0.870	0.899	0.931	0.966
7,000	0.471	0.489	0.506	0.526	0.545	0.566	0.586	0.609	0.632	0.656	0.681	0.684	0.734	0.743	0.794	0.809	0.856	0.881	0.924	0.959
8,000	0.447	0.465	0.483	0.503	0.523	0.544	0.565	0.588	0.612	0.637	0.663	0.690	0.718	0.748	0.779	0.812	0.846	0.881	0.920	0.956
9,000	0.425	0.443	0.462	0.482	0.502	0.524	0.546	0.569	0.594	0.620	0.646	0.675	0.704	0.735	0.767	0.801	0.837	0.875	0.914	0.953
10,000	0.381	0.400	0.420	0.441	0.463	0.485	0.509	0.534	0.560	0.588	0.616	0.671	0.700	0.731	0.757	0.793	0.830	0.869	0.910	0.954
11,000	0.362	0.381	0.401	0.422	0.444	0.467	0.491	0.517	0.544	0.572	0.602	0.632	0.665	0.696	0.736	0.770	0.814	0.856	0.900	0.950
12,000	0.348	0.368	0.388	0.409	0.431	0.455	0.479	0.505	0.532	0.561	0.591	0.622	0.655	0.688	0.726	0.767	0.808	0.852	0.898	0.947
13,000	0.330	0.355	0.374	0.396	0.418	0.438	0.466	0.489	0.520	0.549	0.579	0.611	0.645	0.681	0.719	0.759	0.802	0.846	0.895	0.945
14,000	0.326	0.351	0.365	0.387	0.414	0.433	0.462	0.484	0.515	0.544	0.574	0.606	0.638	0.676	0.707	0.755	0.798	0.840	0.890	0.944
15,000	0.319	0.338	0.349	0.375	0.398	0.425	0.450	0.469	0.501	0.531	0.559	0.597	0.631	0.665	0.704	0.746	0.789	0.839	0.889	0.941
16,000	0.300	0.319	0.340	0.361	0.391	0.415	0.439	0.466	0.494	0.523	0.555	0.582	0.618	0.655	0.696	0.738	0.782	0.834	0.885	0.940
17,000	0.287	0.306	0.329	0.348	0.370	0.397	0.422	0.447	0.477	0.507	0.537	0.573	0.609	0.647	0.688	0.735	0.779	0.831	0.883	0.938
18,000	0.274	0.293	0.313	0.335	0.358	0.383	0.408	0.435	0.464	0.495	0.528	0.562	0.599	0.637	0.680	0.724	0.772	0.823	0.879	0.937
19,000	0.267	0.287	0.308	0.330	0.354	0.378	0.405	0.432	0.462	0.492	0.525	0.560	0.597	0.637	0.679	0.724	0.771	0.823	0.875	0.935
20,000	0.325	0.344	0.365	0.386	0.408	0.432	0.457	0.483	0.510	0.539	0.569	0.601	0.635	0.671	0.709	0.750	0.794	0.840	0.875	0.934
21,000	0.323	0.342	0.361	0.383	0.405	0.428	0.453	0.479	0.506	0.534	0.565	0.597	0.631	0.665	0.704	0.745	0.789	0.836	0.887	0.941
22,000	0.314	0.334	0.354	0.375	0.397	0.421	0.445	0.471	0.499	0.527	0.558	0.591	0.625	0.662	0.701	0.742	0.787	0.834	0.886	0.940
23,000	0.306	0.325	0.345	0.366	0.389	0.412	0.437	0.463	0.491	0.520	0.551	0.584	0.619	0.656	0.696	0.738	0.783	0.831	0.884	0.939
24,000	0.303	0.321	0.341	0.361	0.397	0.420	0.431	0.457	0.484	0.513	0.544	0.586	0.620	0.656	0.695	0.737	0.778	0.828	0.881	0.938
25,000	0.295	0.314	0.333	0.354	0.376	0.399	0.424	0.449	0.477	0.506	0.537	0.571	0.606	0.644	0.684	0.728	0.774	0.824	0.878	0.937
30,000	0.271	0.289	0.308	0.328	0.350	0.373	0.397	0.423	0.451	0.480	0.512	0.546	0.583	0.622	0.664	0.709	0.758	0.811	0.871	0.932
40,000	0.171	0.190	0.210	0.232	0.255	0.280	0.307	0.336	0.366	0.399	0.434	0.472	0.513	0.557	0.605	0.657	0.713	0.773	0.844	0.918
50,000	0.132	0.150	0.169	0.190	0.213	0.238	0.265	0.294	0.325	0.358	0.395	0.434	0.476	0.522	0.572	0.627	0.687	0.754	0.827	0.909
60,000	0.131	0.147	0.165	0.185	0.207	0.230	0.255	0.282	0.311	0.343	0.378	0.415	0.456	0.502	0.552	0.607	0.669	0.736	0.814	0.896
70,000	0.119	0.132	0.148	0.167	0.187	0.210	0.234	0.261	0.290	0.321	0.356	0.394	0.468	0.481	0.559	0.588	0.654	0.723	0.815	0.889
80,000	0.120	0.129	0.142	0.158	0.176	0.197	0.220	0.246	0.274	0.305	0.338	0.381	0.417	0.462	0.518	0.571	0.636	0.712	0.795	0.890
90,000	0.286	0.281	0.282	0.286	0.294	0.305	0.319	0.335	0.354	0.376	0.400	0.429	0.462	0.500	0.544	0.594	0.652	0.721	0.804	0.895
100,000	0.295	0.284	0.280	0.281	0.288	0.297	0.310	0.325	0.343	0.365	0.390	0.418	0.451	0.489	0.533	0.583	0.642	0.711	0.788	0.887
150,000	0.531	0.442	0.392	0.364	0.351	0.344	0.346	0.351	0.361	0.376	0.393	0.416	0.444	0.477	0.518	0.566	0.623	0.693	0.776	0.877
200,000	1.040	0.767	0.624	0.545	0.498	0.471	0.455	0.448	0.447	0.451	0.460	0.474	0.493	0.518	0.550	0.590	0.641	0.703	0.782	0.879
250,000	1.644	1.074	0.806	0.665	0.585	0.537	0.507	0.489	0.479	0.476	0.478	0.486	0.501	0.522	0.550	0.587	0.635	0.697	0.775	0.874
300,000	2.301	1.357	0.954	0.754	0.645	0.581	0.541	0.515	0.500	0.492	0.491	0.496	0.507	0.526	0.552	0.588	0.635	0.696	0.773	0.873
400,000	3.674	1.880	1.213	0.914	0.758	0.669	0.614	0.579	0.556	0.542	0.535	0.534	0.541	0.555	0.576	0.608	0.650	0.706	0.780	0.876
500,000	5.130	2.334	1.410	1.020	0.827	0.720	0.654	0.612	0.584	0.566	0.556	0.553	0.556	0.567	0.587	0.616	0.656	0.710	0.782	0.877

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 200,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.714	0.725	0.738	0.751	0.764	0.784	0.787	0.802	0.815	0.830	0.846	0.859	0.875	0.890	0.907	0.923	0.939	0.953	0.970	0.984
2,000	0.605	0.618	0.635	0.651	0.669	0.686	0.704	0.723	0.742	0.761	0.780	0.800	0.819	0.842	0.862	0.885	0.903	0.927	0.952	0.976
3,000	0.527	0.543	0.573	0.590	0.614	0.619	0.642	0.663	0.686	0.718	0.740	0.751	0.775	0.801	0.830	0.855	0.887	0.911	0.940	0.969
4,000	0.486	0.504	0.523	0.546	0.562	0.586	0.614	0.633	0.658	0.677	0.704	0.731	0.758	0.783	0.806	0.842	0.873	0.903	0.930	0.965
5,000	0.436	0.457	0.478	0.500	0.523	0.547	0.573	0.599	0.625	0.651	0.679	0.709	0.735	0.764	0.795	0.826	0.858	0.893	0.926	0.963
6,000	0.384	0.405	0.430	0.453	0.476	0.498	0.528	0.555	0.580	0.611	0.644	0.669	0.704	0.736	0.771	0.804	0.845	0.879	0.919	0.958
7,000	0.341	0.362	0.392	0.417	0.442	0.467	0.489	0.519	0.547	0.578	0.610	0.643	0.676	0.712	0.750	0.786	0.824	0.868	0.912	0.955
8,000	0.320	0.343	0.367	0.392	0.417	0.444	0.472	0.501	0.531	0.562	0.595	0.628	0.663	0.700	0.738	0.776	0.816	0.860	0.905	0.952
9,000	0.291	0.314	0.337	0.364	0.390	0.418	0.446	0.476	0.506	0.540	0.574	0.609	0.646	0.683	0.723	0.765	0.807	0.852	0.899	0.948
10,000	0.261	0.284	0.308	0.337	0.361	0.389	0.420	0.452	0.482	0.515	0.552	0.587	0.625	0.666	0.709	0.750	0.796	0.844	0.893	0.946
11,000	0.234	0.257	0.281	0.307	0.336	0.364	0.393	0.425	0.459	0.493	0.531	0.567	0.610	0.649	0.693	0.740	0.785	0.838	0.889	0.943
12,000	0.217	0.237	0.262	0.287	0.314	0.343	0.376	0.410	0.439	0.475	0.512	0.551	0.594	0.633	0.681	0.730	0.779	0.832	0.884	0.939
13,000	0.198	0.221	0.246	0.271	0.299	0.328	0.359	0.395	0.425	0.460	0.498	0.537	0.579	0.623	0.670	0.721	0.770	0.821	0.878	0.937
14,000	0.186	0.209	0.233	0.259	0.287	0.316	0.343	0.379	0.413	0.449	0.487	0.524	0.566	0.612	0.659	0.709	0.762	0.817	0.875	0.935
15,000	0.163	0.192	0.216	0.236	0.269	0.298	0.324	0.363	0.396	0.429	0.472	0.512	0.555	0.599	0.649	0.699	0.754	0.808	0.870	0.934
16,000	0.130	0.152	0.177	0.203	0.230	0.259	0.292	0.326	0.361	0.398	0.440	0.481	0.540	0.575	0.637	0.680	0.744	0.796	0.865	0.928
17,000	0.118	0.140	0.164	0.189	0.217	0.245	0.278	0.312	0.347	0.387	0.426	0.469	0.517	0.564	0.616	0.671	0.729	0.791	0.857	0.926
18,000	0.102	0.123	0.147	0.172	0.199	0.229	0.261	0.295	0.332	0.370	0.412	0.456	0.504	0.554	0.606	0.662	0.722	0.785	0.853	0.924
19,000	0.089	0.109	0.132	0.157	0.184	0.214	0.246	0.280	0.317	0.356	0.398	0.443	0.490	0.541	0.595	0.653	0.714	0.779	0.848	0.922
20,000	0.081	0.100	0.122	0.147	0.174	0.203	0.234	0.269	0.306	0.345	0.387	0.432	0.481	0.532	0.586	0.646	0.708	0.773	0.843	0.920
21,000	0.073	0.092	0.114	0.138	0.164	0.193	0.225	0.259	0.296	0.334	0.379	0.423	0.471	0.520	0.577	0.637	0.702	0.769	0.840	0.918
22,000	0.063	0.083	0.104	0.127	0.151	0.181	0.213	0.247	0.282	0.322	0.366	0.409	0.459	0.512	0.570	0.630	0.694	0.762	0.837	0.916
23,000	0.057	0.074	0.094	0.117	0.143	0.171	0.202	0.236	0.272	0.312	0.355	0.402	0.452	0.504	0.562	0.623	0.688	0.756	0.833	0.914
24,000	0.053	0.070	0.090	0.112	0.138	0.163	0.197	0.226	0.268	0.307	0.347	0.396	0.445	0.500	0.557	0.619	0.682	0.753	0.830	0.912
25,000	0.045	0.058	0.081	0.100	0.129	0.156	0.183	0.221	0.257	0.298	0.341	0.385	0.437	0.492	0.549	0.612	0.679	0.750	0.828	0.911
30,000	0.022	0.034	0.050	0.069	0.091	0.118	0.147	0.181	0.218	0.258	0.300	0.347	0.400	0.456	0.518	0.582	0.654	0.730	0.813	0.902
40,000	0.011	0.018	0.028	0.044	0.063	0.087	0.115	0.146	0.181	0.220	0.264	0.312	0.364	0.421	0.484	0.552	0.627	0.707	0.797	0.895
50,000	0.011	0.007	0.009	0.018	0.032	0.051	0.076	0.105	0.138	0.177	0.218	0.267	0.322	0.383	0.445	0.515	0.596	0.683	0.777	0.883
60,000	0.043	0.021	0.008	0.006	0.013	0.025	0.043	0.068	0.098	0.136	0.176	0.224	0.280	0.340	0.406	0.481	0.565	0.656	0.760	0.872
70,000	0.098	0.067	0.049	0.041	0.042	0.050	0.065	0.086	0.113	0.145	0.184	0.228	0.279	0.336	0.402	0.466	0.557	0.643	0.752	0.868
80,000	0.200	0.131	0.080	0.048	0.031	0.024	0.029	0.044	0.064	0.094	0.130	0.175	0.226	0.285	0.379	0.431	0.519	0.631	0.740	0.861
90,000	0.327	0.224	0.152	0.104	0.073	0.057	0.050	0.057	0.074	0.100	0.134	0.175	0.221	0.282	0.345	0.424	0.509	0.612	0.725	0.853
100,000	0.443	0.307	0.211	0.145	0.096	0.072	0.066	0.069	0.082	0.100	0.128	0.169	0.221	0.276	0.343	0.418	0.505	0.602	0.720	0.850
150,000	1.640	1.104	0.727	0.499	0.336	0.228	0.156	0.114	0.099	0.097	0.112	0.135	0.175	0.226	0.294	0.363	0.454	0.562	0.687	0.830
200,000	3.214	2.026	1.311	0.849	0.550	0.351	0.229	0.150	0.108	0.090	0.094	0.115	0.152	0.198	0.260	0.342	0.429	0.542	0.669	0.818
250,000	5.544	3.339	2.089	1.340	0.874	0.575	0.385	0.262	0.187	0.147	0.134	0.141	0.168	0.206	0.262	0.333	0.421	0.534	0.658	0.815
300,000	8.039	4.642	2.842	1.806	1.176	0.784	0.532	0.372	0.273	0.213	0.186	0.181	0.198	0.231	0.281	0.355	0.440	0.530	0.659	0.815
400,000	12.513	6.805	4.012	2.496	1.609	1.066	0.722	0.502	0.361	0.275	0.227	0.209	0.213	0.238	0.281	0.342	0.409	0.523	0.642	0.807
500,000	16.255	8.385	4.782	2.908	1.848	1.212	0.815	0.563	0.403	0.303	0.247	0.223	0.223	0.244	0.284	0.343	0.422	0.522	0.648	0.806

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 300,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.768	0.778	0.789	0.799	0.811	0.822	0.832	0.844	0.855	0.866	0.878	0.889	0.902	0.913	0.924	0.937	0.949	0.962	0.976	0.988
2,000	0.673	0.687	0.701	0.715	0.729	0.745	0.760	0.775	0.791	0.806	0.822	0.839	0.855	0.873	0.889	0.908	0.926	0.944	0.963	0.981
3,000	0.613	0.629	0.644	0.661	0.677	0.694	0.714	0.733	0.751	0.767	0.786	0.805	0.825	0.842	0.864	0.885	0.907	0.931	0.953	0.976
4,000	0.566	0.581	0.597	0.615	0.634	0.655	0.672	0.694	0.714	0.734	0.756	0.777	0.800	0.823	0.845	0.870	0.893	0.920	0.947	0.973
5,000	0.535	0.553	0.571	0.590	0.609	0.629	0.650	0.671	0.692	0.713	0.736	0.759	0.783	0.807	0.828	0.859	0.884	0.910	0.942	0.969
6,000	0.506	0.524	0.543	0.562	0.580	0.601	0.622	0.644	0.667	0.690	0.714	0.739	0.765	0.791	0.818	0.847	0.875	0.904	0.935	0.967
7,000	0.494	0.509	0.529	0.553	0.574	0.586	0.611	0.634	0.661	0.682	0.705	0.730	0.756	0.786	0.810	0.839	0.870	0.901	0.931	0.964
8,000	0.472	0.493	0.514	0.533	0.554	0.575	0.597	0.621	0.643	0.668	0.693	0.714	0.746	0.773	0.801	0.833	0.865	0.893	0.928	0.962
9,000	0.451	0.470	0.490	0.511	0.532	0.554	0.577	0.600	0.625	0.650	0.676	0.703	0.732	0.761	0.791	0.823	0.855	0.889	0.925	0.961
10,000	0.444	0.470	0.489	0.510	0.525	0.544	0.575	0.598	0.618	0.641	0.674	0.697	0.726	0.750	0.789	0.819	0.848	0.884	0.924	0.959
11,000	0.421	0.440	0.461	0.482	0.504	0.527	0.551	0.575	0.601	0.627	0.655	0.683	0.714	0.744	0.777	0.810	0.845	0.880	0.920	0.957
12,000	0.404	0.429	0.450	0.471	0.493	0.512	0.534	0.560	0.586	0.618	0.646	0.672	0.702	0.733	0.767	0.802	0.838	0.877	0.916	0.956
13,000	0.392	0.412	0.433	0.455	0.477	0.501	0.525	0.551	0.573	0.605	0.634	0.660	0.695	0.725	0.759	0.794	0.833	0.871	0.912	0.954
14,000	0.365	0.383	0.405	0.431	0.450	0.476	0.502	0.527	0.556	0.586	0.614	0.646	0.682	0.711	0.749	0.785	0.826	0.866	0.908	0.952
15,000	0.338	0.360	0.382	0.405	0.429	0.454	0.480	0.507	0.536	0.565	0.596	0.629	0.663	0.704	0.735	0.777	0.816	0.857	0.905	0.950
16,000	0.327	0.348	0.373	0.396	0.420	0.445	0.471	0.497	0.528	0.559	0.591	0.620	0.656	0.693	0.731	0.770	0.812	0.853	0.900	0.948
17,000	0.312	0.334	0.356	0.380	0.403	0.428	0.455	0.483	0.515	0.545	0.577	0.610	0.644	0.682	0.720	0.760	0.805	0.850	0.896	0.947
18,000	0.307	0.329	0.351	0.374	0.390	0.424	0.451	0.481	0.508	0.541	0.573	0.597	0.632	0.670	0.713	0.760	0.802	0.844	0.894	0.946
19,000	0.299	0.321	0.343	0.367	0.391	0.417	0.444	0.472	0.501	0.532	0.565	0.596	0.635	0.670	0.712	0.752	0.797	0.843	0.893	0.943
20,000	0.288	0.310	0.333	0.356	0.381	0.407	0.434	0.463	0.492	0.524	0.556	0.591	0.625	0.664	0.705	0.747	0.793	0.840	0.891	0.943
21,000	0.283	0.305	0.327	0.351	0.376	0.402	0.429	0.458	0.487	0.519	0.552	0.586	0.623	0.661	0.700	0.743	0.788	0.836	0.887	0.942
22,000	0.272	0.293	0.316	0.339	0.363	0.389	0.420	0.448	0.478	0.509	0.543	0.578	0.614	0.654	0.694	0.738	0.784	0.833	0.886	0.941
23,000	0.263	0.288	0.311	0.333	0.357	0.383	0.408	0.438	0.467	0.499	0.533	0.569	0.606	0.646	0.689	0.732	0.780	0.830	0.883	0.940
24,000	0.248	0.275	0.292	0.316	0.345	0.367	0.395	0.427	0.458	0.488	0.524	0.559	0.596	0.638	0.680	0.725	0.773	0.824	0.881	0.939
25,000	0.215	0.237	0.261	0.285	0.311	0.337	0.366	0.396	0.427	0.461	0.508	0.534	0.585	0.616	0.662	0.717	0.760	0.820	0.875	0.936
30,000	0.170	0.192	0.214	0.238	0.264	0.291	0.320	0.351	0.384	0.419	0.466	0.495	0.537	0.582	0.630	0.681	0.736	0.795	0.861	0.928
40,000	0.114	0.134	0.155	0.178	0.182	0.210	0.239	0.271	0.323	0.358	0.397	0.438	0.483	0.531	0.583	0.629	0.697	0.764	0.837	0.914
50,000	0.049	0.070	0.084	0.106	0.135	0.161	0.185	0.219	0.255	0.288	0.332	0.376	0.420	0.475	0.530	0.590	0.660	0.733	0.812	0.903
60,000	0.066	0.079	0.095	0.113	0.134	0.158	0.184	0.213	0.245	0.280	0.319	0.361	0.407	0.454	0.514	0.565	0.637	0.719	0.802	0.897
70,000	0.041	0.052	0.066	0.083	0.103	0.126	0.151	0.180	0.202	0.238	0.278	0.322	0.369	0.423	0.482	0.546	0.618	0.700	0.789	0.890
80,000	0.046	0.052	0.063	0.077	0.094	0.115	0.139	0.167	0.198	0.232	0.270	0.313	0.360	0.413	0.471	0.536	0.609	0.690	0.781	0.884
90,000	0.087	0.089	0.096	0.107	0.121	0.139	0.159	0.184	0.211	0.243	0.278	0.318	0.363	0.417	0.473	0.533	0.605	0.678	0.779	0.879
100,000	0.104	0.103	0.106	0.114	0.126	0.142	0.161	0.183	0.210	0.240	0.274	0.313	0.357	0.407	0.462	0.526	0.598	0.679	0.772	0.877
150,000	0.189	0.138	0.107	0.091	0.086	0.089	0.100	0.117	0.141	0.167	0.200	0.240	0.283	0.335	0.395	0.463	0.542	0.631	0.734	0.861
200,000	0.404	0.308	0.246	0.169	0.183	0.172	0.170	0.175	0.187	0.198	0.230	0.259	0.299	0.345	0.399	0.462	0.537	0.629	0.729	0.856
250,000	0.593	0.427	0.323	0.258	0.217	0.193	0.182	0.181	0.188	0.202	0.223	0.252	0.287	0.331	0.383	0.446	0.521	0.611	0.718	0.846
300,000	0.744	0.512	0.374	0.290	0.239	0.210	0.197	0.195	0.202	0.217	0.239	0.268	0.304	0.347	0.399	0.458	0.532	0.622	0.726	0.849
400,000	0.963	0.613	0.414	0.296	0.225	0.184	0.163	0.156	0.159	0.172	0.192	0.220	0.256	0.300	0.353	0.417	0.494	0.587	0.699	0.834
500,000	1.230	0.765	0.508	0.358	0.267	0.214	0.184	0.170	0.169	0.177	0.194	0.220	0.253	0.295	0.346	0.409	0.486	0.578	0.691	0.829

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 400,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.820	0.828	0.836	0.845	0.852	0.860	0.869	0.878	0.887	0.895	0.904	0.913	0.923	0.933	0.941	0.951	0.961	0.971	0.979	0.990
2,000	0.742	0.753	0.764	0.775	0.787	0.799	0.811	0.824	0.836	0.849	0.861	0.874	0.889	0.902	0.914	0.928	0.941	0.955	0.970	0.985
3,000	0.680	0.693	0.707	0.721	0.735	0.749	0.763	0.778	0.793	0.809	0.825	0.843	0.856	0.873	0.890	0.908	0.926	0.944	0.964	0.981
4,000	0.652	0.666	0.680	0.695	0.710	0.725	0.741	0.757	0.773	0.790	0.807	0.824	0.842	0.860	0.879	0.898	0.917	0.935	0.957	0.978
5,000	0.608	0.623	0.643	0.655	0.672	0.689	0.706	0.724	0.742	0.768	0.787	0.806	0.824	0.844	0.863	0.883	0.905	0.930	0.953	0.975
6,000	0.584	0.600	0.617	0.634	0.651	0.669	0.687	0.706	0.725	0.745	0.765	0.786	0.808	0.829	0.853	0.874	0.899	0.925	0.950	0.974
7,000	0.562	0.579	0.591	0.608	0.631	0.650	0.665	0.688	0.708	0.729	0.747	0.772	0.795	0.816	0.839	0.865	0.891	0.917	0.945	0.971
8,000	0.539	0.556	0.583	0.601	0.619	0.630	0.649	0.677	0.698	0.719	0.741	0.758	0.781	0.813	0.832	0.862	0.887	0.912	0.939	0.969
9,000	0.529	0.547	0.565	0.583	0.602	0.622	0.642	0.663	0.684	0.706	0.729	0.752	0.776	0.801	0.827	0.853	0.881	0.909	0.938	0.968
10,000	0.510	0.528	0.546	0.565	0.585	0.605	0.625	0.647	0.669	0.692	0.715	0.739	0.765	0.791	0.818	0.845	0.874	0.905	0.935	0.967
11,000	0.485	0.504	0.523	0.543	0.563	0.584	0.606	0.630	0.652	0.674	0.702	0.725	0.753	0.779	0.807	0.837	0.867	0.899	0.932	0.965
12,000	0.473	0.491	0.511	0.531	0.551	0.573	0.595	0.617	0.641	0.665	0.690	0.716	0.744	0.771	0.800	0.830	0.861	0.894	0.929	0.963
13,000	0.458	0.477	0.497	0.517	0.538	0.560	0.582	0.606	0.630	0.655	0.680	0.707	0.735	0.763	0.793	0.825	0.857	0.890	0.926	0.962
14,000	0.445	0.464	0.484	0.505	0.526	0.548	0.571	0.595	0.619	0.645	0.671	0.698	0.727	0.756	0.787	0.819	0.852	0.887	0.923	0.961
15,000	0.429	0.451	0.471	0.492	0.514	0.536	0.559	0.583	0.609	0.634	0.661	0.689	0.718	0.749	0.780	0.813	0.847	0.883	0.920	0.959
16,000	0.418	0.438	0.459	0.480	0.502	0.525	0.548	0.573	0.598	0.624	0.651	0.681	0.711	0.743	0.774	0.808	0.843	0.880	0.918	0.958
17,000	0.401	0.421	0.441	0.464	0.486	0.508	0.533	0.557	0.584	0.611	0.639	0.670	0.700	0.732	0.769	0.800	0.837	0.875	0.916	0.957
18,000	0.386	0.407	0.429	0.452	0.474	0.497	0.522	0.547	0.575	0.603	0.631	0.661	0.693	0.726	0.760	0.796	0.833	0.872	0.914	0.955
19,000	0.374	0.395	0.417	0.439	0.462	0.486	0.512	0.538	0.565	0.593	0.622	0.653	0.685	0.718	0.753	0.790	0.828	0.869	0.910	0.954
20,000	0.374	0.395	0.416	0.438	0.461	0.484	0.510	0.536	0.563	0.591	0.621	0.648	0.680	0.714	0.749	0.786	0.825	0.865	0.908	0.953
21,000	0.366	0.386	0.408	0.430	0.454	0.478	0.503	0.529	0.556	0.585	0.614	0.645	0.678	0.712	0.747	0.784	0.821	0.864	0.907	0.952
22,000	0.356	0.377	0.399	0.421	0.445	0.469	0.495	0.521	0.549	0.577	0.608	0.639	0.672	0.706	0.742	0.780	0.820	0.861	0.905	0.951
23,000	0.347	0.368	0.390	0.413	0.437	0.461	0.487	0.513	0.541	0.570	0.601	0.633	0.666	0.701	0.737	0.776	0.816	0.859	0.903	0.950
24,000	0.331	0.360	0.382	0.398	0.422	0.448	0.479	0.506	0.534	0.563	0.590	0.623	0.660	0.695	0.733	0.772	0.813	0.854	0.901	0.949
25,000	0.324	0.346	0.368	0.392	0.416	0.441	0.467	0.495	0.523	0.554	0.585	0.617	0.652	0.691	0.726	0.768	0.809	0.852	0.900	0.948
30,000	0.292	0.313	0.335	0.359	0.384	0.409	0.436	0.464	0.494	0.525	0.557	0.591	0.627	0.665	0.705	0.748	0.792	0.840	0.890	0.944
40,000	0.203	0.226	0.251	0.276	0.303	0.330	0.360	0.391	0.423	0.457	0.493	0.531	0.571	0.614	0.660	0.707	0.754	0.813	0.871	0.934
50,000	0.154	0.177	0.202	0.228	0.255	0.284	0.314	0.346	0.379	0.415	0.453	0.493	0.535	0.580	0.628	0.680	0.735	0.794	0.858	0.926
60,000	0.111	0.134	0.158	0.184	0.212	0.241	0.272	0.301	0.339	0.373	0.413	0.455	0.502	0.549	0.600	0.655	0.713	0.776	0.846	0.919
70,000	0.068	0.086	0.108	0.132	0.159	0.188	0.219	0.253	0.289	0.327	0.368	0.413	0.460	0.514	0.569	0.634	0.696	0.763	0.832	0.915
80,000	0.059	0.078	0.101	0.127	0.154	0.185	0.217	0.251	0.288	0.327	0.369	0.413	0.461	0.512	0.566	0.625	0.688	0.757	0.830	0.911
90,000	0.043	0.060	0.081	0.106	0.133	0.163	0.195	0.230	0.267	0.307	0.349	0.394	0.441	0.493	0.549	0.611	0.676	0.747	0.823	0.908
100,000	0.033	0.047	0.066	0.089	0.115	0.145	0.177	0.212	0.250	0.290	0.333	0.379	0.428	0.481	0.538	0.599	0.666	0.739	0.819	0.905
150,000	0.085	0.063	0.060	0.070	0.089	0.114	0.144	0.178	0.216	0.256	0.300	0.348	0.399	0.453	0.512	0.576	0.646	0.722	0.804	0.899
200,000	0.256	0.133	0.098	0.078	0.076	0.072	0.115	0.142	0.177	0.219	0.263	0.309	0.362	0.419	0.479	0.557	0.631	0.710	0.797	0.893
250,000	0.522	0.292	0.173	0.115	0.092	0.091	0.105	0.129	0.160	0.197	0.240	0.287	0.340	0.398	0.461	0.530	0.606	0.684	0.781	0.883
300,000	0.781	0.417	0.234	0.141	0.100	0.088	0.095	0.115	0.144	0.180	0.222	0.269	0.322	0.380	0.444	0.515	0.593	0.679	0.773	0.880
400,000	1.169	0.570	0.284	0.143	0.077	0.054	0.056	0.074	0.103	0.140	0.184	0.234	0.289	0.351	0.424	0.492	0.578	0.663	0.762	0.878
500,000	1.632	0.780	0.388	0.198	0.108	0.071	0.066	0.080	0.107	0.143	0.186	0.236	0.291	0.352	0.419	0.493	0.574	0.664	0.763	0.879

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 500,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.771	0.781	0.791	0.801	0.812	0.822	0.833	0.844	0.855	0.865	0.877	0.888	0.900	0.912	0.924	0.936	0.948	0.966	0.977	0.987
2,000	0.701	0.714	0.726	0.739	0.752	0.765	0.778	0.792	0.806	0.820	0.835	0.850	0.865	0.881	0.897	0.913	0.931	0.950	0.966	0.983
3,000	0.610	0.624	0.640	0.656	0.673	0.689	0.707	0.725	0.742	0.761	0.780	0.800	0.820	0.841	0.862	0.883	0.905	0.934	0.958	0.969
4,000	0.582	0.598	0.614	0.631	0.648	0.667	0.685	0.703	0.723	0.743	0.765	0.784	0.805	0.844	0.864	0.861	0.905	0.901	0.952	0.966
5,000	0.546	0.563	0.581	0.599	0.617	0.636	0.656	0.676	0.697	0.718	0.740	0.763	0.786	0.811	0.835	0.860	0.887	0.914	0.942	0.964
6,000	0.513	0.531	0.549	0.567	0.587	0.607	0.627	0.649	0.671	0.693	0.717	0.741	0.766	0.792	0.819	0.847	0.875	0.905	0.935	0.967
7,000	0.488	0.506	0.524	0.544	0.562	0.583	0.604	0.627	0.650	0.673	0.698	0.724	0.751	0.778	0.807	0.835	0.866	0.898	0.931	0.965
8,000	0.465	0.483	0.502	0.522	0.542	0.563	0.585	0.608	0.632	0.657	0.682	0.708	0.736	0.765	0.795	0.825	0.858	0.891	0.926	0.962
9,000	0.451	0.470	0.489	0.508	0.529	0.550	0.572	0.595	0.619	0.645	0.671	0.698	0.726	0.756	0.787	0.819	0.853	0.886	0.923	0.960
10,000	0.433	0.452	0.471	0.491	0.512	0.534	0.557	0.583	0.605	0.631	0.658	0.686	0.717	0.746	0.777	0.810	0.846	0.881	0.919	0.958
11,000	0.387	0.407	0.428	0.449	0.471	0.495	0.519	0.544	0.571	0.599	0.627	0.658	0.683	0.722	0.757	0.793	0.839	0.877	0.911	0.956
12,000	0.377	0.396	0.417	0.438	0.458	0.481	0.506	0.532	0.561	0.589	0.619	0.649	0.681	0.715	0.750	0.786	0.822	0.866	0.908	0.952
13,000	0.362	0.381	0.402	0.423	0.446	0.469	0.494	0.521	0.548	0.576	0.606	0.638	0.671	0.705	0.741	0.780	0.819	0.861	0.905	0.951
14,000	0.326	0.347	0.369	0.391	0.415	0.440	0.467	0.494	0.523	0.553	0.585	0.618	0.653	0.689	0.727	0.767	0.814	0.854	0.900	0.950
15,000	0.312	0.333	0.355	0.378	0.402	0.427	0.454	0.482	0.511	0.542	0.574	0.608	0.643	0.680	0.719	0.761	0.804	0.849	0.897	0.947
16,000	0.300	0.321	0.343	0.366	0.390	0.415	0.442	0.470	0.500	0.531	0.564	0.598	0.634	0.672	0.712	0.754	0.798	0.845	0.894	0.946
17,000	0.316	0.334	0.354	0.375	0.398	0.421	0.447	0.473	0.502	0.532	0.564	0.597	0.632	0.670	0.705	0.747	0.793	0.841	0.891	0.944
18,000	0.306	0.325	0.344	0.365	0.388	0.412	0.437	0.464	0.493	0.523	0.555	0.589	0.624	0.663	0.703	0.746	0.791	0.839	0.890	0.942
19,000	0.287	0.305	0.325	0.346	0.369	0.393	0.419	0.446	0.476	0.507	0.539	0.580	0.611	0.655	0.692	0.740	0.786	0.835	0.887	0.942
20,000	0.254	0.273	0.294	0.316	0.339	0.364	0.391	0.419	0.450	0.482	0.516	0.553	0.591	0.632	0.686	0.722	0.776	0.831	0.883	0.940
21,000	0.246	0.264	0.285	0.307	0.330	0.355	0.382	0.411	0.441	0.473	0.508	0.545	0.584	0.625	0.670	0.717	0.766	0.822	0.879	0.939
22,000	0.238	0.256	0.276	0.298	0.321	0.347	0.373	0.402	0.433	0.465	0.500	0.537	0.577	0.619	0.663	0.711	0.762	0.816	0.874	0.938
23,000	0.231	0.249	0.269	0.290	0.314	0.339	0.365	0.394	0.425	0.458	0.493	0.530	0.570	0.612	0.658	0.706	0.758	0.812	0.871	0.933
24,000	0.223	0.242	0.261	0.283	0.306	0.331	0.358	0.386	0.417	0.450	0.486	0.523	0.563	0.606	0.652	0.701	0.753	0.809	0.869	0.932
25,000	0.216	0.234	0.253	0.274	0.297	0.322	0.349	0.378	0.409	0.442	0.477	0.515	0.556	0.599	0.646	0.695	0.748	0.805	0.866	0.931
30,000	0.274	0.288	0.303	0.321	0.340	0.361	0.385	0.410	0.437	0.467	0.499	0.534	0.572	0.613	0.657	0.704	0.754	0.809	0.868	0.925
40,000	0.185	0.199	0.191	0.233	0.254	0.277	0.302	0.329	0.360	0.393	0.428	0.467	0.509	0.555	0.604	0.667	0.724	0.785	0.851	0.922
50,000	0.104	0.121	0.141	0.163	0.187	0.214	0.243	0.274	0.307	0.344	0.383	0.426	0.471	0.521	0.574	0.632	0.694	0.761	0.834	0.914
60,000	0.027	0.049	0.068	0.090	0.108	0.144	0.175	0.200	0.245	0.285	0.328	0.427	0.424	0.523	0.535	0.632	0.695	0.761	0.833	0.911
70,000	0.174	0.187	0.203	0.222	0.243	0.268	0.294	0.323	0.355	0.389	0.425	0.464	0.507	0.553	0.602	0.656	0.713	0.780	0.849	0.923
80,000	0.173	0.179	0.191	0.207	0.226	0.248	0.273	0.302	0.333	0.366	0.403	0.443	0.487	0.533	0.584	0.639	0.700	0.768	0.838	0.915
90,000	0.186	0.185	0.195	0.214	0.228	0.249	0.274	0.302	0.337	0.367	0.403	0.446	0.486	0.533	0.583	0.638	0.700	0.764	0.830	0.911
100,000	0.190	0.188	0.194	0.205	0.222	0.242	0.266	0.293	0.323	0.357	0.393	0.433	0.476	0.523	0.575	0.630	0.691	0.758	0.831	0.911
150,000	0.236	0.180	0.149	0.137	0.138	0.149	0.169	0.194	0.225	0.261	0.302	0.346	0.395	0.449	0.508	0.572	0.642	0.719	0.803	0.897
200,000	0.399	0.268	0.190	0.147	0.127	0.125	0.136	0.156	0.183	0.217	0.257	0.302	0.352	0.408	0.469	0.537	0.611	0.694	0.785	0.887
250,000	0.600	0.382	0.251	0.176	0.136	0.121	0.122	0.136	0.160	0.191	0.229	0.273	0.324	0.380	0.443	0.513	0.590	0.676	0.772	0.879
300,000	0.830	0.525	0.348	0.246	0.190	0.164	0.159	0.168	0.188	0.216	0.252	0.294	0.343	0.397	0.458	0.525	0.600	0.684	0.777	0.882
400,000	1.218	0.730	0.453	0.295	0.205	0.160	0.143	0.144	0.160	0.187	0.222	0.264	0.313	0.369	0.432	0.502	0.580	0.668	0.768	0.876
500,000	1.345	0.803	0.504	0.335	0.241	0.193	0.173	0.174	0.188	0.213	0.246	0.286	0.333	0.387	0.448	0.515	0.591	0.674	0.770	0.878

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = 1M																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.809	0.818	0.827	0.836	0.844	0.854	0.862	0.872	0.881	0.891	0.900	0.909	0.918	0.932	0.938	0.949	0.958	0.969	0.978	0.989
2,000	0.718	0.731	0.743	0.756	0.769	0.781	0.795	0.806	0.821	0.834	0.848	0.864	0.876	0.892	0.906	0.921	0.937	0.953	0.968	0.984
3,000	0.652	0.680	0.695	0.709	0.724	0.728	0.755	0.770	0.786	0.802	0.819	0.828	0.846	0.864	0.883	0.901	0.924	0.941	0.960	0.980
4,000	0.634	0.649	0.664	0.680	0.696	0.713	0.729	0.746	0.763	0.781	0.799	0.817	0.836	0.855	0.874	0.892	0.912	0.934	0.955	0.977
5,000	0.592	0.613	0.631	0.644	0.664	0.681	0.697	0.718	0.737	0.751	0.773	0.794	0.815	0.841	0.860	0.883	0.904	0.927	0.951	0.975
6,000	0.561	0.578	0.595	0.614	0.633	0.650	0.671	0.690	0.712	0.731	0.753	0.775	0.798	0.821	0.844	0.868	0.894	0.919	0.945	0.972
7,000	0.525	0.546	0.564	0.583	0.601	0.623	0.644	0.664	0.686	0.709	0.732	0.755	0.779	0.803	0.829	0.855	0.884	0.912	0.941	0.971
8,000	0.498	0.517	0.538	0.558	0.578	0.599	0.621	0.644	0.667	0.690	0.714	0.739	0.765	0.792	0.819	0.847	0.876	0.905	0.936	0.968
9,000	0.471	0.491	0.512	0.533	0.556	0.576	0.599	0.623	0.647	0.673	0.698	0.724	0.750	0.778	0.808	0.838	0.868	0.899	0.932	0.966
10,000	0.450	0.470	0.491	0.513	0.535	0.558	0.582	0.606	0.631	0.656	0.683	0.710	0.739	0.767	0.799	0.829	0.861	0.894	0.928	0.963
11,000	0.431	0.452	0.473	0.495	0.518	0.542	0.566	0.590	0.616	0.642	0.670	0.698	0.723	0.757	0.792	0.818	0.857	0.887	0.925	0.961
12,000	0.414	0.435	0.457	0.479	0.499	0.526	0.551	0.576	0.602	0.630	0.657	0.685	0.717	0.750	0.780	0.813	0.850	0.883	0.919	0.959
13,000	0.397	0.419	0.438	0.461	0.484	0.509	0.534	0.563	0.590	0.617	0.644	0.676	0.707	0.739	0.771	0.805	0.842	0.879	0.918	0.958
14,000	0.374	0.396	0.418	0.442	0.466	0.491	0.517	0.544	0.571	0.600	0.630	0.661	0.693	0.727	0.761	0.798	0.835	0.873	0.914	0.957
15,000	0.359	0.381	0.404	0.427	0.452	0.477	0.504	0.531	0.559	0.589	0.619	0.651	0.684	0.718	0.754	0.791	0.830	0.869	0.911	0.956
16,000	0.347	0.368	0.391	0.415	0.440	0.466	0.493	0.521	0.550	0.579	0.610	0.642	0.677	0.714	0.747	0.785	0.824	0.866	0.908	0.953
17,000	0.329	0.351	0.375	0.399	0.424	0.450	0.478	0.506	0.536	0.566	0.601	0.634	0.668	0.703	0.741	0.778	0.818	0.862	0.907	0.952
18,000	0.310	0.333	0.357	0.387	0.413	0.440	0.462	0.491	0.521	0.552	0.585	0.619	0.654	0.691	0.730	0.772	0.814	0.858	0.903	0.951
19,000	0.299	0.322	0.346	0.370	0.397	0.424	0.452	0.474	0.505	0.537	0.571	0.606	0.642	0.683	0.723	0.768	0.809	0.855	0.901	0.949
20,000	0.279	0.302	0.327	0.352	0.378	0.406	0.435	0.464	0.496	0.528	0.563	0.598	0.635	0.674	0.718	0.760	0.806	0.851	0.898	0.948
21,000	0.268	0.291	0.328	0.341	0.368	0.395	0.424	0.455	0.486	0.527	0.553	0.589	0.633	0.667	0.708	0.751	0.796	0.845	0.896	0.947
22,000	0.285	0.308	0.332	0.356	0.382	0.409	0.427	0.467	0.489	0.529	0.555	0.598	0.635	0.673	0.708	0.750	0.791	0.842	0.892	0.947
23,000	0.278	0.301	0.325	0.350	0.375	0.394	0.422	0.452	0.484	0.516	0.542	0.586	0.624	0.663	0.699	0.748	0.789	0.843	0.892	0.945
24,000	0.269	0.292	0.316	0.341	0.367	0.394	0.422	0.452	0.483	0.516	0.550	0.586	0.623	0.662	0.704	0.747	0.789	0.838	0.889	0.944
25,000	0.259	0.282	0.306	0.331	0.357	0.384	0.413	0.443	0.474	0.507	0.542	0.578	0.616	0.656	0.698	0.742	0.788	0.837	0.886	0.944
30,000	0.218	0.241	0.270	0.291	0.318	0.346	0.379	0.406	0.439	0.473	0.512	0.548	0.588	0.630	0.676	0.721	0.770	0.823	0.879	0.937
40,000	0.173	0.203	0.226	0.256	0.279	0.305	0.335	0.360	0.392	0.429	0.469	0.509	0.564	0.594	0.647	0.696	0.755	0.807	0.861	0.930
50,000	0.123	0.143	0.165	0.188	0.214	0.243	0.273	0.305	0.340	0.377	0.417	0.459	0.504	0.551	0.604	0.659	0.717	0.780	0.849	0.923
60,000	0.082	0.098	0.130	0.140	0.165	0.193	0.235	0.256	0.292	0.330	0.381	0.416	0.463	0.514	0.576	0.628	0.691	0.768	0.836	0.915
70,000	0.065	0.080	0.095	0.119	0.141	0.171	0.199	0.235	0.268	0.309	0.351	0.396	0.445	0.497	0.553	0.614	0.679	0.750	0.826	0.910
80,000	0.055	0.066	0.082	0.101	0.124	0.151	0.181	0.209	0.249	0.288	0.326	0.375	0.426	0.475	0.536	0.597	0.662	0.736	0.819	0.904
90,000	0.076	0.075	0.081	0.093	0.110	0.133	0.159	0.189	0.224	0.262	0.304	0.349	0.399	0.454	0.513	0.577	0.648	0.724	0.808	0.899
100,000	0.088	0.079	0.080	0.088	0.102	0.122	0.147	0.177	0.211	0.248	0.290	0.336	0.386	0.441	0.501	0.567	0.638	0.716	0.802	0.896
150,000	0.234	0.162	0.118	0.095	0.087	0.091	0.104	0.125	0.153	0.187	0.227	0.273	0.324	0.382	0.445	0.515	0.596	0.679	0.775	0.881
200,000	0.439	0.282	0.184	0.125	0.093	0.080	0.082	0.096	0.119	0.149	0.187	0.232	0.284	0.342	0.407	0.480	0.564	0.655	0.757	0.873
250,000	0.786	0.498	0.265	0.164	0.105	0.095	0.079	0.070	0.087	0.115	0.151	0.198	0.248	0.306	0.374	0.449	0.535	0.630	0.739	0.862
300,000	1.015	0.661	0.415	0.262	0.168	0.114	0.080	0.082	0.091	0.113	0.145	0.186	0.235	0.293	0.361	0.437	0.523	0.620	0.731	0.857
400,000	1.422	0.869	0.536	0.333	0.207	0.134	0.095	0.080	0.084	0.102	0.131	0.171	0.220	0.278	0.345	0.422	0.510	0.610	0.723	0.852
500,000	1.828	1.095	0.667	0.406	0.248	0.154	0.101	0.078	0.076	0.091	0.119	0.157	0.206	0.264	0.332	0.410	0.499	0.601	0.717	0.849

Bottom 5%

Optimal Split Point by Size of Risk – PY 2015

Exhibit 1

Split Point	Cohort = > 1M																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.884	0.889	0.894	0.900	0.906	0.911	0.917	0.922	0.928	0.934	0.940	0.946	0.951	0.957	0.963	0.969	0.976	0.975	0.984	0.993
2,000	0.788	0.805	0.814	0.824	0.823	0.837	0.852	0.857	0.872	0.882	0.882	0.902	0.912	0.921	0.933	0.943	0.955	0.965	0.977	0.989
3,000	0.754	0.765	0.776	0.787	0.799	0.810	0.822	0.834	0.846	0.857	0.869	0.882	0.894	0.907	0.914	0.927	0.944	0.957	0.971	0.986
4,000	0.716	0.728	0.742	0.754	0.768	0.781	0.797	0.810	0.824	0.837	0.850	0.864	0.878	0.893	0.908	0.916	0.938	0.949	0.966	0.983
5,000	0.681	0.695	0.709	0.723	0.738	0.753	0.768	0.783	0.798	0.814	0.830	0.846	0.862	0.879	0.895	0.913	0.931	0.947	0.965	0.982
6,000	0.651	0.666	0.681	0.696	0.712	0.728	0.744	0.761	0.778	0.795	0.812	0.830	0.848	0.863	0.884	0.904	0.920	0.939	0.961	0.980
7,000	0.623	0.639	0.655	0.672	0.689	0.706	0.723	0.741	0.759	0.777	0.796	0.815	0.834	0.854	0.876	0.893	0.915	0.934	0.957	0.979
8,000	0.603	0.620	0.637	0.654	0.673	0.690	0.708	0.727	0.746	0.765	0.785	0.805	0.825	0.846	0.867	0.886	0.909	0.932	0.955	0.977
9,000	0.579	0.589	0.598	0.633	0.645	0.658	0.690	0.709	0.725	0.750	0.776	0.792	0.814	0.835	0.857	0.879	0.903	0.928	0.951	0.976
10,000	0.552	0.571	0.590	0.600	0.629	0.641	0.669	0.684	0.712	0.728	0.756	0.774	0.804	0.821	0.850	0.870	0.898	0.921	0.948	0.974
11,000	0.521	0.541	0.561	0.583	0.604	0.634	0.647	0.670	0.699	0.716	0.740	0.768	0.788	0.817	0.839	0.864	0.892	0.917	0.944	0.972
12,000	0.505	0.524	0.545	0.568	0.588	0.611	0.634	0.657	0.682	0.705	0.729	0.754	0.779	0.809	0.835	0.859	0.886	0.914	0.943	0.971
13,000	0.475	0.497	0.519	0.542	0.565	0.603	0.612	0.635	0.674	0.687	0.711	0.748	0.766	0.792	0.827	0.855	0.883	0.911	0.941	0.969
14,000	0.460	0.482	0.504	0.527	0.553	0.575	0.600	0.624	0.653	0.676	0.703	0.730	0.760	0.787	0.814	0.846	0.874	0.904	0.938	0.967
15,000	0.448	0.471	0.494	0.518	0.543	0.568	0.593	0.611	0.644	0.671	0.694	0.726	0.754	0.779	0.808	0.844	0.870	0.901	0.934	0.967
16,000	0.434	0.457	0.481	0.506	0.531	0.556	0.581	0.608	0.634	0.662	0.690	0.718	0.747	0.777	0.807	0.837	0.869	0.898	0.931	0.965
17,000	0.420	0.444	0.468	0.493	0.518	0.544	0.571	0.597	0.625	0.653	0.681	0.710	0.740	0.770	0.801	0.832	0.865	0.898	0.931	0.964
18,000	0.407	0.431	0.456	0.481	0.507	0.533	0.560	0.588	0.615	0.644	0.673	0.703	0.734	0.764	0.796	0.828	0.860	0.894	0.929	0.964
19,000	0.394	0.419	0.444	0.469	0.496	0.522	0.550	0.578	0.603	0.632	0.662	0.693	0.724	0.758	0.791	0.823	0.857	0.892	0.927	0.963
20,000	0.378	0.402	0.428	0.453	0.481	0.508	0.536	0.565	0.594	0.624	0.654	0.685	0.717	0.750	0.783	0.819	0.854	0.889	0.925	0.961
21,000	0.365	0.391	0.417	0.442	0.469	0.498	0.526	0.555	0.584	0.615	0.646	0.678	0.711	0.743	0.778	0.813	0.849	0.885	0.923	0.960
22,000	0.349	0.374	0.400	0.427	0.455	0.483	0.512	0.542	0.572	0.603	0.638	0.667	0.701	0.738	0.774	0.806	0.845	0.883	0.921	0.960
23,000	0.354	0.379	0.407	0.431	0.460	0.474	0.515	0.544	0.565	0.605	0.636	0.661	0.703	0.730	0.765	0.802	0.841	0.880	0.918	0.959
24,000	0.344	0.369	0.397	0.422	0.451	0.477	0.506	0.536	0.567	0.598	0.629	0.663	0.697	0.724	0.767	0.798	0.840	0.876	0.916	0.958
25,000	0.336	0.359	0.387	0.413	0.442	0.469	0.498	0.529	0.559	0.591	0.623	0.658	0.692	0.726	0.762	0.799	0.837	0.876	0.917	0.956
30,000	0.300	0.325	0.356	0.381	0.411	0.440	0.473	0.502	0.535	0.568	0.605	0.638	0.674	0.710	0.750	0.787	0.825	0.867	0.912	0.952
40,000	0.345	0.367	0.389	0.413	0.437	0.463	0.489	0.517	0.546	0.576	0.607	0.640	0.674	0.709	0.746	0.784	0.823	0.865	0.917	0.958
50,000	0.311	0.332	0.358	0.382	0.407	0.430	0.458	0.487	0.517	0.548	0.581	0.616	0.651	0.688	0.728	0.768	0.810	0.854	0.901	0.949
60,000	0.274	0.297	0.321	0.347	0.374	0.402	0.431	0.462	0.494	0.527	0.561	0.597	0.635	0.674	0.714	0.757	0.801	0.845	0.894	0.946
70,000	0.269	0.290	0.313	0.337	0.363	0.390	0.419	0.449	0.481	0.509	0.545	0.581	0.620	0.660	0.702	0.746	0.792	0.840	0.891	0.944
80,000	0.251	0.271	0.294	0.318	0.344	0.371	0.400	0.430	0.462	0.496	0.532	0.569	0.608	0.648	0.691	0.736	0.784	0.834	0.886	0.942
90,000	0.231	0.252	0.274	0.299	0.326	0.355	0.383	0.416	0.447	0.484	0.517	0.558	0.595	0.640	0.681	0.730	0.776	0.829	0.882	0.940
100,000	0.200	0.222	0.246	0.272	0.300	0.330	0.362	0.395	0.429	0.471	0.508	0.543	0.585	0.628	0.675	0.723	0.773	0.824	0.879	0.938
150,000	0.157	0.173	0.195	0.221	0.250	0.281	0.314	0.349	0.386	0.425	0.465	0.508	0.552	0.599	0.647	0.699	0.753	0.809	0.870	0.933
200,000	0.137	0.145	0.162	0.186	0.215	0.247	0.282	0.320	0.359	0.400	0.443	0.488	0.534	0.583	0.634	0.684	0.741	0.802	0.864	0.929
250,000	0.133	0.125	0.135	0.155	0.183	0.215	0.251	0.290	0.331	0.374	0.419	0.466	0.515	0.566	0.619	0.675	0.733	0.795	0.859	0.928
300,000	0.135	0.096	0.089	0.101	0.124	0.156	0.193	0.234	0.279	0.325	0.374	0.425	0.478	0.533	0.591	0.651	0.714	0.780	0.848	0.922
400,000	0.168	0.100	0.077	0.081	0.101	0.131	0.168	0.209	0.255	0.302	0.352	0.405	0.459	0.516	0.576	0.638	0.703	0.771	0.845	0.920
500,000	0.214	0.116	0.077	0.069	0.089	0.117	0.154	0.196	0.240	0.289	0.340	0.396	0.451	0.508	0.567	0.630	0.697	0.767	0.840	0.918

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 5,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.588	0.603	0.620	0.637	0.654	0.679	0.691	0.710	0.729	0.748	0.768	0.794	0.811	0.832	0.854	0.877	0.901	0.927	0.949	0.976
2,000	0.413	0.432	0.452	0.473	0.495	0.518	0.542	0.566	0.592	0.619	0.647	0.677	0.706	0.738	0.771	0.806	0.841	0.879	0.917	0.958
3,000	0.308	0.325	0.346	0.368	0.392	0.416	0.442	0.471	0.498	0.529	0.562	0.597	0.632	0.670	0.710	0.753	0.797	0.843	0.894	0.945
4,000	0.236	0.255	0.275	0.295	0.318	0.342	0.368	0.397	0.427	0.459	0.494	0.530	0.570	0.613	0.657	0.705	0.756	0.811	0.870	0.934
5,000	0.228	0.240	0.256	0.274	0.293	0.314	0.337	0.363	0.391	0.421	0.456	0.492	0.531	0.575	0.621	0.671	0.727	0.787	0.853	0.925
6,000	0.286	0.285	0.301	0.304	0.318	0.339	0.351	0.377	0.395	0.422	0.456	0.485	0.525	0.563	0.612	0.658	0.714	0.777	0.844	0.918
7,000	0.307	0.308	0.311	0.318	0.325	0.337	0.351	0.367	0.387	0.422	0.437	0.468	0.503	0.543	0.595	0.639	0.696	0.755	0.828	0.909
8,000	0.299	0.296	0.296	0.298	0.303	0.308	0.322	0.336	0.353	0.376	0.400	0.432	0.467	0.508	0.554	0.607	0.668	0.735	0.813	0.900
9,000	0.308	0.302	0.295	0.292	0.297	0.300	0.308	0.318	0.333	0.357	0.377	0.407	0.441	0.482	0.528	0.584	0.646	0.716	0.798	0.893
10,000	0.324	0.311	0.303	0.296	0.296	0.294	0.301	0.308	0.321	0.340	0.360	0.386	0.419	0.459	0.504	0.560	0.625	0.699	0.785	0.884
11,000	0.302	0.287	0.275	0.267	0.265	0.261	0.264	0.272	0.282	0.302	0.319	0.348	0.382	0.423	0.480	0.537	0.604	0.685	0.774	0.878
12,000	0.327	0.307	0.291	0.278	0.272	0.265	0.264	0.267	0.276	0.291	0.309	0.335	0.367	0.406	0.454	0.511	0.580	0.661	0.757	0.868
13,000	0.357	0.332	0.311	0.294	0.284	0.272	0.268	0.268	0.274	0.284	0.300	0.325	0.353	0.393	0.438	0.495	0.564	0.648	0.746	0.862
14,000	0.387	0.357	0.332	0.311	0.294	0.281	0.274	0.270	0.273	0.280	0.293	0.315	0.342	0.378	0.424	0.481	0.550	0.635	0.735	0.857
15,000	0.420	0.385	0.355	0.329	0.308	0.292	0.280	0.274	0.273	0.277	0.289	0.306	0.333	0.367	0.412	0.468	0.538	0.624	0.726	0.850
16,000	0.454	0.414	0.380	0.350	0.325	0.305	0.289	0.280	0.275	0.277	0.285	0.301	0.325	0.357	0.401	0.457	0.526	0.613	0.717	0.846
17,000	0.508	0.462	0.423	0.388	0.346	0.322	0.303	0.299	0.282	0.280	0.286	0.299	0.324	0.349	0.393	0.448	0.519	0.603	0.709	0.839
18,000	0.548	0.497	0.452	0.412	0.378	0.349	0.325	0.308	0.296	0.291	0.292	0.303	0.320	0.348	0.390	0.442	0.509	0.596	0.703	0.836
19,000	0.577	0.521	0.472	0.428	0.389	0.358	0.331	0.311	0.296	0.288	0.287	0.296	0.311	0.338	0.378	0.431	0.499	0.584	0.694	0.830
20,000	0.612	0.550	0.496	0.448	0.405	0.370	0.340	0.316	0.299	0.289	0.285	0.292	0.306	0.331	0.369	0.421	0.488	0.575	0.686	0.826
21,000	0.653	0.586	0.527	0.474	0.428	0.387	0.354	0.328	0.307	0.294	0.287	0.292	0.302	0.326	0.363	0.413	0.480	0.568	0.680	0.821
22,000	0.695	0.622	0.557	0.501	0.449	0.405	0.368	0.338	0.315	0.298	0.289	0.291	0.301	0.322	0.357	0.406	0.473	0.560	0.673	0.817
23,000	0.737	0.659	0.588	0.526	0.471	0.423	0.383	0.349	0.323	0.303	0.292	0.291	0.298	0.317	0.351	0.399	0.465	0.552	0.666	0.813
24,000	0.781	0.696	0.621	0.554	0.495	0.442	0.398	0.361	0.331	0.309	0.296	0.293	0.297	0.315	0.346	0.393	0.457	0.546	0.660	0.809
25,000	0.825	0.735	0.655	0.582	0.519	0.463	0.414	0.374	0.341	0.316	0.300	0.295	0.297	0.312	0.342	0.389	0.451	0.539	0.654	0.805
30,000	1.056	0.937	0.827	0.729	0.644	0.567	0.500	0.442	0.394	0.355	0.326	0.307	0.300	0.306	0.327	0.367	0.426	0.512	0.629	0.788
40,000	1.361	1.181	1.024	0.881	0.757	0.649	0.556	0.475	0.406	0.348	0.303	0.272	0.255	0.251	0.264	0.299	0.355	0.446	0.573	0.752
50,000	1.885	1.611	1.376	1.175	1.002	0.849	0.721	0.607	0.512	0.431	0.363	0.311	0.273	0.256	0.256	0.276	0.329	0.414	0.541	0.730
60,000	2.488	2.097	1.770	1.491	1.261	1.060	0.883	0.737	0.618	0.512	0.426	0.356	0.301	0.270	0.257	0.266	0.308	0.389	0.517	0.712
70,000	3.163	2.622	2.186	1.823	1.522	1.270	1.059	0.876	0.724	0.593	0.486	0.401	0.333	0.281	0.258	0.258	0.295	0.370	0.497	0.696
80,000	3.917	3.203	2.638	2.174	1.801	1.489	1.230	1.013	0.832	0.675	0.549	0.441	0.365	0.299	0.265	0.256	0.286	0.349	0.476	0.679
90,000	4.807	3.854	3.123	2.549	2.089	1.714	1.407	1.153	0.940	0.759	0.611	0.489	0.392	0.320	0.273	0.258	0.279	0.337	0.459	0.667
100,000	5.797	4.567	3.651	2.946	2.393	1.920	1.586	1.291	1.024	0.843	0.674	0.515	0.425	0.340	0.285	0.259	0.274	0.315	0.448	0.656
150,000	13.098	9.195	6.775	5.119	3.947	3.085	2.429	1.922	1.520	1.196	0.934	0.723	0.552	0.420	0.342	0.265	0.249	0.286	0.406	0.620
200,000	25.747	15.829	10.574	7.485	5.506	4.153	3.183	2.464	1.914	1.488	1.149	0.878	0.662	0.495	0.369	0.287	0.252	0.274	0.386	0.600
250,000	45.639	23.841	14.646	9.765	6.894	5.048	3.797	2.888	2.214	1.699	1.302	0.987	0.738	0.547	0.402	0.304	0.256	0.269	0.375	0.588
300,000	73.550	32.963	18.525	11.767	8.051	5.766	4.253	3.198	2.429	1.849	1.407	1.062	0.790	0.581	0.424	0.315	0.260	0.267	0.369	0.582
400,000	140.372	49.130	24.645	14.595	9.613	6.711	4.848	3.601	2.710	2.025	1.553	1.170	0.850	0.621	0.467	0.347	0.264	0.264	0.362	0.575
500,000	250.921	66.600	29.946	16.926	10.796	7.383	5.278	3.877	2.895	2.177	1.644	1.236	0.910	0.667	0.489	0.356	0.289	0.286	0.363	0.571

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 10,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.651	0.666	0.681	0.696	0.712	0.726	0.743	0.759	0.775	0.792	0.809	0.826	0.844	0.862	0.881	0.900	0.919	0.938	0.959	0.980
2,000	0.503	0.523	0.540	0.560	0.581	0.604	0.624	0.645	0.669	0.693	0.717	0.741	0.767	0.793	0.820	0.848	0.876	0.906	0.936	0.967
3,000	0.391	0.412	0.432	0.454	0.483	0.508	0.531	0.553	0.585	0.613	0.638	0.668	0.701	0.733	0.766	0.804	0.839	0.877	0.916	0.958
4,000	0.308	0.326	0.353	0.376	0.401	0.427	0.454	0.480	0.513	0.543	0.574	0.608	0.645	0.681	0.720	0.763	0.806	0.851	0.898	0.948
5,000	0.243	0.265	0.288	0.312	0.338	0.364	0.393	0.422	0.454	0.487	0.520	0.559	0.599	0.637	0.682	0.728	0.776	0.828	0.881	0.940
6,000	0.200	0.221	0.243	0.267	0.292	0.319	0.347	0.378	0.409	0.444	0.479	0.518	0.560	0.601	0.648	0.700	0.752	0.807	0.867	0.931
7,000	0.161	0.180	0.201	0.224	0.249	0.276	0.306	0.333	0.368	0.402	0.439	0.480	0.523	0.567	0.617	0.671	0.727	0.788	0.853	0.924
8,000	0.132	0.149	0.170	0.192	0.215	0.241	0.270	0.299	0.332	0.368	0.405	0.447	0.491	0.536	0.591	0.645	0.705	0.770	0.841	0.916
9,000	0.102	0.118	0.137	0.159	0.182	0.206	0.234	0.264	0.297	0.333	0.370	0.413	0.459	0.505	0.560	0.620	0.683	0.752	0.830	0.912
10,000	0.092	0.108	0.125	0.145	0.166	0.190	0.215	0.245	0.277	0.313	0.350	0.393	0.438	0.488	0.542	0.601	0.667	0.739	0.818	0.904
11,000	0.087	0.100	0.115	0.133	0.153	0.176	0.201	0.228	0.260	0.293	0.331	0.372	0.418	0.468	0.523	0.584	0.652	0.726	0.808	0.898
12,000	0.077	0.086	0.100	0.115	0.134	0.155	0.179	0.206	0.237	0.270	0.309	0.350	0.395	0.446	0.502	0.564	0.634	0.711	0.797	0.893
13,000	0.075	0.084	0.096	0.110	0.127	0.147	0.169	0.195	0.224	0.257	0.293	0.334	0.380	0.430	0.487	0.550	0.621	0.700	0.788	0.886
14,000	0.072	0.079	0.089	0.101	0.117	0.136	0.157	0.181	0.209	0.241	0.276	0.317	0.362	0.412	0.470	0.534	0.606	0.687	0.779	0.882
15,000	0.074	0.079	0.088	0.097	0.110	0.127	0.147	0.170	0.198	0.229	0.262	0.302	0.351	0.401	0.455	0.520	0.594	0.676	0.772	0.877
16,000	0.069	0.070	0.078	0.086	0.098	0.115	0.132	0.154	0.181	0.210	0.244	0.284	0.328	0.380	0.437	0.503	0.578	0.663	0.761	0.873
17,000	0.070	0.072	0.076	0.084	0.094	0.108	0.124	0.145	0.170	0.199	0.232	0.271	0.315	0.365	0.423	0.490	0.566	0.653	0.752	0.867
18,000	0.090	0.089	0.090	0.095	0.103	0.115	0.130	0.149	0.172	0.199	0.231	0.268	0.311	0.360	0.417	0.483	0.558	0.647	0.745	0.863
19,000	0.079	0.076	0.076	0.080	0.087	0.097	0.112	0.129	0.152	0.178	0.210	0.247	0.290	0.340	0.397	0.464	0.543	0.632	0.736	0.857
20,000	0.093	0.087	0.085	0.087	0.092	0.100	0.113	0.129	0.149	0.175	0.205	0.241	0.283	0.332	0.389	0.456	0.534	0.624	0.730	0.854
21,000	0.105	0.096	0.092	0.092	0.095	0.101	0.112	0.127	0.146	0.170	0.199	0.234	0.274	0.323	0.380	0.447	0.525	0.616	0.724	0.850
22,000	0.114	0.104	0.096	0.093	0.095	0.101	0.109	0.123	0.141	0.163	0.191	0.224	0.265	0.313	0.369	0.436	0.515	0.607	0.716	0.846
23,000	0.123	0.110	0.102	0.097	0.096	0.100	0.108	0.119	0.138	0.160	0.187	0.217	0.258	0.303	0.362	0.426	0.505	0.598	0.710	0.842
24,000	0.143	0.127	0.116	0.109	0.106	0.107	0.113	0.124	0.138	0.158	0.183	0.214	0.253	0.299	0.355	0.420	0.499	0.593	0.705	0.838
25,000	0.158	0.139	0.126	0.117	0.112	0.112	0.116	0.124	0.138	0.156	0.180	0.210	0.248	0.293	0.348	0.413	0.491	0.586	0.698	0.835
30,000	0.158	0.130	0.107	0.090	0.079	0.072	0.071	0.074	0.083	0.098	0.119	0.147	0.183	0.228	0.284	0.351	0.434	0.536	0.659	0.812
40,000	0.320	0.260	0.212	0.173	0.142	0.118	0.102	0.092	0.087	0.090	0.101	0.118	0.146	0.182	0.231	0.295	0.375	0.480	0.612	0.781
50,000	0.517	0.420	0.341	0.276	0.226	0.183	0.149	0.126	0.109	0.100	0.101	0.111	0.129	0.156	0.199	0.258	0.335	0.439	0.576	0.757
60,000	0.758	0.611	0.494	0.397	0.322	0.260	0.211	0.173	0.144	0.125	0.113	0.113	0.123	0.143	0.178	0.231	0.305	0.408	0.547	0.737
70,000	1.036	0.825	0.660	0.530	0.425	0.342	0.276	0.223	0.182	0.152	0.132	0.122	0.124	0.137	0.166	0.213	0.283	0.382	0.523	0.720
80,000	1.352	1.066	0.844	0.671	0.535	0.429	0.344	0.275	0.222	0.181	0.152	0.134	0.128	0.135	0.158	0.199	0.265	0.363	0.504	0.706
90,000	1.732	1.336	1.043	0.822	0.651	0.518	0.421	0.329	0.263	0.212	0.174	0.146	0.135	0.134	0.151	0.190	0.251	0.346	0.487	0.694
100,000	2.178	1.654	1.262	0.984	0.773	0.622	0.493	0.383	0.313	0.244	0.201	0.169	0.144	0.137	0.149	0.182	0.239	0.336	0.471	0.683
150,000	5.592	3.778	2.688	1.970	1.488	1.141	0.887	0.693	0.543	0.429	0.337	0.269	0.218	0.185	0.166	0.181	0.220	0.297	0.427	0.645
200,000	11.649	6.834	4.387	3.004	2.150	1.590	1.201	0.920	0.710	0.551	0.427	0.332	0.262	0.211	0.184	0.181	0.207	0.276	0.402	0.624
250,000	21.359	10.667	6.258	4.015	2.751	1.972	1.459	1.099	0.838	0.643	0.494	0.380	0.295	0.233	0.195	0.183	0.202	0.266	0.388	0.611
300,000	34.846	15.039	8.076	4.914	3.258	2.282	1.658	1.236	0.934	0.712	0.545	0.416	0.319	0.248	0.204	0.186	0.200	0.259	0.379	0.603
400,000	67.790	22.664	10.802	6.168	3.894	2.660	1.885	1.385	1.038	0.794	0.594	0.450	0.350	0.271	0.209	0.185	0.198	0.252	0.368	0.593
500,000	122.807	31.174	13.395	7.216	4.428	2.947	2.067	1.503	1.117	0.838	0.634	0.479	0.364	0.277	0.219	0.191	0.194	0.244	0.363	0.588

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 20,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.608	0.625	0.644	0.661	0.678	0.689	0.711	0.726	0.749	0.763	0.784	0.807	0.825	0.845	0.868	0.886	0.910	0.936	0.952	0.977
2,000	0.422	0.440	0.463	0.487	0.508	0.525	0.551	0.577	0.606	0.639	0.659	0.696	0.724	0.753	0.786	0.817	0.852	0.888	0.926	0.962
3,000	0.322	0.345	0.371	0.395	0.418	0.437	0.464	0.495	0.527	0.558	0.590	0.623	0.663	0.701	0.739	0.777	0.817	0.857	0.906	0.952
4,000	0.265	0.287	0.311	0.335	0.361	0.383	0.418	0.433	0.480	0.512	0.534	0.584	0.618	0.656	0.708	0.740	0.794	0.840	0.892	0.944
5,000	0.213	0.235	0.260	0.283	0.310	0.338	0.367	0.398	0.430	0.466	0.504	0.541	0.583	0.627	0.674	0.721	0.769	0.823	0.882	0.938
6,000	0.156	0.176	0.201	0.220	0.249	0.280	0.311	0.342	0.377	0.411	0.446	0.492	0.538	0.584	0.638	0.685	0.743	0.801	0.864	0.930
7,000	0.123	0.142	0.163	0.186	0.208	0.235	0.268	0.302	0.336	0.372	0.410	0.453	0.501	0.546	0.605	0.656	0.714	0.780	0.850	0.921
8,000	0.083	0.101	0.124	0.140	0.160	0.189	0.218	0.248	0.284	0.318	0.362	0.406	0.453	0.505	0.564	0.619	0.687	0.755	0.833	0.913
9,000	0.066	0.091	0.101	0.118	0.131	0.164	0.185	0.222	0.247	0.292	0.333	0.380	0.424	0.477	0.535	0.597	0.664	0.739	0.822	0.907
10,000	0.055	0.071	0.083	0.090	0.115	0.130	0.155	0.184	0.223	0.253	0.293	0.344	0.386	0.443	0.502	0.566	0.637	0.718	0.806	0.898
11,000	0.060	0.072	0.080	0.083	0.105	0.115	0.140	0.173	0.203	0.231	0.269	0.321	0.363	0.417	0.479	0.545	0.621	0.702	0.793	0.892
12,000	0.082	0.081	0.082	0.082	0.098	0.103	0.124	0.155	0.183	0.209	0.245	0.297	0.337	0.399	0.460	0.524	0.600	0.685	0.782	0.886
13,000	0.083	0.078	0.077	0.079	0.087	0.102	0.110	0.137	0.166	0.195	0.224	0.274	0.316	0.376	0.438	0.508	0.582	0.673	0.771	0.879
14,000	0.097	0.086	0.081	0.080	0.085	0.093	0.107	0.125	0.150	0.179	0.208	0.257	0.298	0.361	0.421	0.491	0.566	0.659	0.761	0.874
15,000	0.130	0.101	0.103	0.096	0.094	0.098	0.110	0.127	0.145	0.172	0.206	0.244	0.284	0.349	0.409	0.475	0.555	0.648	0.752	0.870
16,000	0.162	0.147	0.136	0.130	0.129	0.130	0.138	0.157	0.172	0.201	0.230	0.268	0.310	0.363	0.418	0.490	0.562	0.656	0.755	0.868
17,000	0.187	0.167	0.165	0.142	0.137	0.136	0.152	0.164	0.169	0.194	0.232	0.260	0.297	0.352	0.418	0.477	0.551	0.646	0.752	0.868
18,000	0.221	0.197	0.178	0.162	0.155	0.148	0.153	0.164	0.175	0.198	0.219	0.255	0.292	0.349	0.403	0.466	0.545	0.641	0.743	0.863
19,000	0.250	0.217	0.193	0.172	0.160	0.149	0.148	0.157	0.164	0.184	0.206	0.241	0.277	0.329	0.386	0.451	0.529	0.630	0.732	0.858
20,000	0.287	0.245	0.212	0.184	0.165	0.150	0.143	0.148	0.151	0.173	0.194	0.223	0.254	0.307	0.367	0.435	0.516	0.611	0.720	0.850
21,000	0.334	0.282	0.240	0.207	0.182	0.160	0.148	0.148	0.146	0.157	0.175	0.208	0.239	0.290	0.348	0.412	0.495	0.600	0.708	0.847
22,000	0.301	0.247	0.203	0.168	0.141	0.120	0.109	0.105	0.107	0.120	0.138	0.168	0.206	0.257	0.317	0.385	0.471	0.576	0.699	0.839
23,000	0.343	0.287	0.230	0.189	0.158	0.132	0.115	0.109	0.107	0.116	0.133	0.160	0.196	0.246	0.305	0.373	0.459	0.565	0.686	0.834
24,000	0.390	0.321	0.263	0.215	0.176	0.145	0.123	0.113	0.110	0.115	0.129	0.154	0.189	0.238	0.295	0.362	0.449	0.556	0.679	0.826
25,000	0.424	0.348	0.286	0.234	0.191	0.158	0.134	0.118	0.113	0.115	0.127	0.151	0.184	0.228	0.285	0.355	0.442	0.550	0.673	0.823
30,000	0.719	0.584	0.481	0.407	0.331	0.270	0.220	0.183	0.151	0.137	0.138	0.146	0.167	0.202	0.251	0.315	0.400	0.511	0.641	0.803
40,000	1.211	0.999	0.821	0.670	0.541	0.434	0.344	0.272	0.215	0.173	0.146	0.134	0.137	0.157	0.196	0.255	0.334	0.445	0.587	0.769
50,000	1.829	1.541	1.232	1.040	0.811	0.677	0.516	0.424	0.310	0.257	0.189	0.168	0.148	0.152	0.176	0.222	0.295	0.400	0.546	0.741
60,000	2.415	1.961	1.596	1.292	1.038	0.829	0.655	0.512	0.395	0.301	0.229	0.177	0.147	0.138	0.151	0.189	0.258	0.363	0.512	0.718
70,000	3.423	2.757	2.223	1.794	1.442	1.154	0.916	0.720	0.560	0.430	0.327	0.249	0.194	0.164	0.162	0.184	0.241	0.336	0.485	0.697
80,000	4.553	3.621	2.895	2.318	1.867	1.491	1.180	0.933	0.729	0.564	0.431	0.327	0.251	0.201	0.179	0.186	0.233	0.321	0.465	0.682
90,000	5.834	4.534	3.602	2.858	2.274	1.810	1.431	1.132	0.888	0.685	0.522	0.394	0.301	0.234	0.195	0.193	0.226	0.305	0.445	0.667
100,000	7.141	5.492	4.277	3.355	2.647	2.090	1.652	1.298	1.015	0.783	0.598	0.459	0.341	0.259	0.205	0.194	0.219	0.294	0.429	0.654
150,000	17.473	12.064	8.703	6.430	4.845	3.668	2.859	2.211	1.695	1.318	1.010	0.762	0.558	0.406	0.305	0.246	0.225	0.264	0.377	0.609
200,000	34.608	21.085	13.882	9.633	6.929	5.121	3.849	2.923	2.233	1.706	1.296	0.975	0.722	0.526	0.379	0.280	0.234	0.250	0.354	0.581
250,000	60.511	32.033	19.436	12.724	8.796	6.313	4.646	3.472	2.620	1.984	1.499	1.123	0.829	0.601	0.429	0.309	0.246	0.248	0.342	0.567
300,000	95.075	43.969	24.720	15.442	10.288	7.257	5.255	3.878	2.904	2.179	1.640	1.228	0.903	0.655	0.465	0.331	0.256	0.248	0.335	0.558
400,000	172.394	63.902	32.517	19.121	12.249	8.394	5.980	4.337	3.262	2.411	1.839	1.347	0.991	0.719	0.512	0.361	0.273	0.254	0.327	0.547
500,000	298.400	86.536	40.003	22.384	14.025	9.377	6.575	4.736	3.496	2.607	1.950	1.456	1.077	0.783	0.559	0.391	0.292	0.263	0.328	0.544

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 30,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.707	0.718	0.733	0.745	0.755	0.764	0.786	0.799	0.812	0.827	0.843	0.855	0.866	0.885	0.899	0.915	0.933	0.949	0.967	0.983
2,000	0.589	0.608	0.625	0.640	0.660	0.675	0.692	0.712	0.729	0.751	0.769	0.786	0.811	0.829	0.847	0.874	0.897	0.924	0.948	0.974
3,000	0.478	0.515	0.533	0.556	0.573	0.579	0.621	0.639	0.661	0.673	0.698	0.725	0.765	0.785	0.811	0.837	0.869	0.904	0.933	0.965
4,000	0.408	0.428	0.449	0.473	0.494	0.519	0.543	0.569	0.596	0.623	0.651	0.680	0.712	0.744	0.777	0.808	0.843	0.881	0.919	0.961
5,000	0.348	0.373	0.396	0.416	0.442	0.464	0.491	0.520	0.547	0.577	0.609	0.643	0.676	0.710	0.745	0.791	0.828	0.865	0.909	0.954
6,000	0.324	0.344	0.361	0.381	0.405	0.437	0.464	0.487	0.517	0.553	0.584	0.614	0.649	0.686	0.727	0.767	0.811	0.852	0.900	0.947
7,000	0.301	0.318	0.340	0.366	0.396	0.415	0.438	0.470	0.498	0.531	0.562	0.594	0.631	0.670	0.711	0.754	0.797	0.844	0.892	0.945
8,000	0.223	0.244	0.268	0.291	0.316	0.344	0.369	0.399	0.430	0.465	0.501	0.539	0.579	0.624	0.669	0.715	0.766	0.820	0.876	0.941
9,000	0.184	0.205	0.227	0.250	0.276	0.304	0.331	0.361	0.395	0.430	0.467	0.507	0.550	0.597	0.644	0.695	0.749	0.804	0.866	0.931
10,000	0.147	0.167	0.192	0.214	0.238	0.267	0.293	0.324	0.355	0.393	0.434	0.474	0.520	0.568	0.618	0.669	0.724	0.787	0.854	0.926
11,000	0.148	0.164	0.184	0.206	0.226	0.254	0.284	0.309	0.346	0.377	0.418	0.455	0.505	0.549	0.602	0.655	0.714	0.775	0.844	0.919
12,000	0.132	0.147	0.167	0.186	0.205	0.232	0.256	0.288	0.318	0.353	0.392	0.435	0.482	0.528	0.581	0.639	0.702	0.767	0.836	0.919
13,000	0.116	0.128	0.146	0.164	0.182	0.208	0.230	0.261	0.297	0.327	0.368	0.408	0.460	0.506	0.560	0.621	0.686	0.752	0.828	0.911
14,000	0.119	0.139	0.143	0.158	0.175	0.200	0.221	0.252	0.279	0.319	0.352	0.392	0.440	0.490	0.542	0.605	0.671	0.738	0.819	0.907
15,000	0.088	0.102	0.112	0.127	0.140	0.167	0.188	0.222	0.245	0.287	0.324	0.361	0.410	0.468	0.522	0.592	0.654	0.726	0.810	0.902
16,000	0.097	0.103	0.115	0.110	0.142	0.160	0.180	0.208	0.227	0.272	0.308	0.346	0.397	0.446	0.507	0.566	0.639	0.715	0.804	0.896
17,000	0.093	0.092	0.102	0.112	0.126	0.143	0.165	0.189	0.219	0.251	0.289	0.331	0.378	0.431	0.490	0.552	0.624	0.704	0.792	0.891
18,000	0.087	0.081	0.089	0.095	0.106	0.122	0.141	0.164	0.192	0.224	0.261	0.303	0.352	0.405	0.465	0.532	0.606	0.690	0.783	0.886
19,000	0.088	0.085	0.086	0.091	0.100	0.114	0.132	0.154	0.181	0.212	0.249	0.291	0.339	0.393	0.452	0.521	0.596	0.681	0.775	0.882
20,000	0.093	0.053	0.055	0.089	0.096	0.089	0.109	0.145	0.171	0.194	0.232	0.279	0.326	0.380	0.441	0.510	0.587	0.673	0.770	0.878
21,000	0.061	0.056	0.056	0.061	0.070	0.083	0.101	0.124	0.151	0.183	0.220	0.262	0.311	0.366	0.428	0.498	0.576	0.665	0.764	0.876
22,000	0.079	0.066	0.062	0.064	0.070	0.081	0.097	0.117	0.142	0.173	0.209	0.251	0.299	0.354	0.415	0.486	0.567	0.657	0.757	0.872
23,000	0.082	0.071	0.065	0.064	0.069	0.078	0.092	0.111	0.135	0.164	0.200	0.242	0.288	0.343	0.406	0.477	0.557	0.647	0.751	0.868
24,000	0.092	0.076	0.069	0.065	0.067	0.075	0.086	0.104	0.127	0.155	0.190	0.231	0.277	0.333	0.396	0.468	0.547	0.640	0.745	0.865
25,000	0.099	0.084	0.069	0.067	0.065	0.072	0.082	0.098	0.120	0.148	0.180	0.222	0.267	0.322	0.386	0.456	0.539	0.632	0.739	0.862
30,000	0.175	0.136	0.110	0.090	0.078	0.073	0.074	0.083	0.096	0.117	0.146	0.183	0.226	0.279	0.343	0.414	0.500	0.598	0.713	0.846
40,000	0.597	0.501	0.412	0.343	0.293	0.244	0.210	0.192	0.174	0.170	0.181	0.192	0.217	0.261	0.308	0.372	0.448	0.553	0.674	0.821
50,000	0.996	0.827	0.681	0.570	0.472	0.392	0.330	0.279	0.238	0.219	0.206	0.207	0.214	0.247	0.283	0.340	0.418	0.517	0.643	0.802
60,000	1.425	1.169	0.958	0.785	0.641	0.524	0.429	0.353	0.289	0.250	0.219	0.208	0.208	0.225	0.265	0.305	0.388	0.483	0.616	0.782
70,000	2.146	1.740	1.414	1.150	0.935	0.760	0.618	0.502	0.410	0.339	0.290	0.251	0.235	0.238	0.258	0.292	0.358	0.460	0.591	0.764
80,000	2.811	2.247	1.806	1.454	1.173	0.946	0.762	0.614	0.495	0.401	0.330	0.280	0.250	0.240	0.250	0.279	0.345	0.438	0.572	0.750
90,000	3.756	2.961	2.362	1.896	1.526	1.225	0.994	0.802	0.639	0.525	0.423	0.357	0.299	0.281	0.277	0.299	0.339	0.433	0.559	0.741
100,000	4.915	3.830	3.020	2.403	1.924	1.547	1.247	1.007	0.814	0.668	0.546	0.444	0.376	0.341	0.315	0.323	0.362	0.443	0.562	0.739
150,000	12.169	8.634	6.362	4.772	3.679	2.877	2.274	1.810	1.449	1.161	0.934	0.755	0.614	0.509	0.436	0.397	0.394	0.442	0.539	0.711
200,000	23.596	14.896	10.120	7.226	5.340	4.021	3.125	2.430	1.927	1.529	1.219	0.974	0.781	0.632	0.522	0.453	0.421	0.440	0.526	0.692
250,000	39.839	22.118	13.935	9.440	6.729	4.934	3.760	2.880	2.258	1.776	1.405	1.114	0.886	0.708	0.574	0.484	0.435	0.439	0.515	0.679
300,000	60.275	29.561	17.367	11.280	7.816	5.655	4.218	3.216	2.502	1.956	1.539	1.214	0.962	0.764	0.614	0.510	0.449	0.443	0.512	0.673
400,000	105.128	42.147	22.523	13.848	9.268	6.554	4.808	3.625	2.784	2.162	1.694	1.331	1.013	0.832	0.663	0.542	0.466	0.448	0.507	0.664
500,000	173.842	55.674	27.171	15.860	10.239	7.089	5.121	3.807	2.893	2.231	1.800	1.367	1.077	0.846	0.672	0.553	0.470	0.452	0.505	0.659

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 40,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.736	0.747	0.760	0.772	0.778	0.789	0.803	0.812	0.833	0.843	0.857	0.869	0.886	0.896	0.910	0.923	0.941	0.956	0.969	0.983
2,000	0.623	0.641	0.655	0.668	0.685	0.702	0.720	0.736	0.749	0.773	0.789	0.804	0.829	0.849	0.867	0.886	0.912	0.934	0.954	0.976
3,000	0.540	0.547	0.568	0.591	0.604	0.624	0.652	0.664	0.686	0.715	0.730	0.756	0.778	0.804	0.827	0.855	0.889	0.910	0.939	0.971
4,000	0.433	0.462	0.482	0.500	0.522	0.551	0.574	0.595	0.613	0.645	0.675	0.697	0.726	0.761	0.791	0.819	0.852	0.890	0.925	0.963
5,000	0.368	0.387	0.409	0.432	0.455	0.479	0.505	0.532	0.559	0.588	0.619	0.649	0.682	0.716	0.753	0.786	0.827	0.867	0.912	0.956
6,000	0.308	0.331	0.352	0.378	0.405	0.427	0.457	0.482	0.514	0.542	0.577	0.609	0.647	0.681	0.724	0.762	0.807	0.850	0.900	0.948
7,000	0.263	0.280	0.304	0.328	0.353	0.383	0.407	0.431	0.463	0.499	0.535	0.572	0.609	0.648	0.695	0.739	0.783	0.833	0.886	0.942
8,000	0.234	0.262	0.286	0.309	0.338	0.360	0.383	0.409	0.440	0.479	0.515	0.555	0.591	0.630	0.675	0.723	0.767	0.824	0.878	0.936
9,000	0.192	0.213	0.235	0.259	0.283	0.314	0.343	0.373	0.403	0.437	0.474	0.513	0.554	0.598	0.647	0.697	0.750	0.806	0.868	0.932
10,000	0.161	0.182	0.204	0.226	0.252	0.279	0.308	0.339	0.372	0.407	0.445	0.485	0.528	0.575	0.624	0.676	0.733	0.792	0.857	0.926
11,000	0.138	0.158	0.179	0.205	0.230	0.257	0.286	0.316	0.350	0.385	0.421	0.462	0.507	0.554	0.605	0.659	0.719	0.782	0.849	0.922
12,000	0.127	0.145	0.165	0.187	0.210	0.237	0.259	0.290	0.323	0.359	0.402	0.444	0.488	0.538	0.590	0.646	0.707	0.773	0.841	0.917
13,000	0.127	0.152	0.165	0.182	0.215	0.230	0.261	0.296	0.326	0.357	0.399	0.440	0.480	0.531	0.579	0.637	0.698	0.768	0.834	0.914
14,000	0.102	0.121	0.136	0.155	0.178	0.202	0.230	0.259	0.294	0.325	0.369	0.411	0.450	0.505	0.560	0.616	0.682	0.753	0.827	0.911
15,000	0.084	0.099	0.116	0.135	0.156	0.181	0.207	0.237	0.269	0.306	0.344	0.387	0.433	0.485	0.539	0.597	0.666	0.740	0.817	0.906
16,000	0.074	0.088	0.104	0.122	0.143	0.167	0.193	0.223	0.255	0.291	0.330	0.372	0.419	0.471	0.527	0.589	0.655	0.733	0.812	0.901
17,000	0.069	0.081	0.096	0.116	0.132	0.155	0.181	0.212	0.243	0.276	0.316	0.361	0.408	0.458	0.515	0.579	0.647	0.723	0.806	0.897
18,000	0.054	0.066	0.081	0.098	0.118	0.140	0.166	0.194	0.226	0.261	0.300	0.344	0.391	0.444	0.502	0.566	0.636	0.716	0.801	0.895
19,000	0.045	0.056	0.068	0.085	0.103	0.124	0.149	0.178	0.209	0.244	0.284	0.327	0.375	0.429	0.487	0.554	0.625	0.705	0.793	0.892
20,000	0.044	0.052	0.064	0.078	0.096	0.116	0.140	0.167	0.198	0.233	0.272	0.316	0.364	0.417	0.476	0.542	0.616	0.698	0.788	0.889
21,000	0.047	0.058	0.067	0.079	0.094	0.113	0.133	0.159	0.189	0.223	0.261	0.304	0.352	0.406	0.464	0.532	0.607	0.690	0.782	0.886
22,000	0.045	0.050	0.058	0.069	0.084	0.102	0.124	0.149	0.179	0.212	0.250	0.293	0.341	0.395	0.456	0.523	0.598	0.682	0.777	0.882
23,000	0.046	0.045	0.053	0.062	0.075	0.092	0.111	0.136	0.164	0.197	0.235	0.278	0.326	0.380	0.441	0.511	0.586	0.674	0.771	0.878
24,000	0.047	0.048	0.052	0.060	0.072	0.088	0.108	0.131	0.158	0.190	0.228	0.270	0.318	0.372	0.433	0.502	0.580	0.667	0.765	0.875
25,000	0.059	0.057	0.058	0.074	0.074	0.088	0.106	0.128	0.154	0.185	0.221	0.263	0.310	0.364	0.425	0.494	0.572	0.660	0.764	0.873
30,000	0.047	0.038	0.034	0.035	0.040	0.050	0.065	0.085	0.109	0.139	0.175	0.216	0.265	0.324	0.387	0.455	0.537	0.631	0.741	0.860
40,000	0.137	0.100	0.073	0.054	0.043	0.038	0.041	0.050	0.063	0.087	0.114	0.150	0.198	0.249	0.312	0.389	0.474	0.576	0.696	0.835
50,000	0.283	0.212	0.156	0.113	0.081	0.060	0.047	0.044	0.049	0.063	0.084	0.114	0.154	0.204	0.265	0.340	0.429	0.536	0.664	0.817
60,000	0.541	0.413	0.312	0.233	0.171	0.124	0.091	0.070	0.060	0.060	0.071	0.093	0.125	0.170	0.226	0.300	0.389	0.499	0.634	0.799
70,000	0.799	0.609	0.461	0.344	0.252	0.183	0.132	0.095	0.073	0.063	0.066	0.080	0.107	0.148	0.201	0.273	0.362	0.473	0.612	0.785
80,000	1.162	0.886	0.667	0.500	0.371	0.271	0.180	0.140	0.101	0.079	0.071	0.060	0.096	0.130	0.180	0.248	0.338	0.446	0.590	0.770
90,000	1.600	1.193	0.892	0.659	0.485	0.348	0.247	0.169	0.115	0.097	0.079	0.058	0.088	0.115	0.161	0.230	0.312	0.429	0.571	0.761
100,000	1.926	1.422	1.051	0.773	0.564	0.403	0.282	0.195	0.127	0.078	0.074	0.055	0.057	0.101	0.145	0.193	0.295	0.408	0.556	0.749
150,000	6.298	4.327	3.062	2.203	1.604	1.172	0.857	0.624	0.451	0.325	0.234	0.174	0.140	0.130	0.143	0.182	0.254	0.354	0.513	0.709
200,000	12.742	7.881	5.188	3.556	2.502	1.790	1.293	0.937	0.679	0.491	0.355	0.260	0.197	0.165	0.159	0.182	0.241	0.335	0.487	0.690
250,000	22.206	12.238	7.519	4.919	3.357	2.354	1.682	1.213	0.880	0.637	0.468	0.345	0.262	0.212	0.192	0.204	0.252	0.334	0.482	0.684
300,000	33.643	16.583	9.551	6.005	3.990	2.746	1.934	1.382	0.996	0.717	0.525	0.385	0.290	0.230	0.202	0.208	0.251	0.328	0.475	0.678
400,000	54.249	22.688	12.074	7.536	4.750	3.223	2.239	1.589	1.148	0.832	0.594	0.434	0.347	0.249	0.238	0.213	0.266	0.323	0.468	0.672
500,000	84.773	29.771	14.728	8.509	5.374	3.586	2.474	1.748	1.255	0.909	0.666	0.493	0.370	0.291	0.249	0.240	0.267	0.338	0.465	0.669

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 50,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.772	0.784	0.783	0.793	0.792	0.821	0.832	0.842	0.837	0.850	0.862	0.886	0.900	0.911	0.914	0.926	0.940	0.960	0.973	0.983
2,000	0.673	0.682	0.700	0.720	0.722	0.737	0.757	0.770	0.782	0.803	0.807	0.831	0.849	0.863	0.879	0.899	0.921	0.941	0.959	0.980
3,000	0.646	0.659	0.670	0.684	0.699	0.713	0.729	0.744	0.758	0.771	0.794	0.811	0.829	0.850	0.861	0.880	0.906	0.931	0.954	0.975
4,000	0.586	0.595	0.614	0.626	0.641	0.682	0.693	0.714	0.726	0.745	0.750	0.786	0.799	0.812	0.845	0.877	0.897	0.923	0.947	0.971
5,000	0.552	0.565	0.571	0.597	0.604	0.622	0.648	0.660	0.687	0.701	0.736	0.762	0.778	0.808	0.828	0.857	0.885	0.909	0.939	0.970
6,000	0.469	0.480	0.498	0.522	0.557	0.562	0.582	0.617	0.623	0.648	0.676	0.710	0.729	0.758	0.791	0.818	0.853	0.889	0.924	0.963
7,000	0.437	0.454	0.472	0.475	0.510	0.531	0.552	0.575	0.603	0.624	0.665	0.678	0.707	0.749	0.770	0.813	0.839	0.878	0.915	0.960
8,000	0.391	0.432	0.428	0.468	0.484	0.486	0.527	0.554	0.562	0.604	0.617	0.645	0.688	0.711	0.747	0.782	0.822	0.864	0.911	0.955
9,000	0.384	0.401	0.418	0.437	0.458	0.483	0.501	0.525	0.551	0.581	0.606	0.636	0.668	0.702	0.737	0.776	0.810	0.858	0.902	0.948
10,000	0.302	0.319	0.339	0.359	0.382	0.406	0.432	0.474	0.487	0.517	0.549	0.595	0.632	0.658	0.699	0.748	0.805	0.843	0.887	0.946
11,000	0.205	0.225	0.247	0.272	0.295	0.323	0.350	0.380	0.412	0.446	0.483	0.566	0.562	0.606	0.688	0.729	0.754	0.827	0.881	0.941
12,000	0.206	0.225	0.246	0.267	0.291	0.318	0.344	0.373	0.406	0.437	0.474	0.512	0.552	0.602	0.645	0.696	0.748	0.805	0.866	0.938
13,000	0.157	0.176	0.197	0.219	0.244	0.270	0.298	0.329	0.362	0.407	0.435	0.484	0.520	0.574	0.622	0.675	0.730	0.791	0.858	0.928
14,000	0.134	0.151	0.172	0.194	0.219	0.246	0.274	0.306	0.339	0.375	0.414	0.455	0.500	0.548	0.599	0.654	0.712	0.778	0.849	0.921
15,000	0.131	0.151	0.171	0.193	0.217	0.243	0.271	0.301	0.335	0.370	0.408	0.449	0.494	0.542	0.590	0.648	0.709	0.772	0.844	0.919
16,000	0.124	0.141	0.154	0.180	0.201	0.229	0.254	0.287	0.318	0.356	0.392	0.436	0.479	0.529	0.580	0.639	0.699	0.767	0.838	0.916
17,000	0.126	0.142	0.160	0.181	0.203	0.228	0.250	0.285	0.317	0.352	0.391	0.422	0.467	0.517	0.570	0.634	0.696	0.759	0.841	0.913
18,000	0.137	0.152	0.172	0.192	0.216	0.241	0.267	0.297	0.329	0.364	0.400	0.446	0.487	0.532	0.584	0.645	0.704	0.767	0.834	0.912
19,000	0.093	0.108	0.125	0.145	0.168	0.192	0.220	0.250	0.282	0.318	0.357	0.398	0.444	0.495	0.549	0.609	0.675	0.745	0.834	0.908
20,000	0.077	0.091	0.108	0.126	0.149	0.173	0.200	0.229	0.263	0.300	0.339	0.382	0.429	0.481	0.536	0.598	0.665	0.738	0.818	0.905
21,000	0.078	0.092	0.107	0.127	0.148	0.172	0.198	0.227	0.257	0.296	0.334	0.378	0.425	0.475	0.532	0.594	0.659	0.732	0.813	0.902
22,000	0.079	0.092	0.108	0.126	0.137	0.161	0.197	0.222	0.258	0.294	0.329	0.372	0.418	0.466	0.523	0.589	0.655	0.729	0.810	0.900
23,000	0.059	0.071	0.086	0.103	0.127	0.146	0.176	0.201	0.237	0.269	0.311	0.352	0.402	0.452	0.512	0.574	0.645	0.720	0.805	0.897
24,000	0.058	0.069	0.083	0.099	0.119	0.144	0.169	0.198	0.230	0.262	0.302	0.345	0.393	0.445	0.503	0.570	0.638	0.715	0.802	0.896
25,000	0.052	0.059	0.075	0.087	0.105	0.128	0.152	0.184	0.214	0.251	0.287	0.331	0.382	0.436	0.494	0.557	0.630	0.707	0.797	0.893
30,000	0.029	0.034	0.041	0.051	0.065	0.084	0.106	0.132	0.162	0.196	0.236	0.279	0.328	0.384	0.446	0.515	0.591	0.677	0.773	0.880
40,000	0.073	0.057	0.048	0.047	0.049	0.057	0.071	0.089	0.113	0.142	0.177	0.217	0.265	0.320	0.382	0.454	0.536	0.632	0.737	0.860
50,000	0.157	0.119	0.091	0.073	0.062	0.059	0.062	0.072	0.088	0.111	0.141	0.177	0.222	0.274	0.336	0.409	0.490	0.592	0.705	0.841
60,000	0.295	0.219	0.166	0.122	0.095	0.076	0.066	0.064	0.069	0.086	0.107	0.140	0.180	0.230	0.290	0.363	0.448	0.554	0.676	0.824
70,000	0.477	0.360	0.269	0.203	0.152	0.115	0.091	0.077	0.074	0.079	0.099	0.124	0.158	0.203	0.259	0.330	0.418	0.526	0.650	0.809
80,000	0.733	0.571	0.446	0.344	0.278	0.223	0.177	0.157	0.142	0.129	0.135	0.160	0.182	0.220	0.268	0.340	0.416	0.523	0.644	0.802
90,000	1.028	0.780	0.593	0.451	0.343	0.261	0.200	0.157	0.129	0.114	0.111	0.122	0.143	0.179	0.228	0.292	0.378	0.482	0.616	0.787
100,000	1.289	0.971	0.736	0.559	0.426	0.328	0.252	0.195	0.156	0.134	0.123	0.129	0.143	0.173	0.222	0.281	0.364	0.471	0.602	0.779
150,000	3.632	2.519	1.796	1.300	0.950	0.696	0.509	0.370	0.268	0.195	0.146	0.118	0.109	0.119	0.149	0.201	0.287	0.387	0.535	0.733
200,000	7.735	4.864	3.239	2.237	1.579	1.130	0.811	0.581	0.412	0.290	0.203	0.145	0.113	0.104	0.119	0.160	0.230	0.336	0.488	0.702
250,000	13.612	7.695	4.796	3.163	2.165	1.514	1.070	0.756	0.531	0.368	0.252	0.172	0.122	0.099	0.103	0.141	0.200	0.307	0.460	0.681
300,000	20.406	10.465	6.165	3.930	2.636	1.821	1.279	0.904	0.621	0.445	0.294	0.210	0.137	0.114	0.102	0.133	0.187	0.291	0.443	0.669
400,000	36.172	15.940	8.646	5.256	3.410	2.311	1.603	1.132	0.792	0.554	0.388	0.266	0.184	0.131	0.117	0.129	0.179	0.273	0.424	0.654
500,000	54.415	20.711	10.488	6.127	3.888	2.587	1.775	1.243	0.867	0.610	0.422	0.289	0.198	0.140	0.119	0.127	0.176	0.267	0.417	0.648

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 60,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.770	0.776	0.793	0.803	0.813	0.823	0.843	0.843	0.854	0.868	0.878	0.889	0.906	0.918	0.930	0.942	0.948	0.962	0.978	0.988
2,000	0.706	0.715	0.728	0.741	0.755	0.770	0.780	0.794	0.811	0.822	0.835	0.852	0.868	0.882	0.896	0.916	0.932	0.947	0.965	0.983
3,000	0.664	0.677	0.690	0.704	0.718	0.733	0.747	0.764	0.780	0.794	0.814	0.831	0.848	0.863	0.881	0.899	0.919	0.938	0.960	0.977
4,000	0.643	0.656	0.670	0.686	0.702	0.719	0.731	0.754	0.765	0.782	0.787	0.821	0.834	0.849	0.870	0.888	0.910	0.927	0.954	0.978
5,000	0.612	0.626	0.640	0.647	0.671	0.681	0.703	0.720	0.730	0.756	0.770	0.788	0.810	0.830	0.855	0.874	0.897	0.923	0.946	0.974
6,000	0.639	0.653	0.665	0.678	0.693	0.707	0.723	0.737	0.755	0.745	0.765	0.786	0.806	0.827	0.850	0.874	0.897	0.921	0.946	0.973
7,000	0.623	0.635	0.648	0.661	0.674	0.689	0.702	0.718	0.735	0.752	0.771	0.786	0.807	0.828	0.852	0.877	0.895	0.921	0.941	0.973
8,000	0.588	0.592	0.603	0.620	0.628	0.652	0.662	0.688	0.684	0.729	0.728	0.764	0.769	0.810	0.834	0.860	0.877	0.910	0.939	0.969
9,000	0.497	0.513	0.529	0.546	0.564	0.583	0.602	0.623	0.645	0.671	0.692	0.717	0.742	0.769	0.798	0.827	0.860	0.893	0.926	0.967
10,000	0.461	0.516	0.531	0.547	0.533	0.582	0.600	0.621	0.625	0.663	0.687	0.693	0.725	0.753	0.793	0.811	0.846	0.882	0.924	0.962
11,000	0.532	0.559	0.566	0.571	0.599	0.609	0.621	0.647	0.652	0.677	0.705	0.723	0.745	0.776	0.800	0.830	0.853	0.878	0.923	0.956
12,000	0.401	0.418	0.436	0.455	0.474	0.496	0.518	0.537	0.562	0.589	0.617	0.646	0.677	0.764	0.792	0.821	0.821	0.862	0.920	0.958
13,000	0.376	0.416	0.411	0.452	0.451	0.494	0.496	0.520	0.564	0.573	0.618	0.632	0.678	0.698	0.735	0.773	0.816	0.855	0.899	0.949
14,000	0.389	0.405	0.423	0.441	0.461	0.482	0.504	0.527	0.552	0.579	0.611	0.640	0.671	0.704	0.739	0.774	0.813	0.854	0.899	0.950
15,000	0.397	0.421	0.429	0.446	0.467	0.485	0.506	0.534	0.556	0.585	0.608	0.639	0.664	0.703	0.732	0.772	0.814	0.850	0.898	0.949
16,000	0.369	0.394	0.401	0.434	0.436	0.467	0.477	0.511	0.530	0.561	0.585	0.617	0.657	0.687	0.716	0.768	0.804	0.852	0.898	0.945
17,000	0.331	0.346	0.363	0.381	0.401	0.422	0.444	0.468	0.494	0.522	0.552	0.584	0.619	0.656	0.696	0.742	0.784	0.835	0.888	0.945
18,000	0.316	0.331	0.347	0.365	0.384	0.405	0.428	0.461	0.487	0.507	0.537	0.570	0.611	0.648	0.688	0.731	0.777	0.824	0.880	0.939
19,000	0.315	0.329	0.344	0.361	0.380	0.400	0.422	0.446	0.472	0.499	0.530	0.562	0.598	0.636	0.676	0.721	0.768	0.819	0.875	0.938
20,000	0.306	0.319	0.332	0.348	0.366	0.386	0.407	0.431	0.457	0.486	0.516	0.549	0.585	0.624	0.667	0.710	0.761	0.813	0.871	0.932
21,000	0.290	0.302	0.322	0.333	0.351	0.375	0.392	0.416	0.442	0.471	0.505	0.535	0.571	0.614	0.654	0.700	0.752	0.806	0.866	0.930
22,000	0.285	0.297	0.311	0.327	0.340	0.360	0.386	0.410	0.436	0.461	0.492	0.526	0.566	0.605	0.646	0.694	0.746	0.803	0.862	0.928
23,000	0.285	0.296	0.309	0.324	0.341	0.359	0.381	0.404	0.429	0.457	0.488	0.522	0.559	0.599	0.642	0.690	0.742	0.798	0.859	0.927
24,000	0.268	0.280	0.294	0.310	0.328	0.347	0.369	0.393	0.420	0.449	0.480	0.514	0.552	0.592	0.641	0.691	0.740	0.795	0.857	0.924
25,000	0.270	0.281	0.293	0.308	0.325	0.344	0.365	0.388	0.414	0.442	0.473	0.509	0.544	0.585	0.631	0.675	0.735	0.791	0.856	0.922
30,000	0.288	0.291	0.297	0.302	0.316	0.327	0.346	0.365	0.385	0.413	0.440	0.473	0.510	0.551	0.597	0.647	0.706	0.766	0.837	0.914
40,000	0.446	0.425	0.406	0.395	0.389	0.386	0.388	0.396	0.406	0.419	0.439	0.463	0.493	0.529	0.571	0.620	0.677	0.738	0.816	0.900
50,000	0.581	0.536	0.499	0.470	0.448	0.432	0.422	0.418	0.419	0.426	0.439	0.455	0.481	0.515	0.554	0.601	0.658	0.723	0.802	0.893
60,000	0.730	0.656	0.596	0.547	0.508	0.478	0.445	0.432	0.426	0.427	0.434	0.448	0.470	0.499	0.536	0.585	0.643	0.710	0.792	0.885
70,000	1.118	0.998	0.901	0.821	0.756	0.703	0.661	0.629	0.606	0.538	0.532	0.533	0.542	0.560	0.628	0.660	0.701	0.729	0.801	0.889
80,000	1.403	1.229	1.088	0.973	0.879	0.803	0.741	0.692	0.654	0.627	0.609	0.599	0.599	0.608	0.626	0.654	0.692	0.745	0.811	0.894
90,000	1.709	1.501	1.308	1.130	1.025	0.907	0.825	0.770	0.709	0.671	0.648	0.626	0.619	0.622	0.635	0.659	0.694	0.744	0.808	0.892
100,000	2.202	1.866	1.601	1.390	1.218	1.080	0.966	0.874	0.800	0.742	0.697	0.666	0.646	0.638	0.637	0.659	0.686	0.736	0.798	0.887
150,000	4.686	3.674	2.954	2.419	2.011	1.693	1.440	1.238	1.076	0.946	0.843	0.763	0.704	0.663	0.641	0.638	0.656	0.696	0.762	0.877
200,000	7.887	5.771	4.399	3.460	2.759	2.255	1.885	1.579	1.337	1.120	0.990	0.868	0.757	0.691	0.662	0.634	0.634	0.667	0.740	0.841
250,000	11.493	7.680	5.562	4.220	3.303	2.641	2.147	1.767	1.471	1.237	1.052	0.907	0.794	0.711	0.654	0.624	0.622	0.651	0.713	0.826
300,000	15.724	9.687	6.712	4.955	3.804	2.998	2.409	1.964	1.620	1.352	1.139	0.973	0.843	0.745	0.677	0.637	0.627	0.649	0.711	0.823
400,000	23.698	12.790	8.311	5.912	4.430	3.431	2.720	2.193	1.792	1.482	1.239	1.047	0.898	0.785	0.703	0.652	0.633	0.648	0.706	0.817
500,000	33.089	15.636	9.616	6.639	4.882	3.732	2.929	2.343	1.902	1.563	1.299	1.092	0.931	0.808	0.718	0.661	0.636	0.648	0.704	0.814

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 70,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.834	0.839	0.846	0.854	0.863	0.870	0.878	0.886	0.891	0.898	0.901	0.919	0.923	0.930	0.936	0.947	0.959	0.970	0.978	0.989
2,000	0.746	0.756	0.765	0.775	0.791	0.804	0.812	0.824	0.833	0.841	0.856	0.872	0.878	0.889	0.904	0.922	0.933	0.950	0.964	0.981
3,000	0.737	0.742	0.772	0.764	0.775	0.784	0.799	0.816	0.822	0.833	0.847	0.865	0.880	0.866	0.887	0.903	0.926	0.944	0.958	0.979
4,000	0.709	0.718	0.711	0.722	0.745	0.771	0.768	0.781	0.786	0.812	0.815	0.836	0.852	0.868	0.888	0.900	0.925	0.942	0.958	0.979
5,000	0.628	0.637	0.650	0.662	0.675	0.692	0.705	0.722	0.736	0.754	0.772	0.793	0.810	0.832	0.850	0.875	0.896	0.921	0.950	0.973
6,000	0.593	0.615	0.623	0.637	0.646	0.656	0.678	0.695	0.711	0.728	0.749	0.774	0.790	0.815	0.834	0.861	0.884	0.911	0.945	0.970
7,000	0.430	0.458	0.465	0.489	0.515	0.530	0.552	0.573	0.597	0.625	0.687	0.680	0.709	0.766	0.796	0.815	0.864	0.891	0.929	0.968
8,000	0.440	0.454	0.473	0.495	0.516	0.534	0.552	0.572	0.600	0.626	0.653	0.679	0.705	0.724	0.771	0.802	0.840	0.876	0.915	0.960
9,000	0.420	0.435	0.452	0.470	0.489	0.510	0.531	0.551	0.578	0.603	0.630	0.657	0.689	0.718	0.754	0.788	0.828	0.867	0.908	0.954
10,000	0.414	0.428	0.445	0.463	0.474	0.500	0.522	0.539	0.542	0.564	0.589	0.648	0.683	0.709	0.745	0.784	0.807	0.861	0.905	0.951
11,000	0.379	0.398	0.411	0.431	0.446	0.468	0.490	0.514	0.538	0.565	0.595	0.623	0.657	0.696	0.728	0.766	0.811	0.853	0.893	0.948
12,000	0.306	0.323	0.342	0.361	0.383	0.406	0.430	0.457	0.485	0.515	0.546	0.580	0.621	0.657	0.697	0.742	0.783	0.839	0.890	0.945
13,000	0.299	0.316	0.338	0.354	0.379	0.389	0.423	0.449	0.477	0.506	0.530	0.573	0.609	0.646	0.692	0.732	0.779	0.825	0.889	0.938
14,000	0.325	0.341	0.356	0.377	0.398	0.419	0.441	0.468	0.494	0.532	0.552	0.593	0.621	0.664	0.702	0.744	0.784	0.836	0.882	0.937
15,000	0.303	0.312	0.335	0.354	0.375	0.390	0.420	0.446	0.468	0.495	0.534	0.565	0.600	0.636	0.683	0.723	0.771	0.822	0.881	0.938
16,000	0.274	0.242	0.305	0.278	0.344	0.322	0.390	0.406	0.444	0.436	0.506	0.523	0.595	0.591	0.662	0.708	0.759	0.812	0.870	0.932
17,000	0.212	0.226	0.239	0.257	0.282	0.304	0.329	0.352	0.382	0.416	0.451	0.490	0.531	0.572	0.622	0.672	0.728	0.789	0.851	0.931
18,000	0.203	0.217	0.232	0.250	0.269	0.291	0.316	0.342	0.372	0.404	0.439	0.477	0.518	0.563	0.611	0.664	0.716	0.780	0.850	0.921
19,000	0.190	0.201	0.215	0.233	0.253	0.275	0.297	0.324	0.354	0.386	0.422	0.471	0.501	0.548	0.597	0.658	0.710	0.775	0.846	0.920
20,000	0.228	0.238	0.255	0.266	0.288	0.303	0.325	0.354	0.378	0.411	0.448	0.478	0.523	0.561	0.613	0.665	0.715	0.782	0.844	0.919
21,000	0.215	0.224	0.236	0.250	0.266	0.285	0.307	0.332	0.361	0.391	0.425	0.462	0.509	0.545	0.601	0.654	0.707	0.775	0.843	0.918
22,000	0.211	0.219	0.229	0.242	0.258	0.276	0.297	0.321	0.348	0.379	0.414	0.451	0.491	0.535	0.583	0.647	0.699	0.769	0.838	0.917
23,000	0.195	0.201	0.211	0.223	0.229	0.256	0.277	0.292	0.327	0.357	0.386	0.424	0.472	0.512	0.572	0.636	0.685	0.758	0.831	0.914
24,000	0.218	0.216	0.231	0.241	0.249	0.271	0.290	0.312	0.332	0.366	0.400	0.432	0.476	0.522	0.567	0.626	0.679	0.748	0.827	0.908
25,000	0.219	0.221	0.227	0.236	0.248	0.264	0.282	0.303	0.309	0.356	0.389	0.425	0.466	0.499	0.553	0.618	0.680	0.748	0.820	0.908
30,000	0.311	0.306	0.312	0.311	0.323	0.333	0.343	0.359	0.369	0.400	0.427	0.461	0.494	0.534	0.579	0.631	0.684	0.757	0.822	0.898
40,000	0.412	0.383	0.360	0.342	0.331	0.326	0.327	0.332	0.341	0.353	0.373	0.400	0.432	0.470	0.516	0.571	0.635	0.705	0.790	0.886
50,000	0.750	0.664	0.591	0.531	0.482	0.442	0.411	0.389	0.376	0.370	0.373	0.385	0.404	0.434	0.473	0.524	0.592	0.667	0.757	0.876
60,000	1.086	0.945	0.827	0.728	0.645	0.576	0.520	0.476	0.443	0.420	0.407	0.405	0.414	0.434	0.466	0.511	0.571	0.647	0.742	0.859
70,000	1.391	1.190	1.024	0.885	0.769	0.674	0.595	0.532	0.482	0.446	0.422	0.410	0.410	0.423	0.450	0.492	0.550	0.627	0.725	0.845
80,000	1.824	1.547	1.320	1.133	0.979	0.852	0.746	0.661	0.591	0.537	0.498	0.472	0.460	0.462	0.479	0.491	0.544	0.618	0.716	0.838
90,000	2.275	1.909	1.617	1.380	1.185	1.026	0.893	0.785	0.697	0.626	0.572	0.534	0.510	0.508	0.508	0.533	0.576	0.640	0.729	0.834
100,000	2.909	2.403	2.006	1.689	1.432	1.222	1.049	0.908	0.792	0.699	0.625	0.571	0.533	0.514	0.512	0.529	0.566	0.632	0.717	0.842
150,000	7.625	5.765	4.472	3.530	2.824	2.282	1.859	1.523	1.255	1.041	0.871	0.739	0.638	0.567	0.525	0.512	0.528	0.578	0.669	0.806
200,000	13.040	9.116	6.696	5.086	3.953	3.122	2.496	2.011	1.631	1.330	1.091	0.902	0.755	0.647	0.572	0.532	0.528	0.563	0.646	0.781
250,000	19.129	12.294	8.565	6.266	4.743	3.669	2.884	2.291	1.834	1.476	1.194	0.972	0.800	0.671	0.580	0.527	0.513	0.543	0.624	0.771
300,000	23.980	14.263	9.492	6.745	5.002	3.811	2.958	2.325	1.844	1.472	1.180	0.952	0.776	0.644	0.552	0.498	0.486	0.517	0.603	0.756
400,000	37.246	19.635	12.244	8.363	6.041	4.521	3.463	2.695	2.120	1.679	1.338	1.070	0.862	0.705	0.592	0.521	0.493	0.514	0.593	0.746
500,000	56.573	26.610	15.679	10.373	7.351	5.428	4.123	3.190	2.499	1.974	1.569	1.252	1.005	0.816	0.675	0.581	0.534	0.538	0.604	0.748

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 80,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.699	0.678	0.704	0.718	0.733	0.764	0.779	0.773	0.788	0.809	0.825	0.844	0.858	0.869	0.887	0.916	0.926	0.948	0.964	0.985
2,000	0.589	0.602	0.619	0.637	0.653	0.671	0.692	0.710	0.727	0.751	0.773	0.807	0.822	0.834	0.856	0.877	0.900	0.924	0.948	0.978
3,000	0.576	0.591	0.608	0.624	0.641	0.661	0.677	0.690	0.710	0.736	0.757	0.778	0.800	0.819	0.843	0.877	0.890	0.919	0.946	0.978
4,000	0.556	0.571	0.589	0.605	0.624	0.641	0.660	0.672	0.792	0.709	0.827	0.754	0.852	0.816	0.885	0.861	0.921	0.914	0.937	0.970
5,000	0.602	0.615	0.627	0.644	0.659	0.675	0.690	0.709	0.728	0.745	0.766	0.784	0.806	0.826	0.848	0.871	0.895	0.920	0.945	0.966
6,000	0.590	0.604	0.620	0.633	0.648	0.666	0.681	0.700	0.717	0.741	0.746	0.775	0.797	0.819	0.836	0.860	0.890	0.917	0.941	0.962
7,000	0.574	0.592	0.599	0.622	0.638	0.650	0.671	0.683	0.706	0.727	0.745	0.768	0.788	0.812	0.831	0.861	0.886	0.912	0.939	0.967
8,000	0.520	0.536	0.552	0.569	0.587	0.606	0.625	0.645	0.666	0.688	0.711	0.734	0.759	0.790	0.816	0.844	0.875	0.901	0.934	0.967
9,000	0.466	0.483	0.501	0.510	0.541	0.558	0.582	0.594	0.626	0.648	0.673	0.700	0.727	0.758	0.786	0.813	0.851	0.887	0.923	0.960
10,000	0.454	0.470	0.488	0.501	0.520	0.544	0.565	0.587	0.610	0.634	0.660	0.687	0.717	0.742	0.776	0.809	0.844	0.879	0.915	0.958
11,000	0.436	0.452	0.464	0.482	0.505	0.525	0.546	0.568	0.593	0.617	0.642	0.670	0.701	0.732	0.763	0.797	0.834	0.872	0.913	0.955
12,000	0.429	0.445	0.461	0.479	0.492	0.512	0.534	0.556	0.584	0.609	0.635	0.663	0.692	0.724	0.757	0.791	0.828	0.868	0.908	0.954
13,000	0.412	0.419	0.436	0.455	0.474	0.509	0.524	0.547	0.581	0.595	0.622	0.650	0.687	0.722	0.750	0.788	0.824	0.862	0.907	0.951
14,000	0.323	0.342	0.413	0.382	0.405	0.428	0.453	0.520	0.546	0.573	0.568	0.601	0.636	0.697	0.733	0.774	0.812	0.844	0.901	0.950
15,000	0.210	0.231	0.254	0.278	0.304	0.331	0.360	0.391	0.423	0.457	0.556	0.532	0.573	0.663	0.703	0.710	0.790	0.838	0.888	0.947
16,000	0.194	0.216	0.238	0.263	0.288	0.316	0.345	0.375	0.409	0.444	0.481	0.519	0.563	0.605	0.652	0.711	0.754	0.810	0.877	0.944
17,000	0.214	0.235	0.256	0.274	0.302	0.328	0.353	0.383	0.419	0.449	0.485	0.527	0.567	0.610	0.653	0.705	0.749	0.812	0.866	0.945
18,000	0.177	0.197	0.219	0.242	0.268	0.295	0.324	0.355	0.388	0.423	0.461	0.501	0.543	0.588	0.636	0.697	0.742	0.806	0.866	0.933
19,000	0.212	0.232	0.253	0.277	0.301	0.328	0.356	0.370	0.418	0.451	0.487	0.512	0.554	0.609	0.655	0.695	0.748	0.805	0.870	0.933
20,000	0.190	0.209	0.231	0.254	0.279	0.305	0.333	0.364	0.396	0.431	0.468	0.518	0.548	0.593	0.640	0.691	0.745	0.806	0.866	0.931
21,000	0.161	0.171	0.206	0.229	0.244	0.295	0.324	0.334	0.388	0.424	0.453	0.492	0.543	0.582	0.632	0.684	0.742	0.800	0.861	0.928
22,000	0.135	0.155	0.344	0.200	0.226	0.402	0.296	0.311	0.361	0.396	0.551	0.480	0.511	0.654	0.609	0.668	0.727	0.795	0.851	0.922
23,000	0.158	0.355	0.382	0.241	0.265	0.437	0.448	0.329	0.362	0.523	0.553	0.476	0.608	0.568	0.687	0.730	0.727	0.830	0.853	0.922
24,000	0.131	0.149	0.169	0.363	0.382	0.402	0.425	0.449	0.474	0.503	0.533	0.565	0.600	0.638	0.679	0.727	0.712	0.817	0.874	0.919
25,000	0.231	0.247	0.261	0.284	0.306	0.329	0.351	0.381	0.411	0.440	0.474	0.513	0.550	0.593	0.638	0.689	0.707	0.816	0.856	0.933
30,000	0.173	0.185	0.199	0.216	0.234	0.255	0.279	0.306	0.333	0.367	0.402	0.440	0.482	0.529	0.579	0.633	0.695	0.761	0.833	0.914
40,000	0.111	0.119	0.129	0.142	0.159	0.181	0.205	0.232	0.262	0.215	0.331	0.372	0.350	0.467	0.522	0.583	0.650	0.735	0.814	0.884
50,000	0.129	0.117	0.123	0.133	0.147	0.176	0.196	0.223	0.251	0.283	0.319	0.352	0.396	0.453	0.499	0.568	0.636	0.669	0.798	0.894
60,000	0.129	0.120	0.119	0.123	0.133	0.148	0.167	0.190	0.217	0.249	0.284	0.324	0.369	0.420	0.476	0.539	0.609	0.689	0.780	0.879
70,000	0.194	0.167	0.152	0.145	0.147	0.148	0.167	0.186	0.209	0.236	0.271	0.309	0.353	0.402	0.458	0.522	0.593	0.668	0.762	0.878
80,000	0.274	0.226	0.194	0.176	0.167	0.167	0.174	0.188	0.207	0.232	0.263	0.299	0.340	0.389	0.444	0.507	0.580	0.663	0.759	0.871
90,000	0.412	0.321	0.257	0.214	0.186	0.170	0.165	0.168	0.179	0.197	0.222	0.253	0.292	0.339	0.394	0.462	0.537	0.624	0.729	0.860
100,000	0.685	0.532	0.422	0.342	0.284	0.244	0.219	0.205	0.202	0.208	0.222	0.246	0.278	0.319	0.371	0.434	0.509	0.601	0.710	0.842
150,000	1.896	1.362	1.009	0.766	0.595	0.475	0.390	0.331	0.294	0.273	0.266	0.273	0.291	0.321	0.364	0.423	0.491	0.583	0.693	0.825
200,000	3.487	2.298	1.594	1.146	0.849	0.645	0.504	0.406	0.340	0.298	0.276	0.271	0.280	0.304	0.341	0.394	0.464	0.555	0.669	0.822
250,000	6.233	3.856	2.499	1.734	1.248	0.924	0.700	0.543	0.456	0.357	0.308	0.282	0.274	0.283	0.310	0.355	0.421	0.511	0.632	0.797
300,000	9.223	5.209	3.287	2.224	1.575	1.155	0.869	0.670	0.530	0.433	0.367	0.326	0.306	0.306	0.325	0.363	0.423	0.509	0.627	0.791
400,000	14.203	7.176	4.249	2.762	1.906	1.370	1.015	0.771	0.599	0.479	0.395	0.341	0.311	0.302	0.313	0.346	0.402	0.486	0.606	0.771
500,000	20.330	9.253	5.199	3.283	2.229	1.587	1.171	0.888	0.690	0.551	0.454	0.388	0.349	0.332	0.337	0.363	0.413	0.492	0.607	0.770

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 90,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.712	0.723	0.737	0.750	0.762	0.775	0.789	0.799	0.817	0.831	0.845	0.856	0.872	0.885	0.906	0.921	0.929	0.947	0.967	0.985
2,000	0.613	0.627	0.646	0.662	0.679	0.696	0.706	0.730	0.748	0.764	0.786	0.805	0.824	0.841	0.864	0.885	0.908	0.932	0.952	0.977
3,000	0.535	0.553	0.571	0.589	0.597	0.618	0.638	0.660	0.682	0.712	0.735	0.758	0.782	0.807	0.832	0.854	0.882	0.911	0.940	0.970
4,000	0.472	0.490	0.510	0.531	0.552	0.573	0.596	0.620	0.643	0.668	0.694	0.720	0.748	0.775	0.805	0.833	0.865	0.898	0.928	0.964
5,000	0.421	0.441	0.460	0.482	0.504	0.527	0.552	0.577	0.603	0.629	0.658	0.687	0.715	0.747	0.781	0.814	0.847	0.884	0.922	0.960
6,000	0.393	0.418	0.439	0.462	0.486	0.507	0.529	0.555	0.585	0.609	0.638	0.670	0.702	0.732	0.766	0.802	0.837	0.875	0.914	0.957
7,000	0.362	0.383	0.407	0.428	0.451	0.476	0.501	0.528	0.555	0.585	0.617	0.648	0.681	0.715	0.749	0.785	0.824	0.866	0.908	0.953
8,000	0.343	0.363	0.373	0.408	0.434	0.457	0.484	0.510	0.538	0.568	0.598	0.631	0.664	0.700	0.737	0.774	0.814	0.858	0.903	0.950
9,000	0.326	0.347	0.369	0.392	0.417	0.442	0.468	0.496	0.525	0.555	0.586	0.602	0.637	0.691	0.715	0.756	0.810	0.846	0.896	0.946
10,000	0.302	0.377	0.346	0.363	0.394	0.469	0.441	0.475	0.543	0.536	0.564	0.602	0.638	0.676	0.715	0.777	0.817	0.846	0.889	0.946
11,000	0.340	0.360	0.380	0.401	0.425	0.449	0.473	0.500	0.527	0.556	0.587	0.619	0.653	0.689	0.726	0.765	0.808	0.839	0.890	0.944
12,000	0.397	0.414	0.436	0.454	0.474	0.495	0.518	0.541	0.566	0.592	0.619	0.648	0.679	0.711	0.745	0.782	0.798	0.863	0.884	0.951
13,000	0.389	0.406	0.418	0.438	0.459	0.480	0.504	0.529	0.554	0.578	0.605	0.636	0.668	0.700	0.737	0.776	0.814	0.855	0.902	0.949
14,000	0.369	0.380	0.398	0.418	0.444	0.465	0.483	0.507	0.533	0.565	0.589	0.620	0.653	0.690	0.724	0.764	0.806	0.849	0.899	0.948
15,000	0.356	0.373	0.391	0.411	0.431	0.452	0.475	0.501	0.527	0.554	0.583	0.608	0.645	0.680	0.721	0.757	0.800	0.844	0.894	0.945
16,000	0.336	0.353	0.371	0.391	0.412	0.434	0.463	0.487	0.513	0.541	0.570	0.602	0.635	0.671	0.709	0.749	0.793	0.839	0.890	0.943
17,000	0.322	0.339	0.358	0.378	0.402	0.422	0.445	0.474	0.501	0.526	0.556	0.589	0.623	0.660	0.698	0.740	0.786	0.835	0.884	0.941
18,000	0.307	0.325	0.344	0.363	0.385	0.407	0.432	0.457	0.485	0.513	0.545	0.577	0.615	0.650	0.693	0.735	0.782	0.829	0.882	0.938
19,000	0.299	0.316	0.335	0.355	0.376	0.399	0.423	0.449	0.476	0.506	0.537	0.570	0.606	0.638	0.684	0.728	0.771	0.824	0.879	0.937
20,000	0.297	0.307	0.326	0.352	0.366	0.388	0.419	0.438	0.472	0.501	0.524	0.565	0.599	0.633	0.679	0.724	0.770	0.822	0.876	0.935
21,000	0.279	0.297	0.315	0.335	0.356	0.379	0.403	0.429	0.456	0.486	0.517	0.551	0.587	0.627	0.669	0.717	0.762	0.815	0.872	0.933
22,000	0.267	0.284	0.303	0.323	0.344	0.367	0.391	0.417	0.445	0.475	0.507	0.542	0.579	0.619	0.662	0.707	0.757	0.809	0.869	0.932
23,000	0.264	0.281	0.299	0.319	0.340	0.363	0.387	0.413	0.441	0.470	0.502	0.537	0.574	0.614	0.657	0.703	0.754	0.808	0.866	0.930
24,000	0.257	0.274	0.292	0.311	0.332	0.355	0.379	0.405	0.428	0.463	0.495	0.530	0.561	0.603	0.652	0.698	0.749	0.800	0.864	0.929
25,000	0.254	0.270	0.288	0.307	0.326	0.347	0.372	0.397	0.424	0.453	0.486	0.520	0.557	0.598	0.642	0.689	0.741	0.798	0.860	0.928
30,000	0.195	0.212	0.231	0.251	0.272	0.296	0.321	0.348	0.377	0.409	0.443	0.480	0.521	0.564	0.611	0.663	0.719	0.780	0.845	0.922
40,000	0.177	0.205	0.220	0.237	0.255	0.265	0.298	0.323	0.350	0.372	0.413	0.449	0.488	0.524	0.580	0.634	0.687	0.758	0.830	0.906
50,000	0.126	0.133	0.142	0.155	0.170	0.189	0.210	0.234	0.261	0.292	0.326	0.365	0.408	0.455	0.509	0.569	0.637	0.711	0.797	0.890
60,000	0.079	0.082	0.089	0.100	0.114	0.131	0.152	0.177	0.204	0.236	0.272	0.312	0.357	0.407	0.464	0.528	0.600	0.689	0.778	0.885
70,000	0.085	0.078	0.077	0.081	0.090	0.103	0.120	0.141	0.167	0.197	0.231	0.270	0.315	0.367	0.425	0.492	0.568	0.654	0.754	0.870
80,000	0.056	0.050	0.052	0.059	0.072	0.088	0.109	0.134	0.162	0.194	0.231	0.272	0.318	0.370	0.429	0.496	0.571	0.657	0.755	0.863
90,000	0.078	0.062	0.057	0.059	0.068	0.082	0.101	0.124	0.151	0.181	0.202	0.257	0.288	0.355	0.399	0.481	0.565	0.644	0.751	0.863
100,000	0.117	0.086	0.073	0.062	0.064	0.076	0.091	0.107	0.130	0.160	0.195	0.233	0.277	0.329	0.389	0.455	0.534	0.627	0.732	0.856
150,000	0.782	0.574	0.446	0.366	0.316	0.286	0.270	0.266	0.270	0.281	0.298	0.323	0.353	0.391	0.437	0.493	0.559	0.640	0.737	0.855
200,000	1.862	1.300	0.979	0.785	0.662	0.582	0.530	0.496	0.475	0.464	0.462	0.468	0.481	0.502	0.531	0.570	0.620	0.684	0.766	0.869
250,000	2.905	1.824	1.295	0.957	0.767	0.647	0.569	0.518	0.485	0.465	0.470	0.456	0.477	0.483	0.519	0.548	0.599	0.665	0.752	0.859
300,000	3.951	2.271	1.476	1.053	0.807	0.656	0.558	0.494	0.453	0.428	0.415	0.413	0.421	0.439	0.467	0.507	0.561	0.632	0.725	0.845
400,000	6.243	3.241	1.984	1.363	1.019	0.813	0.682	0.595	0.537	0.498	0.474	0.462	0.461	0.470	0.491	0.524	0.572	0.637	0.726	0.843
500,000	8.705	4.112	2.384	1.583	1.159	0.911	0.756	0.654	0.585	0.539	0.509	0.492	0.486	0.491	0.508	0.538	0.582	0.644	0.729	0.845

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 100,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.772	0.782	0.791	0.793	0.806	0.823	0.835	0.846	0.850	0.860	0.875	0.891	0.904	0.911	0.922	0.937	0.950	0.962	0.973	0.987
2,000	0.703	0.712	0.725	0.740	0.755	0.769	0.781	0.794	0.805	0.822	0.837	0.855	0.866	0.883	0.899	0.914	0.932	0.949	0.964	0.982
3,000	0.639	0.656	0.669	0.684	0.700	0.716	0.733	0.749	0.767	0.784	0.803	0.821	0.838	0.858	0.877	0.896	0.915	0.936	0.958	0.978
4,000	0.581	0.598	0.617	0.642	0.650	0.671	0.689	0.706	0.731	0.748	0.768	0.788	0.810	0.835	0.854	0.877	0.901	0.925	0.950	0.975
5,000	0.534	0.551	0.569	0.588	0.607	0.627	0.643	0.668	0.690	0.712	0.735	0.751	0.782	0.801	0.832	0.854	0.883	0.911	0.940	0.971
6,000	0.508	0.526	0.545	0.564	0.584	0.604	0.625	0.647	0.669	0.700	0.717	0.741	0.766	0.793	0.820	0.848	0.877	0.903	0.934	0.967
7,000	0.474	0.492	0.515	0.531	0.556	0.577	0.596	0.622	0.642	0.677	0.683	0.719	0.749	0.766	0.798	0.836	0.864	0.897	0.929	0.965
8,000	0.422	0.442	0.463	0.485	0.507	0.531	0.556	0.580	0.606	0.634	0.662	0.693	0.722	0.752	0.785	0.819	0.851	0.889	0.927	0.960
9,000	0.407	0.427	0.448	0.462	0.492	0.516	0.534	0.566	0.592	0.615	0.648	0.678	0.712	0.748	0.773	0.807	0.848	0.884	0.921	0.958
10,000	0.357	0.378	0.400	0.423	0.447	0.473	0.499	0.526	0.555	0.584	0.615	0.648	0.681	0.722	0.753	0.789	0.828	0.869	0.912	0.955
11,000	0.333	0.349	0.386	0.401	0.433	0.447	0.492	0.503	0.548	0.568	0.603	0.633	0.675	0.701	0.742	0.780	0.824	0.863	0.906	0.952
12,000	0.322	0.343	0.365	0.387	0.411	0.439	0.466	0.494	0.524	0.555	0.588	0.622	0.657	0.694	0.732	0.772	0.813	0.856	0.904	0.950
13,000	0.316	0.336	0.358	0.381	0.405	0.431	0.458	0.486	0.516	0.547	0.580	0.614	0.649	0.687	0.725	0.767	0.809	0.854	0.899	0.946
14,000	0.270	0.319	0.314	0.337	0.363	0.410	0.418	0.448	0.494	0.512	0.547	0.583	0.621	0.661	0.703	0.753	0.792	0.841	0.897	0.946
15,000	0.286	0.304	0.324	0.346	0.369	0.394	0.421	0.449	0.480	0.511	0.545	0.581	0.619	0.659	0.700	0.744	0.790	0.839	0.887	0.945
16,000	0.303	0.320	0.339	0.360	0.382	0.406	0.432	0.460	0.489	0.520	0.553	0.588	0.625	0.664	0.705	0.748	0.793	0.841	0.883	0.945
17,000	0.291	0.307	0.326	0.346	0.368	0.392	0.418	0.446	0.476	0.507	0.541	0.577	0.614	0.654	0.696	0.740	0.787	0.836	0.883	0.943
18,000	0.268	0.284	0.302	0.322	0.344	0.368	0.395	0.423	0.453	0.485	0.520	0.556	0.595	0.636	0.680	0.733	0.773	0.831	0.884	0.938
19,000	0.264	0.280	0.297	0.317	0.339	0.363	0.388	0.417	0.447	0.479	0.521	0.550	0.590	0.631	0.675	0.722	0.769	0.822	0.879	0.938
20,000	0.246	0.261	0.279	0.299	0.321	0.345	0.371	0.400	0.431	0.464	0.499	0.537	0.577	0.620	0.665	0.714	0.761	0.818	0.876	0.935
21,000	0.238	0.253	0.270	0.289	0.311	0.335	0.361	0.390	0.421	0.454	0.490	0.528	0.569	0.612	0.658	0.707	0.759	0.814	0.869	0.935
22,000	0.229	0.242	0.258	0.277	0.298	0.322	0.348	0.377	0.408	0.441	0.477	0.516	0.557	0.602	0.649	0.699	0.752	0.810	0.869	0.932
23,000	0.243	0.255	0.277	0.288	0.308	0.331	0.357	0.384	0.415	0.449	0.483	0.522	0.562	0.606	0.652	0.700	0.754	0.810	0.866	0.933
24,000	0.215	0.226	0.242	0.259	0.280	0.304	0.329	0.358	0.413	0.445	0.460	0.499	0.541	0.587	0.635	0.687	0.752	0.808	0.866	0.932
25,000	0.217	0.222	0.237	0.260	0.280	0.303	0.328	0.353	0.388	0.421	0.458	0.491	0.532	0.580	0.629	0.679	0.736	0.796	0.860	0.931
30,000	0.181	0.188	0.199	0.214	0.234	0.255	0.280	0.309	0.341	0.377	0.415	0.454	0.499	0.547	0.603	0.658	0.716	0.779	0.849	0.922
40,000	0.303	0.279	0.264	0.257	0.258	0.264	0.277	0.295	0.318	0.347	0.380	0.418	0.461	0.509	0.562	0.620	0.682	0.757	0.828	0.909
50,000	0.381	0.315	0.267	0.233	0.212	0.202	0.202	0.211	0.228	0.252	0.284	0.322	0.368	0.420	0.479	0.546	0.623	0.702	0.786	0.887
60,000	0.614	0.494	0.403	0.334	0.286	0.254	0.236	0.230	0.236	0.251	0.276	0.309	0.349	0.398	0.457	0.523	0.599	0.683	0.781	0.886
70,000	0.821	0.640	0.503	0.400	0.324	0.272	0.239	0.200	0.216	0.224	0.230	0.275	0.314	0.354	0.423	0.491	0.571	0.660	0.760	0.874
80,000	1.172	0.894	0.683	0.560	0.406	0.321	0.262	0.225	0.206	0.203	0.215	0.250	0.285	0.324	0.384	0.466	0.547	0.625	0.744	0.859
90,000	1.369	1.033	0.784	0.597	0.459	0.359	0.289	0.244	0.219	0.212	0.219	0.250	0.282	0.321	0.379	0.453	0.534	0.628	0.735	0.860
100,000	1.860	1.378	1.024	0.763	0.571	0.430	0.330	0.262	0.221	0.201	0.200	0.215	0.246	0.290	0.347	0.419	0.507	0.605	0.718	0.853
150,000	5.847	4.031	2.826	1.997	1.416	1.002	0.707	0.499	0.353	0.257	0.199	0.174	0.176	0.201	0.249	0.317	0.406	0.517	0.652	0.814
200,000	12.242	7.849	5.251	3.607	2.525	1.788	1.276	0.913	0.657	0.479	0.359	0.285	0.248	0.243	0.266	0.317	0.393	0.497	0.630	0.799
250,000	19.746	11.689	7.423	4.916	3.361	2.344	1.658	1.183	0.851	0.619	0.462	0.359	0.301	0.280	0.290	0.331	0.400	0.499	0.599	0.796
300,000	26.361	14.536	8.804	5.652	3.778	2.593	1.812	1.283	0.917	0.666	0.495	0.383	0.319	0.293	0.300	0.338	0.405	0.502	0.631	0.796
400,000	40.838	20.250	11.506	7.081	4.595	3.086	2.118	1.477	1.079	0.772	0.562	0.424	0.325	0.288	0.288	0.320	0.384	0.481	0.613	0.785
500,000	59.408	26.431	14.548	8.682	5.405	3.644	2.430	1.705	1.176	0.832	0.598	0.442	0.321	0.296	0.274	0.313	0.373	0.468	0.598	0.776

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 200,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.663	0.681	0.694	0.711	0.722	0.738	0.772	0.784	0.788	0.803	0.829	0.845	0.864	0.878	0.893	0.914	0.933	0.952	0.966	0.987
2,000	0.579	0.594	0.605	0.628	0.642	0.665	0.678	0.702	0.719	0.742	0.762	0.785	0.798	0.829	0.849	0.875	0.897	0.924	0.948	0.980
3,000	0.492	0.511	0.529	0.552	0.567	0.589	0.610	0.641	0.663	0.687	0.711	0.735	0.760	0.788	0.817	0.844	0.875	0.905	0.937	0.975
4,000	0.447	0.465	0.483	0.507	0.525	0.551	0.574	0.596	0.621	0.648	0.674	0.702	0.731	0.760	0.792	0.820	0.856	0.891	0.926	0.964
5,000	0.404	0.423	0.450	0.464	0.488	0.510	0.534	0.561	0.586	0.612	0.641	0.669	0.700	0.731	0.763	0.800	0.837	0.877	0.915	0.959
6,000	0.360	0.378	0.409	0.420	0.452	0.478	0.501	0.528	0.551	0.581	0.612	0.637	0.667	0.713	0.749	0.786	0.827	0.864	0.907	0.954
7,000	0.314	0.335	0.357	0.379	0.404	0.429	0.456	0.485	0.514	0.543	0.576	0.611	0.648	0.689	0.726	0.767	0.811	0.855	0.903	0.950
8,000	0.301	0.321	0.349	0.365	0.387	0.419	0.438	0.465	0.506	0.527	0.568	0.594	0.630	0.682	0.709	0.755	0.798	0.846	0.893	0.946
9,000	0.301	0.317	0.328	0.356	0.382	0.405	0.429	0.459	0.488	0.514	0.551	0.590	0.627	0.668	0.711	0.746	0.793	0.839	0.891	0.944
10,000	0.304	0.320	0.341	0.361	0.381	0.405	0.430	0.457	0.484	0.517	0.551	0.585	0.619	0.652	0.702	0.744	0.786	0.838	0.890	0.941
11,000	0.284	0.303	0.317	0.342	0.360	0.387	0.408	0.438	0.465	0.501	0.532	0.568	0.603	0.644	0.685	0.729	0.780	0.831	0.883	0.938
12,000	0.282	0.300	0.315	0.334	0.355	0.377	0.400	0.426	0.455	0.486	0.520	0.553	0.594	0.636	0.680	0.724	0.771	0.824	0.881	0.937
13,000	0.277	0.291	0.312	0.327	0.342	0.364	0.392	0.418	0.446	0.476	0.507	0.546	0.585	0.622	0.666	0.715	0.767	0.820	0.875	0.935
14,000	0.272	0.280	0.297	0.310	0.332	0.354	0.375	0.399	0.434	0.458	0.497	0.528	0.569	0.615	0.651	0.708	0.755	0.813	0.871	0.934
15,000	0.290	0.299	0.309	0.327	0.345	0.363	0.385	0.413	0.432	0.470	0.502	0.534	0.575	0.614	0.656	0.709	0.753	0.816	0.865	0.935
16,000	0.285	0.293	0.303	0.317	0.334	0.353	0.374	0.398	0.428	0.455	0.487	0.522	0.562	0.605	0.649	0.694	0.749	0.806	0.865	0.931
17,000	0.270	0.277	0.288	0.312	0.318	0.337	0.357	0.382	0.408	0.438	0.471	0.509	0.551	0.592	0.641	0.688	0.743	0.799	0.861	0.929
18,000	0.275	0.272	0.292	0.306	0.315	0.332	0.352	0.378	0.406	0.431	0.465	0.501	0.542	0.585	0.631	0.680	0.734	0.793	0.860	0.927
19,000	0.264	0.268	0.275	0.284	0.299	0.316	0.336	0.358	0.387	0.416	0.449	0.485	0.525	0.570	0.617	0.669	0.726	0.786	0.853	0.923
20,000	0.267	0.272	0.275	0.284	0.298	0.312	0.333	0.353	0.379	0.409	0.441	0.477	0.517	0.560	0.611	0.661	0.720	0.778	0.848	0.920
21,000	0.272	0.276	0.276	0.287	0.295	0.313	0.328	0.353	0.374	0.406	0.435	0.474	0.512	0.558	0.603	0.659	0.714	0.779	0.844	0.920
22,000	0.283	0.281	0.283	0.291	0.299	0.313	0.330	0.350	0.375	0.403	0.432	0.470	0.509	0.554	0.601	0.653	0.712	0.773	0.843	0.918
23,000	0.274	0.266	0.267	0.272	0.285	0.298	0.310	0.335	0.359	0.388	0.414	0.452	0.496	0.543	0.587	0.646	0.707	0.769	0.839	0.916
24,000	0.276	0.269	0.217	0.272	0.280	0.282	0.307	0.327	0.367	0.379	0.411	0.442	0.487	0.532	0.583	0.664	0.695	0.762	0.835	0.915
25,000	0.177	0.197	0.211	0.230	0.256	0.275	0.305	0.329	0.360	0.394	0.429	0.469	0.511	0.557	0.606	0.659	0.717	0.779	0.833	0.919
30,000	0.203	0.211	0.224	0.239	0.257	0.275	0.298	0.323	0.351	0.383	0.415	0.453	0.494	0.542	0.588	0.644	0.704	0.768	0.838	0.916
40,000	0.249	0.253	0.256	0.263	0.274	0.289	0.304	0.324	0.348	0.374	0.404	0.439	0.478	0.521	0.569	0.624	0.683	0.749	0.823	0.906
50,000	0.282	0.276	0.272	0.274	0.275	0.278	0.289	0.304	0.333	0.354	0.390	0.408	0.451	0.487	0.541	0.594	0.659	0.727	0.813	0.897
60,000	0.335	0.309	0.294	0.283	0.278	0.277	0.280	0.291	0.305	0.325	0.349	0.380	0.414	0.457	0.507	0.569	0.629	0.704	0.790	0.891
70,000	0.420	0.379	0.348	0.325	0.308	0.300	0.297	0.299	0.308	0.324	0.343	0.370	0.404	0.444	0.492	0.549	0.614	0.687	0.777	0.883
80,000	0.499	0.437	0.411	0.350	0.324	0.307	0.298	0.295	0.300	0.311	0.329	0.353	0.390	0.422	0.472	0.529	0.596	0.675	0.766	0.876
90,000	0.573	0.482	0.412	0.359	0.321	0.293	0.276	0.261	0.267	0.275	0.290	0.313	0.344	0.384	0.431	0.492	0.564	0.653	0.744	0.868
100,000	0.729	0.613	0.524	0.456	0.404	0.365	0.338	0.321	0.313	0.314	0.333	0.348	0.372	0.408	0.445	0.502	0.568	0.653	0.747	0.862
150,000	1.932	1.533	1.242	1.025	0.859	0.731	0.632	0.556	0.498	0.457	0.430	0.417	0.417	0.430	0.456	0.497	0.555	0.632	0.728	0.849
200,000	3.387	2.517	1.941	1.538	1.246	1.027	0.861	0.733	0.636	0.563	0.510	0.475	0.458	0.456	0.470	0.501	0.546	0.619	0.718	0.840
250,000	5.337	3.743	2.777	2.140	1.697	1.359	1.135	0.953	0.802	0.707	0.627	0.569	0.525	0.515	0.510	0.531	0.565	0.634	0.724	0.839
300,000	7.231	4.821	3.456	2.602	2.027	1.605	1.307	1.094	0.912	0.790	0.690	0.617	0.567	0.538	0.529	0.538	0.565	0.631	0.711	0.831
400,000	10.285	6.350	4.332	3.149	2.389	1.868	1.492	1.214	1.004	0.827	0.707	0.626	0.564	0.518	0.520	0.519	0.550	0.610	0.700	0.824
500,000	8.430	4.375	2.602	1.712	1.223	0.935	0.758	0.646	0.575	0.530	0.504	0.492	0.492	0.503	0.524	0.557	0.604	0.667	0.753	0.858

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 300,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.775	0.785	0.791	0.801	0.812	0.822	0.833	0.845	0.855	0.869	0.880	0.890	0.900	0.912	0.924	0.937	0.949	0.961	0.973	0.986
2,000	0.642	0.655	0.675	0.689	0.703	0.719	0.735	0.752	0.769	0.788	0.804	0.822	0.841	0.859	0.879	0.895	0.916	0.937	0.956	0.980
3,000	0.560	0.577	0.597	0.615	0.633	0.652	0.673	0.692	0.712	0.733	0.754	0.776	0.798	0.824	0.846	0.872	0.892	0.919	0.946	0.974
4,000	0.504	0.523	0.542	0.563	0.581	0.602	0.625	0.647	0.670	0.693	0.717	0.742	0.764	0.796	0.820	0.848	0.877	0.904	0.936	0.969
5,000	0.482	0.501	0.521	0.541	0.562	0.583	0.615	0.638	0.646	0.670	0.696	0.734	0.760	0.787	0.810	0.839	0.867	0.895	0.927	0.965
6,000	0.456	0.479	0.489	0.510	0.530	0.563	0.583	0.606	0.633	0.653	0.677	0.710	0.738	0.768	0.795	0.827	0.860	0.891	0.927	0.962
7,000	0.423	0.443	0.464	0.485	0.508	0.531	0.555	0.580	0.605	0.632	0.660	0.689	0.718	0.746	0.779	0.816	0.850	0.884	0.922	0.959
8,000	0.407	0.426	0.447	0.469	0.492	0.516	0.540	0.565	0.586	0.618	0.646	0.672	0.709	0.741	0.768	0.806	0.840	0.878	0.916	0.957
9,000	0.388	0.409	0.430	0.453	0.476	0.499	0.522	0.548	0.575	0.603	0.632	0.663	0.694	0.726	0.761	0.797	0.835	0.873	0.914	0.955
10,000	0.368	0.389	0.410	0.433	0.456	0.480	0.506	0.532	0.560	0.588	0.618	0.649	0.682	0.716	0.751	0.788	0.826	0.866	0.911	0.953
11,000	0.371	0.369	0.391	0.435	0.438	0.463	0.488	0.534	0.544	0.573	0.604	0.650	0.669	0.703	0.741	0.779	0.820	0.862	0.906	0.952
12,000	0.357	0.377	0.396	0.418	0.442	0.466	0.492	0.518	0.546	0.575	0.604	0.637	0.668	0.694	0.732	0.772	0.819	0.862	0.902	0.950
13,000	0.327	0.368	0.396	0.412	0.416	0.445	0.471	0.518	0.527	0.569	0.603	0.632	0.666	0.700	0.739	0.771	0.812	0.860	0.902	0.951
14,000	0.327	0.348	0.380	0.392	0.426	0.440	0.466	0.498	0.521	0.560	0.583	0.616	0.654	0.687	0.730	0.766	0.806	0.851	0.901	0.951
15,000	0.309	0.331	0.358	0.381	0.404	0.429	0.456	0.483	0.506	0.544	0.576	0.610	0.645	0.681	0.719	0.759	0.799	0.847	0.894	0.948
16,000	0.290	0.312	0.334	0.357	0.381	0.407	0.434	0.462	0.492	0.523	0.556	0.591	0.627	0.666	0.706	0.748	0.795	0.843	0.893	0.945
17,000	0.263	0.285	0.306	0.331	0.355	0.383	0.422	0.438	0.470	0.511	0.536	0.581	0.618	0.649	0.703	0.747	0.782	0.834	0.888	0.943
18,000	0.257	0.271	0.302	0.324	0.349	0.384	0.402	0.427	0.455	0.491	0.529	0.561	0.603	0.640	0.683	0.730	0.777	0.828	0.882	0.939
19,000	0.244	0.264	0.285	0.307	0.332	0.357	0.384	0.413	0.444	0.477	0.511	0.548	0.587	0.628	0.672	0.723	0.767	0.819	0.879	0.937
20,000	0.236	0.257	0.278	0.301	0.326	0.352	0.380	0.404	0.436	0.468	0.504	0.541	0.580	0.622	0.666	0.718	0.763	0.818	0.872	0.934
21,000	0.221	0.242	0.264	0.288	0.318	0.339	0.373	0.397	0.427	0.467	0.498	0.538	0.571	0.619	0.663	0.715	0.758	0.814	0.873	0.934
22,000	0.212	0.231	0.253	0.282	0.307	0.328	0.360	0.390	0.418	0.457	0.489	0.526	0.567	0.612	0.655	0.705	0.758	0.813	0.871	0.933
23,000	0.193	0.213	0.248	0.271	0.296	0.322	0.351	0.380	0.412	0.446	0.482	0.518	0.561	0.605	0.650	0.699	0.752	0.809	0.868	0.932
24,000	0.192	0.216	0.238	0.267	0.288	0.314	0.342	0.375	0.407	0.437	0.471	0.511	0.552	0.590	0.644	0.696	0.747	0.800	0.865	0.930
25,000	0.205	0.225	0.243	0.263	0.290	0.312	0.344	0.366	0.390	0.431	0.460	0.509	0.541	0.593	0.636	0.695	0.736	0.803	0.862	0.929
30,000	0.193	0.211	0.230	0.251	0.274	0.299	0.325	0.354	0.387	0.417	0.456	0.494	0.534	0.580	0.626	0.677	0.733	0.790	0.851	0.924
40,000	0.117	0.134	0.152	0.173	0.195	0.222	0.244	0.275	0.307	0.346	0.384	0.426	0.467	0.516	0.569	0.627	0.689	0.759	0.835	0.911
50,000	0.114	0.126	0.142	0.160	0.143	0.204	0.230	0.221	0.290	0.324	0.328	0.371	0.447	0.469	0.525	0.609	0.654	0.734	0.814	0.907
60,000	0.059	0.066	0.077	0.092	0.110	0.131	0.156	0.185	0.216	0.252	0.291	0.330	0.378	0.435	0.499	0.555	0.631	0.706	0.795	0.891
70,000	0.054	0.052	0.058	0.067	0.081	0.099	0.117	0.144	0.174	0.209	0.244	0.292	0.342	0.397	0.457	0.524	0.599	0.681	0.778	0.882
80,000	0.047	0.039	0.038	0.044	0.055	0.071	0.092	0.117	0.147	0.182	0.222	0.266	0.316	0.372	0.435	0.505	0.583	0.670	0.765	0.877
90,000	0.096	0.074	0.062	0.058	0.061	0.071	0.087	0.108	0.134	0.166	0.203	0.246	0.295	0.350	0.413	0.484	0.563	0.653	0.755	0.870
100,000	0.105	0.073	0.056	0.047	0.048	0.056	0.071	0.091	0.118	0.149	0.186	0.232	0.279	0.338	0.399	0.473	0.554	0.646	0.748	0.867
150,000	0.438	0.281	0.174	0.103	0.059	0.034	0.025	0.029	0.044	0.068	0.100	0.141	0.191	0.249	0.317	0.395	0.484	0.587	0.705	0.841
200,000	1.072	0.700	0.456	0.296	0.191	0.126	0.089	0.073	0.074	0.088	0.114	0.151	0.197	0.252	0.318	0.394	0.483	0.589	0.703	0.843
250,000	1.590	1.001	0.630	0.394	0.239	0.141	0.081	0.050	0.039	0.046	0.066	0.099	0.143	0.199	0.265	0.345	0.438	0.547	0.674	0.824
300,000	2.348	1.455	0.911	0.568	0.348	0.208	0.119	0.068	0.044	0.041	0.054	0.082	0.122	0.176	0.241	0.321	0.415	0.527	0.658	0.815
400,000	3.548	2.144	1.327	0.826	0.510	0.307	0.178	0.099	0.055	0.038	0.041	0.061	0.097	0.147	0.212	0.291	0.387	0.502	0.640	0.803
500,000	4.478	2.776	1.684	1.035	0.634	0.381	0.220	0.120	0.068	0.046	0.046	0.066	0.100	0.150	0.207	0.287	0.389	0.504	0.641	0.803

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 400,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.779	0.789	0.799	0.809	0.819	0.831	0.842	0.852	0.879	0.884	0.888	0.899	0.909	0.920	0.931	0.941	0.957	0.966	0.978	0.989
2,000	0.720	0.731	0.744	0.756	0.768	0.781	0.794	0.807	0.820	0.834	0.848	0.862	0.876	0.890	0.906	0.921	0.936	0.952	0.967	0.985
3,000	0.678	0.691	0.704	0.718	0.731	0.741	0.760	0.775	0.788	0.805	0.816	0.837	0.849	0.867	0.887	0.901	0.922	0.938	0.959	0.980
4,000	0.596	0.612	0.628	0.645	0.662	0.680	0.697	0.719	0.735	0.754	0.776	0.796	0.815	0.838	0.862	0.880	0.905	0.928	0.952	0.976
5,000	0.564	0.582	0.599	0.616	0.634	0.653	0.673	0.692	0.712	0.732	0.754	0.776	0.798	0.819	0.843	0.868	0.893	0.919	0.945	0.974
6,000	0.529	0.547	0.565	0.584	0.603	0.623	0.643	0.664	0.686	0.708	0.731	0.754	0.778	0.803	0.829	0.855	0.882	0.910	0.939	0.968
7,000	0.492	0.511	0.530	0.550	0.580	0.600	0.622	0.643	0.658	0.682	0.706	0.733	0.758	0.785	0.814	0.845	0.872	0.903	0.934	0.966
8,000	0.493	0.511	0.530	0.549	0.569	0.590	0.611	0.633	0.656	0.679	0.696	0.729	0.755	0.777	0.805	0.839	0.865	0.895	0.931	0.964
9,000	0.469	0.488	0.507	0.527	0.548	0.569	0.591	0.614	0.637	0.662	0.687	0.714	0.740	0.769	0.792	0.828	0.860	0.890	0.925	0.961
10,000	0.433	0.453	0.473	0.494	0.516	0.538	0.562	0.586	0.611	0.637	0.664	0.692	0.721	0.751	0.778	0.815	0.853	0.882	0.921	0.959
11,000	0.412	0.432	0.453	0.474	0.496	0.519	0.543	0.568	0.594	0.621	0.649	0.678	0.708	0.739	0.772	0.806	0.842	0.876	0.918	0.958
12,000	0.411	0.423	0.444	0.466	0.488	0.511	0.536	0.562	0.587	0.617	0.643	0.671	0.703	0.733	0.768	0.800	0.838	0.870	0.914	0.955
13,000	0.387	0.402	0.436	0.458	0.480	0.493	0.521	0.547	0.573	0.598	0.635	0.661	0.691	0.724	0.758	0.795	0.832	0.868	0.911	0.953
14,000	0.362	0.383	0.417	0.439	0.462	0.485	0.511	0.526	0.554	0.582	0.620	0.651	0.682	0.716	0.751	0.788	0.824	0.863	0.908	0.951
15,000	0.348	0.368	0.391	0.426	0.436	0.462	0.487	0.512	0.542	0.569	0.611	0.633	0.672	0.707	0.737	0.781	0.817	0.859	0.903	0.950
16,000	0.330	0.351	0.373	0.396	0.420	0.445	0.470	0.498	0.526	0.556	0.587	0.620	0.654	0.688	0.728	0.768	0.807	0.854	0.900	0.948
17,000	0.315	0.336	0.358	0.381	0.405	0.430	0.456	0.484	0.513	0.543	0.575	0.608	0.644	0.680	0.719	0.760	0.803	0.848	0.896	0.946
18,000	0.322	0.343	0.364	0.387	0.410	0.435	0.461	0.488	0.516	0.546	0.577	0.610	0.644	0.681	0.719	0.759	0.802	0.845	0.894	0.945
19,000	0.311	0.331	0.353	0.376	0.399	0.424	0.450	0.477	0.506	0.536	0.568	0.601	0.636	0.673	0.712	0.754	0.797	0.844	0.893	0.944
20,000	0.289	0.310	0.332	0.355	0.379	0.405	0.431	0.459	0.496	0.520	0.552	0.586	0.623	0.661	0.701	0.744	0.792	0.840	0.890	0.942
21,000	0.278	0.299	0.321	0.345	0.369	0.394	0.421	0.449	0.479	0.510	0.543	0.578	0.615	0.654	0.695	0.738	0.785	0.833	0.886	0.942
22,000	0.268	0.289	0.311	0.335	0.359	0.385	0.412	0.440	0.470	0.501	0.535	0.570	0.607	0.647	0.689	0.733	0.780	0.830	0.883	0.940
23,000	0.259	0.280	0.302	0.325	0.349	0.375	0.402	0.431	0.461	0.493	0.527	0.562	0.600	0.640	0.682	0.727	0.775	0.826	0.880	0.938
24,000	0.248	0.269	0.291	0.315	0.339	0.365	0.393	0.421	0.452	0.484	0.518	0.554	0.592	0.633	0.676	0.721	0.770	0.822	0.878	0.937
25,000	0.239	0.261	0.283	0.306	0.331	0.357	0.384	0.413	0.444	0.476	0.511	0.547	0.586	0.627	0.670	0.717	0.766	0.819	0.875	0.936
30,000	0.194	0.216	0.239	0.263	0.288	0.315	0.344	0.374	0.406	0.442	0.476	0.514	0.556	0.605	0.649	0.695	0.751	0.807	0.866	0.929
40,000	0.131	0.157	0.180	0.198	0.229	0.256	0.280	0.315	0.344	0.379	0.421	0.458	0.501	0.551	0.598	0.652	0.711	0.778	0.846	0.919
50,000	0.099	0.118	0.139	0.161	0.185	0.211	0.239	0.270	0.303	0.338	0.376	0.418	0.463	0.511	0.564	0.621	0.684	0.752	0.827	0.910
60,000	0.069	0.087	0.106	0.128	0.151	0.177	0.205	0.236	0.269	0.305	0.344	0.386	0.431	0.482	0.537	0.596	0.662	0.735	0.814	0.903
70,000	0.048	0.064	0.082	0.103	0.126	0.151	0.178	0.208	0.241	0.277	0.316	0.359	0.406	0.457	0.513	0.575	0.643	0.718	0.802	0.897
80,000	0.036	0.049	0.064	0.084	0.104	0.130	0.157	0.184	0.219	0.255	0.291	0.337	0.384	0.433	0.493	0.557	0.627	0.705	0.792	0.891
90,000	0.028	0.038	0.052	0.069	0.089	0.112	0.138	0.167	0.199	0.234	0.273	0.316	0.368	0.416	0.474	0.539	0.609	0.694	0.782	0.886
100,000	0.027	0.034	0.047	0.062	0.081	0.103	0.129	0.157	0.188	0.223	0.263	0.306	0.354	0.406	0.465	0.531	0.598	0.686	0.778	0.880
150,000	0.086	0.058	0.045	0.043	0.049	0.062	0.081	0.105	0.134	0.167	0.206	0.249	0.297	0.352	0.414	0.483	0.561	0.647	0.748	0.865
200,000	0.157	0.097	0.064	0.048	0.045	0.051	0.065	0.085	0.111	0.142	0.179	0.221	0.269	0.324	0.386	0.457	0.538	0.630	0.736	0.858
250,000	0.213	0.133	0.088	0.065	0.057	0.060	0.072	0.090	0.114	0.143	0.178	0.219	0.266	0.320	0.381	0.452	0.532	0.624	0.730	0.855
300,000	0.266	0.162	0.105	0.075	0.064	0.065	0.075	0.092	0.115	0.144	0.179	0.219	0.266	0.319	0.380	0.450	0.530	0.623	0.729	0.854
400,000	0.386	0.217	0.127	0.079	0.057	0.053	0.060	0.075	0.098	0.127	0.162	0.203	0.250	0.305	0.367	0.438	0.520	0.614	0.724	0.851
500,000	0.538	0.310	0.188	0.123	0.090	0.077	0.079	0.091	0.111	0.137	0.170	0.210	0.256	0.309	0.371	0.441	0.522	0.616	0.725	0.851

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 500,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.817	0.825	0.833	0.841	0.850	0.858	0.867	0.876	0.885	0.892	0.902	0.911	0.921	0.930	0.940	0.947	0.959	0.969	0.981	0.990
2,000	0.749	0.760	0.771	0.782	0.793	0.804	0.816	0.828	0.839	0.851	0.863	0.877	0.889	0.902	0.915	0.929	0.943	0.957	0.971	0.987
3,000	0.695	0.708	0.720	0.733	0.747	0.760	0.774	0.788	0.802	0.817	0.832	0.847	0.863	0.879	0.890	0.912	0.929	0.944	0.962	0.983
4,000	0.638	0.652	0.667	0.698	0.698	0.714	0.743	0.748	0.764	0.791	0.798	0.827	0.844	0.855	0.880	0.899	0.914	0.936	0.958	0.980
5,000	0.591	0.607	0.623	0.640	0.657	0.675	0.693	0.711	0.730	0.750	0.770	0.790	0.811	0.832	0.854	0.877	0.904	0.931	0.953	0.977
6,000	0.580	0.579	0.596	0.614	0.647	0.651	0.670	0.689	0.709	0.730	0.751	0.782	0.796	0.819	0.847	0.870	0.890	0.916	0.947	0.973
7,000	0.555	0.572	0.589	0.607	0.625	0.643	0.662	0.682	0.702	0.723	0.744	0.767	0.781	0.813	0.838	0.857	0.888	0.911	0.944	0.972
8,000	0.502	0.520	0.539	0.559	0.579	0.600	0.644	0.664	0.686	0.689	0.713	0.737	0.777	0.802	0.827	0.853	0.881	0.904	0.936	0.970
9,000	0.461	0.479	0.500	0.521	0.541	0.565	0.587	0.611	0.634	0.660	0.686	0.713	0.755	0.769	0.799	0.839	0.861	0.894	0.935	0.969
10,000	0.445	0.465	0.486	0.507	0.528	0.551	0.574	0.598	0.619	0.649	0.672	0.703	0.728	0.761	0.789	0.833	0.854	0.890	0.931	0.965
11,000	0.428	0.440	0.469	0.490	0.512	0.535	0.559	0.584	0.609	0.636	0.663	0.692	0.721	0.751	0.783	0.826	0.850	0.885	0.926	0.964
12,000	0.401	0.421	0.443	0.465	0.488	0.514	0.536	0.564	0.588	0.617	0.644	0.675	0.706	0.738	0.772	0.805	0.841	0.879	0.919	0.960
13,000	0.452	0.471	0.490	0.509	0.530	0.551	0.573	0.596	0.620	0.645	0.636	0.666	0.697	0.730	0.764	0.797	0.836	0.873	0.916	0.958
14,000	0.439	0.458	0.477	0.497	0.518	0.539	0.562	0.585	0.610	0.635	0.661	0.689	0.718	0.748	0.779	0.812	0.846	0.882	0.920	0.957
15,000	0.413	0.446	0.452	0.485	0.494	0.528	0.551	0.564	0.600	0.616	0.652	0.681	0.710	0.741	0.768	0.807	0.842	0.878	0.917	0.957
16,000	0.404	0.423	0.443	0.464	0.485	0.508	0.531	0.556	0.581	0.608	0.635	0.665	0.696	0.728	0.761	0.797	0.833	0.872	0.915	0.955
17,000	0.394	0.413	0.433	0.453	0.475	0.498	0.521	0.546	0.572	0.599	0.628	0.658	0.689	0.721	0.756	0.791	0.829	0.868	0.910	0.954
18,000	0.390	0.409	0.429	0.450	0.472	0.495	0.518	0.543	0.569	0.596	0.625	0.655	0.686	0.719	0.753	0.790	0.828	0.865	0.908	0.953
19,000	0.381	0.400	0.420	0.441	0.463	0.486	0.510	0.535	0.561	0.589	0.618	0.648	0.680	0.713	0.748	0.785	0.824	0.864	0.907	0.952
20,000	0.371	0.390	0.410	0.431	0.453	0.504	0.501	0.526	0.553	0.581	0.610	0.659	0.673	0.708	0.743	0.781	0.820	0.868	0.905	0.952
21,000	0.398	0.416	0.434	0.454	0.475	0.497	0.519	0.544	0.569	0.595	0.623	0.652	0.683	0.716	0.751	0.787	0.816	0.865	0.903	0.950
22,000	0.390	0.408	0.427	0.447	0.468	0.489	0.512	0.537	0.562	0.589	0.617	0.647	0.678	0.711	0.746	0.782	0.813	0.862	0.906	0.949
23,000	0.383	0.401	0.420	0.440	0.460	0.482	0.506	0.530	0.556	0.583	0.611	0.641	0.673	0.706	0.742	0.779	0.818	0.860	0.904	0.951
24,000	0.376	0.394	0.412	0.432	0.453	0.475	0.499	0.523	0.549	0.576	0.605	0.636	0.667	0.701	0.737	0.775	0.815	0.857	0.902	0.950
25,000	0.369	0.387	0.406	0.426	0.447	0.469	0.493	0.517	0.543	0.571	0.600	0.630	0.663	0.697	0.733	0.771	0.812	0.855	0.900	0.949
30,000	0.359	0.377	0.396	0.417	0.438	0.460	0.484	0.509	0.535	0.563	0.592	0.623	0.655	0.690	0.727	0.757	0.800	0.851	0.897	0.945
40,000	0.313	0.329	0.347	0.367	0.387	0.409	0.433	0.458	0.485	0.514	0.544	0.577	0.612	0.650	0.690	0.739	0.779	0.833	0.885	0.939
50,000	0.162	0.183	0.205	0.230	0.255	0.283	0.312	0.343	0.377	0.412	0.450	0.489	0.532	0.577	0.626	0.678	0.734	0.793	0.861	0.927
60,000	0.179	0.202	0.226	0.251	0.278	0.306	0.335	0.367	0.400	0.434	0.471	0.510	0.551	0.595	0.642	0.692	0.745	0.796	0.863	0.926
70,000	0.143	0.165	0.189	0.215	0.242	0.271	0.301	0.333	0.367	0.403	0.441	0.482	0.525	0.571	0.619	0.672	0.728	0.789	0.854	0.925
80,000	0.125	0.147	0.170	0.196	0.223	0.252	0.282	0.315	0.349	0.386	0.425	0.466	0.510	0.557	0.607	0.661	0.719	0.781	0.848	0.919
90,000	0.082	0.101	0.125	0.150	0.177	0.207	0.239	0.273	0.309	0.348	0.390	0.433	0.480	0.529	0.583	0.640	0.701	0.779	0.839	0.923
100,000	0.109	0.127	0.149	0.172	0.199	0.227	0.257	0.290	0.325	0.362	0.401	0.444	0.489	0.537	0.571	0.644	0.705	0.761	0.834	0.918
150,000	0.074	0.076	0.087	0.104	0.127	0.153	0.183	0.216	0.252	0.291	0.334	0.379	0.428	0.481	0.537	0.599	0.666	0.738	0.818	0.904
200,000	0.169	0.166	0.173	0.188	0.208	0.231	0.258	0.288	0.320	0.356	0.393	0.434	0.478	0.525	0.576	0.632	0.693	0.759	0.832	0.911
250,000	0.192	0.144	0.126	0.125	0.137	0.157	0.183	0.213	0.248	0.286	0.328	0.373	0.422	0.475	0.531	0.593	0.660	0.734	0.814	0.902
300,000	0.242	0.168	0.137	0.131	0.142	0.163	0.191	0.224	0.261	0.301	0.344	0.390	0.439	0.492	0.548	0.609	0.675	0.744	0.822	0.907
400,000	0.368	0.242	0.182	0.160	0.161	0.175	0.199	0.229	0.264	0.302	0.344	0.389	0.437	0.490	0.545	0.606	0.681	0.751	0.826	0.909
500,000	0.461	0.285	0.201	0.167	0.161	0.172	0.194	0.224	0.258	0.297	0.339	0.384	0.433	0.486	0.542	0.603	0.669	0.741	0.819	0.905

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = 1M																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.819	0.829	0.837	0.844	0.847	0.862	0.869	0.878	0.889	0.896	0.905	0.914	0.925	0.931	0.942	0.953	0.961	0.970	0.983	0.991
2,000	0.712	0.723	0.767	0.750	0.763	0.801	0.789	0.804	0.838	0.850	0.862	0.875	0.888	0.902	0.915	0.929	0.943	0.957	0.972	0.986
3,000	0.709	0.721	0.734	0.746	0.759	0.772	0.785	0.799	0.813	0.827	0.841	0.856	0.872	0.886	0.901	0.918	0.929	0.950	0.966	0.983
4,000	0.682	0.695	0.714	0.729	0.742	0.756	0.765	0.778	0.793	0.812	0.829	0.845	0.856	0.873	0.889	0.906	0.923	0.945	0.962	0.980
5,000	0.646	0.660	0.674	0.689	0.708	0.724	0.739	0.751	0.767	0.785	0.802	0.822	0.841	0.858	0.878	0.893	0.917	0.938	0.957	0.978
6,000	0.615	0.630	0.646	0.661	0.678	0.694	0.711	0.729	0.746	0.765	0.785	0.804	0.823	0.839	0.862	0.883	0.904	0.929	0.952	0.976
7,000	0.588	0.604	0.624	0.636	0.657	0.675	0.692	0.707	0.726	0.749	0.768	0.786	0.809	0.829	0.851	0.876	0.898	0.922	0.948	0.973
8,000	0.571	0.593	0.609	0.621	0.645	0.661	0.677	0.700	0.718	0.735	0.752	0.780	0.801	0.818	0.842	0.870	0.892	0.917	0.945	0.971
9,000	0.566	0.583	0.598	0.617	0.633	0.652	0.670	0.690	0.701	0.722	0.744	0.767	0.789	0.813	0.836	0.862	0.887	0.914	0.941	0.970
10,000	0.562	0.578	0.594	0.611	0.632	0.647	0.668	0.684	0.701	0.726	0.745	0.769	0.786	0.814	0.837	0.856	0.885	0.912	0.941	0.968
11,000	0.557	0.569	0.591	0.603	0.620	0.638	0.657	0.679	0.696	0.717	0.738	0.760	0.783	0.807	0.833	0.854	0.884	0.909	0.939	0.968
12,000	0.524	0.541	0.559	0.577	0.596	0.615	0.635	0.655	0.676	0.699	0.721	0.745	0.769	0.794	0.821	0.848	0.879	0.907	0.934	0.968
13,000	0.518	0.535	0.552	0.571	0.589	0.626	0.645	0.665	0.685	0.707	0.728	0.751	0.775	0.799	0.817	0.844	0.873	0.903	0.933	0.967
14,000	0.524	0.541	0.558	0.576	0.594	0.590	0.638	0.653	0.674	0.682	0.718	0.741	0.755	0.778	0.820	0.843	0.865	0.898	0.935	0.966
15,000	0.508	0.525	0.542	0.561	0.579	0.604	0.619	0.645	0.665	0.683	0.711	0.735	0.756	0.785	0.812	0.839	0.869	0.900	0.932	0.965
16,000	0.486	0.504	0.522	0.540	0.560	0.580	0.601	0.622	0.644	0.668	0.692	0.717	0.743	0.771	0.803	0.829	0.860	0.895	0.930	0.964
17,000	0.476	0.494	0.512	0.531	0.550	0.570	0.591	0.613	0.636	0.659	0.684	0.709	0.736	0.764	0.793	0.824	0.856	0.892	0.925	0.962
18,000	0.454	0.460	0.479	0.499	0.519	0.563	0.584	0.596	0.609	0.635	0.661	0.704	0.731	0.760	0.789	0.820	0.844	0.886	0.922	0.960
19,000	0.444	0.462	0.481	0.500	0.521	0.542	0.564	0.587	0.611	0.635	0.661	0.688	0.717	0.747	0.778	0.810	0.844	0.877	0.918	0.959
20,000	0.418	0.437	0.456	0.476	0.497	0.519	0.542	0.565	0.590	0.616	0.643	0.672	0.701	0.732	0.765	0.799	0.835	0.873	0.913	0.956
21,000	0.415	0.433	0.452	0.472	0.493	0.515	0.538	0.561	0.586	0.612	0.639	0.667	0.697	0.729	0.761	0.796	0.833	0.871	0.912	0.953
22,000	0.406	0.425	0.444	0.464	0.485	0.507	0.529	0.554	0.579	0.605	0.632	0.661	0.691	0.723	0.756	0.792	0.829	0.868	0.910	0.953
23,000	0.394	0.421	0.432	0.453	0.474	0.496	0.520	0.546	0.578	0.596	0.629	0.655	0.685	0.716	0.751	0.787	0.825	0.865	0.907	0.951
24,000	0.405	0.423	0.442	0.462	0.483	0.504	0.527	0.545	0.575	0.602	0.623	0.657	0.683	0.720	0.746	0.782	0.824	0.864	0.905	0.952
25,000	0.398	0.416	0.459	0.455	0.476	0.519	0.520	0.544	0.569	0.595	0.623	0.652	0.682	0.715	0.749	0.794	0.823	0.861	0.905	0.951
30,000	0.376	0.396	0.415	0.434	0.455	0.473	0.501	0.520	0.550	0.574	0.606	0.631	0.666	0.697	0.733	0.770	0.809	0.854	0.898	0.948
40,000	0.290	0.307	0.325	0.346	0.366	0.388	0.413	0.437	0.465	0.495	0.525	0.558	0.594	0.632	0.674	0.718	0.766	0.818	0.874	0.934
50,000	0.242	0.258	0.276	0.295	0.315	0.338	0.361	0.387	0.415	0.445	0.478	0.513	0.551	0.592	0.637	0.685	0.738	0.795	0.859	0.926
60,000	0.218	0.234	0.251	0.270	0.290	0.313	0.336	0.362	0.390	0.421	0.454	0.489	0.528	0.570	0.616	0.666	0.721	0.781	0.845	0.919
70,000	0.132	0.149	0.168	0.189	0.211	0.236	0.262	0.291	0.322	0.356	0.392	0.431	0.474	0.521	0.572	0.630	0.690	0.756	0.830	0.913
80,000	0.123	0.138	0.156	0.174	0.196	0.220	0.246	0.275	0.304	0.338	0.375	0.415	0.458	0.504	0.557	0.614	0.676	0.745	0.821	0.906
90,000	0.112	0.125	0.141	0.159	0.180	0.203	0.228	0.256	0.286	0.320	0.356	0.396	0.441	0.489	0.541	0.599	0.663	0.734	0.813	0.902
100,000	0.096	0.109	0.126	0.145	0.166	0.190	0.217	0.245	0.277	0.311	0.348	0.388	0.432	0.481	0.534	0.593	0.658	0.730	0.810	0.897
150,000	0.082	0.065	0.061	0.067	0.079	0.098	0.120	0.147	0.178	0.213	0.252	0.295	0.343	0.397	0.456	0.522	0.596	0.687	0.773	0.882
200,000	0.155	0.082	0.054	0.042	0.051	0.065	0.071	0.109	0.142	0.178	0.215	0.262	0.312	0.365	0.426	0.497	0.572	0.659	0.750	0.871
250,000	0.332	0.184	0.102	0.059	0.041	0.039	0.050	0.069	0.095	0.128	0.166	0.211	0.261	0.318	0.382	0.454	0.536	0.630	0.747	0.865
300,000	0.452	0.249	0.137	0.077	0.048	0.041	0.047	0.063	0.087	0.118	0.156	0.199	0.249	0.306	0.370	0.443	0.526	0.621	0.730	0.855
400,000	0.825	0.470	0.274	0.162	0.101	0.071	0.061	0.066	0.082	0.106	0.139	0.175	0.228	0.284	0.348	0.422	0.507	0.605	0.718	0.848
500,000	1.153	0.638	0.363	0.212	0.129	0.087	0.070	0.072	0.086	0.110	0.143	0.183	0.231	0.287	0.351	0.425	0.509	0.606	0.719	0.848

Bottom 5%

Optimal Split Point by Size of Risk – PY 2016

Exhibit 1

Split Point	Cohort = > 1M																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.933	0.936	0.938	0.941	0.945	0.948	0.951	0.954	0.953	0.958	0.964	0.966	0.971	0.976	0.977	0.982	0.987	0.989	0.994	0.996
2,000	0.888	0.892	0.897	0.902	0.906	0.912	0.917	0.922	0.921	0.927	0.932	0.939	0.950	0.955	0.961	0.968	0.974	0.983	0.988	0.995
3,000	0.869	0.874	0.880	0.885	0.891	0.896	0.902	0.908	0.914	0.921	0.927	0.933	0.940	0.946	0.953	0.961	0.969	0.975	0.984	0.992
4,000	0.857	0.847	0.868	0.874	0.876	0.885	0.892	0.896	0.905	0.912	0.919	0.924	0.933	0.941	0.948	0.957	0.964	0.970	0.982	0.991
5,000	0.836	0.844	0.849	0.855	0.863	0.869	0.876	0.884	0.892	0.899	0.907	0.915	0.924	0.932	0.935	0.951	0.961	0.969	0.979	0.990
6,000	0.822	0.829	0.836	0.843	0.850	0.857	0.865	0.873	0.881	0.890	0.898	0.907	0.917	0.926	0.936	0.946	0.955	0.967	0.977	0.989
7,000	0.811	0.818	0.825	0.832	0.840	0.848	0.856	0.865	0.873	0.883	0.892	0.901	0.910	0.921	0.931	0.942	0.953	0.964	0.976	0.988
8,000	0.801	0.808	0.815	0.823	0.831	0.839	0.848	0.856	0.866	0.875	0.885	0.895	0.905	0.916	0.927	0.938	0.950	0.962	0.974	0.987
9,000	0.729	0.739	0.750	0.761	0.753	0.767	0.791	0.804	0.817	0.831	0.845	0.888	0.899	0.890	0.905	0.915	0.934	0.960	0.973	0.986
10,000	0.687	0.700	0.713	0.727	0.747	0.761	0.775	0.789	0.799	0.814	0.829	0.845	0.860	0.877	0.893	0.913	0.928	0.945	0.965	0.985
11,000	0.676	0.690	0.704	0.718	0.732	0.747	0.761	0.776	0.792	0.808	0.824	0.835	0.852	0.873	0.890	0.909	0.923	0.943	0.962	0.985
12,000	0.667	0.678	0.691	0.706	0.721	0.736	0.752	0.770	0.783	0.800	0.816	0.820	0.850	0.868	0.885	0.903	0.920	0.940	0.960	0.979
13,000	0.624	0.634	0.650	0.666	0.682	0.705	0.717	0.739	0.757	0.771	0.793	0.809	0.831	0.851	0.869	0.891	0.914	0.939	0.954	0.979
14,000	0.605	0.622	0.638	0.654	0.672	0.689	0.707	0.725	0.744	0.763	0.783	0.802	0.825	0.843	0.864	0.887	0.907	0.931	0.953	0.976
15,000	0.594	0.610	0.627	0.645	0.662	0.680	0.698	0.717	0.736	0.755	0.775	0.796	0.816	0.838	0.859	0.884	0.905	0.929	0.951	0.976
16,000	0.582	0.595	0.616	0.633	0.649	0.671	0.685	0.711	0.728	0.746	0.768	0.790	0.809	0.833	0.855	0.878	0.901	0.926	0.950	0.975
17,000	0.566	0.584	0.602	0.620	0.639	0.658	0.677	0.697	0.718	0.738	0.759	0.781	0.803	0.826	0.850	0.873	0.898	0.923	0.948	0.974
18,000	0.553	0.571	0.589	0.608	0.627	0.647	0.667	0.687	0.709	0.730	0.752	0.775	0.797	0.820	0.846	0.869	0.895	0.920	0.946	0.973
19,000	0.544	0.561	0.581	0.600	0.619	0.639	0.660	0.681	0.702	0.723	0.746	0.769	0.792	0.816	0.841	0.866	0.892	0.918	0.944	0.972
20,000	0.535	0.553	0.572	0.592	0.611	0.632	0.652	0.673	0.696	0.718	0.740	0.764	0.788	0.812	0.844	0.863	0.889	0.916	0.943	0.971
21,000	0.502	0.521	0.541	0.562	0.583	0.604	0.626	0.649	0.672	0.696	0.720	0.745	0.771	0.797	0.833	0.860	0.887	0.914	0.942	0.970
22,000	0.494	0.513	0.566	0.554	0.570	0.597	0.619	0.642	0.662	0.690	0.715	0.740	0.766	0.791	0.820	0.848	0.877	0.908	0.937	0.970
23,000	0.522	0.539	0.556	0.575	0.594	0.613	0.634	0.655	0.677	0.701	0.722	0.747	0.759	0.797	0.823	0.852	0.875	0.904	0.938	0.969
24,000	0.515	0.532	0.549	0.568	0.587	0.607	0.628	0.649	0.671	0.694	0.718	0.742	0.767	0.782	0.820	0.849	0.877	0.906	0.936	0.966
25,000	0.454	0.469	0.497	0.520	0.537	0.567	0.593	0.612	0.643	0.668	0.690	0.722	0.750	0.778	0.817	0.845	0.874	0.904	0.935	0.966
30,000	0.409	0.432	0.455	0.479	0.503	0.529	0.555	0.574	0.609	0.637	0.660	0.696	0.726	0.757	0.789	0.820	0.855	0.890	0.926	0.963
40,000	0.350	0.370	0.394	0.423	0.446	0.473	0.504	0.530	0.563	0.593	0.623	0.658	0.692	0.724	0.762	0.799	0.836	0.872	0.915	0.952
50,000	0.272	0.295	0.320	0.346	0.374	0.402	0.432	0.463	0.496	0.530	0.565	0.601	0.639	0.678	0.721	0.763	0.806	0.853	0.900	0.949
60,000	0.243	0.266	0.291	0.317	0.345	0.374	0.405	0.437	0.470	0.505	0.541	0.579	0.618	0.659	0.698	0.747	0.793	0.839	0.891	0.944
70,000	0.206	0.229	0.253	0.280	0.308	0.338	0.370	0.403	0.438	0.475	0.513	0.553	0.594	0.638	0.682	0.730	0.779	0.831	0.884	0.942
80,000	0.184	0.206	0.231	0.258	0.287	0.317	0.349	0.384	0.420	0.457	0.493	0.537	0.577	0.622	0.671	0.718	0.771	0.823	0.879	0.938
90,000	0.157	0.177	0.201	0.228	0.257	0.287	0.320	0.355	0.392	0.430	0.471	0.514	0.558	0.604	0.653	0.704	0.758	0.813	0.872	0.934
100,000	0.148	0.167	0.190	0.215	0.243	0.274	0.307	0.341	0.378	0.417	0.458	0.501	0.546	0.594	0.643	0.696	0.750	0.808	0.869	0.933
150,000	0.081	0.089	0.105	0.127	0.154	0.185	0.219	0.257	0.297	0.339	0.385	0.433	0.483	0.536	0.593	0.652	0.714	0.780	0.849	0.923
200,000	0.103	0.107	0.123	0.146	0.176	0.209	0.246	0.286	0.328	0.372	0.418	0.466	0.515	0.567	0.621	0.677	0.735	0.797	0.861	0.929
250,000	0.101	0.096	0.106	0.127	0.156	0.190	0.227	0.268	0.312	0.358	0.405	0.454	0.505	0.558	0.614	0.671	0.730	0.793	0.859	0.928
300,000	0.077	0.056	0.057	0.074	0.101	0.136	0.176	0.220	0.267	0.316	0.367	0.421	0.476	0.533	0.592	0.653	0.716	0.783	0.852	0.926
400,000	0.128	0.084	0.091	0.113	0.139	0.180	0.221	0.256	0.302	0.350	0.412	0.452	0.505	0.560	0.625	0.674	0.734	0.797	0.868	0.929
500,000	0.103	0.061	0.058	0.086	0.115	0.141	0.183	0.223	0.288	0.329	0.381	0.443	0.482	0.553	0.605	0.659	0.731	0.787	0.864	0.926

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 5,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.533	0.551	0.569	0.588	0.607	0.627	0.648	0.669	0.691	0.713	0.735	0.759	0.783	0.809	0.834	0.860	0.886	0.913	0.945	0.971
2,000	0.377	0.389	0.411	0.439	0.463	0.480	0.507	0.537	0.565	0.588	0.620	0.650	0.682	0.721	0.757	0.793	0.831	0.869	0.913	0.955
3,000	0.258	0.279	0.299	0.320	0.345	0.369	0.398	0.425	0.456	0.490	0.521	0.561	0.600	0.641	0.682	0.728	0.777	0.829	0.883	0.940
4,000	0.190	0.206	0.225	0.245	0.267	0.291	0.317	0.348	0.379	0.413	0.448	0.487	0.529	0.576	0.625	0.677	0.733	0.793	0.857	0.926
5,000	0.156	0.167	0.179	0.195	0.218	0.239	0.258	0.289	0.314	0.349	0.388	0.428	0.472	0.521	0.573	0.630	0.689	0.760	0.833	0.914
6,000	0.144	0.150	0.158	0.169	0.183	0.200	0.220	0.244	0.270	0.302	0.342	0.377	0.425	0.476	0.531	0.591	0.655	0.729	0.812	0.903
7,000	0.156	0.156	0.160	0.166	0.176	0.189	0.206	0.226	0.251	0.279	0.319	0.351	0.394	0.443	0.505	0.566	0.631	0.703	0.796	0.892
8,000	0.169	0.163	0.161	0.162	0.168	0.176	0.189	0.206	0.227	0.253	0.284	0.320	0.368	0.412	0.473	0.532	0.604	0.686	0.779	0.883
9,000	0.201	0.189	0.180	0.176	0.175	0.161	0.186	0.198	0.215	0.237	0.255	0.299	0.332	0.386	0.442	0.507	0.581	0.666	0.763	0.875
10,000	0.202	0.185	0.173	0.164	0.161	0.161	0.166	0.176	0.190	0.210	0.237	0.270	0.310	0.357	0.414	0.479	0.556	0.645	0.747	0.865
11,000	0.228	0.206	0.191	0.175	0.166	0.164	0.163	0.170	0.180	0.196	0.222	0.251	0.290	0.336	0.392	0.457	0.536	0.627	0.733	0.857
12,000	0.269	0.240	0.216	0.197	0.182	0.173	0.169	0.171	0.177	0.190	0.211	0.238	0.274	0.318	0.372	0.439	0.518	0.611	0.721	0.850
13,000	0.307	0.273	0.243	0.215	0.198	0.184	0.173	0.173	0.174	0.184	0.202	0.226	0.259	0.303	0.356	0.422	0.500	0.596	0.709	0.842
14,000	0.346	0.305	0.269	0.239	0.215	0.196	0.183	0.175	0.174	0.181	0.195	0.216	0.247	0.288	0.341	0.406	0.485	0.581	0.697	0.835
15,000	0.387	0.339	0.299	0.262	0.232	0.209	0.192	0.181	0.176	0.179	0.190	0.208	0.237	0.276	0.327	0.391	0.470	0.568	0.687	0.829
16,000	0.430	0.376	0.328	0.287	0.252	0.224	0.202	0.187	0.178	0.178	0.186	0.201	0.227	0.264	0.314	0.378	0.457	0.555	0.676	0.823
17,000	0.471	0.412	0.359	0.312	0.273	0.240	0.213	0.194	0.182	0.177	0.182	0.196	0.219	0.254	0.302	0.365	0.444	0.544	0.667	0.817
18,000	0.514	0.447	0.388	0.336	0.291	0.254	0.223	0.200	0.185	0.177	0.178	0.190	0.211	0.244	0.291	0.352	0.431	0.532	0.657	0.811
19,000	0.570	0.495	0.429	0.370	0.320	0.278	0.242	0.215	0.195	0.183	0.181	0.189	0.207	0.238	0.282	0.343	0.421	0.522	0.648	0.805
20,000	0.619	0.537	0.467	0.402	0.346	0.298	0.259	0.228	0.204	0.189	0.183	0.187	0.203	0.231	0.274	0.333	0.411	0.512	0.640	0.800
21,000	0.672	0.581	0.503	0.434	0.373	0.319	0.275	0.239	0.212	0.194	0.184	0.186	0.199	0.225	0.266	0.324	0.401	0.502	0.632	0.795
22,000	0.723	0.627	0.543	0.466	0.399	0.342	0.293	0.252	0.221	0.199	0.187	0.186	0.196	0.220	0.259	0.316	0.392	0.493	0.624	0.790
23,000	0.778	0.674	0.582	0.501	0.428	0.365	0.311	0.266	0.231	0.205	0.191	0.186	0.194	0.216	0.253	0.308	0.384	0.486	0.617	0.785
24,000	0.844	0.734	0.635	0.544	0.466	0.396	0.338	0.288	0.249	0.219	0.200	0.192	0.196	0.215	0.250	0.303	0.377	0.478	0.610	0.781
25,000	0.902	0.782	0.674	0.580	0.496	0.421	0.358	0.304	0.261	0.227	0.204	0.194	0.195	0.212	0.245	0.296	0.370	0.470	0.603	0.777
30,000	1.185	1.021	0.880	0.751	0.637	0.539	0.453	0.380	0.316	0.268	0.229	0.205	0.195	0.200	0.224	0.268	0.337	0.437	0.573	0.756
40,000	1.786	1.529	1.307	1.105	0.934	0.781	0.651	0.536	0.439	0.356	0.291	0.240	0.208	0.193	0.199	0.230	0.288	0.384	0.525	0.723
50,000	2.517	2.129	1.797	1.513	1.273	1.061	0.877	0.719	0.584	0.469	0.374	0.307	0.243	0.209	0.197	0.212	0.261	0.348	0.489	0.698
60,000	3.342	2.787	2.344	1.956	1.519	1.352	1.116	0.912	0.739	0.585	0.413	0.370	0.284	0.231	0.203	0.204	0.248	0.322	0.461	0.676
70,000	4.054	3.325	2.736	2.255	1.863	1.530	1.249	1.012	0.811	0.645	0.504	0.386	0.289	0.233	0.199	0.193	0.221	0.293	0.434	0.657
80,000	5.063	4.098	3.336	2.716	2.222	1.817	1.474	1.190	0.950	0.751	0.586	0.445	0.334	0.261	0.210	0.193	0.212	0.283	0.420	0.644
90,000	6.248	4.954	3.967	3.211	2.597	2.102	1.697	1.363	1.088	0.856	0.664	0.507	0.381	0.287	0.223	0.195	0.205	0.269	0.403	0.630
100,000	7.564	5.895	4.656	3.713	2.979	2.395	1.924	1.539	1.222	0.959	0.742	0.565	0.423	0.312	0.237	0.198	0.200	0.259	0.390	0.619
150,000	17.391	12.167	8.817	6.584	5.016	3.873	3.025	2.360	1.837	1.421	1.086	0.816	0.602	0.432	0.307	0.227	0.195	0.230	0.344	0.578
200,000	34.394	20.852	13.878	9.705	7.046	5.248	3.988	3.045	2.332	1.780	1.352	1.008	0.736	0.523	0.364	0.256	0.204	0.217	0.320	0.555
250,000	61.160	31.783	19.196	12.735	8.871	6.411	4.764	3.575	2.711	2.049	1.538	1.143	0.830	0.586	0.404	0.276	0.210	0.212	0.308	0.542
300,000	97.222	43.731	24.400	15.336	10.423	7.367	5.363	3.978	2.980	2.238	1.673	1.239	0.897	0.632	0.432	0.292	0.214	0.209	0.300	0.533
400,000	184.566	65.596	32.684	19.238	12.481	8.542	6.107	4.471	3.317	2.474	1.840	1.349	0.975	0.685	0.466	0.311	0.222	0.206	0.291	0.524
500,000	325.787	89.996	40.059	22.355	14.035	9.529	6.700	4.820	3.546	2.627	1.943	1.419	1.026	0.719	0.487	0.323	0.226	0.198	0.286	0.518

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 10,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.781	0.790	0.802	0.806	0.818	0.828	0.836	0.851	0.855	0.870	0.879	0.891	0.905	0.916	0.926	0.938	0.949	0.963	0.974	0.987
2,000	0.694	0.707	0.724	0.731	0.744	0.754	0.768	0.784	0.801	0.817	0.827	0.841	0.855	0.874	0.892	0.908	0.927	0.943	0.962	0.980
3,000	0.594	0.608	0.609	0.624	0.654	0.671	0.675	0.693	0.713	0.743	0.752	0.773	0.795	0.817	0.840	0.865	0.891	0.915	0.943	0.972
4,000	0.322	0.343	0.366	0.389	0.413	0.439	0.465	0.494	0.524	0.552	0.586	0.619	0.653	0.691	0.728	0.768	0.811	0.855	0.902	0.950
5,000	0.270	0.291	0.314	0.338	0.363	0.390	0.417	0.445	0.476	0.507	0.541	0.577	0.615	0.655	0.696	0.740	0.786	0.836	0.887	0.942
6,000	0.218	0.237	0.259	0.284	0.309	0.336	0.363	0.394	0.426	0.459	0.495	0.533	0.573	0.616	0.661	0.709	0.760	0.816	0.872	0.934
7,000	0.173	0.191	0.214	0.237	0.263	0.289	0.316	0.348	0.380	0.414	0.451	0.491	0.534	0.579	0.627	0.680	0.736	0.795	0.858	0.927
8,000	0.141	0.158	0.179	0.201	0.226	0.251	0.280	0.310	0.345	0.379	0.417	0.457	0.502	0.549	0.600	0.655	0.714	0.777	0.846	0.920
9,000	0.110	0.127	0.146	0.168	0.193	0.217	0.245	0.276	0.309	0.344	0.383	0.424	0.470	0.519	0.572	0.630	0.693	0.759	0.833	0.913
10,000	0.086	0.103	0.121	0.141	0.166	0.189	0.216	0.246	0.279	0.315	0.354	0.395	0.443	0.493	0.548	0.608	0.673	0.743	0.822	0.906
11,000	0.067	0.083	0.101	0.120	0.143	0.166	0.191	0.222	0.254	0.288	0.329	0.371	0.419	0.470	0.525	0.586	0.655	0.729	0.811	0.901
12,000	0.053	0.068	0.085	0.102	0.122	0.146	0.171	0.200	0.232	0.266	0.307	0.349	0.396	0.448	0.506	0.568	0.638	0.716	0.801	0.895
13,000	0.043	0.055	0.071	0.086	0.106	0.128	0.152	0.181	0.212	0.246	0.287	0.329	0.376	0.429	0.487	0.551	0.623	0.704	0.791	0.890
14,000	0.035	0.045	0.060	0.074	0.092	0.114	0.137	0.164	0.196	0.229	0.268	0.311	0.359	0.412	0.471	0.536	0.610	0.692	0.783	0.885
15,000	0.026	0.036	0.048	0.062	0.077	0.099	0.120	0.147	0.177	0.211	0.249	0.292	0.339	0.393	0.453	0.519	0.594	0.679	0.773	0.880
16,000	0.021	0.029	0.040	0.052	0.066	0.087	0.107	0.133	0.162	0.195	0.232	0.276	0.323	0.377	0.437	0.504	0.581	0.667	0.765	0.874
17,000	0.017	0.024	0.031	0.043	0.055	0.075	0.094	0.119	0.147	0.180	0.217	0.259	0.306	0.361	0.421	0.489	0.567	0.656	0.756	0.870
18,000	0.016	0.021	0.026	0.036	0.046	0.065	0.082	0.106	0.133	0.165	0.201	0.243	0.290	0.344	0.405	0.473	0.552	0.644	0.747	0.865
19,000	0.018	0.020	0.023	0.032	0.040	0.057	0.073	0.096	0.122	0.152	0.188	0.230	0.276	0.330	0.391	0.460	0.541	0.633	0.738	0.860
20,000	0.015	0.016	0.018	0.025	0.034	0.049	0.065	0.087	0.113	0.143	0.178	0.219	0.266	0.319	0.380	0.451	0.532	0.625	0.732	0.856
21,000	0.017	0.016	0.017	0.022	0.029	0.042	0.057	0.078	0.103	0.131	0.166	0.207	0.252	0.305	0.366	0.438	0.520	0.615	0.725	0.852
22,000	0.020	0.017	0.016	0.019	0.025	0.036	0.051	0.070	0.094	0.121	0.156	0.196	0.241	0.294	0.355	0.427	0.510	0.606	0.717	0.847
23,000	0.025	0.018	0.016	0.017	0.022	0.032	0.045	0.063	0.087	0.112	0.146	0.186	0.230	0.283	0.343	0.415	0.499	0.597	0.710	0.843
24,000	0.029	0.021	0.017	0.016	0.020	0.028	0.040	0.057	0.080	0.104	0.137	0.176	0.219	0.272	0.333	0.405	0.489	0.588	0.703	0.839
25,000	0.036	0.025	0.018	0.017	0.019	0.026	0.037	0.052	0.073	0.097	0.129	0.167	0.209	0.262	0.323	0.395	0.480	0.580	0.696	0.835
30,000	0.077	0.055	0.041	0.027	0.022	0.021	0.025	0.035	0.049	0.069	0.097	0.130	0.170	0.220	0.280	0.351	0.438	0.542	0.666	0.817
40,000	0.200	0.151	0.110	0.079	0.057	0.040	0.033	0.029	0.034	0.042	0.062	0.087	0.119	0.164	0.218	0.288	0.376	0.485	0.619	0.787
50,000	0.359	0.277	0.208	0.155	0.114	0.082	0.059	0.044	0.038	0.040	0.049	0.063	0.090	0.130	0.178	0.245	0.331	0.441	0.581	0.763
60,000	0.560	0.429	0.328	0.248	0.185	0.135	0.098	0.071	0.054	0.045	0.045	0.053	0.073	0.105	0.151	0.212	0.297	0.406	0.551	0.743
70,000	0.815	0.627	0.481	0.367	0.278	0.207	0.153	0.113	0.083	0.064	0.055	0.058	0.069	0.094	0.134	0.190	0.271	0.380	0.527	0.726
80,000	1.088	0.830	0.634	0.482	0.366	0.275	0.204	0.150	0.109	0.081	0.065	0.060	0.066	0.085	0.120	0.174	0.251	0.359	0.506	0.712
90,000	1.391	1.040	0.776	0.592	0.441	0.332	0.245	0.176	0.129	0.090	0.067	0.058	0.059	0.075	0.106	0.157	0.231	0.339	0.488	0.699
100,000	1.734	1.275	0.947	0.708	0.529	0.393	0.289	0.210	0.150	0.105	0.076	0.060	0.057	0.068	0.096	0.143	0.216	0.322	0.473	0.688
150,000	4.566	3.019	2.071	1.461	1.049	0.762	0.556	0.402	0.287	0.202	0.140	0.097	0.072	0.064	0.075	0.108	0.169	0.268	0.418	0.648
200,000	9.708	5.571	3.500	2.313	1.590	1.117	0.799	0.572	0.407	0.286	0.198	0.134	0.092	0.071	0.071	0.094	0.147	0.240	0.389	0.625
250,000	17.987	8.863	5.058	3.166	2.087	1.426	1.001	0.707	0.501	0.351	0.242	0.163	0.110	0.079	0.071	0.088	0.135	0.224	0.372	0.611
300,000	29.315	12.545	6.610	3.915	2.513	1.680	1.158	0.810	0.570	0.399	0.274	0.185	0.123	0.086	0.072	0.084	0.128	0.214	0.361	0.602
400,000	56.850	19.389	9.122	5.038	3.090	2.007	1.357	0.942	0.659	0.460	0.316	0.213	0.141	0.095	0.075	0.081	0.120	0.202	0.347	0.591
500,000	99.434	26.686	11.365	5.954	3.528	2.254	1.500	1.031	0.716	0.501	0.345	0.233	0.153	0.102	0.077	0.080	0.114	0.194	0.338	0.583

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 20,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.751	0.764	0.773	0.783	0.796	0.807	0.819	0.830	0.844	0.854	0.867	0.878	0.892	0.901	0.916	0.932	0.940	0.961	0.973	0.987
2,000	0.664	0.678	0.692	0.705	0.721	0.736	0.751	0.765	0.782	0.797	0.815	0.831	0.849	0.865	0.885	0.902	0.918	0.940	0.960	0.978
3,000	0.566	0.583	0.600	0.617	0.634	0.654	0.671	0.691	0.711	0.730	0.752	0.774	0.795	0.819	0.842	0.866	0.893	0.918	0.945	0.971
4,000	0.534	0.555	0.570	0.590	0.606	0.625	0.649	0.666	0.690	0.705	0.731	0.754	0.777	0.804	0.824	0.854	0.880	0.906	0.937	0.969
5,000	0.515	0.531	0.550	0.566	0.587	0.605	0.627	0.646	0.665	0.686	0.710	0.735	0.761	0.787	0.813	0.841	0.874	0.902	0.935	0.963
6,000	0.467	0.495	0.503	0.531	0.542	0.572	0.593	0.614	0.636	0.664	0.684	0.712	0.737	0.768	0.795	0.827	0.858	0.892	0.925	0.961
7,000	0.498	0.516	0.533	0.550	0.569	0.589	0.609	0.630	0.651	0.673	0.698	0.721	0.746	0.775	0.799	0.829	0.862	0.886	0.928	0.957
8,000	0.476	0.491	0.510	0.529	0.546	0.568	0.587	0.610	0.632	0.654	0.680	0.703	0.729	0.758	0.788	0.819	0.855	0.889	0.923	0.961
9,000	0.437	0.454	0.471	0.490	0.511	0.530	0.548	0.575	0.598	0.623	0.654	0.676	0.705	0.740	0.771	0.800	0.839	0.879	0.914	0.956
10,000	0.373	0.391	0.412	0.430	0.450	0.472	0.496	0.518	0.545	0.574	0.602	0.630	0.677	0.695	0.733	0.780	0.820	0.863	0.900	0.952
11,000	0.366	0.383	0.398	0.417	0.438	0.459	0.487	0.507	0.535	0.560	0.589	0.618	0.654	0.687	0.721	0.761	0.802	0.847	0.896	0.946
12,000	0.329	0.346	0.364	0.384	0.404	0.426	0.450	0.475	0.501	0.530	0.560	0.592	0.625	0.662	0.701	0.742	0.787	0.836	0.889	0.942
13,000	0.348	0.363	0.381	0.399	0.420	0.441	0.463	0.487	0.514	0.540	0.570	0.601	0.634	0.669	0.703	0.744	0.788	0.835	0.887	0.941
14,000	0.328	0.342	0.360	0.377	0.397	0.418	0.439	0.464	0.488	0.516	0.547	0.577	0.614	0.644	0.689	0.728	0.777	0.825	0.882	0.939
15,000	0.313	0.328	0.343	0.360	0.379	0.398	0.420	0.443	0.468	0.496	0.526	0.557	0.594	0.631	0.671	0.716	0.762	0.815	0.873	0.932
16,000	0.471	0.469	0.466	0.467	0.470	0.475	0.483	0.494	0.505	0.524	0.543	0.565	0.593	0.622	0.660	0.700	0.747	0.799	0.857	0.924
17,000	0.468	0.461	0.456	0.452	0.454	0.461	0.466	0.478	0.497	0.513	0.523	0.550	0.576	0.608	0.643	0.689	0.735	0.790	0.851	0.920
18,000	0.481	0.471	0.465	0.461	0.462	0.463	0.469	0.477	0.488	0.503	0.521	0.544	0.570	0.600	0.635	0.678	0.727	0.781	0.845	0.917
19,000	0.487	0.475	0.465	0.460	0.457	0.457	0.461	0.467	0.477	0.491	0.508	0.527	0.552	0.588	0.622	0.664	0.713	0.773	0.837	0.914
20,000	0.500	0.486	0.473	0.466	0.462	0.460	0.462	0.468	0.476	0.489	0.505	0.527	0.552	0.582	0.618	0.661	0.711	0.768	0.835	0.910
21,000	0.494	0.477	0.463	0.453	0.446	0.444	0.444	0.450	0.458	0.470	0.486	0.505	0.530	0.564	0.611	0.654	0.694	0.755	0.825	0.906
22,000	0.501	0.480	0.463	0.451	0.443	0.438	0.436	0.446	0.446	0.462	0.477	0.492	0.521	0.552	0.586	0.633	0.683	0.746	0.818	0.901
23,000	0.523	0.500	0.481	0.466	0.455	0.449	0.446	0.447	0.453	0.462	0.476	0.495	0.524	0.550	0.586	0.636	0.682	0.746	0.816	0.901
24,000	0.539	0.512	0.489	0.472	0.459	0.450	0.445	0.444	0.447	0.462	0.475	0.493	0.516	0.545	0.580	0.624	0.676	0.739	0.812	0.899
25,000	0.538	0.508	0.483	0.462	0.447	0.435	0.427	0.427	0.427	0.435	0.447	0.466	0.489	0.519	0.555	0.601	0.657	0.721	0.801	0.891
30,000	0.614	0.569	0.529	0.497	0.471	0.449	0.434	0.424	0.419	0.419	0.427	0.439	0.460	0.487	0.523	0.560	0.623	0.692	0.772	0.875
40,000	0.934	0.842	0.762	0.695	0.637	0.588	0.548	0.516	0.496	0.473	0.463	0.462	0.471	0.483	0.508	0.547	0.598	0.663	0.750	0.859
50,000	1.264	1.115	0.986	0.879	0.786	0.706	0.640	0.582	0.540	0.505	0.479	0.463	0.454	0.459	0.476	0.506	0.556	0.622	0.713	0.837
60,000	1.637	1.417	1.234	1.083	0.952	0.838	0.750	0.672	0.601	0.553	0.513	0.483	0.464	0.458	0.468	0.488	0.531	0.596	0.690	0.819
70,000	2.086	1.779	1.526	1.320	1.149	0.998	0.882	0.775	0.688	0.615	0.566	0.517	0.489	0.471	0.468	0.482	0.519	0.579	0.671	0.809
80,000	2.629	2.212	1.878	1.606	1.382	1.197	1.043	0.913	0.804	0.713	0.644	0.583	0.540	0.508	0.495	0.526	0.578	0.666	0.800	
90,000	3.178	2.635	2.215	1.873	1.589	1.363	1.184	1.020	0.895	0.788	0.702	0.628	0.573	0.526	0.507	0.499	0.522	0.566	0.654	0.790
100,000	3.821	3.118	2.578	2.156	1.821	1.551	1.329	1.144	0.991	0.865	0.762	0.676	0.610	0.557	0.525	0.509	0.525	0.564	0.646	0.782
150,000	8.090	5.985	4.596	3.628	2.924	2.395	1.985	1.660	1.401	1.190	1.014	0.874	0.757	0.665	0.596	0.548	0.536	0.552	0.619	0.756
200,000	14.731	9.684	6.879	5.132	3.970	3.142	2.537	2.077	1.721	1.436	1.207	1.021	0.870	0.748	0.652	0.583	0.552	0.552	0.607	0.741
250,000	24.411	13.996	9.226	6.530	4.876	3.762	2.974	2.396	1.957	1.616	1.345	1.125	0.949	0.807	0.693	0.609	0.564	0.554	0.601	0.733
300,000	36.741	18.590	11.387	7.718	5.611	4.241	3.301	2.630	2.127	1.741	1.440	1.197	1.002	0.846	0.722	0.627	0.574	0.556	0.598	0.728
400,000	64.954	26.513	14.675	9.407	6.578	4.843	3.700	2.907	2.325	1.886	1.546	1.279	1.063	0.891	0.753	0.647	0.584	0.560	0.596	0.723
500,000	106.852	34.358	17.427	10.762	7.280	5.274	3.985	3.096	2.459	1.984	1.619	1.330	1.101	0.918	0.774	0.659	0.591	0.562	0.597	0.721

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 30,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.784	0.792	0.802	0.815	0.826	0.838	0.847	0.855	0.863	0.876	0.882	0.891	0.913	0.921	0.929	0.947	0.947	0.963	0.976	0.986
2,000	0.665	0.677	0.691	0.705	0.721	0.731	0.746	0.762	0.779	0.792	0.810	0.827	0.844	0.863	0.881	0.900	0.919	0.938	0.958	0.981
3,000	0.578	0.585	0.607	0.617	0.639	0.652	0.671	0.697	0.707	0.734	0.755	0.776	0.794	0.814	0.852	0.872	0.892	0.919	0.946	0.971
4,000	0.472	0.490	0.510	0.521	0.542	0.564	0.593	0.616	0.639	0.663	0.689	0.710	0.733	0.764	0.800	0.828	0.861	0.894	0.929	0.967
5,000	0.443	0.461	0.480	0.501	0.522	0.543	0.562	0.588	0.605	0.638	0.664	0.693	0.720	0.751	0.781	0.814	0.845	0.883	0.916	0.959
6,000	0.395	0.416	0.432	0.456	0.476	0.498	0.524	0.545	0.573	0.599	0.631	0.658	0.689	0.722	0.756	0.794	0.831	0.869	0.913	0.955
7,000	0.378	0.384	0.399	0.426	0.447	0.466	0.502	0.524	0.547	0.564	0.604	0.634	0.668	0.704	0.737	0.773	0.816	0.858	0.901	0.949
8,000	0.180	0.199	0.222	0.250	0.273	0.297	0.334	0.430	0.395	0.433	0.527	0.510	0.554	0.642	0.683	0.697	0.778	0.839	0.881	0.942
9,000	0.146	0.166	0.189	0.204	0.239	0.315	0.350	0.329	0.355	0.399	0.435	0.520	0.564	0.568	0.621	0.672	0.731	0.810	0.862	0.936
10,000	0.116	0.124	0.158	0.170	0.203	0.221	0.262	0.292	0.319	0.363	0.396	0.443	0.492	0.534	0.592	0.648	0.713	0.775	0.845	0.926
11,000	0.093	0.102	0.131	0.144	0.177	0.196	0.234	0.265	0.292	0.338	0.371	0.421	0.462	0.513	0.571	0.627	0.695	0.762	0.836	0.922
12,000	0.077	0.084	0.112	0.124	0.157	0.173	0.210	0.233	0.270	0.313	0.347	0.400	0.443	0.493	0.552	0.612	0.680	0.752	0.826	0.917
13,000	0.066	0.072	0.098	0.107	0.140	0.155	0.192	0.214	0.249	0.294	0.328	0.379	0.419	0.474	0.534	0.596	0.666	0.740	0.823	0.914
14,000	0.059	0.069	0.083	0.100	0.131	0.143	0.171	0.198	0.233	0.271	0.310	0.361	0.401	0.456	0.512	0.575	0.648	0.728	0.808	0.908
15,000	0.045	0.049	0.062	0.079	0.108	0.123	0.148	0.178	0.212	0.253	0.289	0.341	0.379	0.436	0.498	0.562	0.635	0.716	0.801	0.900
16,000	0.044	0.048	0.060	0.075	0.101	0.114	0.140	0.168	0.201	0.243	0.276	0.321	0.372	0.425	0.487	0.552	0.628	0.708	0.794	0.896
17,000	0.021	0.030	0.041	0.056	0.083	0.097	0.122	0.151	0.184	0.221	0.263	0.309	0.359	0.414	0.475	0.548	0.620	0.705	0.788	0.892
18,000	0.017	0.023	0.034	0.049	0.073	0.088	0.111	0.141	0.174	0.208	0.251	0.296	0.348	0.404	0.465	0.534	0.612	0.695	0.786	0.888
19,000	0.018	0.023	0.032	0.044	0.069	0.081	0.105	0.132	0.164	0.201	0.241	0.284	0.338	0.391	0.457	0.523	0.601	0.688	0.779	0.885
20,000	0.022	0.026	0.033	0.044	0.068	0.079	0.102	0.129	0.160	0.196	0.236	0.281	0.328	0.387	0.451	0.516	0.599	0.680	0.775	0.882
21,000	0.013	0.014	0.019	0.029	0.051	0.062	0.082	0.108	0.139	0.174	0.216	0.260	0.312	0.369	0.431	0.504	0.588	0.675	0.769	0.880
22,000	0.037	0.033	0.033	0.038	0.059	0.062	0.081	0.104	0.132	0.166	0.204	0.248	0.298	0.356	0.420	0.490	0.576	0.662	0.762	0.875
23,000	0.037	0.054	0.054	0.058	0.078	0.081	0.099	0.122	0.150	0.183	0.219	0.263	0.312	0.368	0.430	0.501	0.580	0.668	0.767	0.877
24,000	0.069	0.061	0.059	0.060	0.078	0.081	0.097	0.120	0.145	0.176	0.214	0.257	0.304	0.361	0.422	0.493	0.576	0.664	0.760	0.873
25,000	0.080	0.070	0.064	0.065	0.081	0.081	0.097	0.117	0.152	0.173	0.209	0.249	0.300	0.355	0.416	0.488	0.570	0.659	0.755	0.872
30,000	0.126	0.085	0.059	0.054	0.043	0.027	0.030	0.047	0.070	0.082	0.113	0.163	0.199	0.255	0.321	0.397	0.490	0.593	0.706	0.845
40,000	0.464	0.350	0.289	0.223	0.164	0.115	0.093	0.077	0.077	0.066	0.080	0.119	0.153	0.194	0.244	0.319	0.417	0.529	0.655	0.814
50,000	0.982	0.794	0.630	0.505	0.392	0.306	0.238	0.172	0.137	0.125	0.116	0.130	0.148	0.174	0.214	0.280	0.373	0.487	0.616	0.792
60,000	1.649	1.374	1.070	0.854	0.717	0.548	0.434	0.365	0.276	0.228	0.206	0.179	0.180	0.197	0.223	0.286	0.364	0.472	0.599	0.778
70,000	2.360	1.891	1.517	1.216	0.973	0.777	0.617	0.490	0.389	0.312	0.256	0.220	0.203	0.205	0.226	0.273	0.342	0.443	0.574	0.760
80,000	3.204	2.359	1.867	1.480	1.178	0.928	0.729	0.573	0.444	0.345	0.275	0.223	0.194	0.186	0.200	0.241	0.308	0.408	0.552	0.739
90,000	4.050	3.169	2.496	1.977	1.569	1.245	0.988	0.781	0.618	0.489	0.391	0.318	0.271	0.246	0.247	0.273	0.329	0.419	0.556	0.739
100,000	5.219	4.030	3.149	2.481	1.966	1.564	1.249	0.997	0.798	0.640	0.518	0.427	0.362	0.322	0.309	0.322	0.365	0.443	0.566	0.744
150,000	12.642	9.029	6.529	4.972	3.783	2.964	2.358	1.913	1.544	1.270	1.056	0.892	0.760	0.664	0.597	0.559	0.552	0.578	0.650	0.781
200,000	23.998	15.275	10.198	7.347	5.360	4.080	3.178	2.543	2.034	1.664	1.379	1.162	0.986	0.854	0.754	0.685	0.648	0.646	0.690	0.797
250,000	40.577	22.755	14.030	9.597	6.735	4.984	3.800	2.993	2.364	1.915	1.575	1.317	1.108	0.951	0.829	0.741	0.687	0.669	0.700	0.798
300,000	61.893	30.743	17.697	11.577	7.893	5.709	4.283	3.331	2.606	2.095	1.712	1.423	1.190	1.014	0.878	0.776	0.710	0.682	0.704	0.796
400,000	109.265	44.519	23.296	14.341	9.409	6.618	4.864	3.730	2.883	2.298	1.863	1.541	1.281	1.084	0.931	0.816	0.736	0.698	0.710	0.796
500,000	176.991	58.730	28.308	16.606	10.689	7.295	5.272	3.964	3.060	2.423	1.952	1.606	1.330	1.120	0.958	0.835	0.750	0.705	0.713	0.796

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 40,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.783	0.794	0.804	0.811	0.821	0.832	0.842	0.851	0.859	0.872	0.883	0.891	0.902	0.914	0.929	0.939	0.950	0.961	0.975	0.986
2,000	0.692	0.701	0.714	0.728	0.741	0.755	0.769	0.787	0.798	0.814	0.828	0.845	0.861	0.877	0.893	0.911	0.927	0.945	0.962	0.979
3,000	0.625	0.639	0.652	0.673	0.688	0.702	0.718	0.734	0.756	0.774	0.787	0.807	0.828	0.847	0.868	0.886	0.908	0.931	0.954	0.976
4,000	0.577	0.592	0.607	0.625	0.642	0.659	0.676	0.696	0.716	0.736	0.756	0.778	0.800	0.820	0.846	0.867	0.893	0.917	0.944	0.972
5,000	0.519	0.537	0.554	0.574	0.592	0.613	0.633	0.654	0.674	0.694	0.717	0.743	0.767	0.793	0.820	0.846	0.875	0.906	0.935	0.967
6,000	0.481	0.499	0.517	0.536	0.556	0.576	0.598	0.620	0.642	0.666	0.691	0.716	0.743	0.771	0.800	0.830	0.861	0.894	0.928	0.963
7,000	0.448	0.466	0.485	0.505	0.525	0.546	0.569	0.592	0.616	0.641	0.667	0.694	0.722	0.752	0.783	0.815	0.849	0.884	0.921	0.960
8,000	0.418	0.435	0.456	0.476	0.495	0.519	0.541	0.564	0.590	0.616	0.643	0.672	0.702	0.733	0.766	0.800	0.837	0.875	0.914	0.956
9,000	0.391	0.412	0.429	0.450	0.472	0.493	0.517	0.542	0.568	0.594	0.623	0.653	0.684	0.717	0.751	0.787	0.826	0.866	0.908	0.953
10,000	0.373	0.391	0.411	0.431	0.452	0.475	0.498	0.523	0.550	0.577	0.606	0.637	0.669	0.702	0.738	0.776	0.815	0.858	0.902	0.950
11,000	0.353	0.371	0.392	0.413	0.433	0.455	0.480	0.505	0.531	0.560	0.590	0.620	0.654	0.689	0.726	0.764	0.806	0.850	0.897	0.947
12,000	0.351	0.369	0.388	0.408	0.429	0.451	0.475	0.499	0.526	0.554	0.584	0.615	0.648	0.681	0.720	0.760	0.802	0.848	0.896	0.946
13,000	0.327	0.348	0.368	0.386	0.406	0.427	0.451	0.480	0.507	0.536	0.566	0.596	0.631	0.669	0.707	0.749	0.790	0.840	0.890	0.943
14,000	0.303	0.322	0.341	0.362	0.384	0.406	0.431	0.457	0.485	0.513	0.545	0.578	0.615	0.653	0.693	0.736	0.782	0.832	0.883	0.941
15,000	0.292	0.310	0.329	0.351	0.372	0.395	0.420	0.447	0.474	0.504	0.536	0.570	0.603	0.643	0.685	0.728	0.774	0.824	0.879	0.937
16,000	0.277	0.295	0.314	0.335	0.357	0.380	0.405	0.430	0.459	0.490	0.521	0.555	0.593	0.631	0.674	0.719	0.767	0.819	0.875	0.935
17,000	0.271	0.288	0.306	0.326	0.348	0.371	0.395	0.422	0.450	0.480	0.512	0.547	0.584	0.623	0.666	0.711	0.760	0.815	0.872	0.933
18,000	0.270	0.285	0.303	0.322	0.343	0.366	0.390	0.416	0.443	0.473	0.505	0.539	0.577	0.616	0.659	0.706	0.755	0.809	0.867	0.931
19,000	0.265	0.275	0.293	0.316	0.337	0.359	0.379	0.403	0.435	0.464	0.494	0.528	0.566	0.608	0.650	0.696	0.747	0.804	0.864	0.929
20,000	0.236	0.252	0.270	0.289	0.310	0.332	0.356	0.383	0.411	0.443	0.476	0.510	0.548	0.590	0.636	0.687	0.740	0.796	0.859	0.926
21,000	0.223	0.239	0.256	0.275	0.296	0.318	0.342	0.368	0.397	0.428	0.461	0.497	0.536	0.578	0.624	0.674	0.729	0.787	0.853	0.924
22,000	0.212	0.228	0.245	0.264	0.284	0.307	0.332	0.358	0.386	0.417	0.451	0.487	0.527	0.569	0.616	0.667	0.722	0.782	0.849	0.922
23,000	0.211	0.226	0.243	0.262	0.282	0.304	0.327	0.354	0.382	0.413	0.446	0.483	0.518	0.565	0.609	0.663	0.719	0.777	0.846	0.920
24,000	0.204	0.219	0.235	0.253	0.272	0.294	0.318	0.344	0.372	0.402	0.436	0.472	0.512	0.555	0.603	0.654	0.711	0.775	0.842	0.917
25,000	0.202	0.215	0.232	0.249	0.268	0.289	0.313	0.338	0.366	0.397	0.430	0.466	0.506	0.549	0.597	0.649	0.706	0.769	0.839	0.915
30,000	0.203	0.214	0.226	0.241	0.257	0.276	0.298	0.325	0.352	0.378	0.409	0.446	0.487	0.531	0.579	0.632	0.691	0.754	0.828	0.910
40,000	0.286	0.281	0.280	0.282	0.287	0.294	0.305	0.319	0.337	0.358	0.385	0.414	0.449	0.488	0.536	0.588	0.647	0.719	0.796	0.891
50,000	0.315	0.305	0.285	0.280	0.277	0.283	0.284	0.291	0.306	0.325	0.344	0.373	0.405	0.444	0.492	0.546	0.608	0.685	0.772	0.878
60,000	0.430	0.395	0.367	0.347	0.332	0.322	0.318	0.318	0.324	0.334	0.350	0.372	0.400	0.435	0.478	0.530	0.590	0.668	0.757	0.868
70,000	0.605	0.543	0.493	0.452	0.417	0.394	0.378	0.368	0.365	0.364	0.374	0.386	0.407	0.440	0.478	0.526	0.582	0.659	0.748	0.862
80,000	0.791	0.695	0.617	0.556	0.501	0.466	0.434	0.414	0.400	0.392	0.391	0.399	0.414	0.439	0.470	0.518	0.573	0.649	0.737	0.853
90,000	0.961	0.831	0.727	0.635	0.571	0.524	0.480	0.450	0.427	0.411	0.404	0.406	0.415	0.438	0.464	0.506	0.561	0.634	0.727	0.846
100,000	1.221	1.067	0.929	0.804	0.714	0.645	0.586	0.542	0.505	0.476	0.461	0.452	0.453	0.468	0.487	0.521	0.571	0.639	0.724	0.844
150,000	2.734	2.165	1.762	1.464	1.238	1.061	0.921	0.810	0.721	0.650	0.595	0.555	0.527	0.513	0.514	0.529	0.564	0.620	0.701	0.827
200,000	4.618	3.369	2.588	2.060	1.682	1.401	1.185	1.016	0.883	0.778	0.694	0.629	0.582	0.550	0.535	0.537	0.560	0.609	0.686	0.814
250,000	6.923	4.618	3.367	2.583	2.053	1.673	1.391	1.175	1.006	0.874	0.769	0.686	0.624	0.580	0.554	0.547	0.562	0.604	0.677	0.806
300,000	9.492	5.799	4.032	2.998	2.336	1.875	1.539	1.286	1.088	0.939	0.818	0.724	0.651	0.599	0.565	0.552	0.560	0.599	0.673	0.799
400,000	14.420	7.557	5.039	3.630	2.759	2.176	1.760	1.455	1.224	1.045	0.903	0.793	0.706	0.643	0.599	0.575	0.574	0.605	0.673	0.796
500,000	20.889	9.307	5.836	3.958	2.956	2.312	1.858	1.549	1.285	1.101	0.946	0.825	0.731	0.658	0.610	0.581	0.576	0.602	0.668	0.791

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 50,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.600	0.645	0.675	0.676	0.657	0.679	0.696	0.737	0.770	0.780	0.781	0.797	0.847	0.859	0.879	0.889	0.916	0.923	0.948	0.979
2,000	0.535	0.552	0.597	0.579	0.600	0.597	0.660	0.678	0.650	0.716	0.716	0.742	0.793	0.780	0.800	0.850	0.865	0.901	0.936	0.943
3,000	0.340	0.393	0.287	0.304	0.455	0.444	0.499	0.430	0.456	0.584	0.586	0.652	0.649	0.690	0.749	0.784	0.817	0.875	0.896	0.955
4,000	0.320	0.257	0.330	0.349	0.322	0.342	0.375	0.447	0.436	0.475	0.522	0.538	0.596	0.644	0.713	0.715	0.767	0.830	0.895	0.938
5,000	0.347	0.370	0.484	0.498	0.525	0.535	0.553	0.571	0.604	0.615	0.640	0.672	0.697	0.689	0.697	0.764	0.809	0.828	0.894	0.931
6,000	0.372	0.386	0.387	0.407	0.435	0.457	0.473	0.492	0.526	0.556	0.580	0.573	0.641	0.684	0.719	0.746	0.823	0.835	0.905	0.946
7,000	0.327	0.332	0.332	0.379	0.408	0.427	0.448	0.440	0.465	0.505	0.531	0.569	0.598	0.636	0.695	0.745	0.780	0.830	0.870	0.935
8,000	0.325	0.332	0.345	0.359	0.377	0.396	0.418	0.439	0.449	0.494	0.534	0.558	0.600	0.632	0.682	0.721	0.767	0.817	0.873	0.938
9,000	0.315	0.322	0.329	0.341	0.355	0.374	0.389	0.415	0.438	0.469	0.496	0.534	0.566	0.612	0.651	0.702	0.756	0.806	0.873	0.933
10,000	0.313	0.322	0.331	0.319	0.359	0.353	0.394	0.418	0.443	0.470	0.459	0.515	0.532	0.597	0.623	0.691	0.730	0.807	0.855	0.929
11,000	0.274	0.260	0.264	0.272	0.293	0.326	0.321	0.366	0.390	0.417	0.452	0.486	0.508	0.572	0.601	0.662	0.730	0.785	0.851	0.924
12,000	0.223	0.218	0.269	0.221	0.277	0.302	0.274	0.324	0.301	0.374	0.398	0.413	0.486	0.540	0.560	0.640	0.671	0.776	0.841	0.922
13,000	0.196	0.188	0.183	0.183	0.189	0.198	0.212	0.231	0.256	0.285	0.319	0.359	0.399	0.459	0.515	0.579	0.650	0.728	0.831	0.914
14,000	0.401	0.377	0.353	0.340	0.331	0.325	0.327	0.461	0.345	0.363	0.491	0.410	0.540	0.493	0.539	0.657	0.662	0.713	0.805	0.894
15,000	0.420	0.388	0.361	0.341	0.345	0.318	0.315	0.319	0.328	0.345	0.367	0.397	0.432	0.474	0.523	0.580	0.646	0.714	0.796	0.896
16,000	0.487	0.443	0.407	0.379	0.356	0.341	0.332	0.330	0.335	0.346	0.365	0.390	0.423	0.464	0.512	0.569	0.635	0.715	0.789	0.893
17,000	0.577	0.524	0.454	0.441	0.389	0.388	0.352	0.363	0.345	0.368	0.367	0.403	0.420	0.470	0.506	0.571	0.613	0.711	0.794	0.891
18,000	0.542	0.466	0.421	0.403	0.372	0.329	0.334	0.326	0.312	0.320	0.345	0.371	0.392	0.439	0.490	0.540	0.629	0.693	0.787	0.888
19,000	0.590	0.531	0.480	0.438	0.404	0.377	0.359	0.347	0.344	0.349	0.361	0.381	0.410	0.447	0.494	0.551	0.613	0.690	0.780	0.890
20,000	0.643	0.580	0.526	0.479	0.441	0.462	0.390	0.376	0.370	0.372	0.382	0.400	0.426	0.461	0.505	0.579	0.623	0.699	0.784	0.883
21,000	0.803	0.727	0.649	0.594	0.548	0.511	0.475	0.461	0.446	0.438	0.435	0.448	0.468	0.500	0.535	0.584	0.645	0.704	0.785	0.885
22,000	0.958	0.843	0.759	0.697	0.633	0.582	0.549	0.513	0.495	0.477	0.476	0.480	0.494	0.515	0.546	0.592	0.646	0.713	0.804	0.883
23,000	0.945	0.839	0.748	0.675	0.608	0.542	0.506	0.470	0.433	0.429	0.463	0.427	0.444	0.499	0.541	0.550	0.633	0.710	0.794	0.888
24,000	1.004	0.893	0.795	0.710	0.619	0.573	0.522	0.482	0.455	0.420	0.424	0.414	0.438	0.453	0.489	0.538	0.608	0.682	0.784	0.880
25,000	0.683	0.592	0.514	0.448	0.394	0.350	0.317	0.293	0.281	0.455	0.442	0.440	0.449	0.468	0.502	0.547	0.605	0.684	0.768	0.876
30,000	0.956	0.829	0.720	0.627	0.549	0.486	0.433	0.393	0.365	0.347	0.342	0.344	0.364	0.388	0.434	0.487	0.554	0.643	0.742	0.857
40,000	1.388	1.121	0.942	0.820	0.685	0.555	0.467	0.405	0.345	0.307	0.285	0.272	0.285	0.308	0.347	0.403	0.478	0.572	0.711	0.831
50,000	2.514	2.059	1.693	1.378	1.113	0.891	0.706	0.555	0.433	0.338	0.271	0.223	0.201	0.202	0.228	0.280	0.356	0.465	0.575	0.781
60,000	3.879	3.139	2.542	2.026	1.613	1.264	0.975	0.739	0.550	0.379	0.284	0.196	0.145	0.125	0.139	0.188	0.271	0.384	0.538	0.742
70,000	3.146	2.520	2.023	1.627	1.300	1.042	0.833	0.668	0.539	0.441	0.370	0.326	0.302	0.303	0.317	0.369	0.438	0.525	0.647	0.803
80,000	3.973	3.147	2.499	1.986	1.581	1.258	1.000	0.796	0.637	0.515	0.426	0.365	0.328	0.321	0.335	0.368	0.436	0.517	0.646	0.798
90,000	5.304	4.127	3.227	2.533	1.987	1.557	1.217	0.949	0.739	0.577	0.456	0.371	0.317	0.292	0.296	0.328	0.389	0.480	0.610	0.780
100,000	6.515	5.079	3.868	3.009	2.346	1.829	1.425	1.119	0.867	0.670	0.527	0.423	0.349	0.312	0.305	0.329	0.384	0.479	0.601	0.772
150,000	19.062	13.417	9.694	7.127	5.293	3.948	2.943	2.177	1.588	1.134	0.786	0.523	0.330	0.199	0.124	0.104	0.138	0.267	0.397	0.644
200,000	18.890	12.067	8.176	5.737	4.121	3.001	2.200	1.610	1.169	0.839	0.591	0.407	0.277	0.194	0.145	0.153	0.186	0.292	0.435	0.665
250,000	32.951	18.896	11.956	8.026	5.579	3.964	2.855	2.060	1.481	1.051	0.732	0.496	0.327	0.213	0.150	0.134	0.167	0.256	0.410	0.648
300,000	49.903	25.874	15.435	9.967	6.766	4.722	3.352	2.396	1.710	1.208	0.836	0.564	0.367	0.232	0.152	0.124	0.150	0.234	0.387	0.632
400,000	83.125	36.818	20.220	12.416	8.147	5.554	3.880	2.743	1.942	1.364	0.941	0.632	0.408	0.254	0.160	0.121	0.138	0.216	0.369	0.618
500,000	125.546	47.952	24.377	14.389	9.200	6.172	4.260	2.982	2.097	1.466	1.008	0.675	0.435	0.269	0.165	0.120	0.132	0.208	0.361	0.611

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 60,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.692	0.704	0.717	0.732	0.747	0.760	0.774	0.789	0.805	0.820	0.834	0.852	0.868	0.883	0.898	0.914	0.931	0.946	0.966	0.984
2,000	0.578	0.596	0.612	0.630	0.649	0.667	0.686	0.706	0.726	0.746	0.768	0.788	0.810	0.832	0.854	0.876	0.898	0.923	0.950	0.973
3,000	0.533	0.549	0.568	0.586	0.621	0.641	0.648	0.670	0.691	0.714	0.736	0.761	0.784	0.809	0.833	0.860	0.882	0.910	0.938	0.969
4,000	0.476	0.496	0.516	0.538	0.559	0.583	0.604	0.627	0.651	0.679	0.701	0.733	0.757	0.781	0.815	0.840	0.870	0.903	0.933	0.966
5,000	0.433	0.454	0.473	0.495	0.518	0.540	0.565	0.589	0.616	0.641	0.669	0.697	0.725	0.756	0.788	0.820	0.856	0.889	0.925	0.962
6,000	0.424	0.444	0.465	0.487	0.509	0.531	0.555	0.580	0.606	0.633	0.661	0.689	0.719	0.748	0.780	0.813	0.849	0.880	0.921	0.958
7,000	0.386	0.407	0.434	0.459	0.480	0.504	0.524	0.549	0.581	0.609	0.641	0.669	0.696	0.732	0.764	0.801	0.837	0.878	0.915	0.956
8,000	0.374	0.394	0.412	0.434	0.461	0.486	0.510	0.537	0.564	0.593	0.620	0.654	0.679	0.714	0.751	0.792	0.830	0.870	0.911	0.954
9,000	0.347	0.368	0.391	0.413	0.435	0.460	0.483	0.514	0.541	0.571	0.599	0.634	0.668	0.702	0.738	0.779	0.813	0.860	0.904	0.950
10,000	0.294	0.318	0.340	0.364	0.384	0.415	0.436	0.470	0.496	0.533	0.563	0.601	0.635	0.676	0.714	0.759	0.799	0.852	0.900	0.949
11,000	0.271	0.293	0.316	0.340	0.365	0.392	0.420	0.449	0.480	0.513	0.547	0.587	0.625	0.660	0.701	0.748	0.796	0.839	0.890	0.945
12,000	0.226	0.248	0.271	0.296	0.322	0.360	0.379	0.410	0.449	0.490	0.526	0.563	0.595	0.638	0.686	0.732	0.780	0.831	0.884	0.941
13,000	0.216	0.237	0.269	0.284	0.310	0.337	0.367	0.396	0.438	0.464	0.500	0.546	0.585	0.623	0.661	0.720	0.767	0.821	0.876	0.937
14,000	0.231	0.250	0.272	0.295	0.320	0.347	0.375	0.404	0.436	0.469	0.505	0.543	0.582	0.625	0.670	0.716	0.761	0.821	0.870	0.937
15,000	0.185	0.204	0.225	0.248	0.273	0.299	0.328	0.360	0.392	0.428	0.469	0.504	0.546	0.592	0.644	0.711	0.763	0.801	0.863	0.933
16,000	0.173	0.192	0.214	0.236	0.262	0.288	0.317	0.349	0.381	0.416	0.455	0.495	0.534	0.583	0.630	0.682	0.736	0.797	0.859	0.933
17,000	0.186	0.203	0.222	0.243	0.257	0.291	0.310	0.347	0.379	0.407	0.450	0.485	0.533	0.565	0.627	0.672	0.731	0.790	0.858	0.926
18,000	0.170	0.185	0.203	0.224	0.247	0.271	0.298	0.328	0.359	0.395	0.433	0.473	0.514	0.562	0.613	0.665	0.726	0.789	0.852	0.924
19,000	0.180	0.195	0.212	0.232	0.253	0.277	0.304	0.333	0.363	0.398	0.434	0.474	0.516	0.563	0.613	0.667	0.724	0.785	0.852	0.923
20,000	0.194	0.207	0.222	0.218	0.237	0.260	0.306	0.333	0.362	0.397	0.419	0.459	0.502	0.546	0.599	0.655	0.720	0.778	0.847	0.920
21,000	0.256	0.265	0.276	0.288	0.305	0.326	0.317	0.357	0.371	0.406	0.425	0.480	0.508	0.569	0.611	0.669	0.721	0.778	0.842	0.923
22,000	0.225	0.236	0.243	0.256	0.272	0.291	0.313	0.337	0.365	0.398	0.430	0.476	0.518	0.561	0.609	0.657	0.715	0.771	0.846	0.919
23,000	0.197	0.204	0.215	0.228	0.244	0.263	0.286	0.311	0.339	0.371	0.406	0.455	0.507	0.550	0.592	0.640	0.700	0.771	0.842	0.915
24,000	0.184	0.190	0.192	0.205	0.220	0.247	0.269	0.295	0.323	0.353	0.384	0.430	0.476	0.528	0.577	0.628	0.694	0.751	0.834	0.913
25,000	0.126	0.133	0.142	0.186	0.200	0.188	0.211	0.237	0.267	0.301	0.338	0.380	0.427	0.477	0.534	0.619	0.683	0.747	0.828	0.911
30,000	0.066	0.066	0.071	0.080	0.094	0.111	0.134	0.160	0.189	0.224	0.264	0.310	0.359	0.414	0.476	0.543	0.618	0.700	0.793	0.890
40,000	0.187	0.152	0.124	0.110	0.099	0.100	0.106	0.117	0.138	0.162	0.195	0.236	0.284	0.337	0.400	0.472	0.555	0.648	0.757	0.868
50,000	0.414	0.324	0.253	0.198	0.158	0.130	0.114	0.108	0.112	0.125	0.148	0.181	0.223	0.275	0.338	0.412	0.498	0.599	0.714	0.848
60,000	0.809	0.647	0.515	0.410	0.327	0.264	0.216	0.184	0.164	0.119	0.134	0.185	0.215	0.257	0.315	0.376	0.463	0.570	0.691	0.837
70,000	1.259	0.984	0.776	0.593	0.472	0.379	0.301	0.239	0.202	0.181	0.173	0.184	0.207	0.240	0.290	0.364	0.443	0.552	0.672	0.820
80,000	1.890	1.517	1.221	0.986	0.797	0.647	0.527	0.434	0.363	0.312	0.280	0.265	0.267	0.286	0.322	0.376	0.450	0.546	0.666	0.816
90,000	2.409	1.893	1.494	1.182	0.936	0.741	0.587	0.466	0.375	0.307	0.263	0.238	0.233	0.247	0.280	0.334	0.411	0.512	0.640	0.804
100,000	2.921	2.277	1.788	1.410	1.115	0.882	0.699	0.556	0.445	0.362	0.305	0.269	0.254	0.261	0.287	0.336	0.408	0.506	0.633	0.796
150,000	7.818	5.682	4.238	3.219	2.475	1.918	1.493	1.164	0.908	0.710	0.559	0.448	0.371	0.326	0.312	0.329	0.378	0.463	0.590	0.763
200,000	16.747	11.101	7.772	5.635	4.181	3.151	2.396	1.829	1.398	1.067	0.813	0.621	0.481	0.387	0.334	0.321	0.350	0.424	0.550	0.737
250,000	27.165	16.422	10.846	7.582	5.489	4.068	3.061	2.322	1.769	1.347	1.025	0.780	0.598	0.469	0.387	0.352	0.363	0.423	0.541	0.727
300,000	40.242	22.258	13.946	9.421	6.675	4.871	3.625	2.729	2.067	1.568	1.189	0.901	0.685	0.529	0.426	0.373	0.371	0.420	0.532	0.719
400,000	65.373	31.646	18.454	11.944	8.241	5.916	4.361	3.267	2.471	1.877	1.427	1.084	0.825	0.634	0.502	0.425	0.403	0.436	0.536	0.716
500,000	94.035	40.077	21.930	13.686	9.220	6.516	4.748	3.526	2.648	2.000	1.513	1.144	0.866	0.661	0.519	0.434	0.406	0.435	0.532	0.713

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 70,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.738	0.736	0.702	0.708	0.727	0.785	0.809	0.775	0.789	0.807	0.832	0.863	0.876	0.895	0.895	0.910	0.934	0.954	0.967	0.982
2,000	0.573	0.589	0.607	0.621	0.643	0.665	0.680	0.697	0.716	0.739	0.760	0.786	0.804	0.820	0.849	0.874	0.894	0.926	0.944	0.975
3,000	0.535	0.523	0.569	0.564	0.602	0.604	0.645	0.647	0.687	0.692	0.732	0.741	0.779	0.792	0.830	0.849	0.885	0.905	0.929	0.969
4,000	0.468	0.486	0.506	0.528	0.548	0.570	0.592	0.612	0.635	0.660	0.694	0.719	0.748	0.768	0.797	0.829	0.859	0.894	0.931	0.967
5,000	0.453	0.470	0.487	0.508	0.528	0.549	0.572	0.595	0.618	0.642	0.668	0.695	0.724	0.753	0.781	0.816	0.844	0.885	0.920	0.962
6,000	0.475	0.451	0.508	0.504	0.529	0.544	0.572	0.608	0.612	0.642	0.663	0.650	0.719	0.724	0.784	0.793	0.835	0.866	0.911	0.956
7,000	0.415	0.432	0.447	0.469	0.489	0.508	0.533	0.556	0.581	0.607	0.638	0.649	0.697	0.729	0.759	0.799	0.829	0.865	0.907	0.955
8,000	0.376	0.393	0.411	0.429	0.456	0.471	0.501	0.524	0.554	0.570	0.615	0.631	0.669	0.685	0.730	0.775	0.819	0.854	0.903	0.951
9,000	0.264	0.282	0.341	0.361	0.382	0.405	0.430	0.422	0.452	0.484	0.515	0.549	0.593	0.668	0.697	0.760	0.785	0.848	0.894	0.941
10,000	0.258	0.283	0.301	0.321	0.343	0.366	0.392	0.419	0.449	0.481	0.517	0.550	0.588	0.633	0.675	0.719	0.769	0.822	0.881	0.941
11,000	0.246	0.260	0.277	0.303	0.346	0.370	0.394	0.420	0.448	0.478	0.511	0.546	0.580	0.607	0.652	0.711	0.760	0.798	0.873	0.940
12,000	0.210	0.222	0.238	0.255	0.275	0.297	0.322	0.349	0.379	0.411	0.450	0.485	0.527	0.577	0.620	0.679	0.730	0.793	0.863	0.927
13,000	0.215	0.226	0.239	0.255	0.274	0.294	0.322	0.344	0.373	0.405	0.440	0.478	0.519	0.565	0.613	0.666	0.723	0.783	0.851	0.928
14,000	0.171	0.183	0.198	0.228	0.235	0.257	0.294	0.310	0.340	0.386	0.411	0.462	0.508	0.542	0.601	0.664	0.717	0.789	0.844	0.926
15,000	0.235	0.231	0.243	0.259	0.288	0.307	0.315	0.341	0.384	0.415	0.435	0.473	0.514	0.569	0.606	0.660	0.717	0.778	0.851	0.924
16,000	0.244	0.249	0.258	0.270	0.285	0.303	0.323	0.333	0.360	0.391	0.424	0.471	0.511	0.555	0.593	0.647	0.714	0.774	0.842	0.919
17,000	0.251	0.256	0.263	0.273	0.283	0.303	0.321	0.340	0.369	0.398	0.427	0.463	0.492	0.534	0.599	0.649	0.698	0.765	0.838	0.917
18,000	0.224	0.227	0.233	0.241	0.253	0.267	0.288	0.310	0.335	0.364	0.398	0.435	0.476	0.521	0.572	0.625	0.689	0.756	0.838	0.915
19,000	0.259	0.260	0.264	0.272	0.288	0.296	0.313	0.339	0.358	0.385	0.421	0.457	0.492	0.539	0.599	0.638	0.682	0.760	0.835	0.914
20,000	0.280	0.275	0.273	0.275	0.281	0.290	0.304	0.321	0.342	0.367	0.430	0.463	0.470	0.514	0.563	0.618	0.680	0.763	0.830	0.913
21,000	0.341	0.284	0.280	0.321	0.282	0.290	0.302	0.355	0.337	0.361	0.391	0.451	0.465	0.508	0.555	0.612	0.672	0.745	0.832	0.904
22,000	0.302	0.290	0.283	0.280	0.282	0.286	0.296	0.311	0.330	0.354	0.382	0.414	0.453	0.503	0.548	0.607	0.669	0.741	0.817	0.903
23,000	0.307	0.292	0.282	0.277	0.280	0.285	0.289	0.302	0.326	0.348	0.370	0.402	0.443	0.490	0.535	0.594	0.663	0.734	0.810	0.901
24,000	0.344	0.326	0.313	0.305	0.319	0.304	0.321	0.316	0.351	0.357	0.395	0.414	0.460	0.493	0.545	0.597	0.658	0.728	0.805	0.901
25,000	0.331	0.307	0.290	0.279	0.272	0.271	0.275	0.285	0.299	0.319	0.345	0.376	0.422	0.450	0.507	0.570	0.635	0.717	0.803	0.899
30,000	0.556	0.371	0.465	0.433	0.358	0.388	0.275	0.370	0.332	0.342	0.393	0.348	0.441	0.462	0.521	0.570	0.628	0.710	0.796	0.887
40,000	0.967	0.794	0.721	0.659	0.609	0.568	0.536	0.502	0.498	0.466	0.489	0.464	0.512	0.500	0.533	0.577	0.622	0.712	0.783	0.888
50,000	1.291	1.135	1.004	0.895	0.804	0.729	0.667	0.618	0.580	0.553	0.536	0.529	0.532	0.545	0.568	0.603	0.645	0.708	0.789	0.898
60,000	1.287	1.106	0.962	0.845	0.752	0.677	0.619	0.574	0.541	0.519	0.507	0.505	0.512	0.538	0.556	0.601	0.681	0.736	0.791	0.891
70,000	1.671	1.370	1.166	1.032	0.867	0.763	0.679	0.611	0.560	0.541	0.499	0.487	0.488	0.498	0.521	0.558	0.635	0.675	0.767	0.870
80,000	2.313	1.907	1.591	1.342	1.145	0.987	0.861	0.761	0.683	0.622	0.578	0.550	0.531	0.524	0.546	0.590	0.612	0.672	0.759	0.868
90,000	3.096	2.555	2.143	1.825	1.574	1.374	1.213	1.084	0.979	0.896	0.830	0.780	0.738	0.721	0.712	0.716	0.735	0.767	0.819	0.896
100,000	3.854	3.153	2.630	2.230	1.918	1.730	1.473	1.312	1.181	1.088	0.988	0.918	0.862	0.825	0.800	0.788	0.792	0.813	0.822	0.888
150,000	8.479	6.260	4.811	3.817	3.109	2.585	2.189	1.881	1.637	1.443	1.287	1.160	1.064	0.978	0.918	0.876	0.853	0.858	0.870	0.920
200,000	15.516	10.285	7.341	5.519	4.317	3.480	2.874	2.420	2.069	1.793	1.573	1.395	1.250	1.134	1.042	0.972	0.924	0.899	0.900	0.931
250,000	27.469	16.232	10.140	7.225	5.418	4.223	3.388	2.778	2.319	1.964	1.684	1.461	1.281	1.144	1.025	0.941	0.885	0.857	0.862	0.907
300,000	40.068	21.369	12.575	9.078	6.578	4.766	3.753	3.029	2.492	2.081	1.804	1.487	1.303	1.128	1.015	0.921	0.859	0.829	0.837	0.890
400,000	66.340	30.171	17.191	11.122	7.815	5.505	4.471	3.401	2.879	2.299	1.983	1.643	1.412	1.238	1.085	0.973	0.896	0.854	0.851	0.895
500,000	98.945	38.831	20.544	12.760	8.727	6.041	4.850	3.815	3.072	2.518	2.094	1.760	1.497	1.287	1.121	0.998	0.912	0.863	0.855	0.895

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 80,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.809	0.820	0.830	0.838	0.844	0.857	0.864	0.872	0.881	0.891	0.899	0.912	0.921	0.930	0.939	0.950	0.958	0.965	0.979	0.989
2,000	0.721	0.733	0.745	0.758	0.771	0.783	0.798	0.808	0.824	0.838	0.849	0.865	0.879	0.893	0.909	0.924	0.940	0.954	0.970	0.984
3,000	0.647	0.668	0.683	0.698	0.720	0.729	0.743	0.760	0.777	0.794	0.823	0.828	0.855	0.875	0.882	0.907	0.920	0.944	0.962	0.981
4,000	0.613	0.629	0.646	0.664	0.678	0.696	0.712	0.735	0.748	0.769	0.786	0.808	0.826	0.847	0.868	0.889	0.910	0.932	0.954	0.976
5,000	0.538	0.556	0.574	0.594	0.611	0.631	0.651	0.673	0.696	0.724	0.747	0.769	0.787	0.819	0.835	0.868	0.895	0.918	0.949	0.972
6,000	0.498	0.518	0.541	0.554	0.578	0.603	0.618	0.647	0.668	0.690	0.715	0.740	0.767	0.792	0.818	0.847	0.875	0.907	0.936	0.969
7,000	0.478	0.493	0.512	0.538	0.555	0.576	0.602	0.623	0.646	0.675	0.698	0.720	0.748	0.778	0.805	0.839	0.869	0.899	0.933	0.965
8,000	0.451	0.473	0.487	0.518	0.535	0.559	0.577	0.601	0.629	0.655	0.683	0.707	0.740	0.767	0.795	0.830	0.863	0.892	0.927	0.963
9,000	0.415	0.436	0.468	0.483	0.504	0.537	0.561	0.574	0.607	0.638	0.666	0.692	0.721	0.761	0.787	0.819	0.851	0.890	0.925	0.961
10,000	0.386	0.407	0.430	0.453	0.477	0.503	0.528	0.555	0.583	0.615	0.644	0.678	0.703	0.739	0.773	0.808	0.847	0.882	0.920	0.958
11,000	0.376	0.397	0.419	0.443	0.466	0.491	0.517	0.544	0.571	0.600	0.624	0.656	0.689	0.723	0.762	0.798	0.835	0.872	0.914	0.956
12,000	0.338	0.361	0.384	0.409	0.434	0.460	0.487	0.515	0.557	0.579	0.613	0.645	0.674	0.716	0.749	0.789	0.826	0.867	0.910	0.954
13,000	0.328	0.351	0.374	0.398	0.424	0.450	0.477	0.506	0.536	0.567	0.599	0.632	0.667	0.703	0.737	0.780	0.818	0.860	0.906	0.953
14,000	0.302	0.324	0.348	0.372	0.398	0.425	0.453	0.483	0.513	0.545	0.579	0.613	0.650	0.687	0.727	0.768	0.811	0.849	0.902	0.950
15,000	0.278	0.301	0.326	0.352	0.379	0.406	0.436	0.466	0.498	0.531	0.565	0.601	0.639	0.677	0.718	0.760	0.803	0.846	0.898	0.948
16,000	0.251	0.275	0.300	0.326	0.354	0.383	0.413	0.444	0.477	0.511	0.546	0.589	0.627	0.662	0.704	0.752	0.797	0.845	0.893	0.945
17,000	0.238	0.260	0.283	0.308	0.335	0.363	0.392	0.423	0.456	0.491	0.527	0.565	0.604	0.646	0.693	0.736	0.786	0.834	0.888	0.943
18,000	0.242	0.248	0.271	0.311	0.323	0.351	0.393	0.425	0.445	0.490	0.526	0.561	0.594	0.644	0.686	0.728	0.785	0.831	0.884	0.943
19,000	0.200	0.221	0.244	0.270	0.296	0.325	0.355	0.395	0.421	0.466	0.503	0.541	0.582	0.620	0.673	0.727	0.770	0.823	0.880	0.941
20,000	0.193	0.215	0.238	0.263	0.288	0.316	0.348	0.380	0.414	0.449	0.488	0.528	0.571	0.615	0.662	0.711	0.762	0.818	0.876	0.937
21,000	0.182	0.202	0.225	0.249	0.275	0.304	0.334	0.366	0.401	0.437	0.475	0.516	0.559	0.604	0.653	0.703	0.756	0.812	0.871	0.935
22,000	0.178	0.198	0.219	0.242	0.268	0.296	0.326	0.358	0.392	0.428	0.467	0.508	0.550	0.595	0.644	0.695	0.750	0.808	0.867	0.934
23,000	0.178	0.184	0.218	0.228	0.266	0.293	0.312	0.355	0.381	0.425	0.464	0.496	0.548	0.588	0.642	0.690	0.745	0.807	0.865	0.932
24,000	0.158	0.176	0.196	0.219	0.244	0.271	0.301	0.334	0.368	0.405	0.445	0.494	0.530	0.579	0.634	0.684	0.738	0.802	0.862	0.930
25,000	0.156	0.172	0.191	0.213	0.237	0.264	0.293	0.325	0.360	0.397	0.436	0.478	0.523	0.571	0.621	0.676	0.733	0.798	0.858	0.928
30,000	0.166	0.224	0.240	0.210	0.232	0.303	0.284	0.314	0.390	0.423	0.422	0.464	0.541	0.557	0.609	0.685	0.722	0.791	0.854	0.928
40,000	0.182	0.185	0.193	0.206	0.222	0.242	0.266	0.293	0.324	0.357	0.395	0.436	0.480	0.529	0.581	0.638	0.699	0.764	0.837	0.915
50,000	0.153	0.142	0.139	0.142	0.152	0.168	0.188	0.214	0.244	0.278	0.317	0.359	0.408	0.460	0.518	0.582	0.651	0.727	0.809	0.902
60,000	0.192	0.162	0.140	0.133	0.131	0.141	0.155	0.175	0.203	0.234	0.273	0.315	0.364	0.418	0.476	0.544	0.617	0.700	0.789	0.890
70,000	0.268	0.207	0.165	0.140	0.128	0.126	0.133	0.148	0.170	0.199	0.235	0.277	0.325	0.380	0.441	0.511	0.588	0.675	0.771	0.880
80,000	0.365	0.265	0.195	0.149	0.121	0.108	0.107	0.116	0.134	0.161	0.194	0.236	0.284	0.340	0.404	0.476	0.558	0.649	0.752	0.869
90,000	0.532	0.366	0.251	0.173	0.122	0.092	0.079	0.080	0.092	0.114	0.146	0.186	0.251	0.292	0.358	0.434	0.520	0.627	0.736	0.860
100,000	0.768	0.493	0.330	0.218	0.144	0.097	0.072	0.064	0.073	0.089	0.116	0.153	0.221	0.257	0.340	0.404	0.505	0.597	0.719	0.846
150,000	2.548	1.633	1.058	0.683	0.436	0.271	0.164	0.096	0.059	0.046	0.051	0.073	0.109	0.160	0.225	0.304	0.400	0.514	0.649	0.809
200,000	5.223	3.099	1.928	1.228	0.790	0.507	0.323	0.202	0.127	0.085	0.069	0.074	0.096	0.136	0.192	0.266	0.359	0.474	0.615	0.788
250,000	18.214	9.788	5.714	3.528	2.253	1.459	0.955	0.624	0.409	0.270	0.181	0.138	0.127	0.142	0.180	0.246	0.332	0.440	0.584	0.765
300,000	28.250	13.857	7.697	4.598	2.876	1.846	1.201	0.787	0.516	0.340	0.230	0.168	0.141	0.145	0.174	0.229	0.310	0.420	0.570	0.755
400,000	47.903	20.457	10.524	6.007	3.653	2.305	1.491	0.978	0.647	0.431	0.293	0.210	0.167	0.158	0.177	0.223	0.297	0.403	0.547	0.742
500,000	71.976	26.971	12.991	7.134	4.234	2.638	1.691	1.104	0.729	0.487	0.331	0.235	0.184	0.168	0.181	0.223	0.293	0.396	0.540	0.736

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 90,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.769	0.779	0.790	0.801	0.811	0.824	0.834	0.845	0.856	0.867	0.879	0.890	0.902	0.913	0.925	0.937	0.950	0.962	0.975	0.987
2,000	0.693	0.706	0.715	0.728	0.745	0.759	0.774	0.787	0.803	0.814	0.830	0.847	0.862	0.878	0.896	0.912	0.929	0.945	0.964	0.982
3,000	0.623	0.638	0.655	0.671	0.687	0.703	0.721	0.738	0.756	0.778	0.796	0.811	0.831	0.851	0.869	0.890	0.911	0.934	0.957	0.978
4,000	0.579	0.596	0.613	0.630	0.647	0.666	0.684	0.703	0.723	0.743	0.763	0.784	0.805	0.831	0.851	0.874	0.897	0.922	0.948	0.974
5,000	0.540	0.557	0.575	0.595	0.614	0.634	0.653	0.672	0.693	0.712	0.736	0.761	0.784	0.809	0.834	0.860	0.886	0.913	0.940	0.970
6,000	0.495	0.514	0.533	0.553	0.573	0.595	0.616	0.638	0.656	0.685	0.705	0.734	0.760	0.784	0.814	0.842	0.870	0.901	0.934	0.966
7,000	0.460	0.480	0.496	0.519	0.540	0.562	0.584	0.607	0.632	0.658	0.683	0.710	0.740	0.768	0.798	0.829	0.861	0.894	0.927	0.963
8,000	0.428	0.448	0.469	0.490	0.513	0.536	0.560	0.584	0.610	0.636	0.664	0.694	0.721	0.754	0.784	0.818	0.851	0.886	0.922	0.961
9,000	0.403	0.426	0.447	0.469	0.492	0.516	0.540	0.566	0.592	0.620	0.648	0.677	0.708	0.740	0.773	0.807	0.842	0.880	0.917	0.958
10,000	0.379	0.400	0.422	0.445	0.468	0.493	0.518	0.544	0.572	0.600	0.629	0.660	0.692	0.725	0.760	0.796	0.836	0.875	0.913	0.955
11,000	0.378	0.398	0.419	0.441	0.464	0.488	0.512	0.538	0.565	0.590	0.620	0.651	0.683	0.717	0.752	0.788	0.827	0.867	0.908	0.953
12,000	0.337	0.359	0.380	0.403	0.428	0.452	0.492	0.506	0.546	0.564	0.593	0.637	0.662	0.712	0.735	0.782	0.820	0.862	0.905	0.951
13,000	0.320	0.341	0.363	0.387	0.411	0.436	0.463	0.490	0.514	0.545	0.577	0.611	0.646	0.687	0.725	0.765	0.808	0.852	0.899	0.950
14,000	0.295	0.316	0.339	0.362	0.387	0.413	0.440	0.468	0.498	0.530	0.563	0.597	0.633	0.671	0.712	0.754	0.798	0.844	0.894	0.945
15,000	0.284	0.305	0.328	0.351	0.376	0.402	0.429	0.458	0.488	0.519	0.553	0.588	0.624	0.663	0.704	0.747	0.792	0.839	0.890	0.943
16,000	0.250	0.271	0.293	0.317	0.342	0.369	0.397	0.427	0.458	0.491	0.526	0.562	0.601	0.642	0.685	0.730	0.779	0.829	0.888	0.942
17,000	0.247	0.268	0.296	0.312	0.339	0.362	0.392	0.427	0.451	0.482	0.518	0.557	0.595	0.635	0.678	0.724	0.773	0.826	0.879	0.940
18,000	0.244	0.274	0.286	0.308	0.333	0.359	0.386	0.416	0.447	0.480	0.514	0.551	0.591	0.632	0.676	0.722	0.771	0.823	0.877	0.939
19,000	0.260	0.278	0.299	0.320	0.343	0.369	0.396	0.424	0.454	0.486	0.520	0.557	0.595	0.635	0.678	0.724	0.765	0.819	0.874	0.938
20,000	0.245	0.264	0.284	0.306	0.327	0.352	0.379	0.407	0.440	0.475	0.509	0.544	0.583	0.624	0.670	0.715	0.767	0.819	0.876	0.933
21,000	0.235	0.264	0.284	0.302	0.325	0.345	0.382	0.406	0.433	0.470	0.504	0.545	0.580	0.619	0.669	0.712	0.762	0.817	0.875	0.934
22,000	0.242	0.261	0.282	0.289	0.327	0.353	0.366	0.408	0.438	0.459	0.505	0.531	0.571	0.622	0.659	0.704	0.764	0.810	0.869	0.932
23,000	0.234	0.266	0.273	0.295	0.319	0.344	0.381	0.399	0.430	0.463	0.497	0.541	0.573	0.614	0.659	0.707	0.757	0.813	0.868	0.931
24,000	0.236	0.254	0.274	0.295	0.318	0.342	0.367	0.396	0.427	0.459	0.496	0.531	0.572	0.612	0.658	0.704	0.755	0.811	0.869	0.929
25,000	0.205	0.239	0.244	0.266	0.290	0.315	0.343	0.372	0.414	0.437	0.473	0.511	0.561	0.595	0.642	0.698	0.750	0.806	0.864	0.931
30,000	0.130	0.152	0.172	0.190	0.217	0.240	0.274	0.299	0.335	0.373	0.408	0.452	0.494	0.541	0.595	0.650	0.708	0.774	0.843	0.919
40,000	0.052	0.064	0.080	0.099	0.121	0.146	0.175	0.206	0.240	0.278	0.319	0.364	0.413	0.466	0.524	0.587	0.655	0.732	0.812	0.903
50,000	0.030	0.033	0.042	0.054	0.071	0.092	0.117	0.145	0.178	0.214	0.255	0.300	0.351	0.406	0.464	0.535	0.609	0.693	0.785	0.888
60,000	0.021	0.015	0.015	0.022	0.034	0.051	0.073	0.100	0.131	0.166	0.207	0.254	0.305	0.362	0.426	0.497	0.575	0.665	0.764	0.875
70,000	0.043	0.025	0.018	0.018	0.026	0.040	0.059	0.083	0.113	0.147	0.186	0.232	0.282	0.340	0.404	0.477	0.559	0.650	0.752	0.869
80,000	0.108	0.072	0.051	0.040	0.039	0.045	0.058	0.078	0.103	0.134	0.170	0.213	0.263	0.318	0.382	0.455	0.537	0.631	0.737	0.860
90,000	0.165	0.107	0.070	0.048	0.037	0.037	0.045	0.060	0.083	0.111	0.146	0.188	0.236	0.292	0.379	0.430	0.515	0.612	0.723	0.852
100,000	0.233	0.146	0.089	0.052	0.076	0.065	0.065	0.037	0.056	0.083	0.116	0.157	0.206	0.282	0.345	0.417	0.490	0.591	0.707	0.844
150,000	1.020	0.664	0.432	0.280	0.180	0.115	0.075	0.055	0.050	0.058	0.077	0.107	0.147	0.198	0.260	0.335	0.425	0.533	0.661	0.821
200,000	2.381	1.454	0.910	0.574	0.360	0.221	0.133	0.079	0.051	0.041	0.048	0.069	0.103	0.150	0.211	0.286	0.378	0.491	0.628	0.795
250,000	4.119	2.345	1.405	0.863	0.533	0.326	0.195	0.113	0.066	0.044	0.042	0.056	0.085	0.129	0.188	0.262	0.355	0.470	0.611	0.785
300,000	5.222	2.793	1.612	0.966	0.589	0.358	0.214	0.126	0.074	0.049	0.045	0.058	0.086	0.128	0.186	0.259	0.352	0.466	0.607	0.782
400,000	8.220	4.007	2.194	1.275	0.764	0.461	0.276	0.162	0.094	0.058	0.045	0.052	0.076	0.115	0.170	0.242	0.334	0.449	0.593	0.773
500,000	12.340	5.542	2.894	1.634	0.960	0.573	0.339	0.195	0.108	0.060	0.040	0.041	0.061	0.097	0.150	0.222	0.314	0.431	0.578	0.764

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 100,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.934	0.936	0.939	0.943	0.944	0.947	0.950	0.953	0.957	0.960	0.956	0.960	0.971	0.974	0.978	0.981	0.982	0.985	0.984	0.991
2,000	0.947	0.952	0.954	0.952	0.956	0.960	0.960	0.962	0.966	0.968	0.969	0.973	0.975	0.976	0.980	0.983	0.985	0.990	0.991	0.993
3,000	0.871	0.875	0.866	0.871	0.877	0.894	0.899	0.905	0.911	0.917	0.923	0.929	0.935	0.943	0.946	0.958	0.968	0.973	0.984	0.991
4,000	0.765	0.773	0.779	0.789	0.797	0.807	0.816	0.826	0.823	0.847	0.858	0.870	0.882	0.908	0.907	0.932	0.925	0.957	0.969	0.982
5,000	0.670	0.681	0.692	0.703	0.715	0.728	0.741	0.754	0.750	0.784	0.799	0.816	0.833	0.839	0.869	0.882	0.902	0.941	0.959	0.978
6,000	0.669	0.679	0.690	0.701	0.739	0.725	0.738	0.751	0.765	0.780	0.796	0.812	0.829	0.863	0.880	0.898	0.924	0.942	0.958	0.973
7,000	0.676	0.621	0.701	0.714	0.728	0.683	0.700	0.770	0.785	0.748	0.773	0.792	0.848	0.865	0.855	0.871	0.923	0.941	0.957	0.975
8,000	0.644	0.657	0.670	0.685	0.699	0.714	0.729	0.744	0.761	0.777	0.794	0.812	0.830	0.849	0.867	0.888	0.908	0.932	0.953	0.981
9,000	0.650	0.663	0.680	0.690	0.705	0.713	0.729	0.744	0.738	0.781	0.799	0.815	0.833	0.852	0.871	0.888	0.904	0.927	0.950	0.975
10,000	0.639	0.652	0.666	0.680	0.695	0.710	0.725	0.741	0.757	0.774	0.791	0.811	0.829	0.846	0.866	0.878	0.907	0.924	0.952	0.973
11,000	0.652	0.661	0.674	0.692	0.706	0.720	0.732	0.747	0.766	0.782	0.799	0.816	0.831	0.854	0.873	0.892	0.912	0.933	0.954	0.976
12,000	0.637	0.651	0.673	0.687	0.701	0.715	0.723	0.745	0.761	0.778	0.800	0.812	0.830	0.852	0.871	0.887	0.908	0.928	0.952	0.976
13,000	0.647	0.660	0.673	0.687	0.701	0.715	0.730	0.745	0.761	0.777	0.794	0.811	0.829	0.848	0.867	0.883	0.905	0.927	0.950	0.974
14,000	0.638	0.651	0.665	0.678	0.692	0.708	0.723	0.738	0.754	0.771	0.788	0.805	0.824	0.843	0.863	0.883	0.904	0.927	0.950	0.974
15,000	0.644	0.657	0.672	0.686	0.698	0.713	0.728	0.744	0.760	0.776	0.792	0.810	0.828	0.847	0.864	0.885	0.906	0.928	0.951	0.973
16,000	0.636	0.650	0.663	0.677	0.691	0.706	0.721	0.737	0.753	0.769	0.787	0.804	0.823	0.842	0.862	0.882	0.904	0.926	0.950	0.973
17,000	0.622	0.635	0.649	0.663	0.678	0.694	0.709	0.725	0.743	0.759	0.777	0.796	0.815	0.834	0.856	0.879	0.899	0.924	0.948	0.973
18,000	0.621	0.635	0.649	0.663	0.678	0.693	0.709	0.725	0.741	0.758	0.776	0.794	0.814	0.833	0.854	0.876	0.898	0.922	0.945	0.973
19,000	0.609	0.622	0.636	0.653	0.670	0.688	0.701	0.720	0.736	0.754	0.771	0.791	0.810	0.829	0.851	0.872	0.896	0.920	0.945	0.972
20,000	0.609	0.622	0.636	0.651	0.665	0.681	0.697	0.713	0.730	0.746	0.766	0.784	0.805	0.826	0.846	0.867	0.892	0.919	0.945	0.971
21,000	0.597	0.611	0.625	0.640	0.655	0.670	0.687	0.704	0.721	0.739	0.758	0.777	0.798	0.819	0.841	0.864	0.889	0.914	0.941	0.971
22,000	0.595	0.607	0.621	0.636	0.651	0.667	0.683	0.700	0.718	0.735	0.755	0.775	0.794	0.816	0.839	0.862	0.886	0.913	0.940	0.970
23,000	0.572	0.613	0.600	0.616	0.631	0.647	0.664	0.682	0.700	0.740	0.757	0.782	0.802	0.822	0.828	0.853	0.879	0.912	0.939	0.968
24,000	0.565	0.579	0.593	0.608	0.624	0.641	0.658	0.676	0.694	0.713	0.734	0.754	0.776	0.801	0.825	0.850	0.877	0.905	0.935	0.968
25,000	0.554	0.568	0.583	0.598	0.614	0.631	0.648	0.666	0.685	0.705	0.725	0.747	0.769	0.793	0.818	0.844	0.873	0.901	0.932	0.966
30,000	0.126	0.145	0.166	0.189	0.213	0.240	0.268	0.298	0.331	0.366	0.404	0.444	0.488	0.535	0.586	0.641	0.859	0.763	0.925	0.915
40,000	0.103	0.119	0.137	0.156	0.178	0.202	0.228	0.256	0.287	0.321	0.358	0.398	0.442	0.490	0.543	0.601	0.665	0.736	0.813	0.901
50,000	0.041	0.112	0.064	0.140	0.086	0.121	0.136	0.177	0.192	0.239	0.323	0.320	0.367	0.419	0.480	0.544	0.615	0.695	0.789	0.889
60,000	0.028	0.032	0.040	0.054	0.078	0.091	0.113	0.142	0.172	0.203	0.237	0.287	0.360	0.411	0.464	0.508	0.588	0.668	0.777	0.889
70,000	0.063	0.056	0.056	0.062	0.072	0.088	0.107	0.131	0.158	0.190	0.226	0.267	0.314	0.366	0.425	0.492	0.568	0.655	0.754	0.868
80,000	0.091	0.071	0.061	0.060	0.065	0.076	0.092	0.112	0.138	0.168	0.202	0.242	0.288	0.340	0.400	0.468	0.546	0.636	0.739	0.861
90,000	0.120	0.095	0.084	0.081	0.087	0.099	0.116	0.137	0.164	0.194	0.230	0.270	0.313	0.366	0.422	0.487	0.565	0.649	0.748	0.865
100,000	0.146	0.101	0.075	0.062	0.059	0.064	0.076	0.094	0.117	0.146	0.180	0.219	0.264	0.317	0.376	0.445	0.525	0.617	0.724	0.853
150,000	0.597	0.390	0.259	0.176	0.124	0.095	0.081	0.080	0.089	0.107	0.132	0.165	0.205	0.254	0.313	0.383	0.465	0.564	0.683	0.826
200,000	1.184	0.712	0.436	0.268	0.164	0.100	0.064	0.046	0.044	0.053	0.072	0.101	0.139	0.187	0.246	0.318	0.406	0.512	0.642	0.802
250,000	1.985	1.133	0.673	0.407	0.247	0.148	0.090	0.057	0.044	0.045	0.059	0.083	0.118	0.163	0.221	0.292	0.381	0.489	0.623	0.790
300,000	2.980	1.632	0.956	0.580	0.359	0.223	0.141	0.091	0.065	0.057	0.063	0.081	0.110	0.152	0.206	0.275	0.362	0.471	0.607	0.781
400,000	4.418	2.250	1.265	0.752	0.461	0.287	0.180	0.115	0.078	0.061	0.060	0.072	0.097	0.134	0.186	0.253	0.338	0.448	0.588	0.768
500,000	6.046	2.871	1.553	0.904	0.548	0.339	0.213	0.135	0.090	0.067	0.061	0.071	0.093	0.128	0.177	0.243	0.328	0.438	0.579	0.762

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 200,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.746	0.757	0.769	0.781	0.792	0.803	0.815	0.827	0.840	0.851	0.864	0.877	0.890	0.903	0.916	0.930	0.946	0.959	0.974	0.987
2,000	0.655	0.678	0.692	0.705	0.720	0.735	0.750	0.767	0.777	0.793	0.811	0.829	0.846	0.864	0.881	0.900	0.919	0.940	0.960	0.980
3,000	0.578	0.595	0.615	0.630	0.648	0.668	0.688	0.705	0.724	0.746	0.765	0.784	0.809	0.831	0.855	0.876	0.900	0.924	0.949	0.976
4,000	0.534	0.555	0.571	0.586	0.607	0.630	0.652	0.671	0.691	0.714	0.736	0.762	0.784	0.808	0.833	0.860	0.889	0.914	0.942	0.970
5,000	0.495	0.513	0.533	0.553	0.573	0.596	0.618	0.636	0.662	0.686	0.708	0.737	0.762	0.788	0.814	0.844	0.873	0.904	0.934	0.967
6,000	0.438	0.465	0.479	0.507	0.523	0.552	0.570	0.600	0.620	0.651	0.679	0.706	0.731	0.764	0.800	0.825	0.861	0.892	0.929	0.964
7,000	0.405	0.426	0.448	0.471	0.494	0.519	0.544	0.570	0.597	0.624	0.652	0.682	0.712	0.745	0.776	0.810	0.846	0.883	0.922	0.960
8,000	0.365	0.386	0.409	0.433	0.460	0.482	0.509	0.537	0.564	0.595	0.629	0.656	0.693	0.727	0.758	0.797	0.833	0.874	0.916	0.957
9,000	0.346	0.368	0.391	0.416	0.441	0.466	0.493	0.520	0.550	0.580	0.611	0.643	0.677	0.712	0.748	0.785	0.826	0.865	0.910	0.954
10,000	0.331	0.349	0.373	0.398	0.422	0.450	0.477	0.504	0.534	0.567	0.598	0.630	0.664	0.700	0.738	0.778	0.818	0.860	0.905	0.951
11,000	0.302	0.325	0.348	0.374	0.399	0.425	0.453	0.483	0.514	0.544	0.578	0.611	0.649	0.686	0.728	0.766	0.810	0.852	0.901	0.948
12,000	0.282	0.306	0.330	0.353	0.382	0.406	0.439	0.466	0.495	0.528	0.561	0.596	0.633	0.671	0.712	0.756	0.799	0.846	0.894	0.946
13,000	0.259	0.282	0.315	0.333	0.357	0.394	0.417	0.445	0.483	0.512	0.546	0.584	0.623	0.659	0.704	0.749	0.793	0.841	0.891	0.944
14,000	0.244	0.267	0.291	0.316	0.343	0.371	0.401	0.432	0.464	0.497	0.533	0.570	0.610	0.649	0.693	0.737	0.785	0.834	0.887	0.942
15,000	0.228	0.249	0.271	0.299	0.326	0.355	0.378	0.411	0.444	0.477	0.517	0.555	0.595	0.640	0.683	0.729	0.779	0.828	0.881	0.940
16,000	0.214	0.237	0.260	0.288	0.315	0.343	0.372	0.401	0.433	0.471	0.509	0.547	0.585	0.625	0.670	0.718	0.771	0.826	0.879	0.938
17,000	0.193	0.219	0.243	0.271	0.297	0.326	0.356	0.384	0.418	0.456	0.492	0.530	0.579	0.622	0.664	0.713	0.763	0.818	0.877	0.936
18,000	0.178	0.201	0.225	0.251	0.278	0.307	0.338	0.371	0.404	0.442	0.480	0.519	0.562	0.606	0.654	0.704	0.757	0.812	0.872	0.934
19,000	0.166	0.188	0.215	0.238	0.266	0.295	0.327	0.360	0.393	0.430	0.469	0.509	0.554	0.597	0.646	0.697	0.749	0.808	0.868	0.933
20,000	0.154	0.174	0.198	0.226	0.253	0.281	0.313	0.346	0.380	0.417	0.457	0.500	0.541	0.587	0.638	0.687	0.743	0.802	0.864	0.930
21,000	0.141	0.166	0.186	0.212	0.243	0.268	0.299	0.335	0.367	0.404	0.446	0.489	0.530	0.579	0.628	0.679	0.738	0.796	0.861	0.928
22,000	0.145	0.167	0.190	0.216	0.243	0.271	0.302	0.335	0.369	0.406	0.435	0.477	0.522	0.571	0.618	0.674	0.734	0.791	0.858	0.926
23,000	0.140	0.163	0.187	0.213	0.239	0.269	0.299	0.333	0.368	0.404	0.443	0.484	0.529	0.576	0.626	0.679	0.725	0.794	0.859	0.925
24,000	0.126	0.148	0.173	0.197	0.226	0.256	0.288	0.320	0.355	0.393	0.432	0.474	0.521	0.569	0.618	0.672	0.729	0.790	0.856	0.924
25,000	0.115	0.136	0.160	0.185	0.212	0.241	0.272	0.306	0.340	0.379	0.418	0.461	0.507	0.556	0.607	0.663	0.722	0.784	0.852	0.921
30,000	0.085	0.104	0.126	0.151	0.178	0.207	0.238	0.271	0.307	0.345	0.386	0.430	0.476	0.527	0.579	0.638	0.700	0.764	0.838	0.916
40,000	0.029	0.044	0.061	0.082	0.106	0.133	0.162	0.195	0.232	0.269	0.312	0.359	0.408	0.463	0.521	0.587	0.654	0.730	0.812	0.902
50,000	0.016	0.020	0.035	0.051	0.068	0.092	0.123	0.154	0.184	0.226	0.268	0.314	0.368	0.425	0.486	0.550	0.624	0.705	0.794	0.892
60,000	0.017	0.015	0.019	0.029	0.047	0.068	0.093	0.122	0.155	0.191	0.237	0.281	0.335	0.390	0.455	0.526	0.602	0.688	0.781	0.885
70,000	0.031	0.016	0.008	0.013	0.024	0.039	0.060	0.087	0.120	0.157	0.198	0.245	0.298	0.359	0.422	0.495	0.575	0.663	0.763	0.876
80,000	0.073	0.035	0.014	0.004	0.004	0.012	0.028	0.050	0.080	0.115	0.155	0.202	0.255	0.314	0.380	0.457	0.541	0.636	0.742	0.864
90,000	0.120	0.064	0.029	0.009	0.001	0.005	0.017	0.036	0.062	0.096	0.135	0.183	0.234	0.294	0.364	0.440	0.527	0.624	0.734	0.858
100,000	0.209	0.124	0.066	0.029	0.009	0.002	0.007	0.021	0.043	0.072	0.110	0.154	0.206	0.266	0.335	0.413	0.502	0.603	0.719	0.850
150,000	0.849	0.534	0.329	0.194	0.107	0.054	0.025	0.015	0.019	0.036	0.064	0.101	0.148	0.205	0.274	0.352	0.445	0.554	0.680	0.827
200,000	1.907	1.167	0.717	0.421	0.254	0.139	0.070	0.028	0.015	0.020	0.038	0.070	0.114	0.167	0.234	0.315	0.410	0.525	0.653	0.813
250,000	3.674	2.247	1.387	0.874	0.551	0.344	0.213	0.129	0.080	0.058	0.056	0.072	0.102	0.147	0.207	0.283	0.375	0.489	0.628	0.797
300,000	5.356	3.079	1.866	1.166	0.737	0.470	0.297	0.188	0.121	0.085	0.074	0.081	0.106	0.146	0.203	0.273	0.364	0.481	0.618	0.790
400,000	8.184	4.404	2.561	1.560	0.974	0.614	0.388	0.244	0.154	0.103	0.081	0.081	0.100	0.136	0.190	0.261	0.353	0.467	0.608	0.783
500,000	10.928	5.553	3.117	1.853	1.139	0.711	0.444	0.277	0.173	0.113	0.084	0.079	0.095	0.130	0.182	0.253	0.344	0.459	0.602	0.779

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 300,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.752	0.758	0.769	0.787	0.795	0.806	0.815	0.829	0.840	0.854	0.863	0.877	0.890	0.904	0.917	0.932	0.944	0.959	0.972	0.985
2,000	0.669	0.682	0.696	0.710	0.725	0.739	0.753	0.764	0.780	0.796	0.811	0.828	0.846	0.865	0.881	0.900	0.918	0.938	0.958	0.979
3,000	0.608	0.621	0.637	0.651	0.670	0.688	0.705	0.721	0.738	0.761	0.781	0.801	0.819	0.838	0.860	0.882	0.903	0.928	0.950	0.975
4,000	0.545	0.551	0.578	0.586	0.610	0.626	0.642	0.670	0.693	0.710	0.732	0.755	0.779	0.809	0.829	0.856	0.885	0.912	0.941	0.971
5,000	0.504	0.521	0.539	0.554	0.576	0.598	0.618	0.636	0.660	0.686	0.709	0.731	0.760	0.791	0.813	0.843	0.870	0.902	0.934	0.966
6,000	0.482	0.500	0.522	0.543	0.558	0.578	0.603	0.625	0.650	0.668	0.696	0.722	0.747	0.775	0.802	0.835	0.863	0.895	0.928	0.964
7,000	0.452	0.469	0.487	0.508	0.528	0.550	0.572	0.596	0.621	0.646	0.674	0.699	0.729	0.757	0.789	0.819	0.855	0.887	0.924	0.960
8,000	0.416	0.431	0.448	0.476	0.498	0.516	0.539	0.566	0.590	0.616	0.644	0.676	0.703	0.740	0.768	0.804	0.839	0.877	0.916	0.958
9,000	0.396	0.415	0.435	0.456	0.478	0.501	0.525	0.549	0.575	0.603	0.631	0.661	0.692	0.724	0.758	0.796	0.831	0.869	0.910	0.955
10,000	0.376	0.411	0.431	0.438	0.474	0.496	0.519	0.532	0.571	0.597	0.626	0.656	0.688	0.714	0.754	0.792	0.826	0.865	0.910	0.951
11,000	0.388	0.411	0.418	0.459	0.469	0.486	0.517	0.540	0.568	0.565	0.624	0.658	0.687	0.703	0.746	0.789	0.815	0.858	0.908	0.953
12,000	0.376	0.395	0.414	0.441	0.455	0.473	0.503	0.528	0.558	0.580	0.606	0.641	0.670	0.710	0.742	0.784	0.823	0.860	0.907	0.952
13,000	0.338	0.343	0.363	0.398	0.420	0.431	0.457	0.494	0.521	0.550	0.572	0.613	0.647	0.683	0.715	0.755	0.803	0.849	0.901	0.947
14,000	0.301	0.340	0.360	0.363	0.404	0.429	0.454	0.464	0.505	0.535	0.553	0.586	0.634	0.667	0.703	0.754	0.789	0.836	0.888	0.945
15,000	0.318	0.337	0.357	0.382	0.405	0.428	0.453	0.477	0.505	0.534	0.565	0.598	0.633	0.668	0.707	0.746	0.786	0.836	0.885	0.943
16,000	0.315	0.341	0.353	0.374	0.403	0.420	0.444	0.477	0.499	0.528	0.559	0.593	0.628	0.665	0.695	0.741	0.785	0.839	0.885	0.943
17,000	0.303	0.321	0.347	0.369	0.383	0.413	0.439	0.459	0.492	0.523	0.548	0.582	0.622	0.661	0.691	0.743	0.788	0.837	0.885	0.943
18,000	0.280	0.297	0.318	0.339	0.361	0.385	0.410	0.438	0.466	0.497	0.529	0.562	0.613	0.650	0.692	0.735	0.776	0.824	0.880	0.942
19,000	0.261	0.262	0.297	0.305	0.342	0.352	0.392	0.409	0.451	0.471	0.514	0.542	0.587	0.624	0.672	0.711	0.768	0.816	0.871	0.938
20,000	0.242	0.261	0.281	0.302	0.325	0.350	0.376	0.404	0.434	0.466	0.500	0.536	0.575	0.617	0.660	0.708	0.753	0.810	0.873	0.932
21,000	0.245	0.263	0.282	0.303	0.326	0.350	0.376	0.404	0.433	0.465	0.500	0.535	0.573	0.609	0.659	0.706	0.753	0.808	0.867	0.930
22,000	0.220	0.235	0.258	0.279	0.302	0.326	0.353	0.381	0.411	0.444	0.479	0.516	0.559	0.601	0.646	0.695	0.747	0.805	0.864	0.928
23,000	0.203	0.221	0.241	0.262	0.286	0.309	0.338	0.367	0.398	0.431	0.469	0.507	0.545	0.588	0.635	0.685	0.741	0.800	0.861	0.926
24,000	0.191	0.209	0.229	0.251	0.275	0.300	0.327	0.357	0.387	0.421	0.456	0.495	0.537	0.580	0.628	0.679	0.734	0.793	0.857	0.926
25,000	0.185	0.203	0.223	0.244	0.268	0.293	0.320	0.349	0.380	0.413	0.449	0.488	0.529	0.574	0.622	0.673	0.729	0.789	0.854	0.924
30,000	0.125	0.141	0.160	0.181	0.204	0.229	0.263	0.286	0.319	0.354	0.391	0.433	0.483	0.531	0.582	0.638	0.696	0.760	0.836	0.913
40,000	0.044	0.054	0.068	0.085	0.105	0.128	0.155	0.184	0.217	0.260	0.294	0.339	0.388	0.450	0.500	0.571	0.647	0.723	0.804	0.899
50,000	0.031	0.032	0.039	0.050	0.065	0.084	0.108	0.135	0.166	0.202	0.242	0.287	0.336	0.392	0.453	0.520	0.596	0.682	0.776	0.882
60,000	0.056	0.046	0.043	0.046	0.055	0.069	0.088	0.112	0.141	0.174	0.213	0.256	0.303	0.362	0.424	0.495	0.573	0.661	0.760	0.869
70,000	0.088	0.061	0.044	0.036	0.036	0.044	0.057	0.077	0.103	0.134	0.171	0.214	0.264	0.321	0.385	0.459	0.542	0.635	0.739	0.862
80,000	0.127	0.085	0.057	0.040	0.033	0.035	0.044	0.060	0.083	0.112	0.148	0.190	0.239	0.296	0.361	0.435	0.520	0.617	0.727	0.854
90,000	0.178	0.111	0.063	0.032	0.013	0.006	0.008	0.019	0.037	0.063	0.097	0.139	0.188	0.247	0.314	0.390	0.480	0.585	0.703	0.841
100,000	0.204	0.164	0.136	0.119	0.111	0.110	0.115	0.127	0.144	0.168	0.198	0.233	0.275	0.326	0.384	0.452	0.531	0.568	0.691	0.855
150,000	0.750	0.527	0.374	0.266	0.194	0.142	0.109	0.089	0.084	0.092	0.108	0.135	0.170	0.218	0.277	0.348	0.435	0.540	0.665	0.809
200,000	1.879	1.300	0.911	0.642	0.454	0.322	0.229	0.166	0.126	0.106	0.101	0.111	0.135	0.173	0.224	0.295	0.383	0.491	0.622	0.793
250,000	3.337	2.261	1.578	1.123	0.811	0.592	0.437	0.327	0.252	0.203	0.176	0.167	0.176	0.195	0.237	0.303	0.379	0.484	0.618	0.785
300,000	4.421	2.965	2.073	1.497	1.106	0.832	0.636	0.495	0.393	0.321	0.274	0.247	0.240	0.217	0.280	0.329	0.374	0.475	0.623	0.779
400,000	6.076	3.912	2.669	1.897	1.389	1.041	0.794	0.616	0.486	0.393	0.329	0.289	0.270	0.271	0.292	0.334	0.400	0.492	0.618	0.783
500,000	8.588	5.423	3.575	2.518	1.840	1.382	1.078	0.844	0.673	0.538	0.449	0.389	0.353	0.339	0.351	0.380	0.434	0.514	0.632	0.792

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 400,000																			
	Credibility																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.804	0.815	0.823	0.833	0.840	0.851	0.860	0.870	0.877	0.886	0.898	0.908	0.917	0.927	0.937	0.948	0.959	0.968	0.979	0.990
2,000	0.742	0.753	0.765	0.777	0.788	0.800	0.811	0.824	0.837	0.849	0.862	0.875	0.878	0.892	0.915	0.929	0.938	0.957	0.971	0.986
3,000	0.694	0.707	0.720	0.733	0.747	0.761	0.775	0.789	0.804	0.819	0.834	0.849	0.865	0.881	0.897	0.913	0.930	0.948	0.963	0.982
4,000	0.659	0.670	0.687	0.699	0.717	0.729	0.748	0.761	0.777	0.794	0.811	0.828	0.846	0.862	0.882	0.899	0.920	0.938	0.959	0.979
5,000	0.617	0.632	0.648	0.664	0.681	0.698	0.715	0.733	0.751	0.769	0.788	0.807	0.826	0.846	0.867	0.887	0.909	0.932	0.953	0.976
6,000	0.589	0.607	0.622	0.639	0.656	0.675	0.693	0.711	0.730	0.750	0.770	0.790	0.811	0.833	0.853	0.878	0.902	0.924	0.949	0.974
7,000	0.557	0.574	0.592	0.610	0.629	0.648	0.667	0.688	0.708	0.729	0.750	0.773	0.793	0.818	0.840	0.867	0.892	0.918	0.944	0.972
8,000	0.526	0.544	0.563	0.582	0.602	0.622	0.643	0.664	0.686	0.708	0.734	0.757	0.779	0.806	0.831	0.856	0.884	0.912	0.940	0.970
9,000	0.499	0.518	0.538	0.557	0.578	0.599	0.621	0.643	0.666	0.689	0.713	0.738	0.764	0.790	0.818	0.846	0.875	0.905	0.936	0.967
10,000	0.479	0.499	0.517	0.539	0.558	0.582	0.602	0.627	0.649	0.674	0.700	0.725	0.752	0.780	0.808	0.838	0.868	0.899	0.931	0.965
11,000	0.459	0.479	0.500	0.519	0.541	0.563	0.587	0.611	0.635	0.660	0.686	0.713	0.741	0.769	0.799	0.830	0.861	0.894	0.928	0.964
12,000	0.446	0.466	0.487	0.508	0.530	0.553	0.576	0.600	0.626	0.652	0.677	0.705	0.733	0.763	0.793	0.825	0.857	0.891	0.926	0.962
13,000	0.436	0.457	0.477	0.499	0.521	0.540	0.564	0.592	0.614	0.643	0.670	0.695	0.724	0.757	0.788	0.818	0.852	0.887	0.923	0.961
14,000	0.420	0.441	0.462	0.484	0.506	0.529	0.554	0.579	0.605	0.631	0.659	0.687	0.717	0.748	0.781	0.813	0.848	0.882	0.920	0.959
15,000	0.405	0.426	0.447	0.469	0.492	0.516	0.541	0.566	0.592	0.620	0.648	0.677	0.708	0.739	0.772	0.807	0.842	0.879	0.918	0.957
16,000	0.388	0.410	0.431	0.454	0.477	0.502	0.527	0.553	0.579	0.607	0.636	0.667	0.698	0.730	0.764	0.799	0.837	0.875	0.915	0.956
17,000	0.369	0.390	0.412	0.436	0.459	0.484	0.510	0.536	0.564	0.593	0.623	0.654	0.685	0.720	0.755	0.793	0.829	0.871	0.912	0.955
18,000	0.354	0.371	0.399	0.422	0.441	0.471	0.497	0.520	0.552	0.582	0.609	0.644	0.676	0.711	0.747	0.785	0.824	0.865	0.909	0.953
19,000	0.333	0.359	0.382	0.405	0.430	0.455	0.479	0.510	0.538	0.568	0.599	0.632	0.666	0.701	0.738	0.777	0.817	0.860	0.905	0.951
20,000	0.316	0.339	0.362	0.386	0.411	0.437	0.464	0.493	0.528	0.558	0.590	0.623	0.657	0.694	0.731	0.771	0.813	0.856	0.902	0.950
21,000	0.306	0.328	0.351	0.376	0.401	0.427	0.455	0.483	0.513	0.544	0.577	0.610	0.648	0.685	0.725	0.763	0.806	0.850	0.899	0.948
22,000	0.294	0.316	0.339	0.364	0.390	0.416	0.443	0.473	0.503	0.534	0.567	0.602	0.638	0.678	0.715	0.757	0.801	0.847	0.895	0.946
23,000	0.283	0.306	0.329	0.354	0.380	0.406	0.434	0.463	0.494	0.526	0.559	0.594	0.631	0.669	0.710	0.752	0.796	0.843	0.893	0.945
24,000	0.273	0.296	0.319	0.344	0.370	0.397	0.425	0.454	0.485	0.517	0.551	0.586	0.621	0.662	0.703	0.745	0.792	0.839	0.890	0.943
25,000	0.293	0.315	0.338	0.361	0.386	0.412	0.439	0.467	0.497	0.528	0.560	0.595	0.631	0.669	0.709	0.751	0.795	0.843	0.887	0.945
30,000	0.255	0.276	0.300	0.324	0.349	0.376	0.402	0.432	0.462	0.495	0.527	0.564	0.603	0.642	0.684	0.732	0.777	0.829	0.882	0.939
40,000	0.187	0.208	0.231	0.257	0.280	0.309	0.336	0.367	0.400	0.433	0.469	0.508	0.548	0.592	0.639	0.689	0.743	0.800	0.862	0.929
50,000	0.148	0.166	0.191	0.212	0.239	0.264	0.295	0.324	0.358	0.391	0.430	0.468	0.511	0.559	0.608	0.662	0.718	0.779	0.847	0.920
60,000	0.113	0.132	0.152	0.173	0.197	0.223	0.250	0.280	0.313	0.347	0.385	0.426	0.470	0.518	0.570	0.628	0.688	0.760	0.833	0.912
70,000	0.109	0.126	0.144	0.164	0.186	0.209	0.235	0.264	0.295	0.330	0.368	0.407	0.452	0.501	0.554	0.611	0.675	0.749	0.824	0.907
80,000	0.099	0.113	0.129	0.147	0.168	0.191	0.217	0.245	0.276	0.311	0.348	0.387	0.432	0.480	0.538	0.596	0.658	0.731	0.813	0.900
90,000	0.096	0.107	0.121	0.138	0.157	0.179	0.203	0.230	0.261	0.294	0.331	0.371	0.416	0.465	0.520	0.580	0.647	0.721	0.804	0.896
100,000	0.020	0.018	0.023	0.034	0.049	0.069	0.094	0.122	0.155	0.192	0.233	0.278	0.329	0.385	0.448	0.517	0.594	0.680	0.774	0.892
150,000	0.121	0.072	0.042	0.027	0.025	0.031	0.046	0.067	0.095	0.128	0.167	0.213	0.264	0.322	0.387	0.461	0.544	0.637	0.740	0.863
200,000	0.296	0.181	0.109	0.065	0.042	0.034	0.038	0.052	0.074	0.104	0.140	0.183	0.233	0.291	0.356	0.431	0.518	0.615	0.726	0.853
250,000	0.512	0.325	0.208	0.134	0.091	0.069	0.063	0.069	0.085	0.109	0.141	0.181	0.229	0.284	0.348	0.422	0.507	0.605	0.713	0.846
300,000	1.039	0.658	0.417	0.264	0.167	0.108	0.076	0.064	0.068	0.084	0.111	0.148	0.194	0.250	0.316	0.394	0.482	0.583	0.702	0.839
400,000	1.472	0.917	0.577	0.365	0.232	0.150	0.104	0.082	0.079	0.091	0.115	0.150	0.194	0.249	0.314	0.389	0.478	0.580	0.699	0.838
500,000	1.873	1.143	0.708	0.441	0.274	0.172	0.112	0.082	0.073	0.081	0.102	0.136	0.179	0.234	0.299	0.376	0.466	0.570	0.692	0.834

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 500,000																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.737	0.748	0.761	0.773	0.784	0.797	0.809	0.821	0.834	0.847	0.872	0.874	0.887	0.909	0.914	0.920	0.942	0.962	0.973	0.988
2,000	0.645	0.652	0.667	0.690	0.699	0.715	0.738	0.742	0.775	0.788	0.805	0.823	0.841	0.860	0.879	0.900	0.915	0.943	0.952	0.985
3,000	0.568	0.589	0.603	0.625	0.642	0.660	0.681	0.700	0.721	0.740	0.770	0.782	0.812	0.828	0.858	0.874	0.898	0.922	0.950	0.976
4,000	0.552	0.569	0.587	0.605	0.623	0.642	0.662	0.682	0.702	0.724	0.746	0.763	0.787	0.815	0.839	0.862	0.887	0.914	0.944	0.970
5,000	0.473	0.493	0.513	0.534	0.557	0.596	0.602	0.624	0.648	0.687	0.711	0.734	0.752	0.780	0.817	0.846	0.874	0.904	0.942	0.968
6,000	0.463	0.484	0.504	0.504	0.547	0.550	0.593	0.617	0.625	0.666	0.678	0.706	0.735	0.765	0.805	0.827	0.858	0.890	0.932	0.966
7,000	0.452	0.472	0.493	0.514	0.536	0.559	0.586	0.607	0.632	0.660	0.684	0.714	0.737	0.769	0.800	0.824	0.861	0.884	0.931	0.963
8,000	0.409	0.430	0.452	0.475	0.498	0.522	0.547	0.573	0.600	0.627	0.655	0.685	0.715	0.747	0.779	0.816	0.852	0.883	0.921	0.963
9,000	0.382	0.405	0.427	0.449	0.473	0.500	0.525	0.552	0.578	0.608	0.638	0.668	0.700	0.732	0.767	0.802	0.839	0.877	0.917	0.960
10,000	0.361	0.383	0.405	0.429	0.454	0.479	0.505	0.533	0.561	0.591	0.621	0.653	0.686	0.719	0.756	0.793	0.831	0.871	0.912	0.958
11,000	0.320	0.343	0.367	0.391	0.417	0.444	0.471	0.500	0.530	0.561	0.594	0.627	0.662	0.699	0.745	0.776	0.818	0.865	0.908	0.956
12,000	0.299	0.322	0.346	0.371	0.397	0.424	0.452	0.482	0.512	0.544	0.578	0.613	0.649	0.694	0.725	0.772	0.810	0.857	0.904	0.951
13,000	0.302	0.324	0.352	0.372	0.402	0.425	0.456	0.485	0.512	0.547	0.577	0.614	0.648	0.687	0.726	0.767	0.810	0.852	0.899	0.949
14,000	0.294	0.308	0.340	0.364	0.382	0.409	0.445	0.467	0.498	0.540	0.564	0.602	0.641	0.675	0.717	0.759	0.802	0.849	0.897	0.947
15,000	0.279	0.301	0.325	0.349	0.375	0.402	0.431	0.461	0.492	0.527	0.558	0.594	0.631	0.670	0.711	0.755	0.795	0.843	0.894	0.945
16,000	0.265	0.287	0.311	0.335	0.385	0.412	0.418	0.463	0.480	0.512	0.564	0.599	0.621	0.661	0.702	0.748	0.793	0.847	0.891	0.944
17,000	0.299	0.320	0.343	0.366	0.391	0.417	0.444	0.472	0.502	0.534	0.554	0.601	0.626	0.676	0.716	0.750	0.801	0.842	0.888	0.942
18,000	0.287	0.308	0.331	0.354	0.379	0.405	0.433	0.462	0.492	0.524	0.557	0.592	0.629	0.668	0.708	0.751	0.796	0.843	0.888	0.941
19,000	0.276	0.297	0.319	0.343	0.368	0.394	0.422	0.451	0.482	0.514	0.548	0.584	0.621	0.660	0.702	0.745	0.791	0.839	0.890	0.939
20,000	0.227	0.249	0.272	0.296	0.323	0.350	0.380	0.410	0.443	0.477	0.513	0.551	0.591	0.634	0.678	0.725	0.774	0.826	0.888	0.935
21,000	0.217	0.239	0.261	0.286	0.312	0.340	0.369	0.400	0.433	0.468	0.504	0.543	0.584	0.626	0.671	0.719	0.769	0.822	0.878	0.936
22,000	0.207	0.229	0.252	0.276	0.302	0.330	0.359	0.391	0.424	0.459	0.496	0.535	0.576	0.619	0.665	0.713	0.764	0.818	0.876	0.934
23,000	0.198	0.219	0.242	0.266	0.292	0.320	0.350	0.382	0.415	0.450	0.487	0.527	0.568	0.612	0.659	0.708	0.760	0.815	0.873	0.935
24,000	0.190	0.211	0.233	0.258	0.284	0.312	0.341	0.373	0.406	0.442	0.479	0.519	0.561	0.606	0.653	0.702	0.755	0.811	0.871	0.933
25,000	0.176	0.196	0.219	0.243	0.269	0.313	0.342	0.374	0.407	0.443	0.480	0.520	0.555	0.598	0.641	0.704	0.754	0.812	0.868	0.933
30,000	0.143	0.162	0.183	0.206	0.231	0.259	0.289	0.321	0.356	0.393	0.432	0.474	0.519	0.567	0.617	0.671	0.729	0.790	0.855	0.925
40,000	0.092	0.101	0.115	0.132	0.153	0.177	0.205	0.236	0.270	0.308	0.347	0.392	0.442	0.494	0.550	0.611	0.676	0.748	0.825	0.909
50,000	0.073	0.075	0.083	0.096	0.114	0.135	0.161	0.191	0.224	0.262	0.304	0.349	0.400	0.464	0.514	0.579	0.648	0.726	0.810	0.901
60,000	0.101	0.097	0.099	0.107	0.111	0.130	0.153	0.180	0.212	0.248	0.289	0.334	0.391	0.445	0.504	0.563	0.634	0.714	0.801	0.896
70,000	0.042	0.042	0.049	0.061	0.078	0.100	0.125	0.155	0.189	0.238	0.276	0.319	0.368	0.422	0.482	0.543	0.624	0.706	0.795	0.891
80,000	0.059	0.049	0.047	0.053	0.065	0.082	0.105	0.132	0.164	0.201	0.243	0.289	0.341	0.398	0.461	0.533	0.610	0.693	0.786	0.887
90,000	0.078	0.059	0.050	0.050	0.072	0.089	0.112	0.139	0.149	0.185	0.226	0.273	0.324	0.382	0.446	0.531	0.594	0.681	0.778	0.882
100,000	0.094	0.063	0.047	0.040	0.045	0.057	0.075	0.102	0.130	0.166	0.208	0.254	0.307	0.366	0.431	0.503	0.583	0.672	0.770	0.879
150,000	0.265	0.161	0.094	0.054	0.048	0.028	0.034	0.068	0.093	0.110	0.150	0.212	0.265	0.325	0.381	0.468	0.552	0.646	0.747	0.869
200,000	0.706	0.443	0.479	0.160	0.184	0.050	0.032	0.031	0.044	0.063	0.104	0.148	0.201	0.263	0.314	0.415	0.506	0.610	0.724	0.854
250,000	1.818	1.159	0.735	0.458	0.277	0.160	0.089	0.051	0.039	0.046	0.069	0.106	0.156	0.217	0.289	0.373	0.469	0.578	0.702	0.842
300,000	2.582	1.641	1.051	0.668	0.417	0.253	0.149	0.087	0.058	0.052	0.066	0.097	0.142	0.200	0.271	0.355	0.452	0.563	0.690	0.835
400,000	3.427	2.156	1.390	0.901	0.586	0.379	0.245	0.162	0.116	0.097	0.101	0.123	0.161	0.213	0.279	0.359	0.453	0.562	0.688	0.833
500,000	3.934	2.366	1.459	0.908	0.562	0.343	0.206	0.125	0.083	0.070	0.078	0.105	0.147	0.204	0.273	0.355	0.451	0.562	0.689	0.832

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = 1M																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.882	0.888	0.894	0.900	0.905	0.910	0.917	0.923	0.928	0.934	0.940	0.945	0.953	0.957	0.964	0.970	0.973	0.982	0.989	0.993
2,000	0.828	0.835	0.844	0.851	0.859	0.867	0.876	0.883	0.896	0.901	0.912	0.918	0.928	0.936	0.946	0.956	0.962	0.972	0.981	0.990
3,000	0.739	0.750	0.761	0.776	0.785	0.799	0.809	0.821	0.830	0.851	0.860	0.874	0.887	0.898	0.914	0.927	0.941	0.956	0.976	0.985
4,000	0.705	0.717	0.740	0.753	0.765	0.778	0.791	0.804	0.809	0.828	0.838	0.855	0.869	0.885	0.904	0.919	0.931	0.949	0.965	0.983
5,000	0.665	0.698	0.688	0.711	0.735	0.743	0.758	0.775	0.785	0.802	0.824	0.837	0.849	0.869	0.885	0.906	0.921	0.941	0.961	0.980
6,000	0.646	0.660	0.674	0.698	0.695	0.720	0.743	0.753	0.764	0.791	0.808	0.821	0.839	0.858	0.879	0.892	0.914	0.934	0.957	0.977
7,000	0.619	0.634	0.649	0.666	0.681	0.697	0.714	0.732	0.749	0.767	0.786	0.805	0.825	0.848	0.868	0.882	0.908	0.930	0.954	0.975
8,000	0.596	0.611	0.627	0.645	0.661	0.678	0.696	0.715	0.733	0.752	0.771	0.792	0.813	0.834	0.859	0.878	0.899	0.924	0.951	0.974
9,000	0.565	0.581	0.598	0.616	0.634	0.652	0.671	0.691	0.711	0.731	0.752	0.774	0.796	0.819	0.843	0.867	0.891	0.917	0.945	0.972
10,000	0.544	0.561	0.579	0.597	0.616	0.635	0.654	0.674	0.695	0.717	0.739	0.762	0.785	0.809	0.834	0.859	0.886	0.913	0.941	0.970
11,000	0.529	0.571	0.565	0.583	0.602	0.622	0.642	0.663	0.700	0.706	0.742	0.752	0.776	0.801	0.827	0.852	0.880	0.908	0.938	0.968
12,000	0.538	0.555	0.572	0.590	0.609	0.627	0.647	0.667	0.686	0.710	0.731	0.742	0.778	0.801	0.828	0.854	0.880	0.905	0.936	0.967
13,000	0.496	0.514	0.532	0.552	0.571	0.592	0.612	0.634	0.657	0.680	0.704	0.729	0.756	0.782	0.809	0.839	0.875	0.905	0.932	0.965
14,000	0.474	0.492	0.511	0.530	0.551	0.573	0.600	0.617	0.640	0.669	0.690	0.719	0.746	0.771	0.802	0.832	0.861	0.895	0.929	0.964
15,000	0.457	0.476	0.495	0.515	0.536	0.558	0.580	0.603	0.627	0.653	0.678	0.705	0.733	0.761	0.791	0.822	0.854	0.892	0.927	0.962
16,000	0.444	0.462	0.483	0.502	0.524	0.546	0.569	0.592	0.617	0.642	0.668	0.699	0.724	0.754	0.785	0.817	0.851	0.885	0.922	0.961
17,000	0.436	0.456	0.470	0.496	0.512	0.539	0.557	0.586	0.606	0.636	0.662	0.690	0.716	0.749	0.778	0.813	0.846	0.883	0.920	0.959
18,000	0.426	0.445	0.465	0.486	0.507	0.529	0.553	0.577	0.602	0.628	0.655	0.683	0.712	0.743	0.775	0.807	0.841	0.879	0.918	0.958
19,000	0.413	0.433	0.453	0.474	0.495	0.518	0.541	0.566	0.591	0.618	0.645	0.674	0.706	0.736	0.769	0.803	0.839	0.876	0.915	0.957
20,000	0.405	0.424	0.444	0.465	0.487	0.510	0.533	0.558	0.584	0.611	0.638	0.667	0.698	0.730	0.763	0.798	0.835	0.873	0.913	0.955
21,000	0.394	0.414	0.434	0.455	0.477	0.497	0.524	0.549	0.575	0.602	0.631	0.661	0.692	0.723	0.758	0.794	0.830	0.870	0.911	0.954
22,000	0.380	0.400	0.420	0.442	0.464	0.488	0.512	0.537	0.564	0.592	0.620	0.653	0.684	0.717	0.750	0.787	0.825	0.866	0.909	0.953
23,000	0.371	0.392	0.412	0.431	0.454	0.480	0.505	0.530	0.555	0.585	0.614	0.645	0.677	0.709	0.746	0.783	0.822	0.863	0.906	0.952
24,000	0.334	0.355	0.377	0.400	0.424	0.452	0.478	0.505	0.530	0.560	0.591	0.623	0.657	0.693	0.730	0.778	0.812	0.860	0.904	0.951
25,000	0.326	0.347	0.368	0.392	0.416	0.442	0.467	0.494	0.523	0.554	0.584	0.617	0.651	0.687	0.725	0.765	0.808	0.852	0.899	0.950
30,000	0.286	0.308	0.330	0.354	0.378	0.404	0.431	0.459	0.489	0.520	0.552	0.587	0.623	0.661	0.701	0.744	0.789	0.837	0.888	0.943
40,000	0.196	0.218	0.242	0.266	0.292	0.319	0.348	0.379	0.411	0.445	0.481	0.519	0.560	0.605	0.649	0.705	0.750	0.811	0.869	0.932
50,000	0.157	0.177	0.199	0.222	0.247	0.274	0.303	0.327	0.365	0.400	0.437	0.472	0.515	0.564	0.613	0.663	0.721	0.782	0.852	0.922
60,000	0.117	0.138	0.161	0.185	0.211	0.239	0.268	0.300	0.333	0.369	0.407	0.448	0.498	0.540	0.595	0.649	0.705	0.772	0.841	0.918
70,000	0.088	0.108	0.131	0.155	0.181	0.209	0.239	0.271	0.310	0.342	0.381	0.423	0.468	0.520	0.572	0.629	0.690	0.757	0.831	0.913
80,000	0.072	0.092	0.113	0.137	0.162	0.190	0.219	0.251	0.285	0.321	0.361	0.403	0.449	0.498	0.552	0.611	0.675	0.745	0.822	0.908
90,000	0.061	0.097	0.100	0.123	0.165	0.176	0.206	0.251	0.264	0.308	0.348	0.391	0.437	0.487	0.531	0.592	0.658	0.737	0.812	0.901
100,000	0.060	0.077	0.097	0.119	0.144	0.170	0.199	0.231	0.264	0.300	0.339	0.381	0.430	0.479	0.535	0.595	0.658	0.731	0.812	0.901
150,000	0.021	0.022	0.033	0.049	0.071	0.096	0.124	0.156	0.191	0.229	0.279	0.315	0.371	0.425	0.468	0.540	0.614	0.698	0.784	0.885
200,000	0.062	0.029	0.019	0.023	0.036	0.057	0.083	0.113	0.148	0.186	0.228	0.275	0.326	0.381	0.439	0.511	0.586	0.673	0.767	0.874
250,000	0.188	0.098	0.053	0.035	0.035	0.047	0.067	0.093	0.125	0.162	0.203	0.249	0.300	0.357	0.420	0.490	0.568	0.657	0.759	0.871
300,000	0.337	0.187	0.106	0.068	0.054	0.057	0.070	0.093	0.122	0.156	0.196	0.241	0.291	0.348	0.411	0.481	0.560	0.650	0.752	0.867
400,000	0.528	0.292	0.167	0.103	0.074	0.067	0.076	0.094	0.121	0.154	0.193	0.239	0.288	0.345	0.407	0.478	0.558	0.647	0.749	0.866
500,000	0.701	0.385	0.218	0.131	0.089	0.075	0.078	0.094	0.118	0.150	0.188	0.232	0.281	0.338	0.400	0.471	0.552	0.642	0.746	0.865

Bottom 5%

Optimal Split Point by Size of Risk – PY 2017

Exhibit 1

Split Point	Cohort = > 1M																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%
1,000	0.855	0.868	0.868	0.875	0.888	0.889	0.902	0.908	0.920	0.918	0.930	0.936	0.943	0.940	0.957	0.956	0.975	0.977	0.988	0.991
2,000	0.816	0.825	0.833	0.841	0.851	0.860	0.868	0.877	0.886	0.895	0.904	0.914	0.923	0.932	0.942	0.945	0.961	0.970	0.981	0.986
3,000	0.743	0.755	0.767	0.779	0.791	0.803	0.815	0.827	0.840	0.852	0.865	0.878	0.891	0.904	0.917	0.931	0.944	0.958	0.975	0.985
4,000	0.704	0.717	0.730	0.744	0.758	0.772	0.786	0.800	0.814	0.829	0.843	0.859	0.873	0.888	0.904	0.920	0.935	0.951	0.967	0.983
5,000	0.673	0.688	0.702	0.717	0.732	0.747	0.763	0.779	0.794	0.810	0.826	0.843	0.860	0.877	0.893	0.911	0.928	0.946	0.964	0.982
6,000	0.621	0.637	0.654	0.671	0.689	0.707	0.724	0.742	0.761	0.779	0.798	0.817	0.836	0.859	0.875	0.898	0.916	0.939	0.960	0.980
7,000	0.604	0.621	0.639	0.657	0.675	0.694	0.712	0.731	0.750	0.769	0.789	0.809	0.829	0.849	0.870	0.891	0.912	0.940	0.955	0.979
8,000	0.619	0.636	0.653	0.671	0.689	0.700	0.725	0.744	0.756	0.775	0.799	0.819	0.833	0.838	0.877	0.894	0.909	0.931	0.957	0.977
9,000	0.618	0.636	0.653	0.672	0.690	0.708	0.726	0.744	0.766	0.782	0.801	0.822	0.839	0.850	0.880	0.898	0.911	0.932	0.954	0.975
10,000	0.592	0.611	0.629	0.648	0.668	0.687	0.706	0.726	0.746	0.766	0.786	0.807	0.827	0.848	0.869	0.890	0.912	0.931	0.956	0.975
11,000	0.565	0.584	0.604	0.624	0.698	0.665	0.734	0.707	0.769	0.750	0.771	0.793	0.815	0.837	0.860	0.883	0.905	0.929	0.954	0.975
12,000	0.586	0.604	0.624	0.643	0.686	0.682	0.702	0.721	0.741	0.778	0.762	0.803	0.824	0.845	0.854	0.877	0.902	0.932	0.950	0.974
13,000	0.570	0.590	0.609	0.629	0.649	0.670	0.689	0.710	0.731	0.752	0.774	0.795	0.817	0.839	0.871	0.884	0.906	0.930	0.948	0.974
14,000	0.547	0.567	0.588	0.602	0.630	0.651	0.672	0.694	0.716	0.743	0.761	0.788	0.806	0.833	0.853	0.879	0.903	0.927	0.946	0.975
15,000	0.531	0.552	0.574	0.595	0.616	0.638	0.661	0.683	0.706	0.729	0.752	0.775	0.796	0.823	0.845	0.872	0.895	0.922	0.951	0.974
16,000	0.516	0.538	0.560	0.582	0.604	0.627	0.650	0.673	0.696	0.720	0.744	0.768	0.792	0.817	0.843	0.868	0.894	0.920	0.945	0.974
17,000	0.504	0.526	0.548	0.571	0.593	0.616	0.640	0.663	0.687	0.712	0.736	0.761	0.787	0.812	0.838	0.864	0.890	0.917	0.944	0.972
18,000	0.487	0.509	0.532	0.556	0.579	0.603	0.627	0.652	0.676	0.701	0.727	0.752	0.778	0.805	0.833	0.860	0.887	0.914	0.943	0.972
19,000	0.474	0.498	0.521	0.545	0.569	0.593	0.618	0.643	0.668	0.694	0.720	0.746	0.773	0.800	0.827	0.855	0.883	0.911	0.941	0.971
20,000	0.464	0.488	0.512	0.535	0.559	0.585	0.610	0.635	0.660	0.686	0.713	0.740	0.768	0.795	0.823	0.852	0.880	0.910	0.939	0.970
21,000	0.457	0.481	0.505	0.530	0.554	0.579	0.605	0.631	0.657	0.680	0.710	0.737	0.762	0.793	0.819	0.848	0.878	0.908	0.937	0.969
22,000	0.449	0.473	0.498	0.522	0.548	0.573	0.599	0.626	0.652	0.679	0.706	0.734	0.762	0.790	0.819	0.846	0.876	0.907	0.938	0.968
23,000	0.438	0.463	0.488	0.513	0.539	0.565	0.591	0.618	0.645	0.672	0.700	0.728	0.756	0.786	0.815	0.845	0.875	0.905	0.937	0.967
24,000	0.419	0.444	0.470	0.496	0.522	0.549	0.576	0.604	0.632	0.660	0.688	0.718	0.747	0.777	0.807	0.842	0.872	0.904	0.935	0.966
25,000	0.414	0.436	0.462	0.492	0.518	0.545	0.572	0.598	0.628	0.654	0.683	0.712	0.741	0.775	0.805	0.837	0.868	0.902	0.934	0.966
30,000	0.326	0.354	0.383	0.413	0.443	0.474	0.534	0.564	0.569	0.600	0.657	0.688	0.721	0.738	0.787	0.821	0.855	0.890	0.931	0.963
40,000	0.252	0.283	0.314	0.346	0.378	0.412	0.446	0.481	0.516	0.553	0.590	0.627	0.666	0.705	0.745	0.785	0.826	0.869	0.912	0.955
50,000	0.194	0.225	0.257	0.290	0.325	0.360	0.396	0.433	0.471	0.510	0.550	0.591	0.632	0.669	0.713	0.758	0.804	0.854	0.900	0.949
60,000	0.147	0.176	0.207	0.240	0.274	0.309	0.346	0.383	0.423	0.463	0.505	0.547	0.591	0.637	0.684	0.729	0.783	0.837	0.888	0.947
70,000	0.093	0.122	0.154	0.187	0.222	0.260	0.298	0.339	0.381	0.424	0.468	0.514	0.562	0.611	0.661	0.714	0.767	0.827	0.881	0.939
80,000	0.077	0.103	0.133	0.165	0.200	0.237	0.276	0.317	0.359	0.403	0.449	0.496	0.545	0.595	0.647	0.701	0.757	0.815	0.874	0.937
90,000	0.099	0.129	0.162	0.196	0.232	0.270	0.309	0.349	0.391	0.434	0.478	0.523	0.570	0.618	0.667	0.718	0.768	0.826	0.881	0.939
100,000	0.080	0.110	0.142	0.177	0.214	0.252	0.292	0.333	0.376	0.420	0.465	0.511	0.560	0.608	0.659	0.711	0.765	0.821	0.878	0.938
150,000	0.050	0.041	0.046	0.064	0.090	0.123	0.162	0.205	0.249	0.300	0.352	0.404	0.461	0.523	0.584	0.645	0.711	0.778	0.851	0.923
200,000	0.118	0.069	0.049	0.050	0.065	0.091	0.126	0.166	0.212	0.262	0.316	0.369	0.432	0.494	0.553	0.625	0.690	0.765	0.840	0.918
250,000	0.231	0.129	0.076	0.055	0.057	0.075	0.105	0.144	0.190	0.240	0.295	0.353	0.414	0.478	0.545	0.613	0.685	0.759	0.837	0.915
300,000	0.194	0.105	0.063	0.053	0.065	0.091	0.126	0.170	0.218	0.270	0.325	0.383	0.443	0.505	0.559	0.637	0.701	0.766	0.841	0.919
400,000	0.203	0.111	0.071	0.064	0.078	0.106	0.144	0.188	0.236	0.289	0.343	0.400	0.458	0.519	0.581	0.645	0.711	0.779	0.850	0.922
500,000	0.238	0.114	0.055	0.038	0.046	0.071	0.107	0.151	0.200	0.253	0.309	0.368	0.429	0.492	0.557	0.624	0.698	0.767	0.843	0.920

Bottom 5%

Optimal Expected Losses

Exhibit 2

Starting Values for Fitting	
Credibility (X)	Expected Loss (Y)
0.700	8,910
0.727	101,588
0.749	205,876
0.770	313,868
0.797	512,257
0.851	1,062,638
0.911	2,078,960
0.943	2,958,200
0.981	5,192,388
0.997	6,000,000
1.000	7,000,000

Fitted Curve
$Y = a+b*\log(x)+c*\log(x)^2+d*\log(x)^3+e*\log(x)^4+f*\log(x)^5$

Credibility (X)	Fitted Exp Loss (Y)
0.700	4,174
0.701	11,097
0.702	17,683
0.703	23,953
0.704	29,924
0.705	35,614
0.706	41,041
0.709	55,902
0.712	68,958
0.715	80,590
0.718	91,141
0.721	100,920
0.724	110,201
0.727	119,228
0.730	128,218
0.733	137,358
0.736	146,813
0.739	156,724
0.742	167,212
0.745	178,379
0.748	190,306
0.751	203,062
0.754	216,698
0.757	231,254
0.760	246,756
0.763	263,220
0.766	280,654
0.769	299,053
0.772	318,410
0.775	338,707
0.778	359,924
0.781	382,034

Credibility (X)	Fitted Exp Loss (Y)
0.784	405,008
0.787	428,814
0.790	453,416
0.793	478,780
0.796	504,867
0.799	531,643
0.802	559,072
0.805	587,119
0.808	615,751
0.811	644,938
0.814	674,652
0.817	704,871
0.820	735,573
0.823	766,742
0.826	798,366
0.829	830,440
0.832	862,961
0.835	895,933
0.838	929,367
0.841	963,278
0.844	997,690
0.847	1,032,631
0.850	1,068,138
0.853	1,104,253
0.856	1,141,026
0.859	1,178,516
0.862	1,216,788
0.865	1,255,914
0.868	1,295,976
0.871	1,337,061
0.874	1,379,268
0.877	1,422,700

Credibility (X)	Fitted Exp Loss (Y)
0.880	1,467,472
0.883	1,513,704
0.886	1,561,526
0.889	1,611,076
0.892	1,662,502
0.895	1,715,957
0.898	1,771,606
0.901	1,829,621
0.904	1,890,183
0.907	1,953,479
0.910	2,019,709
0.913	2,089,078
0.916	2,161,801
0.919	2,238,101
0.922	2,318,210
0.925	2,402,367
0.928	2,490,821
0.931	2,583,829
0.934	2,681,655
0.937	2,784,572
0.940	2,892,863
0.943	3,006,815
0.946	3,126,727
0.949	3,252,905
0.952	3,385,661
0.955	3,525,316
0.958	3,672,201
0.961	3,826,650
0.964	3,989,009
0.967	4,159,630
0.970	4,338,871
0.973	4,527,100

Optimal Split Points

Exhibit 3

Starting Values for Fitting	
Credibility (X)	Split Point (Y)
0.700	10,000
0.727	27,000
0.749	41,000
0.770	58,000
0.797	82,000
0.851	150,000
0.911	290,000
0.943	380,000
1.000	500,000

Fitted Curve
$Y = a*x^5+b*x^4+c*x^3+d*x^2+e*x+f$

Credibility (X)	Fitted Split Point (Y)
0.700	10,000
0.701	11,000
0.702	13,000
0.703	15,000
0.704	17,000
0.705	19,000
0.706	21,000
0.709	23,000
0.712	25,000
0.715	27,000
0.718	29,000
0.721	31,000
0.724	33,000
0.727	35,000
0.730	37,000
0.733	39,000
0.736	41,000
0.739	43,000
0.742	45,000
0.745	47,000
0.748	49,000
0.751	51,000
0.754	53,000
0.757	55,000
0.760	57,000
0.763	59,000
0.766	61,000
0.769	63,000
0.772	65,000
0.775	67,000
0.778	69,000
0.781	71,000

Credibility (X)	Fitted Split Point (Y)
0.784	73,000
0.787	75,000
0.790	77,000
0.793	79,000
0.796	83,000
0.799	87,000
0.802	91,000
0.805	95,000
0.808	99,000
0.811	102,000
0.814	106,000
0.817	110,000
0.820	114,000
0.823	118,000
0.826	122,000
0.829	126,000
0.832	130,000
0.835	134,000
0.838	138,000
0.841	142,000
0.844	146,000
0.847	150,000
0.850	154,000
0.853	158,000
0.856	162,000
0.859	166,000
0.862	170,000
0.865	174,000
0.868	178,000
0.871	180,000
0.874	185,000
0.877	190,000

Credibility (X)	Fitted Split Point (Y)
0.880	195,000
0.883	200,000
0.886	205,000
0.889	210,000
0.892	215,000
0.895	220,000
0.898	225,000
0.901	230,000
0.904	235,000
0.907	240,000
0.910	245,000
0.913	250,000
0.916	255,000
0.919	260,000
0.922	265,000
0.925	270,000
0.928	275,000
0.931	280,000
0.934	285,000
0.937	290,000
0.940	295,000
0.943	300,000
0.946	305,000
0.949	310,000
0.952	315,000
0.955	320,000
0.958	325,000
0.961	330,000
0.964	335,000
0.967	340,000
0.970	345,000
0.973	350,000

Proposed Effective: December 1, 2024

Table B

CURRENT DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge "L" * "C"
(1)		(2)	(3)	(4)	(5)
5,883	or less	0.0500	27,945	0.6286	0.031
5,884	6,477	0.0550	28,095	0.6275	0.035
6,478	7,078	0.0600	28,242	0.6264	0.038
7,079	7,686	0.0650	28,396	0.6253	0.041
7,687	8,300	0.0700	28,550	0.6242	0.044
8,301	8,920	0.0750	28,703	0.6231	0.047
8,921	9,548	0.0800	28,859	0.6220	0.050
9,549	10,182	0.0850	29,018	0.6208	0.053
10,183	10,823	0.0900	29,175	0.6197	0.056
10,824	11,471	0.0950	29,337	0.6185	0.059
11,472	12,127	0.1000	29,500	0.6174	0.062
12,128	12,790	0.1050	29,664	0.6162	0.065
12,791	13,460	0.1100	29,832	0.6150	0.068
13,461	14,138	0.1150	30,000	0.6138	0.071
14,139	14,823	0.1200	30,169	0.6127	0.074
14,824	15,517	0.1250	30,342	0.6115	0.076
15,518	16,218	0.1300	30,515	0.6103	0.079
16,219	16,928	0.1350	30,693	0.6090	0.082
16,929	17,646	0.1400	30,871	0.6078	0.085
17,647	18,372	0.1450	31,052	0.6066	0.088
18,373	19,107	0.1500	31,233	0.6053	0.091
19,108	19,851	0.1550	31,419	0.6041	0.094
19,852	20,603	0.1600	31,606	0.6028	0.096
20,604	21,365	0.1650	31,795	0.6015	0.099
21,366	22,135	0.1700	31,987	0.6002	0.102
22,136	22,916	0.1750	32,180	0.5990	0.105
22,917	23,705	0.1800	32,376	0.5977	0.108
23,706	24,505	0.1850	32,576	0.5963	0.110
24,506	25,314	0.1900	32,776	0.5950	0.113
25,315	26,133	0.1950	32,979	0.5937	0.116
26,134	26,963	0.2000	33,186	0.5923	0.118
26,964	27,803	0.2050	33,395	0.5910	0.121
27,804	28,654	0.2100	33,606	0.5896	0.124

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge "L" * "C"
(1)	(2)	(3)	(4)	(5)	
28,655	29,515	0.2150	33,820	0.5882	0.126
29,516	30,388	0.2200	34,036	0.5868	0.129
30,389	31,272	0.2250	34,257	0.5854	0.132
31,273	32,168	0.2300	34,479	0.5840	0.134
32,169	33,075	0.2350	34,704	0.5826	0.137
33,076	33,994	0.2400	34,932	0.5812	0.139
33,995	34,926	0.2450	35,164	0.5797	0.142
34,927	35,870	0.2500	35,399	0.5783	0.145
35,871	36,826	0.2550	35,636	0.5768	0.147
36,827	37,796	0.2600	35,877	0.5753	0.150
37,797	38,779	0.2650	36,121	0.5739	0.152
38,780	39,775	0.2700	36,369	0.5724	0.155
39,776	40,785	0.2750	36,619	0.5709	0.157
40,786	41,809	0.2800	36,873	0.5694	0.159
41,810	42,848	0.2850	37,131	0.5678	0.162
42,849	43,901	0.2900	37,392	0.5663	0.164
43,902	44,970	0.2950	37,658	0.5647	0.167
44,971	46,053	0.3000	37,927	0.5632	0.169
46,054	47,152	0.3050	38,199	0.5616	0.171
47,153	48,268	0.3100	38,477	0.5600	0.174
48,269	49,399	0.3150	38,757	0.5584	0.176
49,400	50,547	0.3200	39,042	0.5567	0.178
50,548	51,713	0.3250	39,332	0.5551	0.180
51,714	52,896	0.3300	39,625	0.5535	0.183
52,897	54,096	0.3350	39,923	0.5518	0.185
54,097	55,315	0.3400	40,225	0.5501	0.187
55,316	56,553	0.3450	40,533	0.5484	0.189
56,554	57,810	0.3500	40,844	0.5467	0.191
57,811	59,086	0.3550	41,161	0.5450	0.193
59,087	60,382	0.3600	41,483	0.5433	0.196
60,383	61,699	0.3650	41,809	0.5415	0.198
61,700	63,037	0.3700	42,141	0.5397	0.200
63,038	64,396	0.3750	42,478	0.5379	0.202
64,397	65,777	0.3800	42,820	0.5361	0.204
65,778	67,181	0.3850	43,169	0.5343	0.206
67,182	68,608	0.3900	43,522	0.5324	0.208
68,609	70,059	0.3950	43,882	0.5306	0.210

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge "L" * "C"
(1)	(2)	(3)	(4)	(5)	
70,060	71,534	0.4000	44,248	0.5287	0.211
71,535	73,033	0.4050	44,620	0.5268	0.213
73,034	74,559	0.4100	44,998	0.5249	0.215
74,560	76,110	0.4150	45,383	0.5230	0.217
76,111	77,689	0.4200	45,774	0.5210	0.219
77,690	79,294	0.4250	46,172	0.5191	0.221
79,295	80,929	0.4300	46,577	0.5171	0.222
80,930	82,592	0.4350	46,989	0.5151	0.224
82,593	84,285	0.4400	47,409	0.5131	0.226
84,286	86,009	0.4450	47,836	0.5111	0.227
86,010	87,764	0.4500	48,271	0.5090	0.229
87,765	89,552	0.4550	48,714	0.5070	0.231
89,553	91,373	0.4600	49,165	0.5049	0.232
91,374	93,228	0.4650	49,624	0.5028	0.234
93,229	95,118	0.4700	50,093	0.5007	0.235
95,119	97,044	0.4750	50,569	0.4986	0.237
97,045	99,008	0.4800	51,056	0.4965	0.238
99,009	101,010	0.4850	51,552	0.4943	0.240
101,011	103,051	0.4900	52,057	0.4921	0.241
103,052	105,133	0.4950	52,572	0.4899	0.243
105,134	107,257	0.5000	53,098	0.4876	0.244
107,258	109,424	0.5050	53,634	0.4854	0.245
109,425	111,636	0.5100	54,182	0.4831	0.246
111,637	113,893	0.5150	54,740	0.4807	0.248
113,894	116,198	0.5200	55,311	0.4784	0.249
116,199	118,551	0.5250	55,893	0.4760	0.250
118,552	120,955	0.5300	56,488	0.4737	0.251
120,956	123,410	0.5350	57,095	0.4712	0.252
123,411	125,919	0.5400	57,715	0.4688	0.253
125,920	128,484	0.5450	58,350	0.4664	0.254
128,485	131,106	0.5500	58,998	0.4639	0.255
131,107	133,788	0.5550	59,661	0.4613	0.256
133,789	136,530	0.5600	60,339	0.4588	0.257
136,531	139,336	0.5650	61,033	0.4562	0.258
139,337	142,208	0.5700	61,743	0.4536	0.259
142,209	145,148	0.5750	62,469	0.4509	0.259
145,149	148,158	0.5800	63,213	0.4482	0.260

Expected Losses		Credibility	Maximum Value of one Accident	Limit Charge	Weighted Maximum Value Charge
(1)	(2)	"C"	(3)	"L"	"L" * "C"
148,159	151,241	0.5850	63,974	0.4455	0.261
151,242	154,399	0.5900	64,755	0.4428	0.261
154,400	157,637	0.5950	65,554	0.4400	0.262
157,638	160,955	0.6000	66,374	0.4373	0.262
160,956	164,358	0.6050	67,214	0.4345	0.263
164,359	167,849	0.6100	68,075	0.4316	0.263
167,850	171,432	0.6150	68,960	0.4288	0.264
171,433	175,109	0.6200	69,867	0.4259	0.264
175,110	178,885	0.6250	70,799	0.4230	0.264
178,886	182,763	0.6300	71,756	0.4201	0.265
182,764	186,749	0.6350	72,739	0.4171	0.265
186,750	190,846	0.6400	73,749	0.4140	0.265
190,847	195,059	0.6450	74,788	0.4110	0.265
195,060	199,394	0.6500	75,857	0.4079	0.265
199,395	203,855	0.6550	76,956	0.4048	0.265
203,856	208,448	0.6600	78,088	0.4016	0.265
208,449	213,179	0.6650	79,253	0.3984	0.265
213,180	218,055	0.6700	80,454	0.3952	0.265
218,056	223,082	0.6750	81,692	0.3919	0.265
223,083	228,268	0.6800	82,969	0.3886	0.264
228,269	233,619	0.6850	84,286	0.3852	0.264
233,620	239,145	0.6900	85,646	0.3818	0.263
239,146	244,853	0.6950	87,050	0.3783	0.263
244,854	250,753	0.7000	88,501	0.3748	0.262
250,754	256,854	0.7050	90,001	0.3711	0.262
256,855	263,168	0.7100	91,554	0.3676	0.261
263,169	269,705	0.7150	93,160	0.3641	0.260
269,706	276,478	0.7200	94,824	0.3605	0.260
276,479	283,500	0.7250	96,548	0.3569	0.259
283,501	290,784	0.7300	98,337	0.3532	0.258
290,785	298,345	0.7350	100,192	0.3495	0.257
298,346	306,200	0.7400	102,119	0.3459	0.256
306,201	314,366	0.7450	104,122	0.3422	0.255
314,367	322,863	0.7500	106,205	0.3383	0.254
322,864	331,709	0.7550	108,373	0.3343	0.252
331,710	340,928	0.7600	110,631	0.3302	0.251
340,929	350,543	0.7650	112,986	0.3262	0.250

Expected Losses		Credibility	Maximum Value of one Accident	Limit Charge	Weighted Maximum Value Charge
(1)	(2)	"C"	(3)	"L"	"L" * "C"
350,544	360,582	0.7700	115,443	0.3220	0.248
360,583	371,071	0.7750	118,009	0.3176	0.246
371,072	382,042	0.7800	120,691	0.3131	0.244
382,043	393,530	0.7850	123,499	0.3088	0.242
393,531	405,572	0.7900	126,441	0.3042	0.240
405,573	418,208	0.7950	129,525	0.2994	0.238
418,209	431,484	0.8000	132,765	0.2948	0.236
431,485	445,450	0.8050	136,170	0.2901	0.234
445,451	460,160	0.8100	139,755	0.2851	0.231
460,161	475,676	0.8150	143,533	0.2802	0.228
475,677	492,067	0.8200	147,522	0.2751	0.226
492,068	509,408	0.8250	151,739	0.2699	0.223
509,409	527,784	0.8300	156,204	0.2648	0.220
527,785	547,291	0.8350	160,940	0.2594	0.217
547,292	568,037	0.8400	165,972	0.2541	0.213
568,038	590,142	0.8450	171,328	0.2486	0.210
590,143	613,747	0.8500	177,043	0.2433	0.207
613,748	639,008	0.8550	183,151	0.2378	0.203
639,009	666,106	0.8600	189,697	0.2323	0.200
666,107	695,250	0.8650	196,728	0.2268	0.196
695,251	726,679	0.8700	204,300	0.2212	0.192
726,680	760,673	0.8750	212,479	0.2155	0.189
760,674	797,561	0.8800	221,340	0.2100	0.185
797,562	837,728	0.8850	230,973	0.2044	0.181
837,729	881,631	0.8900	241,483	0.1991	0.177
881,632	929,818	0.8950	252,996	0.1937	0.173
929,819	982,946	0.9000	265,662	0.1881	0.169
982,947	1,041,819	0.9050	279,664	0.1823	0.165
1,041,820	1,107,419	0.9100	295,225	0.1763	0.160
1,107,420	1,180,972	0.9150	312,622	0.1703	0.156
1,180,973	1,264,014	0.9200	332,199	0.1644	0.151
1,264,015	1,358,511	0.9250	354,395	0.1583	0.146
1,358,512	1,467,008	0.9300	379,774	0.1520	0.141
1,467,009	1,592,864	0.9350	409,074	0.1453	0.136
1,592,865	1,740,608	0.9400	443,281	0.1390	0.131
1,740,609	1,916,494	0.9450	483,744	0.1329	0.126
1,916,495	2,129,408	0.9500	532,356	0.1268	0.120

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge "L" * "C"
(1)	(2)	(3)	(4)	(5)	
2,129,409	2,392,420	0.9550	540,000	0.1260	0.120
2,392,421	2,725,568	0.9600	540,000	0.1260	0.121
2,725,569	3,148,875	0.9650	540,000	0.1260	0.122
3,148,876	3,618,100	0.9700	540,000	0.1260	0.122
3,618,101	4,132,309	0.9750	540,000	0.1260	0.123
4,132,310	4,707,619	0.9800	540,000	0.1260	0.123
4,707,620	5,372,957	0.9850	540,000	0.1260	0.124
5,372,958	6,191,496	0.9900	540,000	0.1260	0.125
6,191,497	7,380,369	0.9950	540,000	0.1260	0.125
7,380,370	and over	1.0000	540,000	0.1260	0.126

Proposed Effective: December 1, 2024

Table B

UPDATED DELAWARE EXPERIENCE RATING PLAN

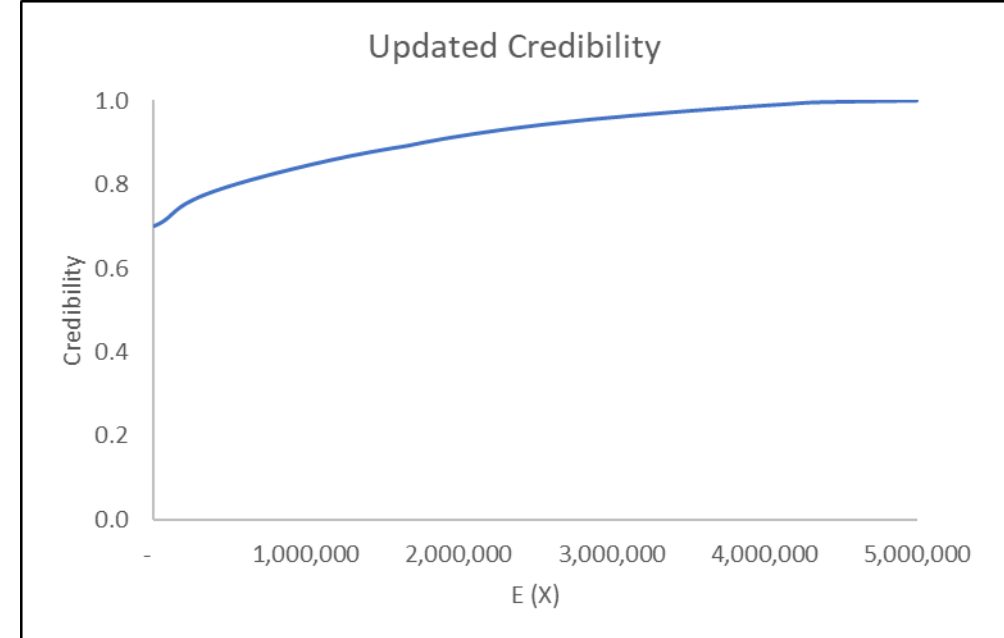
Expected Losses	Credibility "C"	Maximum Value		Limit Charge "L"
		of one Accident		
(1)	(2)	(3)	(4)	
-	5,000	0.690	10,000	0.798
5,001	11,097	0.692	11,000	0.786
11,098	17,683	0.694	13,000	0.763
17,684	23,953	0.697	15,000	0.741
23,954	29,924	0.699	17,000	0.721
29,925	35,614	0.701	19,000	0.702
35,615	41,041	0.703	21,000	0.684
41,042	55,902	0.706	23,000	0.667
55,903	68,958	0.711	25,000	0.651
68,959	80,590	0.715	27,000	0.636
80,591	91,141	0.718	29,000	0.621
91,142	100,920	0.722	31,000	0.607
100,921	110,201	0.725	33,000	0.594
110,202	119,228	0.728	35,000	0.581
119,229	128,218	0.731	37,000	0.569
128,219	137,358	0.734	39,000	0.557
137,359	146,813	0.737	41,000	0.546
146,814	156,724	0.740	43,000	0.535
156,725	167,212	0.743	45,000	0.525
167,213	178,379	0.746	47,000	0.515
178,380	190,306	0.749	49,000	0.506
190,307	203,062	0.752	51,000	0.497
203,063	216,698	0.755	53,000	0.488
216,699	231,254	0.758	55,000	0.480
231,255	246,756	0.761	57,000	0.472
246,757	263,220	0.764	59,000	0.464
263,221	280,654	0.767	61,000	0.456
280,655	299,053	0.770	63,000	0.449
299,054	318,410	0.773	65,000	0.442
318,411	338,707	0.776	67,000	0.435
338,708	359,924	0.779	69,000	0.429
359,925	382,034	0.782	71,000	0.422
382,035	405,008	0.785	73,000	0.416

Expected Losses		Credibility	Maximum Value of one Accident	Limit Charge
(1)		"C" (2)	(3)	"L" (4)
405,009	428,814	0.788	75,000	0.410
428,815	453,416	0.791	77,000	0.405
453,417	478,780	0.794	80,000	0.396
478,781	504,867	0.797	83,000	0.389
504,868	531,643	0.800	86,000	0.381
531,644	559,072	0.803	89,000	0.374
559,073	587,119	0.806	92,000	0.366
587,120	615,751	0.809	95,000	0.360
615,752	644,938	0.812	98,000	0.353
644,939	674,652	0.815	102,000	0.345
674,653	704,871	0.818	106,000	0.337
704,872	735,573	0.821	110,000	0.329
735,574	766,742	0.824	114,000	0.322
766,743	798,366	0.827	118,000	0.315
798,367	830,440	0.830	122,000	0.308
830,441	862,961	0.833	126,000	0.302
862,962	895,933	0.836	130,000	0.295
895,934	929,367	0.839	134,000	0.289
929,368	963,278	0.842	138,000	0.283
963,279	997,690	0.845	142,000	0.278
997,691	1,032,631	0.848	146,000	0.273
1,032,632	1,068,138	0.851	150,000	0.267
1,068,139	1,104,253	0.854	154,000	0.262
1,104,254	1,141,026	0.857	158,000	0.258
1,141,027	1,178,516	0.860	162,000	0.253
1,178,517	1,216,788	0.863	166,000	0.249
1,216,789	1,255,914	0.866	170,000	0.244
1,255,915	1,295,976	0.869	174,000	0.240
1,295,977	1,337,061	0.872	178,000	0.237
1,337,062	1,379,268	0.875	182,000	0.233
1,379,269	1,422,700	0.878	186,000	0.229
1,422,701	1,467,472	0.881	190,000	0.226
1,467,473	1,513,704	0.884	194,000	0.223
1,513,705	1,561,526	0.887	198,000	0.219
1,561,527	1,611,076	0.890	202,000	0.216
1,611,077	1,662,502	0.893	206,000	0.213
1,662,503	1,715,957	0.896	210,000	0.210
1,715,958	1,771,606	0.899	215,000	0.207

Expected Losses		Credibility	Maximum Value of one Accident	Limit Charge
(1)		"C" (2)	(3)	"L" (4)
1,771,607	1,829,621	0.902	220,000	0.204
1,829,622	1,890,183	0.905	225,000	0.201
1,890,184	1,953,479	0.908	230,000	0.198
1,953,480	2,019,709	0.911	235,000	0.195
2,019,710	2,089,078	0.914	240,000	0.192
2,089,079	2,161,801	0.917	245,000	0.190
2,161,802	2,238,101	0.920	250,000	0.188
2,238,102	2,318,210	0.923	255,000	0.185
2,318,211	2,402,367	0.926	260,000	0.183
2,402,368	2,490,821	0.929	265,000	0.181
2,490,822	2,583,829	0.932	270,000	0.178
2,583,830	2,681,655	0.935	275,000	0.176
2,681,656	2,784,572	0.938	280,000	0.174
2,784,573	2,892,863	0.941	285,000	0.172
2,892,864	3,006,815	0.944	290,000	0.170
3,006,816	3,126,727	0.947	295,000	0.168
3,126,728	3,252,905	0.950	300,000	0.166
3,252,906	3,385,661	0.953	300,000	0.166
3,385,662	3,525,316	0.956	300,000	0.166
3,525,317	3,672,201	0.959	300,000	0.166
3,672,202	3,826,650	0.962	300,000	0.166
3,826,651	3,989,009	0.965	300,000	0.166
3,989,010	4,159,630	0.968	300,000	0.166
4,159,631	4,338,871	0.971	300,000	0.166
4,338,872	Above	0.974	300,000	0.166

ERP Credibility: Current vs. Updated

Exhibit 6



Under the current plan, the credibility curve starts at 5% and the maximum credibility is 100%.



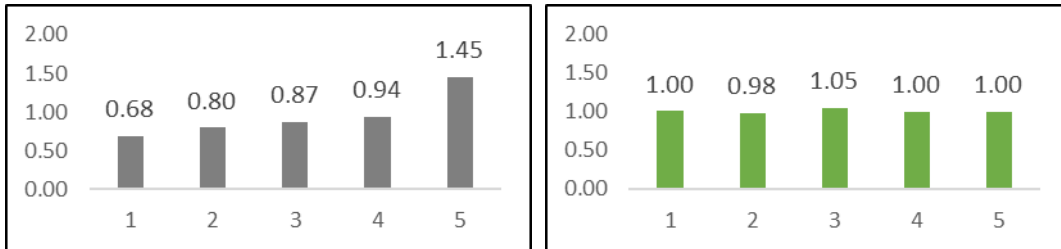
The revised credibility curve starts at around 70% and the maximum credibility is around 97%.

The new variable split points by size of risk resulted in higher credibility values during the optimization process.

Medical-Only Performance Testing

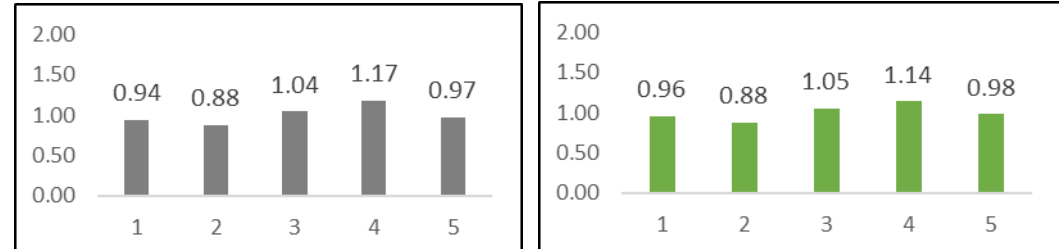
Exhibit 7

Medical-Only x 100%



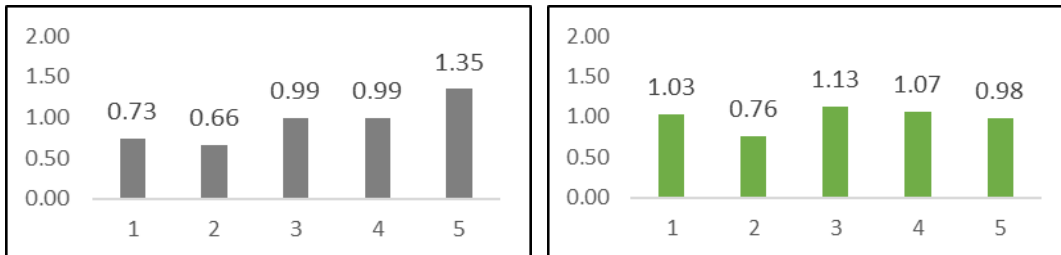
Slope Ratio	Lift	Efficiency Test
0.0056	0.7644	0.0090

Medical-Only x 30%



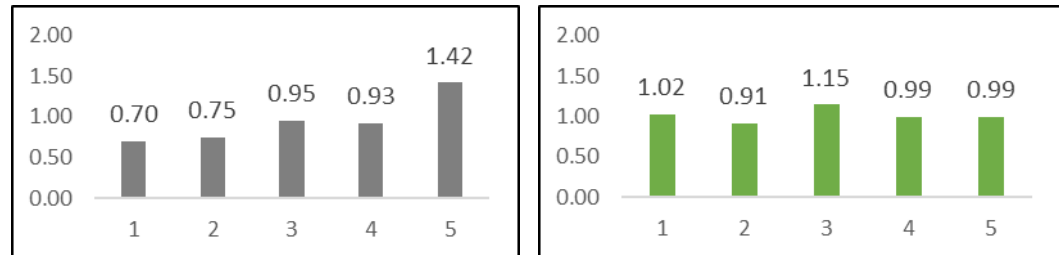
Slope Ratio	Lift	Efficiency Test
0.8813	0.0275	0.7626

Medical-Only x 0%



Slope Ratio	Lift	Efficiency Test
0.1356	0.6152	0.2586

Medical - \$250



Slope Ratio	Lift	Efficiency Test
0.0134	0.7180	0.0880

Distribution of Policies (PY2017 and PY2018)

Premium	Current Plan (\$3,161 in the second ER year)		New Plan (\$5,000 in the three-year period)	
	Count	%	Count	%
Prem < 3,161	9,658	59%	6,293	39%
3,161<= Prem < 5,000	1,250	8%	1,230	8%
5,000 <= Prem < 10,000	1,829	11%	1,974	12%
10,000 <= Prem < 15,000	860	5%	1,202	7%
Prem >= 15,000	2,669	16%	5,568	34%
Total	16,266	100%	16,266	100%
# of Eligible Employers	6,608	41%	8,744	54%

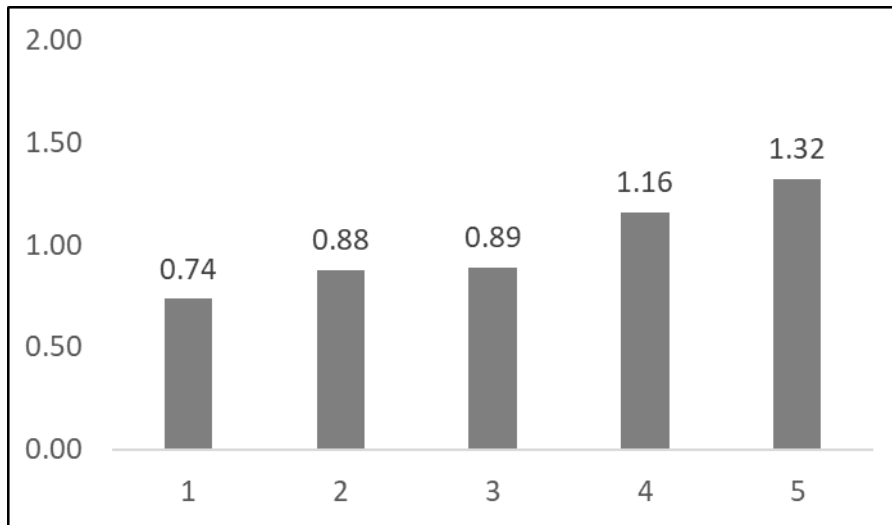
Change in eligibility results in roughly 2,000 employers moving from Merit to ERP, or 13% more employers will be experience rated.

Current ERP Performance Test

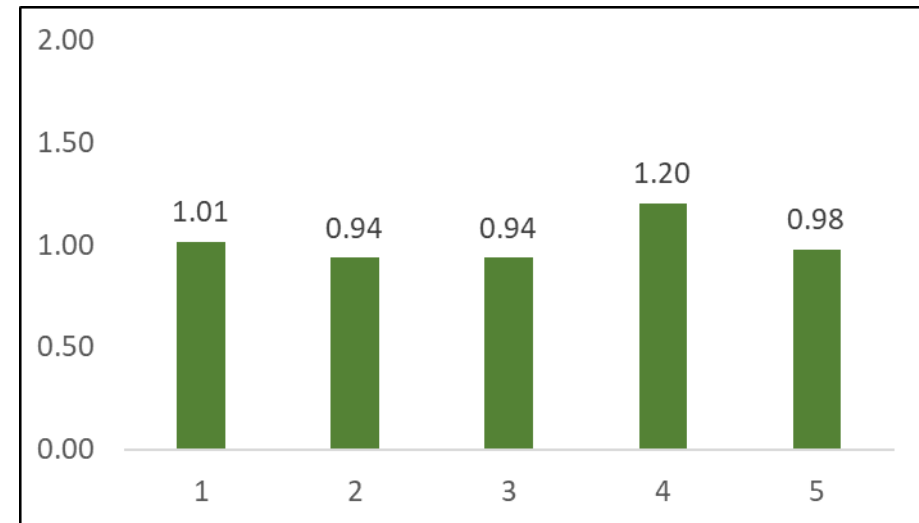
Exhibit 9

2015 - 2018

Manual Loss Ratios



Modified Loss Ratios



Slope Ratio	Lift	Efficiency Test
0.1327	0.5848	0.2186

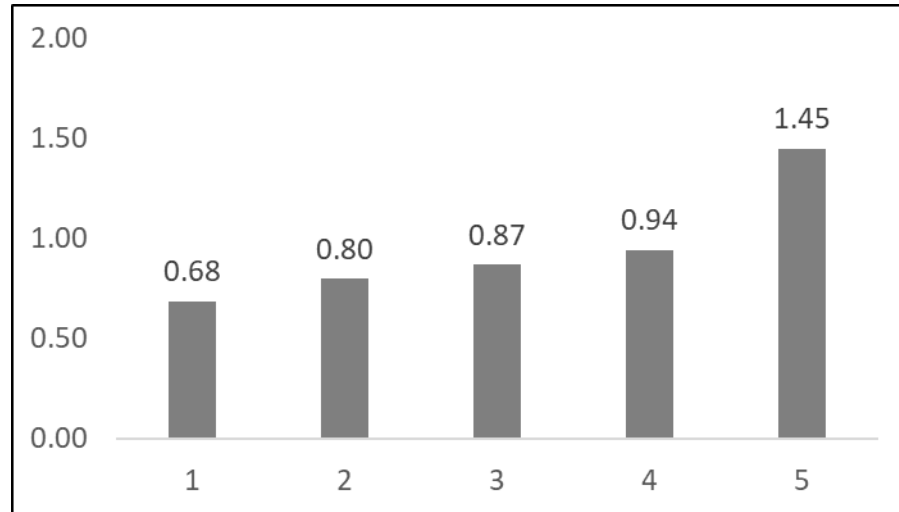
Note: Expected loss is normalized to ensure overall loss ratios achieve a unity loss ratio
Current eligibility requirement

Updated Experience Rating Plan Performance Test

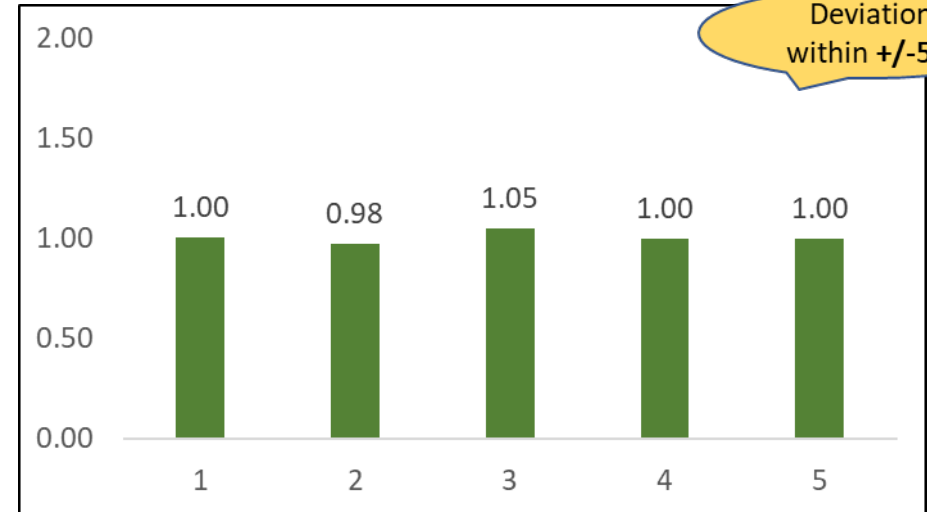
Exhibit 10

2015 - 2018

Manual Loss Ratios



Modified Loss Ratios



Slope Ratio	Lift	Efficiency Test
0.0056	0.7644	0.0090

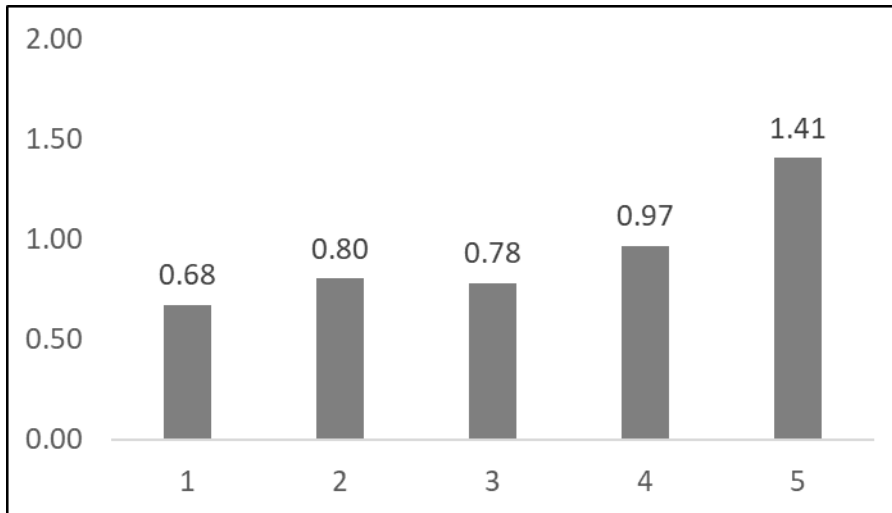
Note: Expected loss is normalized to ensure overall loss ratios achieve a unity loss ratio
Current eligibility requirement

Updated Experience Rating Plan Performance Test

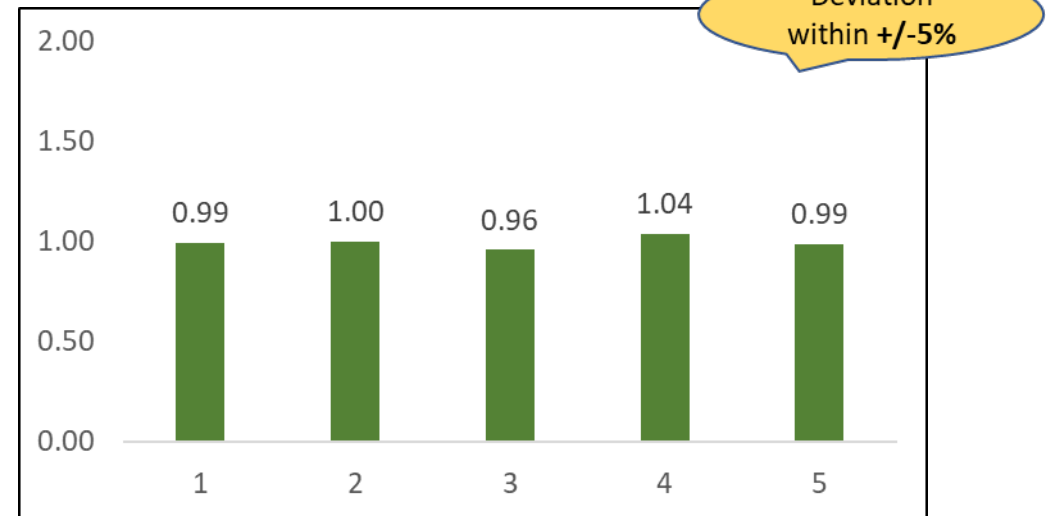
Exhibit 11

2015 - 2020

Manual Loss Ratios



Modified Loss Ratios



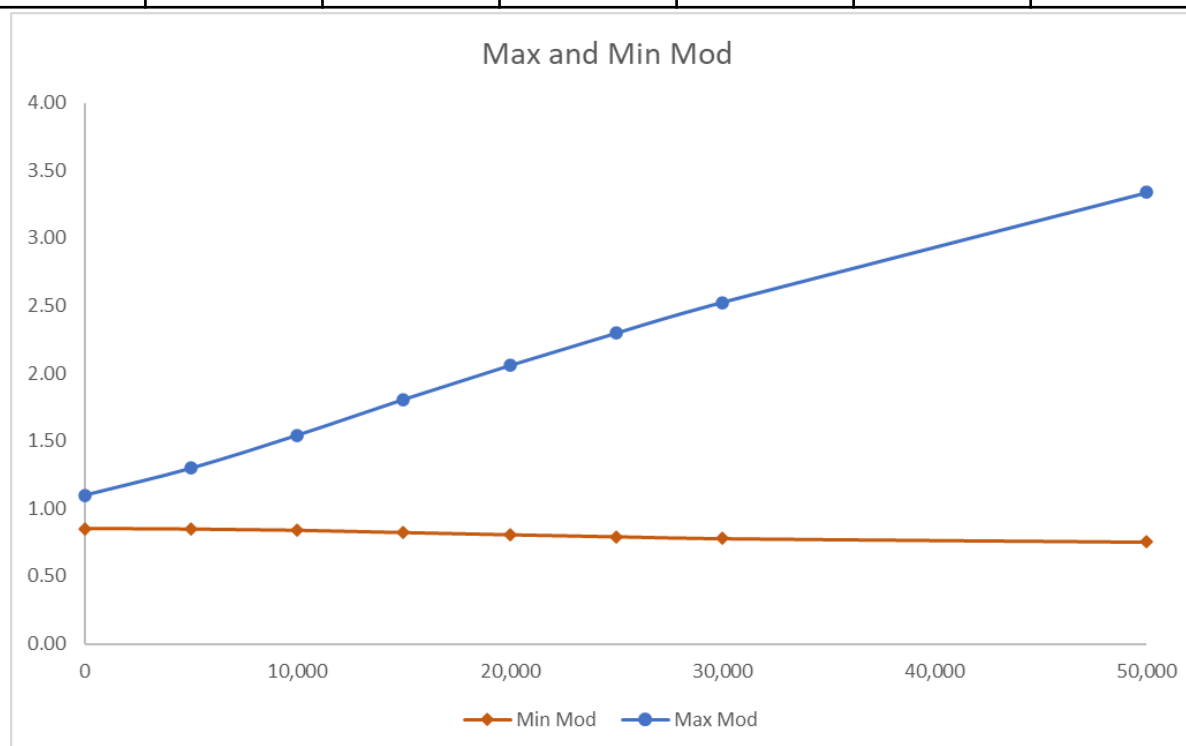
Slope Ratio	Lift	Efficiency Test
0.0199	0.7310	0.0095

Note: Expected loss is normalized to ensure overall loss ratios achieve a unity loss ratio
Current eligibility requirement

Maximum Modification Factors

$$\text{Max Mod} = 1.10 + 0.0004 (E/G)$$

Exp Loss	0	5,000	10,000	25,000	50,000	250,000	500,000	1M
Max Mod (G=12)	1.10	1.27	1.43	1.93	2.77	9.43	17.77	34.43
Loss Free Mod	0.85	0.85	0.84	0.79	0.76	0.59	0.50	0.36



Calculation of G value

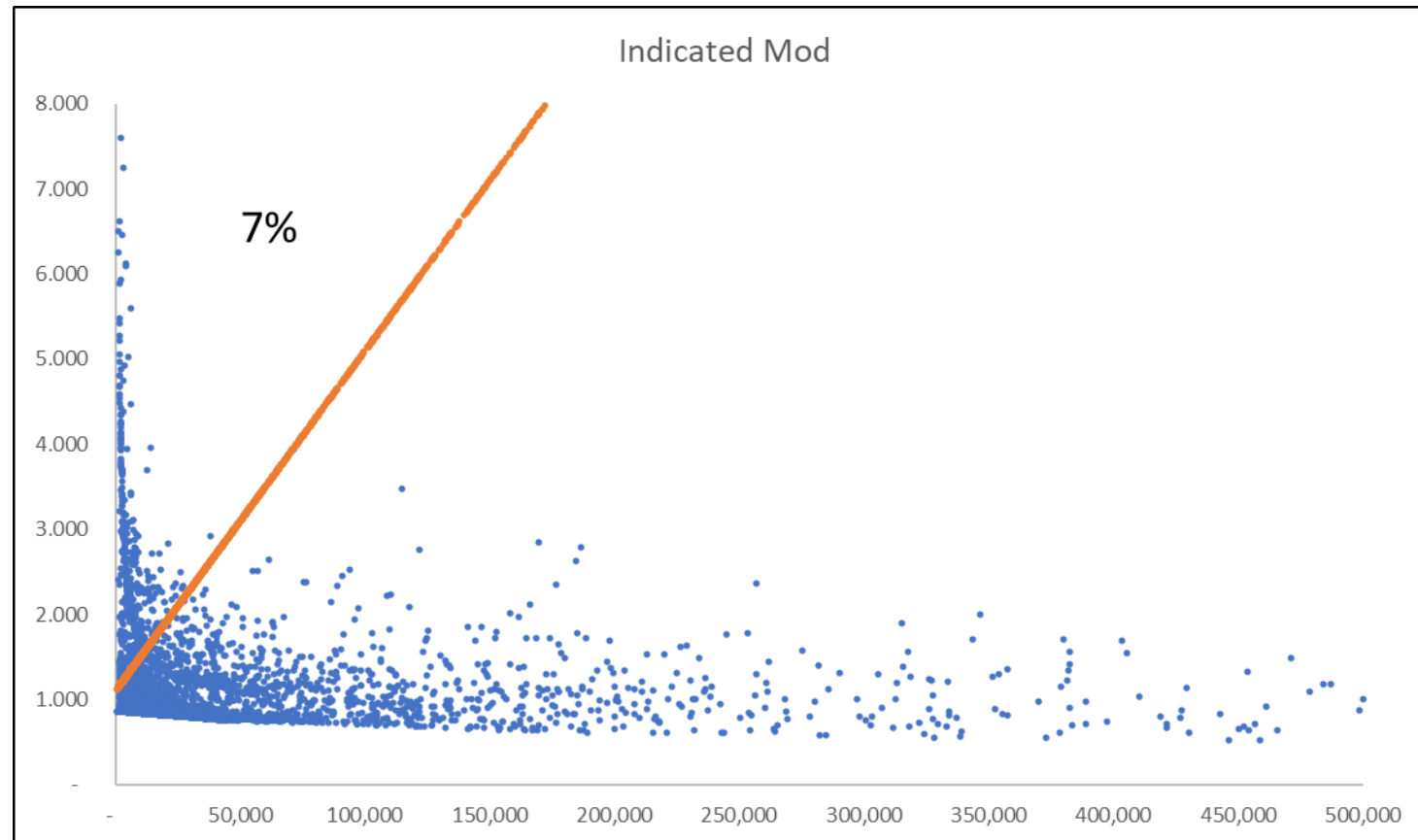
Exhibit 13

Policy Year	2019	2018	2017	2016	2015
Undeveloped Loss	83,008,379	83,942,212	84,987,179	91,823,608	105,443,961
Undeveloped Counts including MO	6,934	7,431	7,787	7,654	7,747
State Average Cost Per Case	11,971	11,296	10,914	11,997	13,6117
G	12	11	11	12	14

Selected 'G' value = 12 (Average of five policy years)

Maximum Modification

Exhibit 14



Approximately 7% of risks are capped at the max mod.

* Indicated modification in the updated plan

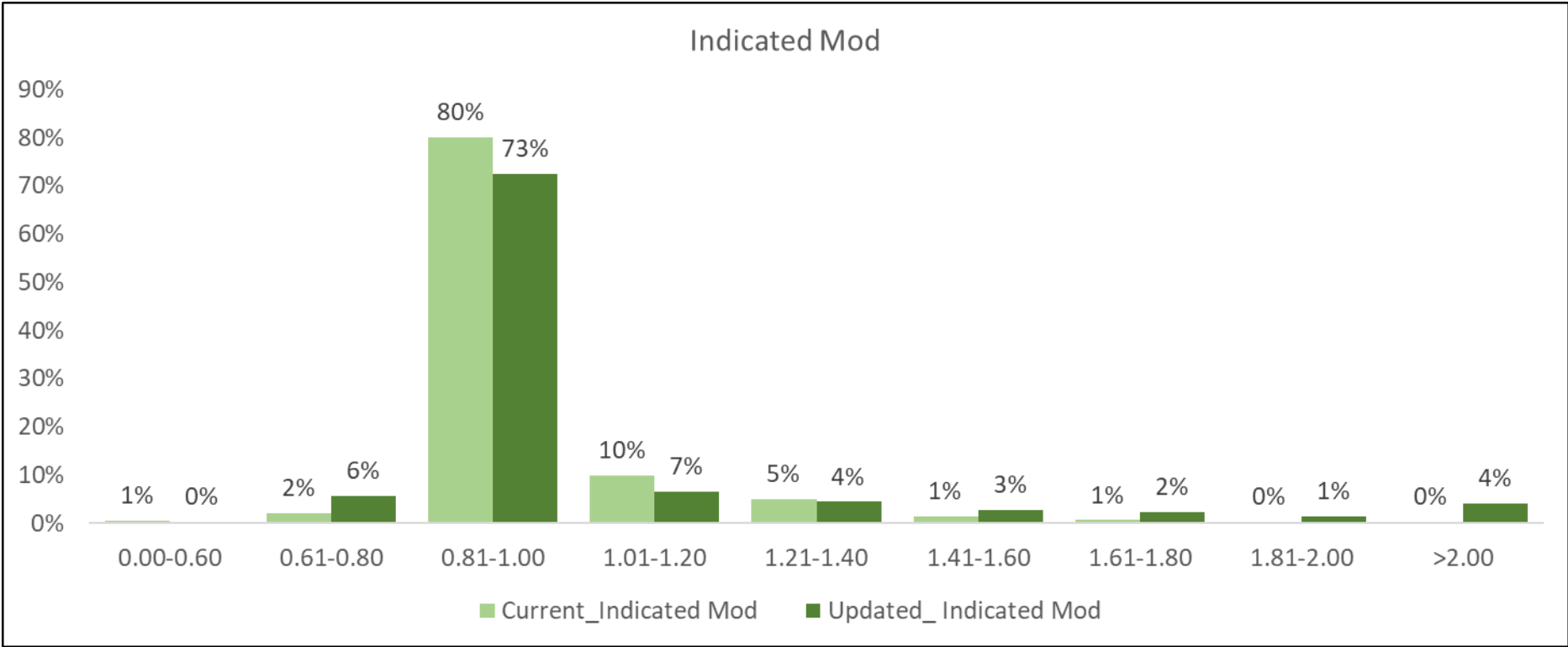
Policies Capped (PY 2017 and PY 2018)

Eligibility	\$3,161 (2nd year)	\$5,000 (3 Years)
Expected Loss	Current Plan	Max Mod
EL <\$5,000	0.0%	3.0%
\$5,000 <= EL <\$10,000	0.0%	2.8%
\$10,000 <= EL < \$25,000	0.0%	1.3%
\$25,000 <= EL < \$50,000	0.0%	0.1%
\$50,000 <=EL < \$250,000	0.0%	0.0%
Total	0%	7.1%

The use of the +40% transitional capping rule results in 1.8% more risks being capped or 8.9% of the risks being capped in total.

- \$3,161 in the second experience rating year
- \$5,000 over the three experience rating years

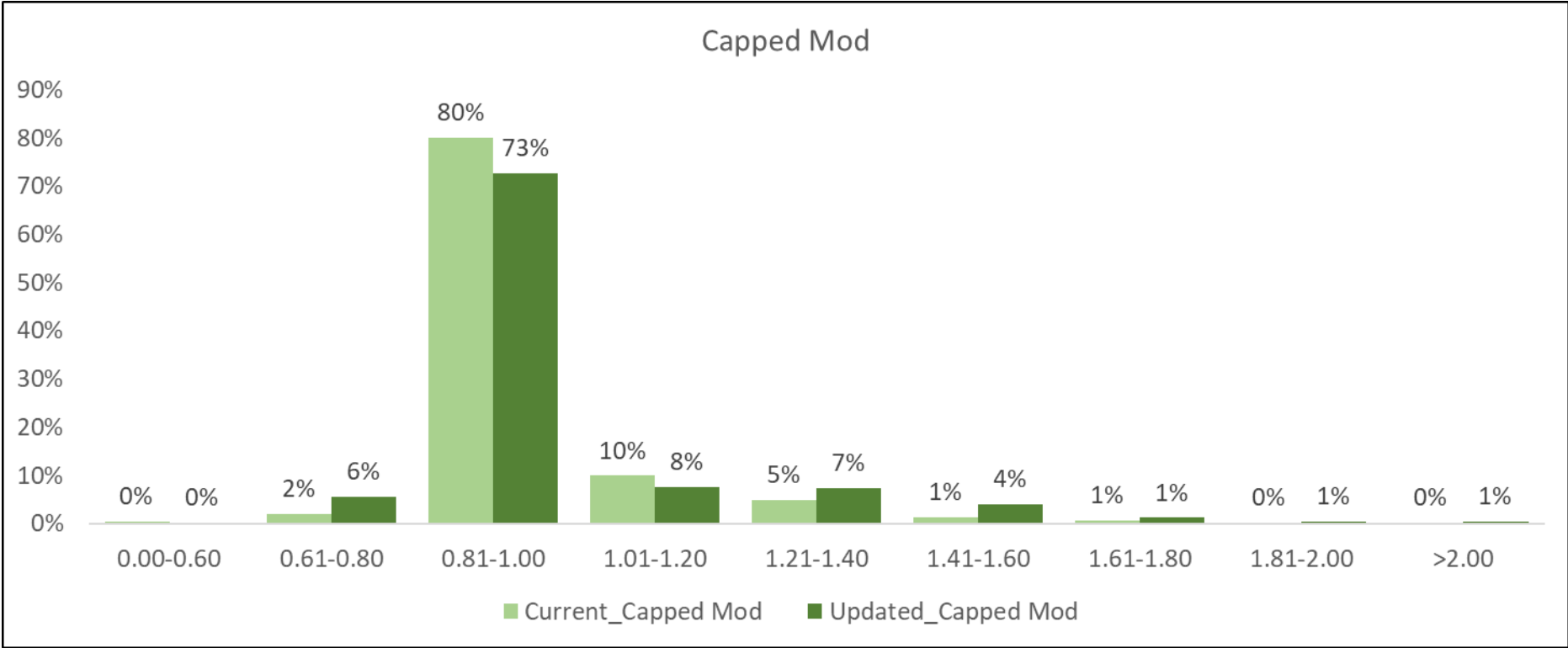
Distribution of Current and Proposed Modifications



* Based on PY 2018 data
 * New eligibility requirement

Distribution of Current and Proposed Modifications

Exhibit 17

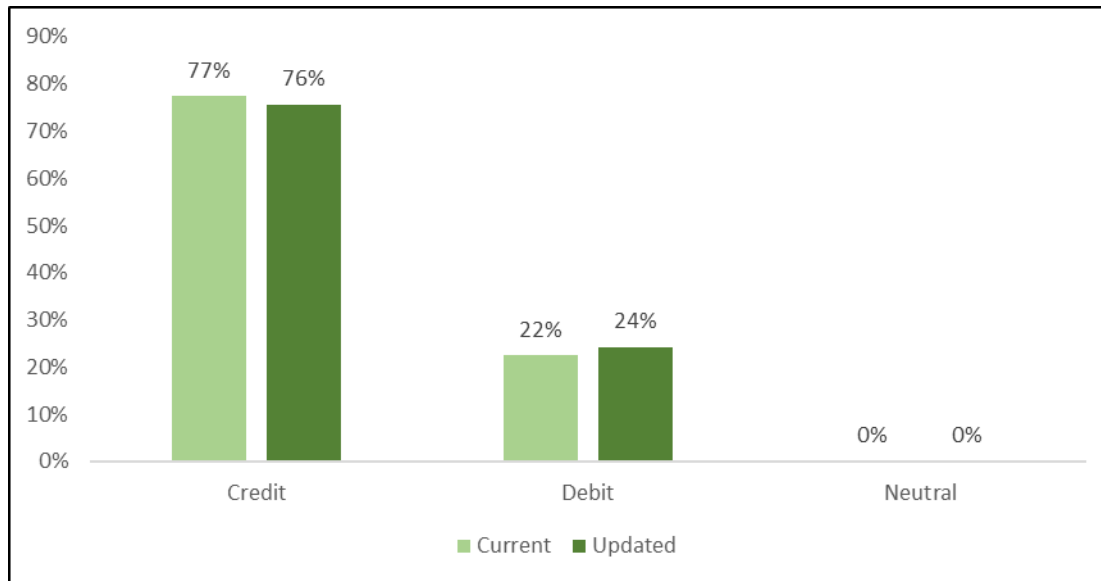


* Based on PY 2018 data
* New eligibility requirement

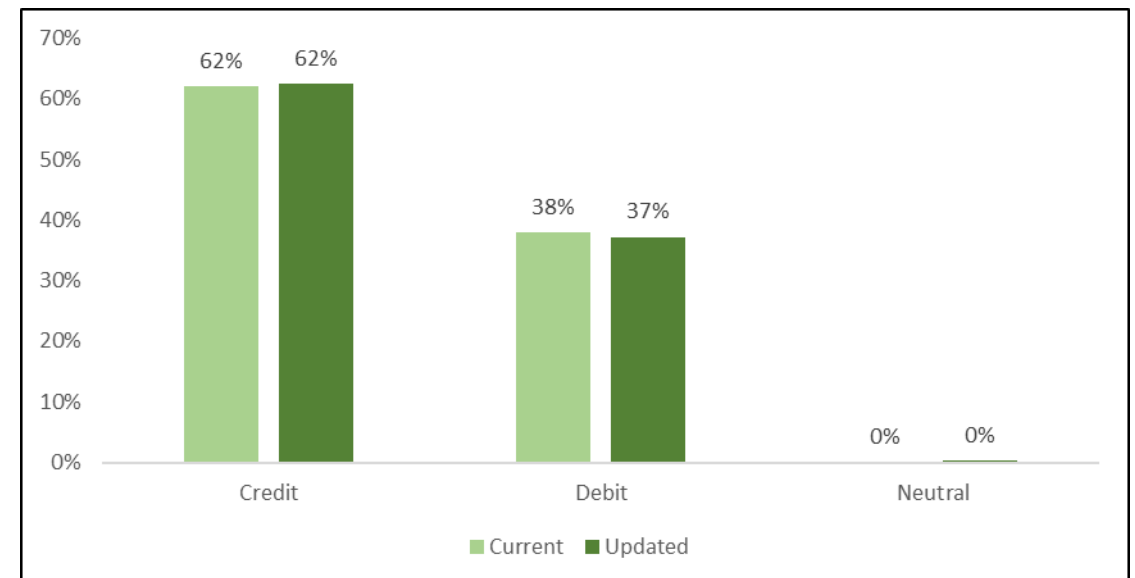
Policy Count and Premium Distribution

Exhibit 18

Policy Count



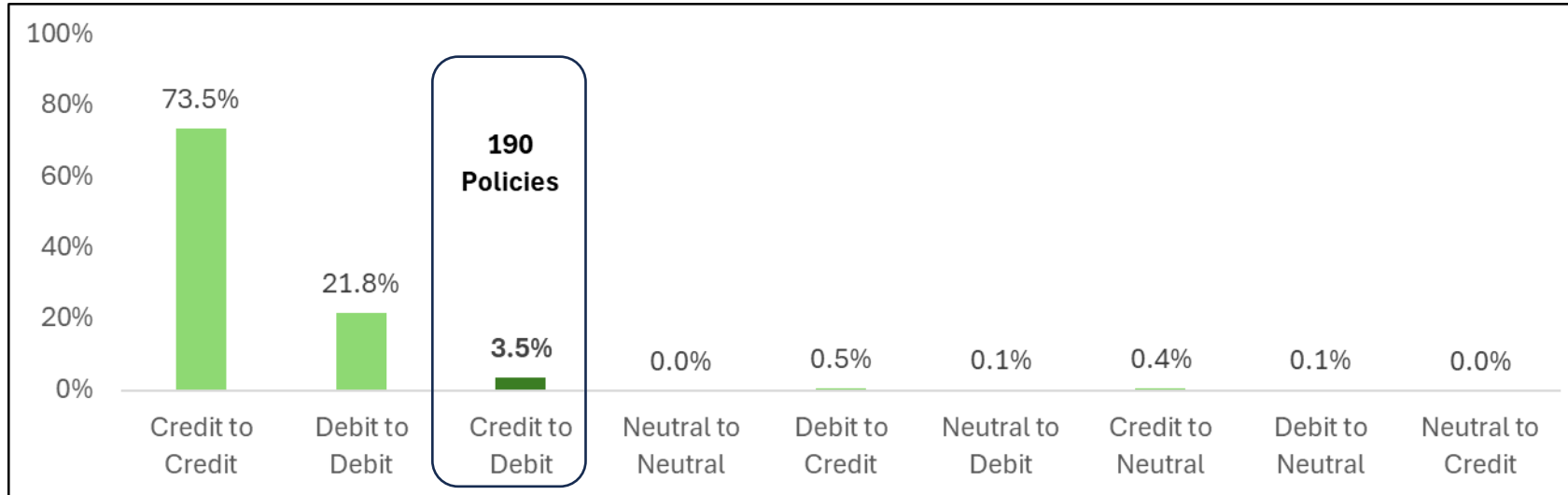
Premium



- Based on PY 2018 data
- New eligibility requirement

Policies that Shift Credit to Debit Modifications

Exhibit 19



95% of risks have expected loss less than \$150,000.

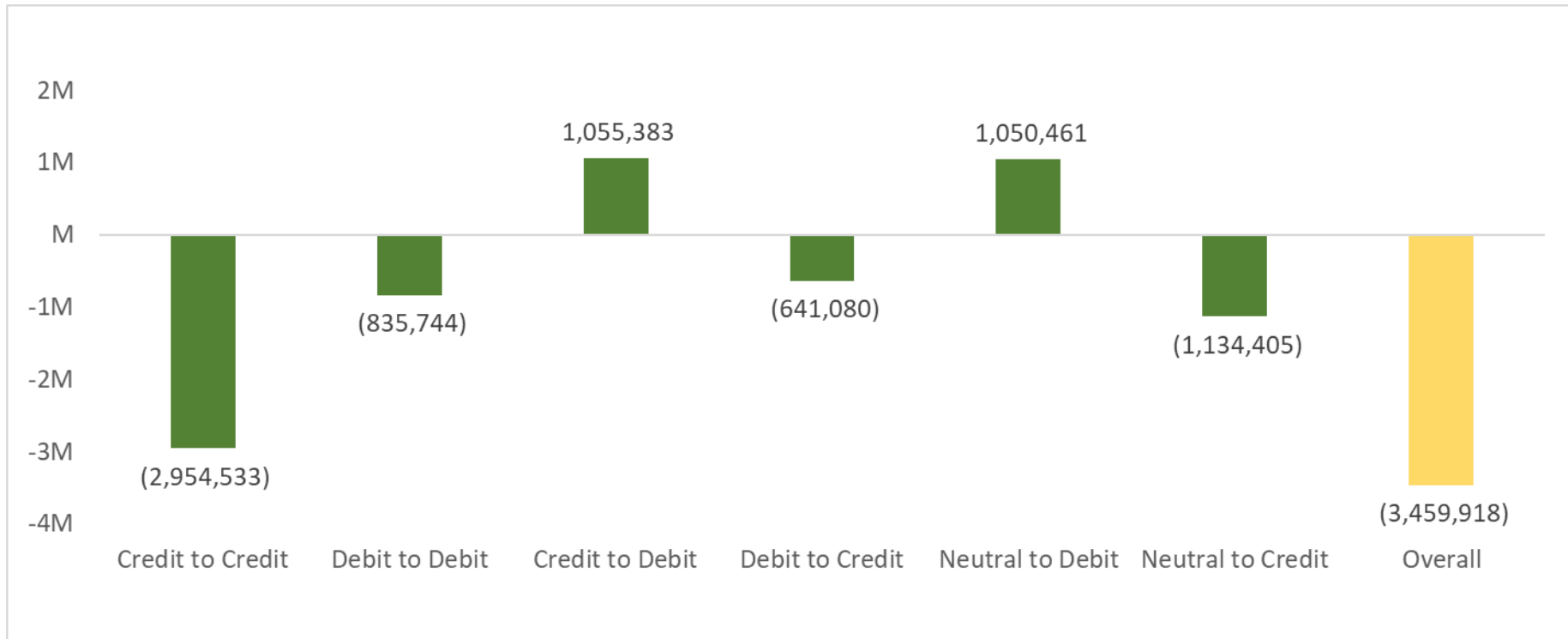
EL ≤ 150,000	95%
EL > 150,000	5%
Total	100%

Current Plan		Updated Plan		% of Mod Change	Distribution
0.0 – 0.90	3	1.0 – 1.05	105	0% - 5%	44%
0.90 – 0.95	6	1.05 – 1.10	63	5% - 10%	44%
0.95 – 0.975	20	1.10 – 1.15	11	10% - 15%	5%
0.975 – 1.0	161	1.15 – 1.20	2	15% - 20%	1%
Credit to Debit	190	> 1.20	9	> 20%	6%
		Credit to Debit	190		

• Based on PY 2018 data

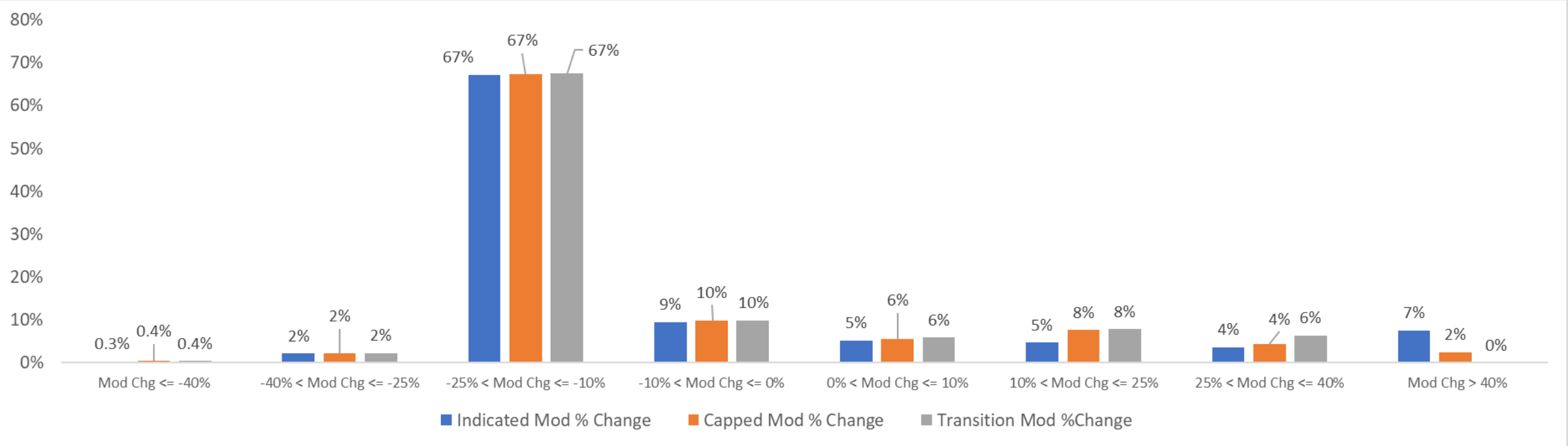
Impact on Premium

Exhibit 20



* Based on PY 2019 and 2020

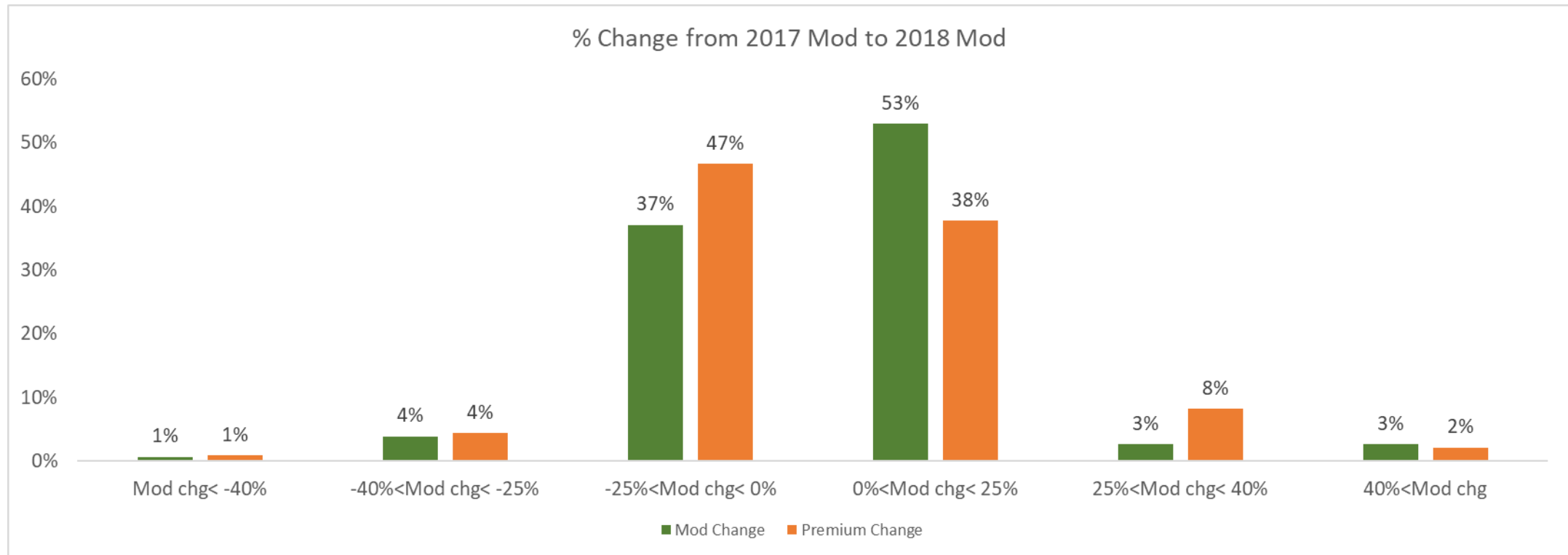
Policies Capped (PY 2018 Max Mod)



Note: “Capped Mod” is based on using Max Mod capping and “Transition Mod” uses both Max Mod and +40% swing limit capping used during a transition period.

Mod and Premium Change

Exhibit 22



* Based on PY 2018 data

Workplace Safety Program

Distribution of Participating Employers

Premium	Count	Premium (Current)	Premium (New)	Credit (Current)	Credit (New)†
0 – 3,161	165	147,196	131,930	22,807	22,456
3,161 – 5,000	129	431,214	394,486	78,237	33,894
5,000 – 25,000	674	7,962,679	7,587,872	1,374,118	561,176
25,000 – 100,000	412	20,317,340	20,448,734	2,777,300	1,288,363
100,000 – 250,000	108	17,713,128	17,789,754	1,561,594	952,993
250,000 – 500,000	25	8,886,714	8,893,614	498,523	417,660
500,000 – 1,000,000	5	2,787,368	2,973,747	100,910	120,035
1,000,000 and above	3	3,227,896	3,616,334	68,978	117,675
Total	1,521	61,473,535	61,837,471	6,482,466	3,514,253
Total Eligible Premium		269,727,315	266,966,862	2.4%	1.3%

* Based on PY 2019 and 2020

† Estimated

- The updated eligibility is estimated to encourage around 2,100 or 15% more employers to join the program.
- Newly eligible employers are estimated to receive a total safety program premium savings of approximately \$650,000.

Overall Impact

	Experience Rating	Workplace Safety †	Overall Impact
Premium	(3,459,918)	2,760,454	(699,465)

The total number of newly added policies for both programs is 2,100.

* Based on PY 2019 and 2020

† Calculated based on the estimated number of participating risks.

COLLECTIBLE PREMIUM RATIOS ***CURRENT PLAN**

Policy Years 2016 to 2018 Unit Data

Policy Year	Premium at Manual Rates	Collected Premium (Excluding Constants)	Collectible Premium Ratio (2)/(3)
(1)	(2)	(3)	(4)
ALL INDUSTRIES			
2016	280,499,537	289,628,999	0.9685
2017	303,537,272	314,958,769	0.9637
2018	308,325,052	308,949,380	0.9980
TOTAL	892,361,861	913,537,148	0.9768
MANUFACTURING AND UTILITIES			
2016	38,248,232	35,049,561	1.0913
2017	39,655,436	35,792,183	1.1079
2018	40,576,228	37,171,201	1.0916
TOTAL	118,479,896	108,012,944	1.0969
CONTRACTING AND QUARRYING			
2016	54,174,402	51,237,012	1.0573
2017	57,985,039	54,334,898	1.0672
2018	65,045,610	59,030,760	1.1019
TOTAL	177,205,051	164,602,670	1.0766
OTHER INDUSTRIES			
2016	188,076,903	203,342,427	0.9249
2017	205,896,797	224,831,688	0.9158
2018	202,703,214	212,747,420	0.9528
TOTAL	596,676,914	640,921,534	0.9310

* Excludes classifications and coverages not subject to experience rating.

Based on updated unit data used in the ERP study

COLLECTIBLE PREMIUM RATIOS *
PROPOSED PLAN

Policy Years 2016 to 2018 Unit Data

Policy Year	Premium at Manual Rates	Collected Premium (Excluding Constants)	Collectible Premium Ratio (2)/(3)
(1)	(2)	(3)	(4)
ALL INDUSTRIES			
2016	280,499,537	284,366,988	0.9864
2017	303,537,272	307,253,915	0.9879
2018	308,325,052	305,529,665	1.0091
TOTAL	892,361,861	897,150,568	0.9947
MANUFACTURING AND UTILITIES			
2016	38,248,232	34,572,541	1.1063
2017	39,655,436	34,842,356	1.1381
2018	40,576,228	36,055,390	1.1254
TOTAL	118,479,896	105,470,288	1.1233
CONTRACTING AND QUARRYING			
2016	54,174,402	49,754,913	1.0888
2017	57,985,039	52,498,364	1.1045
2018	65,045,610	57,500,592	1.1312
TOTAL	177,205,051	159,753,869	1.1092
OTHER INDUSTRIES			
2016	188,076,903	200,039,534	0.9402
2017	205,896,797	219,913,195	0.9363
2018	202,703,214	211,973,682	0.9563
TOTAL	596,676,914	631,926,411	0.9442

* Excludes classifications and coverages not subject to experience rating.

Based on updated unit data used in the ERP study

EXPECTED LOSS COST FACTORS
(Current Experience Rating Plan)

Policy Year Beginning 12/1	Average Law Multiplier	Adjustment Factor	Loss Ratio Development Factor	Expense Allowance * 1 / (PLR/CPR)	Trend Factor	Product (2) * (3) * (4) * (5) * (6)	Expected Loss Rate Factor 1.0 / (7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<u>Manufacturing and Utilities</u>							
2020	1.0413	1.0000	1.1821	1.8595	1.0556	2.4162	0.4139
2021	1.0332	1.0000	1.2346	1.8595	1.0413	2.4699	0.4049
2022	1.0177	1.0000	1.5026	1.8595	1.0272	2.9209	0.3424
<u>Contracting and Quarrying</u>							
2020	1.0413	1.0000	1.1870	1.8251	1.0556	2.3813	0.4199
2021	1.0332	1.0000	1.2923	1.8251	1.0413	2.5375	0.3941
2022	1.0177	1.0000	1.4628	1.8251	1.0272	2.7909	0.3583
<u>Other Industries</u>							
2020	1.0413	1.0000	1.1758	1.5782	1.0556	2.0397	0.4903
2021	1.0332	1.0000	1.2490	1.5782	1.0413	2.1207	0.4715
2022	1.0177	1.0000	1.5219	1.5782	1.0272	2.5109	0.3983

* Permissible Loss Ratio = 0.5899
Collectible Premium Ratios
 Manufacturing = 1.0969
 Contracting = 1.0766
 All Other = 0.9310

EXPECTED LOSS COST FACTORS
(Updated Experience Rating Plan)

Policy Year Beginning 12/1 (1)	Average Law Multiplier (2)	Adjustment Factor (3)	Loss Ratio Development Factor (4)	Expense Allowance * 1 / (PLR/CPR) (5)	Trend Factor (6)	Product (2) * (3) * (4) * (5) * (6) (7)	Expected Loss Rate Factor 1.0 / (7) (8)
<u>Manufacturing and Utilities</u>							
2020	1.0413	1.0000	1.1821	1.9042	1.0556	2.4742	0.4042
2021	1.0332	1.0000	1.2346	1.9042	1.0413	2.5293	0.3954
2022	1.0177	1.0000	1.5026	1.9042	1.0272	2.9911	0.3343
<u>Contracting and Quarrying</u>							
2020	1.0413	1.0000	1.1870	1.8803	1.0556	2.4533	0.4076
2021	1.0332	1.0000	1.2923	1.8803	1.0413	2.6143	0.3825
2022	1.0177	1.0000	1.4628	1.8803	1.0272	2.8753	0.3478
<u>Other Industries</u>							
2020	1.0413	1.0000	1.1758	1.6006	1.0556	2.0687	0.4834
2021	1.0332	1.0000	1.2490	1.6006	1.0413	2.1508	0.4649
2022	1.0177	1.0000	1.5219	1.6006	1.0272	2.5465	0.3927
<p>* Permissible Loss Ratio = 0.5899</p> <p>Collectible Premium Ratios</p> <p style="padding-left: 40px;">Manufacturing = 1.1233</p> <p style="padding-left: 40px;">Contracting = 1.1092</p> <p style="padding-left: 40px;">All Other = 0.9442</p>							

DELAWARE WORKERS COMPENSATION MANUAL OF RULES, CLASSIFICATIONS, AND RATING VALUES FOR WORKERS COMPENSATION AND FOR EMPLOYERS LIABILITY INSURANCE

Proposed Effective: December 1, 2024

INFORMATION PAGE remains unchanged

PREFACE remains unchanged

TABLE OF CONTENTS remains unchanged

SECTION 1 – UNDERWRITING RULES

RULES I – VIII remains unchanged

RULE IX – SPECIAL CONDITIONS OR OPERATIONS EFFECTING COVERAGE AND PREMIUM

F. DELAWARE WORKPLACE SAFETY PROGRAM

1. The Effective Date

Delaware Workplace Safety Program effective February 1, 1989. Revised ~~July 1, 1999~~ [December 1, 2024](#).

2. Eligibility

- a. Employers are eligible for the Workplace Safety Program if they [currently qualify for the uniform experience rating plan or who otherwise qualify for the program pursuant to parameters set by the Insurance Commissioner by regulation. The Delaware Compensation Rating Bureau, or another qualified entity designated by the Department of Insurance, shall test each employer to determine eligibility.](#) ~~have \$3,161 or more of annual Delaware only premium at residual market rates.~~
- b. ~~Qualifying premium and safety credit percent eligibility is based on the most current required unit statistical card filing (for example, July 1999 employers qualify using the unit statistical report for the July 1996 policy).~~
- c. ~~The DCRB will test each employer by taking the required unit statistical card payroll times current Residual Market Rates times most current experience modification to determine the employer's qualifying premium.~~

3. Employer Notification

Employers meeting the [eligibility](#) ~~premium qualification~~ requirement will be notified by the Delaware Department of Insurance seven months in advance of renewal date. This notification will inform the employer of the premium credit they are eligible for if attested safe, together with the schedule of inspection costs.

4. Inspection

The cost of each Department of Insurance safety inspection will be borne by the employer and will start at **\$150 per location**. Each work location must pass inspection for the employer to be eligible for premium credit under the ~~Work-place~~ [Workplace](#) Safety Program. Inspection fees for large and/or complex employers may be established by the Department of Insurance.

5. Employer Action

Once the employer receives their notification of eligibility, the employer must decide to participate in the Workplace Safety Program. This decision must be made no later than five months before their policy renewal. The employer must contact the Delaware Department of Insurance and request an inspection. Inspections will be made by a representative from one of the independent safety expert companies contracted by the Delaware Department of Insurance.

6. Delaware Department of Insurance Action

The Department of Insurance will notify the inspector of the employer's request. The inspector will then contact the employer to set up the first of two inspections. A second unannounced inspection will be made at some later date to confirm initial certifications of safety in the workplace. Failure to pass this non-scheduled inspection will result in withdrawal of the safety credit.

7. Qualified Employer

The DCRB will be informed when an employer passes the inspection. The DCRB will then record on the experience rating calculation sheet the credit percentage to apply to the renewal policy. Code 9880 is to be used in policy issuance and statistical reporting to record the Workplace Safety Program premium credit, which is to be applied after experience modification and after deviation or schedule rating adjustments but before calculating premium discount and before adding of expense constant.

For Example:

975	Restaurant	\$350,000	\$4.39	\$15,365	
953	Clerical	80,000	.54	432	
	Sub-Total			15,797	
9898	Experience Modification		.95	790	Credit
	Sub-Total			15,007	
9887	Schedule Credit 5%			750	Credit
	Sub-Total			14,257	
9880	Safety Program Credit			2,709	Credit
	Sub-Total			11,548	
0063	Premium Discount if applicable				
0900	Expense Constant if applicable				
9999	Estimated Annual			11,548	

8. Safety Credit Percentages

Safety credits will be granted according to the following formula:

$$20\% \times [1.0000 - C]$$

Where "C" is the credibility of the qualified employer in the uniform Experience Rating Plan for the policy period expiring immediately prior to the application of the safety credit. ~~If the qualified employer was not experience rated in the policy period expiring immediately prior to the application of the safety credit, "C" will be set at 0.050.~~ Safety credit ~~factors packages~~ will be rounded to the nearest whole percent.

9. DCRB Rating Values

A Delaware Workplace Safety Program Correction Factor shall be included in loss costs and residual market rates. This factor shall be designed to make the Workplace Safety Program revenue neutral in the aggregate.

10. Appeals

The DCRB's determination of the percentage credit for an individual risk eligible for the Delaware Workplace Safety Program may be appealed pursuant to Rule XVI, APPEALS FROM APPLICATION OF THE RATING SYSTEM PROCEDURE, Section 1 of this Manual.

RULES X – XVII remains unchanged

SECTION 2.1 – SECTION 4 remains unchanged

SECTION 5 – EXPERIENCE RATING PLAN

SECTION I. – II remains unchanged.

SECTION III – GENERAL PROVISIONS

1. Eligibility Requirements

A risk shall qualify for a rating under this Plan if the premium developed by the audited payrolls or other exposures of ~~the the experience period policy terminating two (2) years prior to the date for which the modification is to be established~~, extended at current DCRB Residual Market Rates, is ~~\$3,161~~ 5,000 or more.

- (a) Eligibility requirements will be determined without consideration of Maritime Liability, Liability under the Federal Employers' Liability Act, Excess Limits and Additional Medical Coverage, the non-ratable element for Explosives Manufacturing, and Atomic Energy Projects.
- (b) Risks shall be disqualified by a lapse of insurance of two years or more until they again qualify for experience rating following the lapse.
- (c) The RED may differ from a risk's policy effective date for reasons including, but not limited to:
 - △ Short-term policies
 - △ Cancellations
 - △ Gaps in Coverage
 - △ Changes in ownership or combinability status
 - △ Multiple policy effective dates
 - △ A policy that is longer than one year and 16 days
 - △ Late receipt of current policy information by the DCRB

To determine a risk's RED, the DCRB will review the most recent full-term policies and unit statistical data. For purposes of this rule, a full-term policy is written for 12 months and is not cancelled prior to its expiration date.

The application of Rules 2 and 3 of this section is subject to the provisions of Section V "Tabulation of Experience" of this Plan.

2. THROUGH 10. remains unchanged

SECTION VI – RATING PROCEDURE

1. Actual Primary Losses

Actual Primary Losses (A_p), as tabulated in accordance with the provisions of Rules 4 and 5 of Section V, shall be used in the rating.

2. Expected Losses

Expected Losses (E) shall be determined from the application of the appropriate Expected Loss Factors, shown in Table A, to the payrolls or other exposures for each classification for the experience period.

3. Credibility

The Credibility (C) of the experience of the risk shall correspond to Expected Losses (E), as shown in Table B.

4. ~~Maximum Value~~ Limit Charge

A Limitation Charge (L) reflecting the loss dollars eliminated by the ~~Maximum Value split point~~ placed on One Accident, shall be included in calculating the modification. The Limit Charge times Credibility, or L x C, shall be determined by entering Table B at the level of Expected Losses (E) for the experience period.

5. Credibility Complement (1-C)

The Credibility Complement is computed by subtracting the Credibility (C) from unity (1.0).

6.5. Experience Modification

The Experience Modification (M) shall be determined from the formula:

$$M = \frac{[A \times C + E \times L + E(1.000 - C)]}{E}$$

The experience modification shall be rounded to three decimal places.

The indicated modification will be subject to capping based on the Maximum Modification formula below:

$$1.10 + 0.0004 \times (E / G), \text{ where } G=12$$

If the indicated modification exceeds the Maximum Modification, the Final Modification will be capped at the Maximum Modification.

7. Transition Rules

During the transition period based on the RED between 12/1/24 to 11/30/25, swing limits of +40% of the prior modification will apply, along with a Maximum Modification calculated using the formula above. The Final Modification factor will be determined by selecting the lower value between the modification capped by the +40% swing limit of the prior modification and the Maximum Modification. The +40% swing limit will be eliminated once the year transition period concludes.

Effective: December 1, 2024

Table B

DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge " <u>L</u> " * " <u>C</u> "
(1)		(2)	(3)	(4)	(5)
5,883 -	or less	0.0500-0.690	27,945-10,000	0.6286-0.798	0.034
	5,000				
5,884	5,001	0.0550-0.692	28,095-11,000	0.6275-0.786	0.035
	6,477				
	11,097				
6,478	7,078	0.0600-0.694	28,242-13,000	0.6264-0.763	0.038
11,098	17,683				
7,079	7,686	0.0650-0.697	28,396-15,000	0.6253-0.741	0.041
17,684	23,953				
7,687	8,300	0.0700-0.699	28,550-17,000	0.6242-0.721	0.044
23,954	29,924				
8,301	8,920	0.0750-0.701	28,703-19,000	0.6231-0.702	0.047
29,925	35,614				
8,921	9,548	0.0800-0.703	28,859-21,000	0.6220-0.684	0.050
35,615	41,041				
9,549	40,182	0.0850-0.706	29,018-23,000	0.6208-0.667	0.053
41,042	55,902				
40,183	40,823	0.0900-0.711	29,175-25,000	0.6197-0.651	0.056
55,903	68,958				
40,824	41,471	0.0950-0.715	29,337-27,000	0.6185-0.636	0.059
68,959	80,590				
41,472	42,127	0.1000-0.718	29,500-29,000	0.6174-0.621	0.062
80,590	91,141				
42,128	42,790	0.1050-0.722	29,664-31,000	0.6162-0.607	0.065
91,142	100,920				
42,791	43,460	0.1100-0.725	29,832-33,000	0.6150-0.594	0.068
100,921	110,201				
43,461	44,138	0.1150-0.728	30,000-35,000	0.6138-0.581	0.071
110,202	119,228				
44,139	44,823	0.1200-0.731	30,169-37,000	0.6127-0.569	0.074
119,229	128,218				
44,824	45,517	0.1250-0.734	30,342-39,000	0.6115-0.557	0.076
128,219	137,358				
45,518	46,218	0.1300-0.737	30,515-41,000	0.6103-0.546	0.079
137,359	146,813				
46,219	46,928	0.1350-0.740	30,693-43,000	0.6090-0.535	0.082
146,814	156,724				
46,929	47,646	0.1400-0.743	30,871-45,000	0.6078-0.525	0.085
156,725	167,212				
47,647	48,372	0.1450-0.746	31,052-47,000	0.6066-0.515	0.088
167,213	178,379				

Effective: December 1, 2024

Table B

DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge " <u>L</u> " * " <u>C</u> "
(1)		(2)	(3)	(4)	(5)
48,373	<u>49,107</u>	0.1500 <u>0.749</u>	31,233 <u>49,000</u>	0.6053 <u>0.506</u>	0.091
178,380	<u>190,306</u>				
49,108	<u>49,854</u>	0.1550 <u>0.752</u>	31,449 <u>51,000</u>	0.6041 <u>0.497</u>	0.094
190,307	<u>203,062</u>				
49,852	<u>20,603</u>	0.1600 <u>0.755</u>	31,606 <u>53,000</u>	0.6028 <u>0.488</u>	0.096
203,063	<u>216,698</u>				
20,604	<u>21,365</u>	0.1650 <u>0.758</u>	31,795 <u>55,000</u>	0.6015 <u>0.480</u>	0.099
216,699	<u>231,254</u>				
21,366	<u>22,135</u>	0.1700 <u>0.761</u>	31,987 <u>57,000</u>	0.6002 <u>0.472</u>	0.102
231,255	<u>246,756</u>				
22,136	<u>22,916</u>	0.1750 <u>0.764</u>	32,180 <u>59,000</u>	0.5990 <u>0.464</u>	0.105
246,757	<u>263,220</u>				
22,917	<u>23,705</u>	0.1800 <u>0.767</u>	32,376 <u>61,000</u>	0.5977 <u>0.456</u>	0.108
263,221	<u>280,654</u>				
23,706	<u>24,505</u>	0.1850 <u>0.770</u>	32,576 <u>63,000</u>	0.5963 <u>0.449</u>	0.110
280,655	<u>299,053</u>				
24,506	<u>25,314</u>	0.1900 <u>0.773</u>	32,776 <u>65,000</u>	0.5950 <u>0.442</u>	0.113
299,054	<u>318,410</u>				
25,315	<u>26,133</u>	0.1950 <u>0.776</u>	32,979 <u>67,000</u>	0.5937 <u>0.435</u>	0.116
318,411	<u>338,707</u>				
26,134	<u>26,963</u>	0.2000 <u>0.779</u>	33,186 <u>69,000</u>	0.5923 <u>0.429</u>	0.118
338,708	<u>359,924</u>				
26,964	<u>27,803</u>	0.2050 <u>0.782</u>	33,395 <u>71,000</u>	0.5910 <u>0.422</u>	0.121
359,925	<u>382,034</u>				
27,804	<u>28,654</u>	0.2100 <u>0.785</u>	33,606 <u>73,000</u>	0.5896 <u>0.416</u>	0.124
382,035	<u>405,008</u>				
28,655	<u>29,515</u>	0.2150 <u>0.788</u>	33,820 <u>75,000</u>	0.5882 <u>0.410</u>	0.126
405,009	<u>428,814</u>				
29,516	<u>30,388</u>	0.2200 <u>0.791</u>	34,036 <u>77,000</u>	0.5868 <u>0.405</u>	0.129
428,815	<u>453,416</u>				
30,389	<u>31,272</u>	0.2250 <u>0.794</u>	34,257 <u>80,000</u>	0.5854 <u>0.396</u>	0.132
453,417	<u>478,780</u>				
31,273	<u>32,168</u>	0.2300 <u>0.797</u>	34,479 <u>83,000</u>	0.5840 <u>0.389</u>	0.134
478,781	<u>504,867</u>				
32,169	<u>33,075</u>	0.2350 <u>0.800</u>	34,704 <u>86,000</u>	0.5826 <u>0.381</u>	0.137
504,868	<u>531,643</u>				
33,076	<u>33,994</u>	0.2400 <u>0.803</u>	34,932 <u>89,000</u>	0.5812 <u>0.374</u>	0.139
531,644	<u>559,072</u>				
33,995	<u>34,926</u>	0.2450 <u>0.806</u>	35,164 <u>92,000</u>	0.5797 <u>0.366</u>	0.142
559,073	<u>587,119</u>				

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Table B
DELAWARE EXPERIENCE RATING PLAN

Expected Losses	Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge " <u>L</u> " * " <u>C</u> "
(1)	(2)	(3)	(4)	(5)
34,927	0.2500	35,399	0.5783	0.145
<u>35,870</u>	<u>0.809</u>	<u>95,000</u>	<u>0.360</u>	
587,120	0.2550	35,636	0.5768	0.147
<u>36,827</u>	<u>0.812</u>	<u>98,000</u>	<u>0.353</u>	
615,752	0.2600	35,877	0.5753	0.150
<u>37,796</u>	<u>0.815</u>	<u>102,000</u>	<u>0.345</u>	
644,939	0.2650	36,121	0.5739	0.152
<u>37,797</u>	<u>0.818</u>	<u>106,000</u>	<u>0.337</u>	
674,653	0.2700	36,369	0.5724	0.155
<u>38,780</u>	<u>0.821</u>	<u>110,000</u>	<u>0.329</u>	
704,872	0.2750	36,619	0.5709	0.157
<u>39,776</u>	<u>0.824</u>	<u>114,000</u>	<u>0.322</u>	
735,574	0.2800	36,873	0.5694	0.159
<u>40,786</u>	<u>0.827</u>	<u>118,000</u>	<u>0.315</u>	
766,743	0.2850	37,131	0.5678	0.162
<u>41,810</u>	<u>0.830</u>	<u>122,000</u>	<u>0.308</u>	
798,367	0.2900	37,392	0.5663	0.164
<u>42,849</u>	<u>0.833</u>	<u>126,000</u>	<u>0.302</u>	
830,441	0.2950	37,658	0.5647	0.167
<u>43,902</u>	<u>0.836</u>	<u>130,000</u>	<u>0.295</u>	
862,962	0.3000	37,927	0.5632	0.169
<u>44,974</u>	<u>0.839</u>	<u>134,000</u>	<u>0.289</u>	
895,934	0.3050	38,199	0.5616	0.171
<u>46,054</u>	<u>0.842</u>	<u>138,000</u>	<u>0.283</u>	
929,368	0.3100	38,477	0.5600	0.174
<u>47,153</u>	<u>0.845</u>	<u>142,000</u>	<u>0.278</u>	
963,279	0.3150	38,757	0.5584	0.176
<u>48,269</u>	<u>0.848</u>	<u>146,000</u>	<u>0.273</u>	
997,691	0.3200	39,042	0.5567	0.178
<u>49,400</u>	<u>0.851</u>	<u>150,000</u>	<u>0.267</u>	
1,032,632	0.3250	39,332	0.5551	0.180
<u>50,548</u>	<u>0.854</u>	<u>154,000</u>	<u>0.262</u>	
1,068,139	0.3300	39,625	0.5535	0.183
<u>51,714</u>	<u>0.857</u>	<u>158,000</u>	<u>0.258</u>	
1,104,254	0.3350	39,923	0.5518	0.185
<u>52,897</u>	<u>0.860</u>	<u>162,000</u>	<u>0.253</u>	
1,141,027	0.3400	40,225	0.5501	0.187
<u>54,097</u>	<u>0.863</u>	<u>166,000</u>	<u>0.249</u>	
1,178,517	0.3450	40,533	0.5484	0.189
<u>55,316</u>	<u>0.866</u>	<u>170,000</u>	<u>0.244</u>	
1,216,789				
<u>1,255,914</u>				

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Table B

DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge " <u>L</u> " * " <u>C</u> "
(1)		(2)	(3)	(4)	(5)
56,554	57,810	0.3500 0.869	40,844 174,000	0.5467 0.240	0.194
<u>1,255,915</u>	<u>1,295,976</u>				
57,811	59,086	0.3550 0.872	41,161 178,000	0.5450 0.237	0.193
<u>1,295,977</u>	<u>1,337,061</u>				
59,087	60,382	0.3600 0.875	41,483 182,000	0.5433 0.233	0.196
<u>1,337,062</u>	<u>1,379,268</u>				
60,383	61,699	0.3650 0.878	41,809 186,000	0.5415 0.229	0.198
<u>1,379,269</u>	<u>1,422,700</u>				
61,700	63,037	0.3700 0.881	42,141 190,000	0.5397 0.226	0.200
<u>1,422,701</u>	<u>1,467,472</u>				
63,038	64,396	0.3750 0.884	42,478 194,000	0.5379 0.223	0.202
<u>1,467,473</u>	<u>1,513,704</u>				
64,397	65,777	0.3800 0.887	42,820 198,000	0.5361 0.219	0.204
<u>1,513,705</u>	<u>1,561,526</u>				
65,778	67,181	0.3850 0.890	43,169 202,000	0.5343 0.216	0.206
<u>1,561,527</u>	<u>1,611,076</u>				
67,182	68,608	0.3900 0.893	43,522 206,000	0.5324 0.213	0.208
<u>1,611,077</u>	<u>1,662,502</u>				
68,609	70,059	0.3950 0.896	43,882 210,000	0.5306 0.210	0.210
<u>1,662,503</u>	<u>1,715,957</u>				
70,060	71,534	0.4000 0.899	44,248 215,000	0.5287 0.207	0.214
<u>1,715,958</u>	<u>1,771,606</u>				
71,535	73,033	0.4050 0.902	44,620 220,000	0.5268 0.204	0.213
<u>1,771,607</u>	<u>1,829,621</u>				
73,034	74,559	0.4100 0.905	44,998 225,000	0.5249 0.201	0.215
<u>1,829,622</u>	<u>1,890,183</u>				
74,560	76,110	0.4150 0.908	45,383 230,000	0.5230 0.198	0.217
<u>1,890,184</u>	<u>1,953,479</u>				
76,111	77,689	0.4200 0.911	45,774 235,000	0.5210 0.195	0.219
<u>1,953,480</u>	<u>2,019,709</u>				
77,690	79,294	0.4250 0.914	46,172 240,000	0.5191 0.192	0.224
<u>2,019,710</u>	<u>2,089,078</u>				
79,295	80,929	0.4300 0.917	46,577 245,000	0.5171 0.190	0.222
<u>2,089,079</u>	<u>2,161,801</u>				
80,930	82,592	0.4350 0.920	46,989 250,000	0.5151 0.188	0.224
<u>2,161,802</u>	<u>2,238,101</u>				
82,593	84,285	0.4400 0.923	47,409 255,000	0.5131 0.185	0.226
<u>2,238,102</u>	<u>2,318,210</u>				
84,286	86,009	0.4450 0.926	47,836 260,000	0.5111 0.183	0.227
<u>2,318,211</u>	<u>2,402,367</u>				

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Table B
DELAWARE EXPERIENCE RATING PLAN

Expected Losses	Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge " <u>L</u> " * " <u>C</u> "
(1)	(2)	(3)	(4)	(5)
86,010	0.4500	48,271	0.5090	0.229
<u>2,402,368</u>	<u>0.929</u>	<u>265,000</u>	<u>0.181</u>	
87,765	0.4550	48,714	0.5070	0.231
<u>2,490,822</u>	<u>0.932</u>	<u>270,000</u>	<u>0.178</u>	
89,553	0.4600	49,165	0.5049	0.232
<u>2,583,830</u>	<u>0.935</u>	<u>275,000</u>	<u>0.176</u>	
91,374	0.4650	49,624	0.5028	0.234
<u>2,681,656</u>	<u>0.938</u>	<u>280,000</u>	<u>0.174</u>	
93,229	0.4700	50,093	0.5007	0.235
<u>2,784,573</u>	<u>0.941</u>	<u>285,000</u>	<u>0.172</u>	
95,119	0.4750	50,569	0.4986	0.237
<u>2,892,864</u>	<u>0.944</u>	<u>290,000</u>	<u>0.170</u>	
97,045	0.4800	51,056	0.4965	0.238
<u>3,006,816</u>	<u>0.947</u>	<u>295,000</u>	<u>0.168</u>	
99,009	0.4850	51,552	0.4943	0.240
<u>3,126,728</u>	<u>0.950</u>	<u>300,000</u>	<u>0.166</u>	
101,011	0.4900	52,057	0.4921	0.241
<u>3,252,906</u>	<u>0.953</u>	<u>300,000</u>	<u>0.166</u>	
103,052	0.4950	52,572	0.4899	0.243
<u>3,385,662</u>	<u>0.956</u>	<u>300,000</u>	<u>0.166</u>	
105,134	0.5000	53,098	0.4876	0.244
<u>3,525,317</u>	<u>0.959</u>	<u>300,000</u>	<u>0.166</u>	
107,258	0.5050	53,634	0.4854	0.245
<u>3,672,202</u>	<u>0.962</u>	<u>300,000</u>	<u>0.166</u>	
109,425	0.5100	54,182	0.4831	0.246
<u>3,826,651</u>	<u>0.965</u>	<u>300,000</u>	<u>0.166</u>	
111,637	0.5150	54,740	0.4807	0.248
<u>3,989,010</u>	<u>0.968</u>	<u>300,000</u>	<u>0.166</u>	
113,894	0.5200	55,311	0.4784	0.249
<u>4,159,631</u>	<u>0.971</u>	<u>300,000</u>	<u>0.166</u>	
116,199	0.5250	55,893	0.4760	0.250
<u>4,338,872</u>	<u>0.974</u>	<u>300,000</u>	<u>0.166</u>	
118,552	0.5300	56,488	0.4737	0.251
<u>Above</u>				
120,956	0.5350	57,095	0.4712	0.252
123,411	0.5400	57,715	0.4688	0.253
125,920	0.5450	58,350	0.4664	0.254
128,485	0.5500	58,998	0.4639	0.255
131,107	0.5550	59,661	0.4613	0.256
133,789	0.5600	60,339	0.4588	0.257

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Table B
DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge " <u>L</u> " * " <u>C</u> "
(1)	(2)	(3)	(4)	(5)	
136,531	139,336	0.5650	61,033	0.4562	0.258
139,337	142,208	0.5700	61,743	0.4536	0.259
142,209	145,148	0.5750	62,469	0.4509	0.259
145,149	148,158	0.5800	63,213	0.4482	0.260
148,159	151,241	0.5850	63,974	0.4455	0.261
151,242	154,399	0.5900	64,755	0.4428	0.261
154,400	157,637	0.5950	65,554	0.4400	0.262
157,638	160,955	0.6000	66,374	0.4373	0.262
160,956	164,358	0.6050	67,214	0.4345	0.263
164,359	167,849	0.6100	68,075	0.4316	0.263
167,850	171,432	0.6150	68,960	0.4288	0.264
171,433	175,109	0.6200	69,867	0.4259	0.264
175,110	178,885	0.6250	70,799	0.4230	0.264
178,886	182,763	0.6300	71,756	0.4201	0.265
182,764	186,749	0.6350	72,739	0.4171	0.265
186,750	190,846	0.6400	73,749	0.4140	0.265
190,847	195,059	0.6450	74,788	0.4110	0.265
195,060	199,394	0.6500	75,857	0.4079	0.265
199,395	203,855	0.6550	76,956	0.4048	0.265
203,856	208,448	0.6600	78,088	0.4016	0.265
208,449	213,179	0.6650	79,253	0.3984	0.265
213,180	218,055	0.6700	80,454	0.3952	0.265
218,056	223,082	0.6750	81,692	0.3919	0.265
223,083	228,268	0.6800	82,969	0.3886	0.264
228,269	233,619	0.6850	84,286	0.3852	0.264
233,620	239,145	0.6900	85,646	0.3818	0.263
239,146	244,853	0.6950	87,050	0.3783	0.263
244,854	250,753	0.7000	88,501	0.3748	0.262
250,754	256,854	0.7050	90,001	0.3711	0.262
256,855	263,168	0.7100	91,554	0.3676	0.261
263,169	269,705	0.7150	93,160	0.3641	0.260
269,706	276,478	0.7200	94,824	0.3605	0.260

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Table B

DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge $\frac{"L" * "C"}{"C"}$
(1)	(2)	(3)	(4)	(5)	
276,479	283,500	0.7250	96,548	0.3569	0.259
283,501	290,784	0.7300	98,337	0.3532	0.258
290,785	298,345	0.7350	100,192	0.3495	0.257
298,346	306,200	0.7400	102,119	0.3459	0.256
306,201	314,366	0.7450	104,122	0.3422	0.255
314,367	322,863	0.7500	106,205	0.3383	0.254
322,864	331,709	0.7550	108,373	0.3343	0.252
331,710	340,928	0.7600	110,631	0.3302	0.251
340,929	350,543	0.7650	112,986	0.3262	0.250
350,544	360,582	0.7700	115,443	0.3220	0.248
360,583	371,071	0.7750	118,009	0.3176	0.246
371,072	382,042	0.7800	120,691	0.3131	0.244
382,043	393,530	0.7850	123,499	0.3088	0.242
393,531	405,572	0.7900	126,441	0.3042	0.240
405,573	418,208	0.7950	129,525	0.2994	0.238
418,209	431,484	0.8000	132,765	0.2948	0.236
431,485	445,450	0.8050	136,170	0.2901	0.234
445,451	460,160	0.8100	139,755	0.2851	0.231
460,161	475,676	0.8150	143,533	0.2802	0.228
475,677	492,067	0.8200	147,522	0.2751	0.226
492,068	509,408	0.8250	151,739	0.2699	0.223
509,409	527,784	0.8300	156,204	0.2648	0.220
527,785	547,291	0.8350	160,940	0.2594	0.217
547,292	568,037	0.8400	165,972	0.2541	0.213
568,038	590,142	0.8450	171,328	0.2486	0.210
590,143	613,747	0.8500	177,043	0.2433	0.207
613,748	639,008	0.8550	183,151	0.2378	0.203
639,009	666,106	0.8600	189,697	0.2323	0.200
666,107	695,250	0.8650	196,728	0.2268	0.196
695,251	726,679	0.8700	204,300	0.2212	0.192
726,680	760,673	0.8750	212,479	0.2155	0.189
760,674	797,561	0.8800	221,340	0.2100	0.185

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Table B
DELAWARE EXPERIENCE RATING PLAN

Expected Losses	Credibility "C"	Maximum Value of one Accident	Limit Charge "L"	Weighted Maximum Value Charge "L" * "C"	
(1)	(2)	(3)	(4)	(5)	
797,562	837,728	0.8850	230,973	0.2044	0.181
837,729	881,631	0.8900	241,483	0.1991	0.177
881,632	929,818	0.8950	252,996	0.1937	0.173
929,819	982,946	0.9000	265,662	0.1881	0.169
982,947	1,041,819	0.9050	279,664	0.1823	0.165
1,041,820	1,107,419	0.9100	295,225	0.1763	0.160
1,107,420	1,180,972	0.9150	312,622	0.1703	0.156
1,180,973	1,264,014	0.9200	332,199	0.1644	0.151
1,264,015	1,358,511	0.9250	354,395	0.1583	0.146
1,358,512	1,467,008	0.9300	379,774	0.1520	0.141
1,467,009	1,592,864	0.9350	409,074	0.1453	0.136
1,592,865	1,740,608	0.9400	443,281	0.1390	0.131
1,740,609	1,916,494	0.9450	483,744	0.1329	0.126
1,916,495	2,129,408	0.9500	532,356	0.1268	0.120
2,129,409	2,392,420	0.9550	540,000	0.1260	0.120
2,392,421	2,725,568	0.9600	540,000	0.1260	0.121
2,725,569	3,148,875	0.9650	540,000	0.1260	0.122
3,148,876	3,618,100	0.9700	540,000	0.1260	0.122
3,618,101	4,132,309	0.9750	540,000	0.1260	0.123
4,132,310	4,707,619	0.9800	540,000	0.1260	0.123
4,707,620	5,372,957	0.9850	540,000	0.1260	0.124
5,372,958	6,191,496	0.9900	540,000	0.1260	0.125
6,191,497	7,380,369	0.9950	540,000	0.1260	0.125
7,380,370	and-over	1.0000	540,000	0.1260	0.126

DELAWARE WORKERS COMPENSATION MANUAL OF RULES, CLASSIFICATIONS, AND RATING VALUES FOR WORKERS COMPENSATION AND FOR EMPLOYERS LIABILITY INSURANCE

Proposed Effective: December 1, 2024

INFORMATION PAGE remains unchanged

PREFACE remains unchanged

TABLE OF CONTENTS remains unchanged

SECTION 1 – UNDERWRITING RULES

RULES I – VIII remains unchanged

RULE IX – SPECIAL CONDITIONS OR OPERATIONS EFFECTING COVERAGE AND PREMIUM

F. DELAWARE WORKPLACE SAFETY PROGRAM

1. The Effective Date

Delaware Workplace Safety Program effective February 1, 1989. Revised December 1, 2024.

2. Eligibility

Employers are eligible for the Workplace Safety Program if they currently qualify for the uniform experience rating plan or who otherwise qualify for the program pursuant to parameters set by the Insurance Commissioner by regulation. The Delaware Compensation Rating Bureau, or another qualified entity designated by the Department of Insurance, shall test each employer to determine eligibility.

3. Employer Notification

Employers meeting the eligibility requirement will be notified by the Delaware Department of Insurance seven months in advance of the renewal date. This notification will inform the employer of the premium credit they are eligible for if attested safe, together with the schedule of inspection costs.

4. Inspection

The cost of each Department of Insurance safety inspection will be borne by the employer and will start at **\$150 per location**. Each work location must pass inspection for the employer to be eligible for premium credit under the Workplace Safety Program. Inspection fees for large and/or complex employers may be established by the Department of Insurance.

5. Employer Action

Once the employer receives their notification of eligibility, the employer must decide to participate in the Workplace Safety Program. This decision must be made no later than five months before their policy renewal. The employer must contact the Delaware Department of Insurance and request an inspection. Inspections will be made by a representative from one of the independent safety expert companies contracted by the Delaware Department of Insurance.

6. Delaware Department of Insurance Action

The Department of Insurance will notify the inspector of the employer's request. The inspector will then contact the employer to set up the first of two inspections. A second unannounced inspection will be made at some later date to confirm initial certifications of safety in the workplace. Failure to pass this non-scheduled inspection will result in withdrawal of the safety credit.

7. Qualified Employer

The DCRB will be informed when an employer passes the inspection. The DCRB will then record on the experience rating calculation sheet the credit percentage to apply to the renewal policy. Code 9880 is to be used in policy issuance and statistical reporting to record the Workplace Safety Program premium credit, which is to be applied after experience modification and after deviation or schedule rating adjustments but before calculating premium discount and before adding of expense constant.

For Example:

975	Restaurant	\$350,000	\$4.39	\$15,365	
953	Clerical	80,000	.54	432	
	Sub-Total			15,797	
9898	Experience Modification		.95	790	Credit
	Sub-Total			15,007	
9887	Schedule Credit 5%			750	Credit
	Sub-Total			14,257	
9880	Safety Program Credit			2,709	Credit
	Sub-Total			11,548	
0063	Premium Discount				
	if applicable				
0900	Expense Constant				
	if applicable				
9999	Estimated Annual			11,548	

8. Safety Credit Percentages

Safety credits will be granted according to the following formula:

$$20\% \times [1.0000 - C]$$

Where “C” is the credibility of the qualified employer in the uniform Experience Rating Plan for the policy period expiring immediately prior to the application of the safety credit. Safety credit factors will be rounded to the nearest whole percent.

9. DCRB Rating Values

A Delaware Workplace Safety Program Correction Factor shall be included in loss costs and residual market rates. This factor shall be designed to make the Workplace Safety Program revenue neutral in the aggregate.

10. Appeals

The DCRB’s determination of the percentage credit for an individual risk eligible for the Delaware Workplace Safety Program may be appealed pursuant to Rule XVI, APPEALS FROM APPLICATION OF THE RATING SYSTEM PROCEDURE, Section 1 of this Manual.

RULES X – XVII remains unchanged

SECTION 2.1 – SECTION 4 remains unchanged

SECTION 5 – EXPERIENCE RATING PLAN

SECTION I. – II remains unchanged.

SECTION III – GENERAL PROVISIONS

1. Eligibility Requirements

A risk shall qualify for a rating under this Plan if the premium developed by the audited payrolls or other exposures of the experience period, extended at current **Residual Market Rates**, is **\$5,000 or more**.

- (a) Eligibility requirements will be determined without consideration of Maritime Liability, Liability under the Federal Employers' Liability Act, Excess Limits and Additional Medical Coverage, the non-ratable element for Explosives Manufacturing, and Atomic Energy Projects.
- (b) Risks shall be disqualified by a lapse of insurance of two years or more until they again qualify for experience rating following the lapse.
- (c) The RED may differ from a risk's policy effective date for reasons including, but not limited to:
- Short-term policies
 - Cancellations
 - Gaps in Coverage
 - Changes in ownership or combinability status
 - Multiple policy effective dates
 - A policy that is longer than one year and 16 days
 - Late receipt of current policy information by the DCRB

To determine a risk's RED, the DCRB will review the most recent full-term policies and unit statistical data. For purposes of this rule, a full-term policy is written for 12 months and is not cancelled prior to its expiration date.

The application of Rules 2 and 3 of this section is subject to the provisions of Section V "Tabulation of Experience" of this Plan.

2. THROUGH 10. remains unchanged

SECTION VI – RATING PROCEDURE

1. Actual Primary Losses

Actual Primary Losses (Ap), as tabulated in accordance with the provisions of Rules 4 and 5 of Section V, shall be used in the rating.

2. Expected Losses

Expected Losses (E) shall be determined from the application of the appropriate Expected Loss Factors, shown in Table A, to the payrolls or other exposures for each classification for the experience period.

3. Credibility

The Credibility (C) of the experience of the risk shall correspond to Expected Losses (E), as shown in Table B.

4. Limit Charge

A limit charge (L) reflecting the loss dollars eliminated by the split point placed on One Accident, shall be included in calculating the modification. The Charge times Credibility, or $L \times C$, shall be determined by entering Table B at the level of Expected Losses for the experience period.

5. Credibility Complement

The Credibility Complement is computed by subtracting the Credibility (C) from unity (1.0).

6. Experience Modification

The Experience Modification (M) shall be determined from the formula:

$$[A_p \times C + E \times L + E (1.0 - C)] / E$$

The experience modification shall be rounded to three decimal places.

The indicated modification will be subject to capping based on the Maximum Modification formula below:

$$1.10 + 0.0004 \times (E / G), \text{ where } G=12$$

If the indicated modification exceeds the Maximum Modification, the Final Modification will be capped at the Maximum Modification.

7. Transition Rules

During the transition period based on the RED between 12/1/24 to 11/30/25, swing limits of +40% of the prior modification will apply, along with a Maximum Modification calculated using the formula above. The Final Modification factor will be determined by selecting the lower value between the modification capped by the +40% swing limit of the prior modification and the Maximum Modification. The +40% swing limit will be eliminated once the year transition period concludes.

Effective: December 1, 2024

Table B

DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility	Maximum Value of one Accident	Limit Charge
(1)		"C" (2)	(3)	"L" (4)
-	5,000	0.690	10,000	0.798
5,001	11,097	0.692	11,000	0.786
11,098	17,683	0.694	13,000	0.763
17,684	23,953	0.697	15,000	0.741
23,954	29,924	0.699	17,000	0.721
29,925	35,614	0.701	19,000	0.702
35,615	41,041	0.703	21,000	0.684
41,042	55,902	0.706	23,000	0.667
55,903	68,958	0.711	25,000	0.651
68,959	80,590	0.715	27,000	0.636
80,590	91,141	0.718	29,000	0.621
91,142	100,920	0.722	31,000	0.607
100,921	110,201	0.725	33,000	0.594
110,202	119,228	0.728	35,000	0.581
119,229	128,218	0.731	37,000	0.569
128,219	137,358	0.734	39,000	0.557
137,359	146,813	0.737	41,000	0.546
146,814	156,724	0.740	43,000	0.535
156,725	167,212	0.743	45,000	0.525
167,213	178,379	0.746	47,000	0.515
178,380	190,306	0.749	49,000	0.506
190,307	203,062	0.752	51,000	0.497
203,063	216,698	0.755	53,000	0.488
216,699	231,254	0.758	55,000	0.480
231,255	246,756	0.761	57,000	0.472
246,757	263,220	0.764	59,000	0.464
263,221	280,654	0.767	61,000	0.456
280,655	299,053	0.770	63,000	0.449
299,054	318,410	0.773	65,000	0.442
318,411	338,707	0.776	67,000	0.435
338,708	359,924	0.779	69,000	0.429
359,925	382,034	0.782	71,000	0.422

Effective: December 1, 2024

Table B

DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility	Maximum Value of one Accident	Limit Charge
(1)		"C" (2)	(3)	"L" (4)
382,035	405,008	0.785	73,000	0.416
405,009	428,814	0.788	75,000	0.410
428,815	453,416	0.791	77,000	0.405
453,417	478,780	0.794	80,000	0.396
478,781	504,867	0.797	83,000	0.389
504,868	531,643	0.800	86,000	0.381
531,644	559,072	0.803	89,000	0.374
559,073	587,119	0.806	92,000	0.366
587,120	615,751	0.809	95,000	0.360
615,752	644,938	0.812	98,000	0.353
644,939	674,652	0.815	102,000	0.345
674,653	704,871	0.818	106,000	0.337
704,872	735,573	0.821	110,000	0.329
735,574	766,742	0.824	114,000	0.322
766,743	798,366	0.827	118,000	0.315
798,367	830,440	0.830	122,000	0.308
830,441	862,961	0.833	126,000	0.302
862,962	895,933	0.836	130,000	0.295
895,934	929,367	0.839	134,000	0.289
929,368	963,278	0.842	138,000	0.283
963,279	997,690	0.845	142,000	0.278
997,691	1,032,631	0.848	146,000	0.273
1,032,632	1,068,138	0.851	150,000	0.267
1,068,139	1,104,253	0.854	154,000	0.262
1,104,254	1,141,026	0.857	158,000	0.258
1,141,027	1,178,516	0.860	162,000	0.253
1,178,517	1,216,788	0.863	166,000	0.249
1,216,789	1,255,914	0.866	170,000	0.244
1,255,915	1,295,976	0.869	174,000	0.240
1,295,977	1,337,061	0.872	178,000	0.237
1,337,062	1,379,268	0.875	182,000	0.233
1,379,269	1,422,700	0.878	186,000	0.229

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Table B

DELAWARE EXPERIENCE RATING PLAN

Expected Losses		Credibility	Maximum Value of one Accident	Limit Charge
(1)		"C" (2)	(3)	"L" (4)
1,422,701	1,467,472	0.881	190,000	0.226
1,467,473	1,513,704	0.884	194,000	0.223
1,513,705	1,561,526	0.887	198,000	0.219
1,561,527	1,611,076	0.890	202,000	0.216
1,611,077	1,662,502	0.893	206,000	0.213
1,662,503	1,715,957	0.896	210,000	0.210
1,715,958	1,771,606	0.899	215,000	0.207
1,771,607	1,829,621	0.902	220,000	0.204
1,829,622	1,890,183	0.905	225,000	0.201
1,890,184	1,953,479	0.908	230,000	0.198
1,953,480	2,019,709	0.911	235,000	0.195
2,019,710	2,089,078	0.914	240,000	0.192
2,089,079	2,161,801	0.917	245,000	0.190
2,161,802	2,238,101	0.920	250,000	0.188
2,238,102	2,318,210	0.923	255,000	0.185
2,318,211	2,402,367	0.926	260,000	0.183
2,402,368	2,490,821	0.929	265,000	0.181
2,490,822	2,583,829	0.932	270,000	0.178
2,583,830	2,681,655	0.935	275,000	0.176
2,681,656	2,784,572	0.938	280,000	0.174
2,784,573	2,892,863	0.941	285,000	0.172
2,892,864	3,006,815	0.944	290,000	0.170
3,006,816	3,126,727	0.947	295,000	0.168
3,126,728	3,252,905	0.950	300,000	0.166
3,252,906	3,385,661	0.953	300,000	0.166
3,385,662	3,525,316	0.956	300,000	0.166
3,525,317	3,672,201	0.959	300,000	0.166
3,672,202	3,826,650	0.962	300,000	0.166
3,826,651	3,989,009	0.965	300,000	0.166
3,989,010	4,159,630	0.968	300,000	0.166
4,159,631	4,338,871	0.971	300,000	0.166
4,338,872	Above	0.974	300,000	0.166