

Assessing the impact of “lender choice” on loan-level price adjustments

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Summary

This paper provides an example of how lender choice could impact the LLPA fees collected by the Enterprises. Lender choice for credit scores has the potential to shift both the distribution and risk profile on guaranteed mortgages. To offset this risk, we calculate the actuarially equivalent LLPA by credit score cohort that produces a revenue-neutral pricing structure. This analysis was performed to demonstrate the potential impact on both the potential reduction in G-fees (for the same risk) and level of pricing adjustments that would be required to offset this shift. For risk-neutral pricing, LLPAs would need to be increased by 0.10% to 0.50%, with greater increases in mortgages with lower credit scores.

Introduction

In July 2025,¹ the Federal Housing Finance Agency (FHFA) announced that it will begin permitting VantageScore 4.0 (VantageScore) as a part of credit qualification for mortgages sold to Fannie Mae and Freddie Mac (the Enterprises). Prior to the announcement, the mortgage industry relied exclusively on Classic FICO for borrower eligibility and loan pricing.

After the announcement, the FHFA further indicated that lenders will have the choice of using Classic FICO or VantageScore—an option referred to as lender choice—for underwriting and pricing loans. The choice can be made on a loan-by-loan basis². This announcement introduces behavioral considerations to mortgage pricing and a potential bias that, if not addressed, will result in mortgage credit providers taking on more risk within a credit score range and receiving lower aggregate risk-based fees for guaranteed mortgages. Before enabling a framework with multiple credit scores, mortgage default rates and related pricing must be analyzed to avoid unintended consequences.

In addition to posing credit risk implications, the additional credit scoring options require the expansion of operational capabilities by the industry. To allow for multiple credit scores, operational processes must be updated at lenders, servicers, credit reporting agencies, and the Enterprises.

The Enterprises charge two types of fees for guaranteeing mortgage credit risk: loan-level price adjustments (LLPAs)—which are price adjustments on mortgages sold to the Enterprises and assessed at the time of origination—and guarantee fees (G-fees), which are priced evenly across all guaranteed mortgages and thus are not risk-sensitive. This paper provides an estimate for the adjustments needed to maintain actuarial equivalent pricing under lender choice. Actuarial equivalence means that after adjusting for the shift in the distribution of credit scores and resulting impact on default rates, the total LLPA fees collected by the Enterprises are the same for a given pool of guaranteed mortgages. For this analysis, we assume loan pricing is consistent with the current process wherein one credit score is used to price loans on the LLPA grid.

1. Federal Housing Finance Agency. (July 15, 2025). Policy: Credit Scores. Retrieved October 21, 2025, from <https://www.fhfa.gov/policy/credit-scores>.

2. Ibid

Data and definition of lender choice

The Enterprises publish loan-level data on mortgages underlying mortgage-backed securities (MBS). In July 2024, the Enterprises published historical VantageScore credit scores that can be merged with the MBS datasets.³ This VantageScore data covers approximately 47 million loans, with most loans being originated between 2013 and 2023. Milliman analyzed this data for this paper. Since the analysis evaluates the impact of lender choice, only loans with both a VantageScore and Classic FICO score were analyzed.

Figure 1 summarizes the data used for the analysis. In the available data, 98.5% of the MBS data for origination years 2013 to 2023 include both a VantageScore and FICO score.

FIGURE 1: DATA SUMMARY

ORIGINATION YEAR	NUMBER OF LOANS	ORIGINAL UPB	AVERAGE LOAN AMOUNT	PERCENT OF LOANS WITH BOTH FICO AND VANTAGE (BY UPB)
2013	4,117,070	822,783,951,304	199,847	87.3%
2014	2,798,319	572,965,555,584	204,753	98.7%
2015	3,637,637	810,151,458,742	222,714	99.3%
2016	4,255,024	993,347,829,289	233,453	99.5%
2017	3,575,536	818,288,413,710	228,858	99.6%
2018	3,178,377	742,379,697,610	233,572	99.5%
2019	4,117,309	1,071,427,970,432	260,225	99.9%
2020	8,922,974	2,539,494,205,000	284,602	99.9%
2021	8,824,645	2,523,676,201,000	285,980	99.9%
2022	3,427,814	1,032,421,206,000	301,189	99.8%
2023	143,278	44,140,199,000	308,074	7.2%
Total	46,997,983	11,971,076,687,672	254,715	98.5%

Both Classic FICO and VantageScore are reported using the tri-merge methodology, and a borrower's median credit score is relied on for analysis purposes. This approach ensures consistency in aggregation methods and is also consistent with current policy. Both credit scores are discrete and bound between 300 and 850.

The mortgage lending industry is highly competitive, and lenders often compete to offer the lowest interest rate they can profitably offer. The three credit bureaus have already announced that, at least initially, they will provide VantageScore for free when a lender purchases a FICO score. This analysis assumes that lenders will originate loans with the highest credit score, thus producing the lowest interest rate for the borrower. As such, the lender choice score is calculated as the higher credit score between Classic FICO and VantageScore.

It is possible that policy changes by the Enterprises will impact the lenders' ability to select the highest borrower score of multiple credit score options. Policy considerations remain unclear as the industry approaches implementation.

This paper assumes that lenders will obtain both credit scores and then price and deliver each loan using the highest credit score. Under this assumption, the lender choice credit scores will always be equal to or higher than either score under a single-credit score system.

3. Federal Housing Finance Agency. (July 11, 2024). FHFA Announces Release of Historical VantageScore® 4.0 Credit Scores by the Enterprises [Press release]. Retrieved October 21, 2025, from <https://www.fhfa.gov/news/news-release/fhfa-announces-release-of-historical-vantagescore-4.0-credit-scores-by-the-Enterprises>.

LLPAs

The Enterprises guarantee the timely payment of principal and interest on MBS. This guarantee transfers potential default risk from mortgage investors to the Enterprises, facilitating liquidity in the mortgage market. The Enterprises assess an up-front fee, the LLPA, for providing this coverage and collect ongoing G-fees through the life of the loan. The LLPA is a one-time fee that is priced into the mortgage at origination. LLPAs vary based on the credit quality of the borrower and various risk factors of the mortgage. LLPAs are assessed as a percentage of the original principal balance of the mortgage and can vary from 0.00% to greater than 5.00% for loans depending on the number of and type of risk factors. The G-fee is approximately 50 basis points (0.50%) annually, is a percentage of the unpaid principal balance of the loan, and is generally passed on to the Enterprises as part of the monthly interest paid by borrowers.

As an example of the LLPA grids, Figure 2 shows Fannie Mae's LLPA grid for purchase mortgages, effective from December 5, 2024, to current. There are additional LLPA tables for cashout refinance mortgages, rate/term refinance mortgages, and waivers for certain product features. For this analysis, Milliman assigned the relevant LLPA to each loan, taking into consideration the loan purpose, risk factors and LLPA waivers. LLPA grids have changed over time, and the loans in the mortgages used for this analysis originated between 2013 and 2023; the December 5, 2024, LLPA grid was relied upon for the full analysis for consistency.

As an example of how to determine the LLPA, a purchase mortgage with a loan-to-value ratio (LTV) of 75% or less and a credit score greater than 779 does not incur an LLPA. A purchase mortgage with an LTV of 80% and a credit score less than 640 incurs an LLPA of 2.750%. Note, LLPAs for loans with LTVs greater than 85% are less than LLPAs for loans with LTVs between 75% and 85% due to the economic benefit of private mortgage insurance.

The second table in Figure 2 provides additive price adjustments for specific risk factors. For example, mortgages for investment properties increase the risk of the mortgage. For investment property mortgages with an LTV above 80%, the LLPA is 4.125%. The total LLPA for a purchase mortgage with an LTV between 80.01% and 85.00%, 750 credit score, and investor property would be 5.125% (1.000% + 4.125%).

FIGURE 2: FANNIE MAE LLPA GRID

Purchase Money Loans – LLPA by Credit Score/LTV Ratio										
Credit Score	LTV Range									SFC
	Applicable for all loans with terms greater than 15 years									
	≤ 30.00%	30.01 – 60.00%	60.01 – 70.00%	70.01 – 75.00%	75.01 – 80.00%	80.01 – 85.00%	85.01 – 90.00%	90.01 – 95.00%	>95.00%	
≥ 780	0.000%	0.000%	0.000%	0.000%	0.375%	0.375%	0.250%	0.250%	0.125%	N/A
760 – 779	0.000%	0.000%	0.000%	0.250%	0.625%	0.625%	0.500%	0.500%	0.250%	N/A
740 – 759	0.000%	0.000%	0.125%	0.375%	0.875%	1.000%	0.750%	0.625%	0.500%	N/A
720 – 739	0.000%	0.000%	0.250%	0.750%	1.250%	1.250%	1.000%	0.875%	0.750%	N/A
700 – 719	0.000%	0.000%	0.375%	0.875%	1.375%	1.500%	1.250%	1.125%	0.875%	N/A
680 – 699	0.000%	0.000%	0.625%	1.125%	1.750%	1.875%	1.500%	1.375%	1.125%	N/A
660 – 679	0.000%	0.000%	0.750%	1.375%	1.875%	2.125%	1.750%	1.625%	1.250%	N/A
640 – 659	0.000%	0.000%	1.125%	1.500%	2.250%	2.500%	2.000%	1.875%	1.500%	N/A
≤ 639 ¹	0.000%	0.125%	1.500%	2.125%	2.750%	2.875%	2.625%	2.250%	1.750%	N/A

Additional LLPAs by Loan Attribute Applicable to Purchase Money Loans										
Loan Feature	LTV Range									SFC
	Applicable for all loans									
	≤ 30.00%	30.01 – 60.00%	60.01 – 70.00%	70.01 – 75.00%	75.01 – 80.00%	80.01 – 85.00%	85.01 – 90.00%	90.01 – 95.00%	>95.00%	
Adjustable-rate mortgage	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.250%	0.250%	N/A
Condo ²	0.000%	0.000%	0.125%	0.125%	0.750%	0.750%	0.750%	0.750%	0.750%	N/A
Investment property	1.125%	1.125%	1.625%	2.125%	3.375%	4.125%	4.125%	4.125%	4.125%	N/A
Second home	1.125%	1.125%	1.625%	2.125%	3.375%	4.125%	4.125%	4.125%	4.125%	N/A
Manufactured home ³	0.500%	0.500%	0.500%	0.500%	0.500%	0.500%	0.500%	0.500%	0.500%	235
Two- to four-unit property	0.000%	0.000%	0.375%	0.375%	0.625%	0.625%	0.625%	0.625%	0.625%	N/A
High-balance fixed-rate	0.500%	0.500%	0.750%	0.750%	1.000%	1.000%	1.000%	1.000%	1.000%	808
High-balance ARM	1.250%	1.250%	1.500%	1.500%	2.500%	2.500%	2.500%	2.750%	2.750%	808
Subordinate financing ⁴	0.625%	0.625%	0.625%	0.875%	1.125%	1.125%	1.125%	1.875%	1.875%	N/A

LLPA estimate under Classic FICO, VantageScore, and lender choice

Milliman estimated the LLPA for each loan in the MBS data where both a Classic FICO and VantageScore credit score are provided. Milliman calculated the dollar value of the LLPAs as the product of the original principal balance of the mortgage and the LLPA. For example, for a \$100,000 mortgage with a 1.000% LLPA, the LLPA fee would be \$1,000 ($\$100,000 * 1.000\%$).

LLPAs and the LLPA fee were estimated using Classic FICO for all loans, VantageScore for all loans, and lender choice. Figure 3 provides a summary of the estimate of LLPAs under each credit score.

FIGURE 3: AGGREGATE LLPAS BY CREDIT SCORE

	AVERAGE LLPA	LLPA FEE	LLPA FEE RELATIVE TO CLASSIC FICO
Classic FICO	0.92%	\$110 billion	100%
VantageScore	0.86%	\$102 billion	93%
Lender choice	0.78%	\$93 billion	85%

Under Classic FICO (the credit score used for underwriting and pricing all mortgages in this dataset), the average LLPA was 0.92%. For the approximately \$12 trillion of mortgages originated between 2013 and 2023, this resulted in an estimated LLPA fee of \$110 billion. If VantageScore were used for pricing these loans instead of Classic FICO, the average LLPA would have been 0.86%, and total LLPA fees would have been \$102 billion. If lender choice were used for pricing these loans instead of Classic FICO, the average LLPA would be 0.78%, and total LLPA fees would have been \$93 billion. Lender choice would have produced approximately 15% less in LLPA fees than Classic FICO. Importantly, the population of mortgages is the same; the risk profile of the guaranteed mortgages has not changed.

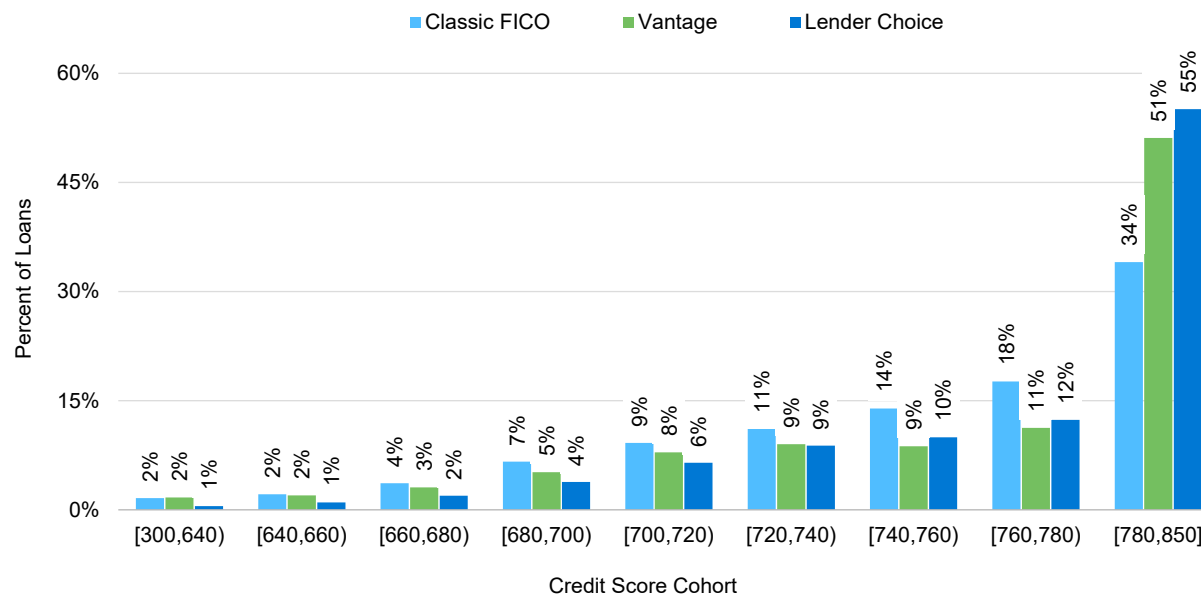
The reason for the reduction in LLPA fees is because, under lender choice, mortgages will be priced using the higher credit score between Classic FICO and VantageScore. For this analysis, it is important to describe how lenders price and deliver mortgages to the Enterprises. Lenders rely on daily pricing and rate sheets to calculate the gross interest rate for new mortgages, typically locking in (or guaranteeing for the borrower) a specific rate for a specific number of days (e.g., typically 30 or 60 days). Once a loan closes, the mortgage is sold to the Enterprises (or swapped for an MBS). Since lenders locked in the interest rate at the time they approved the borrower application, lenders need certainty that the price of the loan will not change in relation to its credit characteristics. If the Enterprise must adjust pricing after the time of the initial lock because the credit score used by the lender for pricing the loan is different from the credit score evaluated by the Enterprise to determine original LLPA fees, then the lenders could misprice the loan and potentially incur financial losses.

Figure 4 provides a visual of the distribution of original mortgage amount by credit score cohort under Classic FICO, VantageScore, and lender choice. Relative to Classic FICO, VantageScore assigns more borrowers to the highest credit score cohort of [780, 850]. Lender choice is even more skewed to the highest credit risk score cohort. This is the primary driver for lower LLPA fees under VantageScore and lender choice relative to Classic FICO.⁴ Under lender choice, credit scores only experience upward migration. This results in a shift in the distribution to higher credit scores and lower LLPAs.

4. VantageScore proposed alternative credit score ranges to normalize LLPAs between Classic FICO and VantageScore. Milliman estimated LLPA fees under VantageScore's proposed LLPA mapping. The LLPA fees were consistent with those calculated using Classic FICO. However, under lender choice, LLPA fees were still estimated to be 12% lower than the LLPA fees under Classic FICO.

VantageScore. (August 18, 2025). VantageScore 4.0 Predicts More Defaults in Mortgages Than Classic FICO. Retrieved November 14, 2025, from <https://vantagescore.com/resources/knowledge-center/vantagescore-4-0-predicts-more-mortgage-defaults-than-classic-fico-49-percent-more-pandemic-era-defaults-detected>.

FIGURE 4: DISTRIBUTION OF MORTGAGES BY CREDIT SCORE COHORT



Under risk-based pricing frameworks, the introduction of changes in underwriting almost always results in a reassessment of the price assessed for the assumed risk. This reevaluation is necessitated by the fact that loans will inevitably migrate from one risk bucket to another. Some risks will be assessed as higher risks and some risks will be assessed as lower risks. However, the aggregate price should remain generally consistent. In this analysis we are reviewing a set of loans that were previously approved, and lender choice only results in upward migration for the loan population. Thus, the impact of total LLPA fees is reduced by 15% under lender choice relative to Classic FICO.

Actuarially equivalent pricing

In Milliman's previous report about lender choice, we estimated that default rates within a given credit score cohort are approximately 30% higher with a lender choice option relative to Classic FICO.⁵ To obtain actuarially equivalent pricing after the introduction of lender choice, LLPAs would have to be increased across all credit score ranges, or an alternative pricing framework that considers both Classic FICO and VantageScore would need to be introduced. Actuarially equivalent pricing means the aggregate LLPA fees would be the same under the current pricing structure and the lender choice pricing structure for the same population of mortgages. To achieve this equivalence, LLPAs would have to be adjusted to account for both the increased credit risk with each credit score cohort as well as the shift in the distribution of mortgages across credit score cohorts.

LLPAs can be adjusted by retaining the same LLPA values and adjusting the credit score cohort ranges to realign the distribution and fee generation. This approach was proposed by VantageScore to produce equivalent LLPA fees using VantageScore relative to Classic FICO. However, the proposed ranges did not consider the impact of lender choice. Another approach would be to reestimate the LLPA grids by performing a ground-up calculation for expected credit losses, expenses, capital, and economic return to recalibrate the LLPAs to offset the impact of lender choice.

5. Glowacki, J., Huff, R., & Ludden, B. (October 29, 2025). "Lender choice" introduces a bias to default rates for mortgage underwriting. Milliman. Retrieved November 14, 2025, from <https://www.milliman.com/en/insight/lender-choice-introduces-bias-mortgage-underwriting>.

Calculating LLPAs is a complex process that takes into consideration economic risk, capital requirements, policy objectives, and other factors.⁶ This paper does not intend to assess policy objectives. As such, the paper does not attempt to propose a holistic recalculation of LLPAs. Instead, the following section discusses how the components of pricing credit risk differ between Classic FICO and lender choice. For illustrative purposes, representative LLPA adjustments are calculated by credit score cohort to estimate the magnitude of pricing adjustments needed to produce equivalent fee revenue.

Lender choice impacts both the Enterprise's calculation of expected credit losses—because it results in a bias in the default rates relative to Classic FICO—and capital—because it shifts the distribution of loans between credit score cohorts. Operating expenses should be generally consistent, and the required economic return on capital should be generally consistent.

Figure 5 shows the distribution of the original mortgage amount under Classic FICO and lender choice in columns A and B. Column C calculates the relativity between columns A and B. For example, for credit scores less than 680, lender choice reduces the percentage of mortgages in low credit score cohorts by approximately 50%. For credit scores between 680 and 780, lender choice reduces the percentage of loans in this range by approximately 25%. For credit scores above 780, lender choice increases the percentage of loans in this range by approximately 60%.

FIGURE 5: LLPA RELATIVITIES

	DISTRIBUTION OF ORIGINAL MORTGAGE AMOUNT			LLPA FEE ESTIMATE (\$)		
	CLASSIC FICO	LENDER CHOICE	RELATIVITY	CLASSIC FICO	LENDER CHOICE	RELATIVITY
	A	B	C = B / A	D	E	F = E / D
[300,640)	2%	1%	32%	4,095,389,900	1,310,563,480	32%
[640,660)	2%	1%	47%	4,999,224,986	2,363,526,826	47%
[660,680)	4%	2%	53%	7,647,885,011	4,076,327,563	53%
[680,700)	7%	4%	58%	12,319,439,471	7,086,323,559	58%
[700,720)	9%	6%	70%	14,649,800,562	10,183,693,572	70%
[720,740)	11%	9%	79%	15,441,383,615	11,994,813,195	78%
[740,760)	14%	10%	72%	15,240,349,268	10,629,468,770	70%
[760,780)	18%	12%	70%	15,169,665,790	10,470,361,847	69%
[780,850]	34%	55%	162%	20,554,697,341	35,054,435,615	171%
Total	100%	100%	100%	110,117,835,945	93,169,514,428	85%

Columns D and E show the estimated LLPA fee over the full dataset by credit score cohort. The fee relativity is calculated as the ratio of the LLPA fees under Classic FICO divided by the LLPA fees under lender choice. Column F shows the fee relativity between the two credit score sources. The difference in the LLPA fee is correlated with the shift in the distribution of loans, but there remain differences between cohorts. From Figure 5, LLPAs would need to increase by 15% in aggregate to produce actuarially equivalent LLPA fees.

6. Golding, E., Goodman, L., Parrott, J., & Ryan, B. (August 2023). How to Think about Fannie Mae and Freddie Mac's Pricing. Urban Institute. Retrieved November 14, 2025, from <https://www.urban.org/sites/default/files/2023-08/How%20to%20Think%20about%20Fannie%20Mae%20and%20Freddie%20Mac's%20Pricing.pdf>.

To produce actuarial equivalent rates, changes to LLPAs need to account for both the shift in the distribution of loans and changes in the risk profile. The shift in the distribution of loans impacts both the LLPA fee and capital requirements for the Enterprises. Capital requirements can be estimated using the Enterprise Regulatory Capital Framework (ERCF). ERCF is a regulatory framework used by the Enterprises to determine the amount of capital they must hold to cover risks associated with their mortgage guarantee businesses. It is designed to ensure the Enterprises are financially resilient and can withstand a severe economic downturn.

Figure 6 provides a summary of the risk profile components that influence pricing for each credit score cohort⁷: The two most relevant components are capital requirements, as estimated under ERCF, and expected credit losses, as estimated by Milliman's mortgage performance models and mortgage cash flow engine. To produce ERCF and expected credit losses⁸ by credit risk cohort for this exercise, Milliman ran 2025 originations from Freddie Mac through Milliman's M-PIRe software under a baseline economic scenario.

FIGURE 6: ERCF CAPITAL ESTIMATE AND EXPECTED CREDIT LOSSES

CREDIT SCORE	ERCF CAPITAL ESTIMATE	CLASSIC FICO		LENDER CHOICE	
		DISTRIBUTION OF ORIGINAL UPB	EXPECTED CREDIT LOSSES	DISTRIBUTION OF ORIGINAL UPB	EXPECTED CREDIT LOSSES
		A	B	C	D
[300,640)	7.3%	2%	1.15%	1%	1.54%
[640,660)	6.9%	3%	0.91%	1%	1.18%
[660,680)	6.5%	4%	0.78%	2%	1.02%
[680,700)	5.8%	7%	0.52%	4%	0.69%
[700,720)	5.0%	9%	0.38%	7%	0.51%
[720,740)	4.3%	11%	0.31%	9%	0.39%
[740,760)	3.6%	13%	0.21%	10%	0.27%
[760,780)	3.0%	17%	0.13%	12%	0.19%
[780,850]	2.4%	34%	0.08%	53%	0.10%
Classic FICO	3.7%	100%	0.25%		
Lender Choice	3.2%			100%	0.24%

Within each credit risk cohort, the estimated ERCF capital requirement is the same under Classic FICO and lender choice. The average estimated capital requirement for the pool of mortgages under Classic FICO is 3.7%, and the average estimated capital requirement under lender choice is 3.2%. The capital requirement is lower under lender choice because the distribution of loans shifts to higher credit score cohorts. This calculation assumes that the Enterprises are permitted to use the lender choice credit score in calculating capital requirements, but, as of the time of this paper, guidance on the credit score that is used for ERCF has not been published. The ERCF framework only requires the use of a "credit score" as a key input for calculating credit risk capital charges. It does not identify a specific credit score. Because the ERCF capital requirements are set to be conservative and to ensure the Enterprises can operate as a going concern during and after severe stress, it would be inconsistent with the original framework if the Enterprises were permitted to select a credit score from more than one option for the purposes of calculating capital such that the selection reduces the capital requirements for the loan in question. Therefore, for this analysis, we will not assume a regulatory capital benefit resulting from ERCF when calculating LLPAs.

7. These values are calculated at the loan level for a representative pool of 2025 originations from Freddie Mac; the values in this table represent a UPB-weighted average of the loan-level estimates.

8. The ERCF capital estimate excludes the impact of the Countercyclical Capital Adjustment (CCA) factor. This factor increases capital requirements when home prices appreciate faster than an assumed long-term trend value. For the loans analyzed for this research, the CCA increases capital estimates by a factor of 1.9. For example, if the capital estimate without the CCA is 2.0%, the capital estimate with the CCA is 3.8% (3.8% = 2.0% * 1.9).

For the pool of 2025 vintage mortgages that Milliman used for the exercise, expected credit losses are approximately 25 basis points, which is consistent with Freddie Mac's internal estimate for expected credit losses.⁹ As detailed in prior research,¹⁰ we estimate the default rates under Classic FICO are approximately 30% lower within each credit score cohort when compared to lender choice. Therefore, Milliman applied an adjustment factor to increase the default rate by 30% when estimating credit losses under lender choice in the model. After this adjustment, expected credit losses for the pool of mortgages are both approximately 0.25%.

Within each credit score cohort, the expected losses increase, and the capital estimate is unchanged. Therefore, the cost of the credit guarantee must increase for each credit score cohort. The estimated increase in the cost of the guarantee can be approximated by the difference between column E and column C. For the 300 to 640 credit score cohort, this would be 0.4% (0.4% = 1.54% - 1.15%). For the 780 to 850 credit score cohort, the increase in expected losses is not material at only 0.02%. Therefore, for actuarially equivalent rates, LLPAs would need to be increased more for lower credit quality borrowers and less for higher credit quality borrowers.

After applying the increase for expected losses to each credit score cohort, the total LLPA fee estimate is still less than the LLPA fee estimate under Classic FICO. The difference is attributable to the shift in the distribution of loans between credit score cohorts. Therefore, an additional factor must be calibrated to produce actuarially equivalent LLPAs. Figure 7 calculates the additional LLPA factor to produce equivalent LLPA fees for the loan population summarized in Figure 1. Specifically, to produce a total LLPA fee estimate of \$110 billion, an additional 0.09% must be added to each credit score cohort. The adjustment is set equally across all cohorts to avoid presuming policy for this exercise, though it is possible the cost could be passed along differently by cohort.

FIGURE 7: ACTUARIALLY EQUIVALENT LLPA ESTIMATE

CREDIT SCORE	LENDER CHOICE					
	AVERAGE LLPA CLASSIC FICO	AVERAGE LLPA LENDER CHOICE	INCREMENTAL LLPA DUE TO INCREASE CREDIT LOSSES	ADDITIONAL LLPA DUE TO DISTRIBUTION SHIFT	TOTAL LLPA	ESTIMATE LLPA FEE
	A	B	C	D	E = B + C + D	F
[300,640)	2.14%	2.13%	0.40%	0.09%	2.62%	1,610,649,929
[640,660)	1.95%	1.95%	0.27%	0.09%	2.31%	2,802,413,131
[660,680)	1.75%	1.75%	0.25%	0.09%	2.08%	4,857,977,549
[680,700)	1.55%	1.55%	0.17%	0.09%	1.81%	8,291,935,530
[700,720)	1.33%	1.31%	0.12%	0.09%	1.53%	11,843,249,474
[720,740)	1.16%	1.14%	0.08%	0.09%	1.31%	13,808,912,421
[740,760)	0.91%	0.89%	0.06%	0.09%	1.04%	12,405,322,381
[760,780)	0.72%	0.71%	0.05%	0.09%	0.85%	12,614,339,171
[780,850]	0.50%	0.53%	0.02%	0.09%	0.64%	42,272,575,091
Total						110,507,374,677

9. Freddie Mac. (2025). Enterprise Regulatory Capital Framework (ERCF) Public Disclosures for the Standardized Approach: For the quarterly period ended June 30, 2025, p.15, "Allowance for Credit Losses to Amortized Cost Basis." Retrieved November 14, 2025, from https://www.freddiemac.com/investors/docs/2Q25_ercf_public_disclosure.pdf.

10. Glowacki, J., Huff, R., & Ludden, B. (October 29, 2025). "Lender choice" introduces a bias to default rates for mortgage underwriting. Milliman. Retrieved November 14, 2025, from <https://www.milliman.com/en/insight/lender-choice-introduces-bias-mortgage-underwriting>.

The “Total LLPA” column is between 15% and 25% higher than the average LLPA under Classic FICO within each credit score cohort, and the change is largest for lower credit score ranges. This table is not a recommendation for a revised LLPA structure or pricing for the Enterprises, and it is less granular than the existing LLPA structure. This analysis provides insights into how much LLPAs would have to increase to produce actuarially equivalent G-fees due to the distribution and risk profile shift resulting from lender choice. Alternative pricing changes could be developed that produce similar results.

Representation of how LLPAs are priced into borrower costs

Figure 8 shows a representative example to equate LLPA fees to borrower costs. LLPAs are typically financed into the mortgage rate assuming an average life of the mortgage. For demonstrative purposes, we will assume an average life of five years. A 1.00% LLPA would be divided by five to produce an annual fee of 0.20%. This fee would be added to the mortgage note rate and increase the interest rate on the mortgage by 0.20%. Figure 8 provides a summary of the estimated lifetime LLPA cost assuming an average mortgage amount of \$300,000 and average life of five years.

FIGURE 8: LIFETIME COST OF INCREASED LLPAS

CREDIT SCORE	MORTGAGE AMOUNT	ESTIMATED INCREASE IN LLPA	AVERAGE LIFE (YEARS)	INCREASE IN INTEREST RATE	LIFETIME INCREASE
	A	B	C	D = B / C	E = A * C * D
[300,640)	\$300,000	0.49%	5	0.10%	\$1,462
[640,660)	\$300,000	0.36%	5	0.07%	\$1,085
[660,680)	\$300,000	0.34%	5	0.07%	\$1,006
[680,700)	\$300,000	0.26%	5	0.05%	\$790
[700,720)	\$300,000	0.21%	5	0.04%	\$642
[720,740)	\$300,000	0.17%	5	0.03%	\$515
[740,760)	\$300,000	0.15%	5	0.03%	\$447
[760,780)	\$300,000	0.14%	5	0.03%	\$435
[780,850]	\$300,000	0.11%	5	0.02%	\$328

Using the LLPAs in Figure 7, the lifetime cost to borrowers to produce actuarially equivalent LLPA fees under lender choice would range from several hundred dollars to almost \$1,500. The individual cost to borrowers will depend on many factors, including the loan amount, credit score, LTV, and how long they retain their mortgage.

Conclusion

This paper provides an example of how lender choice could impact the LLPA fees collected by the Enterprises. Lender choice for credit scores has the potential to shift both the distribution and risk profile on guaranteed mortgages. To offset this risk, we calculated the actuarially equivalent LLPA by credit score cohort that produces a revenue-neutral pricing structure. For risk-neutral pricing, LLPA's would need to be increased by 0.10% to 0.50%, with greater increases in mortgages with lower credit scores.

This analysis was performed to demonstrate the potential impact on both the potential reduction in G-fees (for the same risk) and level of pricing adjustments that would be required to offset this shift. Alternative structures could be developed to allocate some of the increase in fees to higher credit scores. Alternatively, the FHFA and Enterprises could decide not to update LLPAs for the impact of lender choice. This will result in lower guarantee fees for the Enterprises and lower future earnings, all else equal.

Limitations to this analysis

Any actuarial or quantitative analysis is subject to several sources of uncertainty, assumptions, and limitations. This section provides a list of important limitations to this analysis.

1. Pricing for mortgage credit risk is dependent upon operational costs, capital levels, assumptions for expected and unexpected losses, policy objectives, and the level of economic return. This analysis is not a pricing analysis and is not intended to produce actuarially sound G-fees for the Enterprises. This analysis produces an estimate of how LLPA fees would have to be changed if lender choice, and the credit scores required for lender choice, were available and utilized from 2013 through 2023. The analysis subsequently provides a simplified calculation to produce actuarially equivalent LLPAs between Classic FICO and lender choice.
2. This exercise does not consider policy objectives. For example, policy goals often price LLPAs where lower risk borrowers subsidize higher risk borrowers. This subsidization occurs, in part, because higher risk borrowers generally have more difficulty meeting credit obligations, have lower average (and potentially more volatile) income, and have higher average debt-to-income ratios. Therefore, adding fees to higher risk borrowers may inadvertently increase the credit risk of those borrowers, resulting in higher interest rates and debt-to-income and potentially less affordable credit, reducing mortgage eligibility of the broader population.
3. This analysis assumes that lenders will continue to price loans under a single LLPA pricing structure, and the Enterprises will not adjust the way mortgages are priced under lender choice or under a multiple credit scoring framework. It is possible that the Enterprises and/or FHFA will introduce changes to the mortgage pricing process that mitigate the impacts discussed in this paper to maintain a risk-neutral pricing structure with lender choice.
4. The data used in this analysis are only available for mortgages approved under Classic FICO. As a result, the distribution of Classic FICO is censored (limited) because borrowers may have been denied loans exclusively due to a low Classic FICO score, but those borrowers may have been approved in scenarios where a higher VantageScore had been available for decisioning at that point in time. The inclusion of these low Classic FICO scoring records would impact the default risk of a lender choice-originated population in the future.

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