The Importance of Considering Consumer Credit When Predicting Lender Profitability

A White Paper

Executive Summary

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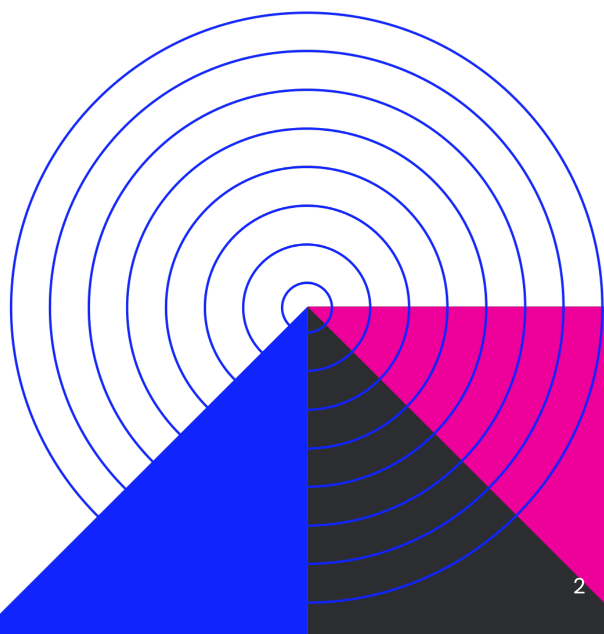
A new analysis by CreditXpert has found a better way to more accurately predict lender profitability and even market share growth using two tools. The first is CreditXpert's Mortgage Credit Potential Index (MCPI), a unique, monthly demand-side view of mid-score mortgage inquiries. The MCPI also highlights the percentage of inquiries that may be able to increase their initial score by at least 20-points within 30 days by completing a custom action plan.

The second tool is the GSEs Loan Level Pricing Adjustment tables. LLPAs are the way the Agencies, Freddie Mac and Fannie Mae, insure against loan-level risk. Instituted more than 15 years ago as a response to the housing crisis, they have undergone several changes since, with the most recent changes taking effect on May 1, 2023.

Of course, the lender would need to be in a position to help the borrower improve their credit score in the time it takes to originate the loan. We show how that is possible in this paper. The savings are real and the lender has the option of letting those funds fall to the bottom line or pass back some of that money to the borrower to beat other lenders. Either way, they aren't leaving that money on the table.

Understanding how LLPAs impact the lender's business and how the ability to help borrowers raise their credit scores are the keys to arriving at a much better way of predicting lender profitability than simply forecasting mortgage lending volume.



How to More Accurately Predict Lender Profitability

One of the most important tasks for any manager is forecasting and planning for future loan volume and calculating the resulting profitability. Historical analysis of previous performance has been a handy tool for this, but in a market that seems unable or unwilling to conform to a "normal" business cycle, this has become unreliable.
So, what now?

Recently, an analysis by CreditXpert found a new way to more accurately predict lender profitability and even market share growth using two tools. The first tool is very new: CreditXpert released its Mortgage Credit Potential Index (MCPI) last year. The second is one very few lenders would consider useful in this case, but it is. That tool is the Government-Sponsored Enterprises (GSEs) Loan Level Pricing Adjustment tables.

Telling this story properly requires us to go back in time and look at a critical component of successful mortgage lending: risk mitigation through risk-based pricing.

When it became clear in the early years of this century that mortgage brokers in some states were using yield spread premiums in a manner that the government considered predatory[1], the industry seemed to be pretending that all borrowers were created equal and backed away from discussing the consumer's credit in its profitability calculations. To do so would have made it clear that borrowers with lower credit scores were more profitable for lenders, something that everyone knows but would put lenders in a bad light.

When the Fed made its final rule on YSPs in 2010[2], it specifically prohibited lenders from pushing borrowers into a particular mortgage just to get more money. But it also provided loopholes in the form of a broad "safe harbor."

Of course it did. Risk-based pricing[3] is an essential element of success for mortgage lenders and it has a long history of use in the industry.

The nation's largest secondary mortgage market investors, Fannie Mae and Freddie Mac, which have both been in government conservatorship since 2008, use it on a regular basis. In the agency world, risk-based pricing comes in the form of Loan Level Price Adjustments (LLPAs)[4], which are typically provided by the GSEs in a table indexed by, among other factors, loan-to-value (LTV) and borrower credit score.

Comprehending the effects of LLPAs on lender's operations and improving borrowers' credit scores are crucial for accurately estimating lender profitability, rather than just focusing on mortgage lending volume predictions.

Understanding the GSE's & Loan Level Price Adjustments

Readers of this paper do not need a primer on the purpose of the GSEs. They are fully aware that the government-sponsored enterprises were established by Congress to improve credit flow in some regions of the United States' economy, particularly for home mortgages, through capital market liquidity. Fannie Mae and Freddie Mac are hard-coded into the mortgage business, to borrow from the IT industry. No one in this business could imagine an industry in which some form of guaranteed liquidity did not exist.

In the beginning, Fannie and Freddie were independent enterprises that, while holding an implicit guarantee from the federal government, were free to succeed or fail on their own merits. Today, they are both in conservatorship.

One way to think of these companies is to consider them like big insurance companies that sell bonds to investors to provide liquidity to lenders, all while managing the overall risk in the investments they make. Fannie and Freddie cover potential losses to their bondholders with Guarantee Fees (G-Fees).

LLPAs are the way the Agencies, Freddie Mac and Fannie Mae, insure against loan-level risk. Instituted more than 15 years ago as a response to the housing crisis, they have undergone several changes since, with the most recent changes taking effect on May 1, 2023. Like the IRS, they give the lender plenty of control over how much they will earn by selling their loans to the GSE, but instead of letting them decide which tax shelters to invest in, they show them which loans they value the highest.

Figure 1: All Eligible Loans – LLPA by Credit Score/LTV Ratio

Representative Credit Score	LTV Range									
	Applicable for all loans with terms greater than 15 years									
	≤ 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%	95.01 – 97.00%	>97.00%	SFC
≥ 740	0.00%	0.25%	0.25%	0.50%	0.25%	0.25%	0.25%	0.75%	0.75%	N/A
720 – 739	0.00%	0.25%	0.50%	0.75%	0.50%	0.50%	0.50%	1.00%	1.00%	N/A
700 – 719	0.00%	0.50%	1.00%	1.25%	1.00%	1.00%	1.00%	1.50%	1.50%	N/A
680 – 699	0.00%	0.50%	1.25%	1.75%	1.50%	1.25%	1.25%	1.50%	1.50%	N/A
660 – 679	0.00%	1.00%	2.25%	2.75%	2.75%	2.25%	2.25%	2.25%	2.25%	N/A
640 – 659	0.50%	1.25%	2.75%	3.00%	3.25%	2.75%	2.75%	2.75%	2.75%	N/A
620 – 639	0.50%	1.50%	3.00%	3.00%	3.25%	3.25%	3.25%	3.50%	3.50%	N/A
≤ 620	0.50%	1.50%	3.00%	3.00%	3.25%	3.25%	3.25%	3.75%	3.75%	N/A

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The LLPA Matrices consist of a series of tables of surcharges based on individual loan characteristics. There are many layers of risk that the GSEs consider, but for the purposes of this paper we will be focusing on LTV and borrower credit score.

LLPAs apply to all loans, based on the LTV and credit score characteristics. There are ten other characteristics that may or may not apply, depending upon the particular loan.

Figure 1 (above) is an example of an LLPA table that was in effect as this article was being written and would remain so until April 30, 2023. For the most part, borrowers have no visibility into this part of the business or what impact it could have on the pricing of their next mortgage loan.

How LLPA Changes Will Impact Lenders and Borrowers

Fannie and Freddie announced new Loan Level Price Adjustments (LLPA) on January 19, 2023. Should these changes survive challenges from industry groups, which seems likely at this point, these changes will become effective for all loans purchased by the Agencies on or after May 1, 2023.

Figure 2: Purchase Money Loans – LLPA by Credit Score/LTV Ratio

Credit Score	LTV Range									
	Applicable for all loans with terms greater than 15 years									
	< 60.00%	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%	SFC
≥ 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	0.000%	0.125%	1.500%	2.125%	2.750%	2.875%	2.625%	2.250%	1.750%	N/A

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LLPA tables are always presented as seen above in Figure 2, showing the percent of the loan amount the lender will be charged for a loan with a particular set of characteristics.

The first thing you'll notice is that even though there are some LTV/credit score combinations that do not include fees, they still exist on the table, which means the GSEs are considering all credit scores.

This new table expands the number of applicants that could be impacted by LLPA adjustments. This is something we have not seen in the past. The existing LLPA tables, in effect until May 1, 2023, stopped at the 740 credit score band.

The Loan-to-Value (LTV) ranges have been expanded, potentially covering LTVs below 30% where they previously seemed to stop at 60%. By adding the 30% – 60% and below 30% ranges to the table the Agencies may be signaling more changes to come.

New fees could show up on this table at any time and we expect to see more fees hit these tables in the future.

In order to illustrate the difference, the new LLPA adjustments will have on a typical lender and borrower, we take a particular case in which the loan amount is $380,000 (slightly more than the January 2023 median home value of $359,000[5]) across a range of down payments and credit scores.

But for the purposes of our illustration, it makes more sense to perform those calculations and fill out the table.

Note, Figure 3 was created to illustrate the premiums paid on a $380,000 loan.

Loan Amount: $380,000

Figure 3: Purchase Money Loans – LLPA by Credit Score/LTV Ratio

Credit Score	LTV Range									
	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%	SFC
≥ 780	$-	$-	$-	$-	$1,425	$1,425	$950	$950	$475	N/A
760 – 779	$-	$-	$-	$950	$2,375	$2,375	$1,900	$1,900	$950	N/A
740 – 759	$-	$-	$475	$1,425	$3,325	$3,800	$2,850	$2,375	$1,900	N/A
720 – 739	$-	$-	$950	$2,850	$4,750	$4,750	$3,800	$3,325	$2,850	N/A
700 – 719	$-	$-	$1,425	$3,325	$5,225	$5,700	$4,750	$4,275	$3,325	N/A
680 – 699	$-	$-	$2,375	$4,275	$6,650	$7,125	$5,700	$5,225	$4,275	N/A
660 – 679	$-	$-	$2,850	$5,225	$7,125	$8,075	$6,650	$6,175	$4,750	N/A
640 – 659	$-	$-	$4,275	$5,700	$8,550	$9,500	$7,600	$7,125	$5,700	N/A
≤ 639	$-	$475	$5,700	$8,075	$10,450	$10,925	$9,975	$8,550	$6,650	N/A

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Ignoring other possible overlays (including the new DTI overlays currently under consideration but recently postponed until August 1, 2023), we are left with figure 3 above, showing the actual fees the GSEs will charge for a $380,000 loan that falls within one of these LTV and credit score buckets.

A lender delivering such a loan, for example, with a credit score in the 680 – 699 range and a loan-to-value of 75% to 80% would be charged $6,650 in loan level price adjustments according to Fig. 3 (1.75% of $380,000, as shown on Fig 2).

Turning the LLPA Into a Strategic Advantage

There is currently a battle brewing between the various trade groups and the GSEs about these and other proposed changes to the LLPA[6]. Their argument is that these changes increase the price of mortgage credit and make homes less affordable, the opposite of what the government actually wants the industry to do[7].

The truth is the changes only increase the cost of credit for borrowers of loans Fannie's data shows to be more risky.

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But the way the tables are today, lenders can easily see which loans are more valuable to their investor, giving them some exciting strategic options.

Let's go back to our previous example. If the lender could somehow help this borrower increase their credit score by 20 points, to the 720 – 739 range, they could drop the LLPA cost by $1,900 to $4,750.

What would you do with the savings of $1,900 on this loan? Let all of it fall to the bottom line and increase short term profitability to meet projections ahead of your next investor meeting? That might be a good call.

Or, you could pass back some of that money to your borrower, increasing your ability to compete in a highly competitive market, decreasing the chances that the loan will fall out before closing and growing your market share? Also, a good strategic option.

But neither of these options is available if you can't actually help the borrower change their credit score. Fortunately, you can.

The Key to Unlocking the Profit in the LLPA

CreditXpert is not in the credit repair business. We shed data-driven light on how prospective homebuyers scores could be improved. Our reports give them detailed instructions on how they can improve their score in about 30 days by taking a few simple actions.

Our monthly Mortgage Credit Potential Index (MCPI) reveals that fully 2/3 of ALL mortgage applicants, with credit scores from the mid-300s through the mid-800s, could have increased their mortgage credit score by at least one 20-point credit band during 2022. Digging deeper, one-third of ALL borrowers in 2022 had the potential to increase their mortgage credit score by at least two bands.

That's data science at work. We applied that science next to the LLPA.

Of the nearly 17 million middle scores analyzed by CreditXpert in 2022, 10.6 million (63%) borrowers could have raised their credit score enough to benefit from a lower LLPA fee. Under the new LLPA table, another 2.8 million (81%) borrowers could benefit.

What effect could this have on a lender's business? When looking at the middle of the table, where many loans are made, every 20-point credit score increase results in a 25 basis point decrease in LLPA premium. Given our $380,000 loan example, that yields $950 the lender can use as they see fit.

On the other hand, they could take that money to the lender's bottom line, adding to the company's profitability. Or they could split it.

But that's just part of the analysis. We also need to know where to find the most borrowers who fit into the most profitable cells on the LLPA matrix. For that, we need another tool.

Let's broaden the view. What would your annual savings be if 2/3 of your borrowers had the opportunity to improve their credit score and did so, thereby reducing your LLPA premiums?

It's not a difficult exercise – your lending data on loan characteristics are readily accessible and so is the LLPA matrix.

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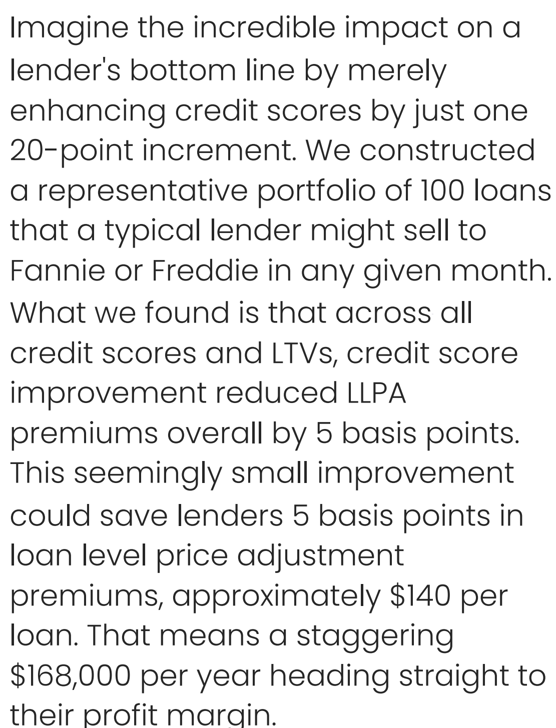


Imagine the incredible impact on a lender's bottom line by merely enhancing credit scores by just one 20-point increment. We constructed a representative portfolio of 100 loans that a typical lender might sell to Fannie or Freddie in any given month. What we found is that across all credit scores and LTVs, credit score improvement reduced LLPA premiums overall by 5 basis points. This seemingly small improvement could save lenders 5 basis points in loan level price adjustment premiums, approximately $140 per loan. That means a staggering $168,000 per year heading straight to their profit margin.

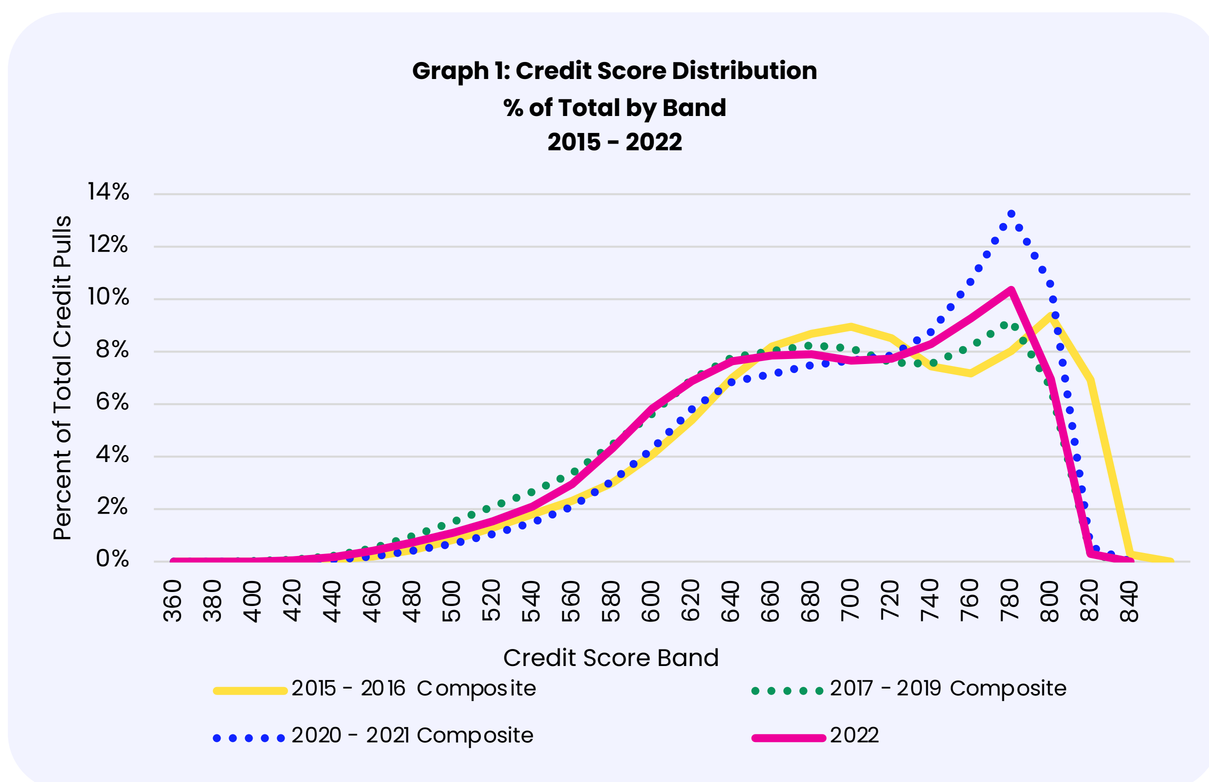
This seemingly small improvement could save lenders about $140 of LLPA premium per loan sold.

Take a few minutes and estimate how much better your own bottom line could have been last year by taking the one step required to help borrowers optimize their credit scores.

Using the MCPI to Find the Potential to Grow Your Business

To get a full picture of the possible future profitability in your lending business, you must know how many borrowers have the potential to increase their credit scores. Fortunately, this data is available to you for free.

CreditXpert's MCPI offers the demand-side view of the mortgage market by providing a detailed, nuanced view of the credit scores of those seeking a mortgage. Graph I provides the distribution view of credit scores, by 20 point credit score band, for the years 2015 through 2022.



Most single pictures tell many stories. This graph is no exception. The lead story, from our perspective, is demand, from a credit score distribution standpoint, is returning to normal following the pandemic.

This is illustrated by the gap between the dotted blue line which is the 2020 – 2021 composite, or pandemic line and the pink and dotted green lines which are the 2022 and 2017 – 2019 lines, respectively.

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2017 – 2019 was a period of high purchase activity, when almost 2/3 of all loans were made for the purchase of a home. 2022 was similar, with just 1/3 of all loans made for the refinance of an existing mortgage.

The pandemic line is easily explainable. The reason that the distribution skews toward higher credit scores is due to the extraordinary dominance of refinance loans, where almost 2/3 of all loans were for the refinance of an existing loan, exactly the opposite of 2022.

That leaves the solid yellow line, the 2015 – 2016 composite. This two-year period is unlike either 2017 – 2019 and 2020 – 2021 in that purchase and refinance lending were almost evenly split in 2015 – 2016. This accounts for the spike in the higher credit score distribution as well as the 'hump' in the credit bands from 660 through 740.

There's more than one more story worth noting in this graph, though the one to highlight today is the upward 'bend' exhibited by the bright pink line in credit bands 580 through 660. We believe the slight surge in the curve through these credit bands illustrates first time homebuyer demand taking hold. We expect that to continue throughout 2023.

Graph 2 provides a different view, concentrating on 2019 through 2022. Focus on the yellow and green lines, 2019 and 2022, respectively. 2019 was 'just' pre-pandemic. 2022 was 'just' post-pandemic. Notice how similar credit score distributions are for these two years. Familiar credit inquiry patterns, unaffected by catastrophic forces, are returning, making the demand side of mortgage lending more predictable.

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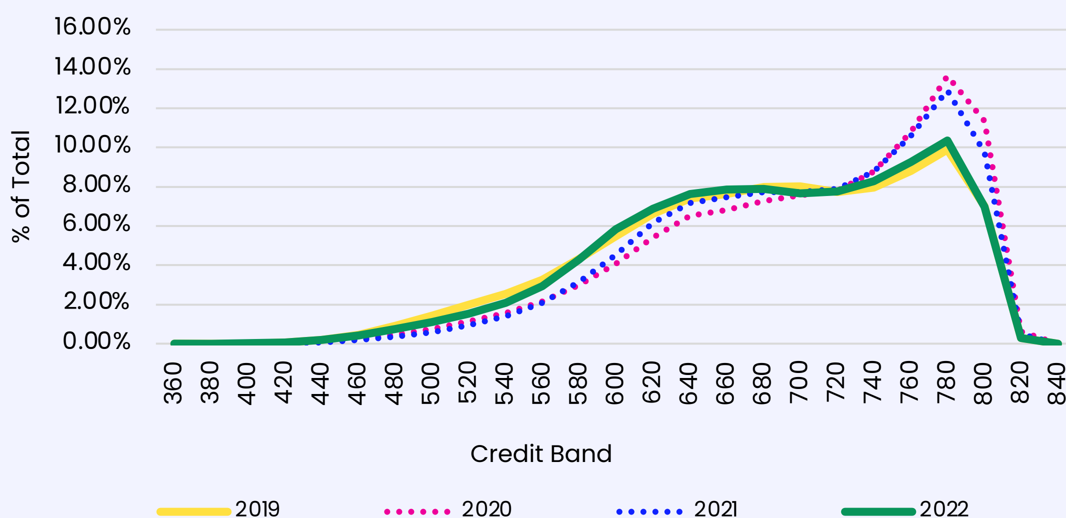

The implications for mortgage lenders are obvious: focus on first-time homebuyers. Their demand for mortgage credit is demonstrable, and clearly illustrated in the data. But remember, they may need help increasing their credit scores in order to be the most profitable or to allow the lender the most flexibility in the offer it makes to these borrowers.

Investors have the power to pay what they want for the loans lenders originate. The GSE's LLPA matrices are just ground rules, but they apply to every lender in the space. Learn to play the game better than anyone else and you'll win.

Doing these exercises will also give you a much better view of what your business could do this year. Together MCPI and LLPA give you the tools to better predict what your company could earn in the future. In any event, leaving an examination of consumer credit out of your deliberations is a mistake that will cost you money.

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