



In-Focus

A NEW METHOD FOR MEASURING LENDER PERFORMANCE

AN EXCERPT FROM
STRATMOR
INSIGHTS



A NEW METHOD FOR MEASURING LENDER PERFORMANCE VS. PEERS

By Dr. Matt Lind

Mortgage lenders have utilized virtually the same metrics to assess performance for the past 30 years. Considering how dramatically our market has changed during this time, STRATMOR Group has been exploring new techniques to enhance the way lenders can measure performance versus peers.

As a leader in gathering and providing a variety of performance benchmarking data to the industry, STRATMOR is a strong proponent of lenders using benchmarking data to manage and improve their performance. While internal comparisons are useful — for example, comparing this quarter’s performance to the prior quarter or the same quarter last year — only by comparing peer-to-peer performance can lenders gain a more real and useful assessment of how well they are doing and, perhaps more important, where they need to improve.

STRATMOR’s new method for benchmarking lender production or servicing performance can be applied to virtually any traditional performance metric, from direct production margin and direct origination expense per loan to loans serviced per servicing FTE and more. Common benchmarking comparisons enable a lender to say: “My direct retail origination

expense per loan is \$200 less than average.” With the new method, this same lender could say: “My direct retail origination expense per loan is equal to or better than 62 percent of lenders.”

STRATMOR believes this new method provides lenders with a better sense of their competitive performance than simple comparisons to averages or medians.

What the New Metric Means to You

Imagine a simple one-metric calculator such as the one below. In this example, we have entered hypothetical direct margin data (as used here, direct margin includes all revenues and expenses except

	Retail	CD
Direct Margin (bps)	95	148
Better than %	54.4%	52.4%

In-Focus

A NEW METHOD FOR MEASURING LENDER PERFORMANCE VS. PEERS



for corporate allocation expense) for a lender that originates in both the retail and consumer direct channels.

We've entered 95 bps as the direct margin for this lender's origination operations and the calculator comes back with 54.4 percent. This result tells us that at 95 bps, this lender's retail direct margin is equal to or better than 54.4 percent of the retail originating population of lenders in the data base. Similarly, at 148 bps, this lender's direct margin in consumer direct (CD) is equal to or better than 52.4 percent of the lender population originating loans in the channel. STRATMOR believes that this perspective is much more meaningful to our clients than internal comparisons alone.

When the CEO asks you how good a 100-bps retail direct margin is in relation to the competition, you can say: "It's estimated that our retail direct margin is better than 55.31 percent of lenders." However, to make even this estimate requires that you know the average and standard deviation of the true or underlying distribution of lender retail direct margin.

For Math Geeks Only: STRATMOR Does the Math

To generate such direct margin calculations (or similar calculations for other performance metrics) with accuracy, a substantial lender-level data base is required. We can, however, get comparable (albeit somewhat less accurate) results using aggregated lender data if we assume that lender performance metrics are "normally" distributed. By this we mean that that the underlying data tends to be distributed around a central value with no significant bias above or below this central value.

Assume, for example, that the true distribution of lenders' direct margin for the retail channel is normally distributed with an average of 92.53 bps

and a standard deviation, a measure of how spread out the data is around the average, of 55.98 bps. Here is where the fun begins!

A common practice in statistics when dealing with normally distributed data is to "standardize" the distribution. Such standardizing facilitates both the understanding and decision-making with respect to the data.

The first step in standardizing is to convert the normal data values to "Z-scores" or "Standard-scores" that measure the distance of each data point from the average in terms of the number of standard deviations.

So, for example, consider a hypothetical lender that reports a retail direct margin of 148.56 bps. Assuming that the average margin of all lenders is 92.53 bps with a standard deviation of 55.98 bps, the Z-score for this lender would be:

$$\text{Z-score} = (148.56 - 92.53) / 55.98 = 1.0$$

This result tells us that this lender's retail direct margin is 1.0 standard deviation above the average. It also tells us that this lender's direct retail profitability is equal to or better than 84 percent of lenders. How do we know this? When we standardize or normalize the data, we find that for any normally distributed data, we can easily compute for any specific data value:

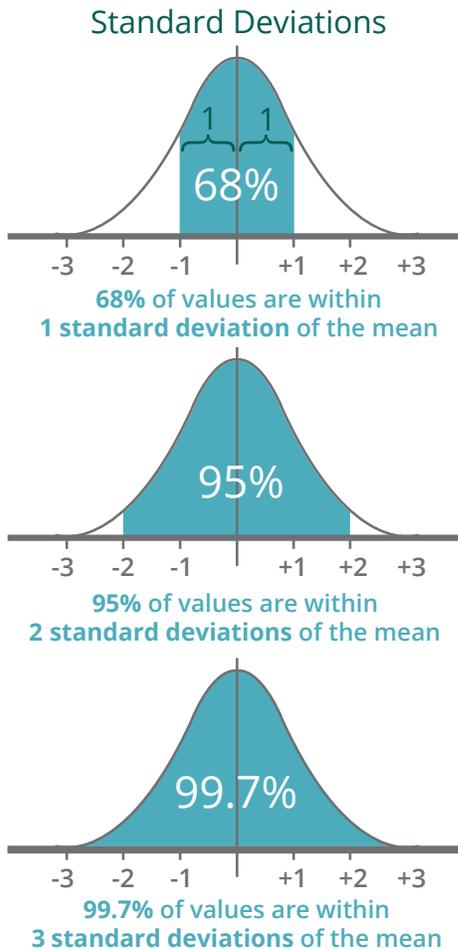
So, if a lender's Z-score is +1, we know that they are better than $50\% + \frac{1}{2} \times 68\% = 84\%$ of retail lenders. On the other hand, if their Z-score is -1, we know that they are better than $50\% - \frac{1}{2} \times 68\% = 16\%$ of retail lenders. Similarly, if their Z-score is +2, they are better than $50\% + \frac{1}{2} \times 95\% = 97.5\%$ of retail lenders.

In-Focus

A NEW METHOD FOR MEASURING LENDER PERFORMANCE VS. PEERS



More generally, given the average and standard deviation of a normally distributed data set, we can, by converting the data to standardized scores, easily compute for any specific data value the percentage of data that is equal to or less than that value.



Direct Margin (bps)	Z-Score	Standard Normal CUM%	Actual CUM%
-120	(3.80)	0.01%	0.0%
-100	(3.44)	0.03%	2.20%
-80	(3.08)	0.10%	2.20%
-60	(2.72)	0.32%	2.20%
-40	(2.37)	0.90%	2.20%
-20	(2.01)	2.22%	2.20%
0	(1.65)	4.92%	5.60%
20	(1.30)	9.75%	8.90%
40	(.94)	17.40%	12.20%
60	(.58)	28.06%	22.20%
80	(.22)	41.14%	32.20%
100	0.13	55.31%	58.90%
120	0.49	68.82%	70.00%
140	0.85	80.18%	85.60%
160	1.21	88.60%	91.10%
180	1.56	94.099%	95.60%
200	1.92	97.26%	96.70%
220	2.28	98.86%	97.80%
240	2.63	99.58%	100.00%

The table above illustrates this conversion, assuming the underlying retail direct margin data is normally distributed. The first column contains direct margin values in bps; the second column converts these values to the equivalent Z-score using the assumed 92.53 bps average and 55.98 bps standard deviation of true underlying lender-level data set.

In-Focus

A NEW METHOD FOR MEASURING LENDER PERFORMANCE VS. PEERS

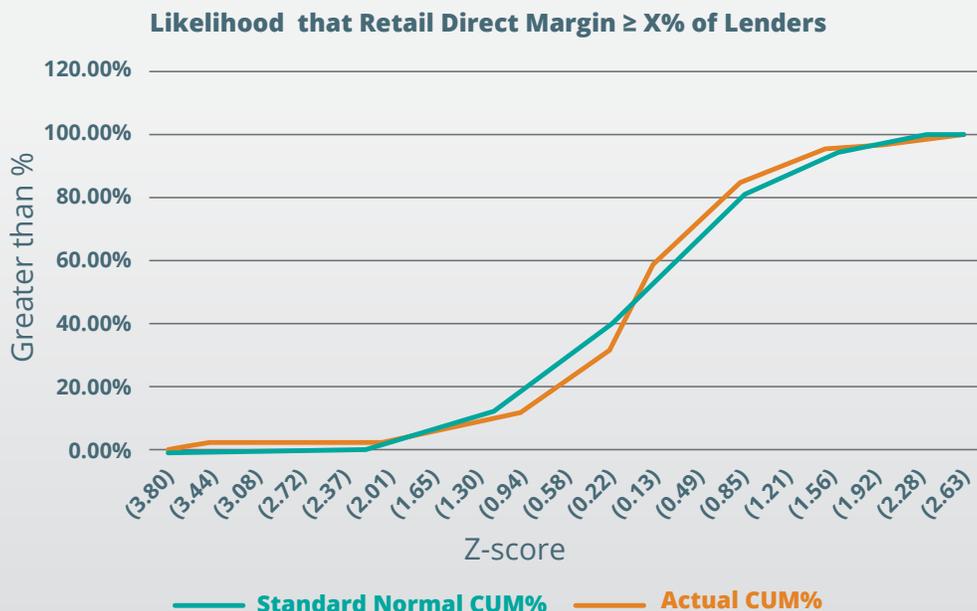
The next two columns display the cumulative percentage — the percent of lenders with a retail direct margin equal to or less than the direct margin value — for an assumed standard normal distribution of values versus the assumed actual distribution for underlying lender-level data.

So, for example, a lender with a retail direct margin of 100 bps is equal to or better than 58.90 percent of lenders based on the assumed actual lender-level data set versus 55.31 percent using the Standard Normal distribution with an assumed average of 92.53 bps and 55.98 bps standard deviation, a disparity of roughly 6 percent.

These same results are presented graphically in the chart below. While there are differences, we think you'll agree that the theoretical results obtained by

assuming the actual data is normally distributed are quite close to the actual results.

These results also suggest that we consider the Z-score as a new benchmarking metric for lender performance. Think, for example, how much more information is conveyed by saying that a lender's retail Z-score for its retail direct margin is 0.13 versus saying that it's retail direct margin is 100 bps. In the latter case, you don't know whether the lender's 100 bps margin is better or worse than average; and no way of knowing how much better or worse. On the other hand, a Z-score of 0.13 tells you not only that the lender's margin is better than average but also how much better. And, in this latter regard, the Z-score is a much more powerful indicator of comparative or competitive performance.



WE WELCOME YOUR FEEDBACK

We invite readers to give us feedback regarding the usefulness of this new approach to looking at lender performance. You can provide such feedback by contacting our Senior Partner, Jim Cameron, at jim.cameron@stratmorgroup.com. ■