



Compass Analytics | 580 California Street, Suite 1725 | San Francisco, CA 94104 | 415-462-7500 | www.compass-analytics.com

An excerpt from Compass Analytics July 2010 *Month in Review*

Topic of the Month: *Tips for Improving Secondary Marketing Efficiency and Effectiveness*

Revisiting the Importance of Knowing your Day-1 Profit Margin

This is a preview of an article to be published in the August issue of *Secondary Marketing Executive*.

Do you know what your profit margin is when you originate a loan? Profit margin, the most important driver of a Lender's profitability, is often an obscure topic for most Secondary Marketing Managers (SMM's), and surprisingly, many can't answer the above question with 100% confidence. Control over profit margins equates to better control of a firm's overall profitability, however many SMM's unknowingly have effectively given up control of their Day-1 Margin.

One of the biggest mistakes we see both new and seasoned Secondary Marketing Manager's make when originating loans is using an Investor's Best Efforts ratesheet to price the loans and set their margin, while selling the loans on a Mandatory execution. Why do we say this is a mistake? Because by doing so, these managers are allowing the most important driver of profit to be manipulated by a third party and thus have effectively given up control of their Day-1 Margin. When a Lender uses Best Efforts pricing to originate a loan he/she plans to hedge and sell using a Mandatory execution, a portion of the Day-1 margin built into the loans when they are originated is attributed to the spread between the all-in Best Efforts price, and the all-in Mandatory price. Let's use the following hypothetical data to illustrate:

FNMA 30-Yr (30-day Locks)					
Noterate	Rank 1 BE Price	Rank 1 Mand Price	BE to Mand Spread	Base Margin	Total Margin
4.625	101.25	101.62	0.37	0.45	0.82
4.750	101.77	102.04	0.27	0.45	0.72
4.875	102.17	102.63	0.46	0.45	0.91
5.000	102.76	103.10	0.34	0.45	0.79
5.125	103.35	103.79	0.44	0.45	0.89
5.250	103.95	104.47	0.52	0.45	0.97
Average BE-Mand Spread			0.4	Average Total Margin 0.85	

Using the data in the table above, let's say that an originator prices the Jones loan, a FNMA 30-Yr 4.750% noterate using a Best Efforts ratesheet, with the intention of hedging that loan and selling on a



Compass Analytics | 580 California Street, Suite 1725 | San Francisco, CA 94104 | 415-462-7500 | www.compass-analytics.com

Mandatory execution. The Total Effective Margin on the day the loan is originated is equal to the Base Margin of 45bps plus the difference between the All-In Best Efforts execution and the All-In Mandatory execution of 27bps, or 72bps. Seems like a healthy margin, so what's the problem? The problem is that the Best Efforts to Mandatory spread is a moving target; on any given day the spread can vary by product, delivery term and as observed in the table above, by noterate. So if the SMM is assuming that the Jones loan is receiving the Average Total Margin of 85bps (the average BE-Mand Spread of 40bps plus the 45bps of base margin), in reality they are already underperforming by 13bps on Day-1 just due to variation in BE-Mand spread between the average and value of the 4.750% noterate. For an SMM pricing loans in this manner, unless they are performing this analysis every day, by product, noterate and delivery term, their Day-1 profit margin is an unknown, or at best inaccurate.

Additionally, the average BE-Mand spreads expand and contract given different market environments and changes to investor demand for product. Below is a graph of some observed Best Efforts to Mandatory Spread average values for the month of May:





Compass Analytics | 580 California Street, Suite 1725 | San Francisco, CA 94104 | 415-462-7500 | www.compass-analytics.com

As clearly expressed in the chart, the spread is volatile and contracts and expands day over day. This means that the 72bps of Total Margin that was built into the Jones loan on Day-1 could be more or less than 72bps on the day the loan is sold on a Mandatory Execution. For example let's say 23 days have passed and the Jones loan has closed. Today when the SMM goes to sell the loan Mandatory, the Best Efforts to Mandatory spread on the 4.750% noterate is now only 17bps, and his/her effective margin on the loan is now 62bps, a reduction of 10bps from the day of origination and 23bps worse than the average total margin expected across all noterates. Add in 5 to 10bps of hedge cost to this scenario, and allowing a third-party to influence your margin has proven very costly.

Day N BE to Mand Spread	Day N+23 BE to Mand Spread	Base Margin	Day N Expected Total Margin	Day N+23 Realized Total Margin
0.27	0.17	0.45	0.72	0.62

Aside from increasing P&L volatility, there are several other problems caused by pricing to Best Efforts and selling Mandatory. We'll discuss in greater detail the most important of these problems, which include setting the correct amount of hedge coverage in a dynamic pullthrough model, as well as improper reporting of pipeline profitability and understanding the effectiveness of the hedging strategy employed to protect the Day-1 Margin.

In a Dynamic Pullthrough model, originators assume that loans with positive P&L above and beyond the Day-1 margin, (we'll refer to this as positive Secondary Marketing P&L) have a lower percentage chance of closing since increased market prices means rates are lower and the borrower is more likely to get a more favorable rate elsewhere. Conversely, when loans have negative Secondary marketing P&L, the model assumes that a higher percentage of these loans will close as lower prices drive market rates higher and the rates and terms of the existing loan lock are more attractive to borrowers. This means that originators pricing to Best Efforts and valuing loans with a mark-to-market Mandatory execution will have the true Secondary Marketing P&L of the loans distorted by the amount of the Best Efforts to Mandatory spread. Using the Jones loan above as an example, in a flat market, we show that it is 27bps in-the-money on Day-1. Since loans that are in-the-money are covered at a lower percentage, the loan is effectively underhedged starting on Day-1. This situation stays true the entire time the loan is in the pipeline assuming that the Best Efforts to Mandatory spread is > 0. Using an average to proxy the Best Efforts to Mandatory spread won't work in this situation because the spread varies by product, noterate and delivery term and those spread values can change from one day to the next. In a down market, improper hedge coverage can be extremely costly.

Additionally, pricing loans in this manner leads to distortions in profitability reporting and hedge effectiveness testing. If an originator doesn't know what his or her profit margin is for each loan, how well can they determine how effective their hedge is? Going back to the Jones loan, which had a Total



Compass Analytics | 580 California Street, Suite 1725 | San Francisco, CA 94104 | 415-462-7500 | www.compass-analytics.com

Effective Margin of 62bps on the day it was sold, how is this P&L being reported in the financial statements? Most likely the originator is booking the 45bps of Base Margin as P&L from Margin and the additional 17bps that's attributed to the BE-Mand spread as P&L from execution, thereby understating the Effective Total Margin and overstating the gain on sale from market movement. In this scenario, loans will almost always have a negative hedge cost, unless the cost to hedge is greater than the BE to Mand spread on the day the loan was sold. Not only is this unrealistic, it's dangerous. Understanding hedge cost allows managers to make prudent decisions about which products to hedge and sell Mandatory and which products are better sold as Best Efforts.

Again, using an average to proxy the Best Efforts to Mandatory spread won't work in this situation because the spreads vary by product, noterate and delivery term and can change day over day, leading to distortions in hedge performance. A manager assuming that they'll make the average Total Margin of 85bps on the Jones loan introduces 13bps of noise on the day of origination (85bps vs. the 72 bps of actual Total Margin built in on Day-1) and 23bps of noise on day N+23 when the loan is sold, (85bps vs. the actual Total Margin of 62bps on the day it was sold). Add in 10bps of hedgecost, and an SMM using averages to determine their Day-1 Margin would be left scratching their head as to how the hedge performed so poorly in the case of the Jones loan.

So if all this is true, why do SMM's price loans that they plan to hedge and sell Mandatory using Best Efforts ratesheets, when they would clearly benefit from pricing the loans to a Mandatory execution on Day-1? The answer is, because it's easy. It's very simple to take a listed Best Efforts price from an investor's ratesheet, back out a base margin and put out pricing to the street. Conversely, without the right technology and tools, it can be extremely difficult to produce a ratesheet based on Mandatory executions. In the past originators pricing to a Mandatory execution had to update the investor model with live MBS prices, update applicable pricing components, such as par noterates, noterate adjusters, buyup and buydown grids, early delivery bonuses and various other spiffs, some of which can change daily in order to produce a base set of rates. As if that's not enough, they would then have to perform a Best Execution analysis among different Investor's Mandatory executions to determine the best prices to put out to the street. With such an extensive process, there is a lot of room for human error, making it difficult to train backup individuals within the department to generate rates in this manner.

Luckily, there are tools out there that make pricing to a Mandatory execution simple and time-effective. By using tools that automate and streamline the process, SMM's can reduce the time it takes to generate rates, while removing much of the human error element involved in pricing to a Mandatory execution, allowing SMM's to take advantage of all the benefits of pricing loans Mandatory without all the hassle. By pricing Mandatory and selling Mandatory, SMM's take back control of their profit margins, giving themselves the ability to either put out better pricing to the street, or increase their base margin as they see fit. Without the distortions caused by variations in the BE-Mand spread, originators can accurately track their historical pullthrough in different market scenarios allowing them to implement more accurate pullthrough assumptions based on those real-life observations. Additionally, pricing Mandatory provides SMM's with the ability to track hedgecost and pullthrough at the loan level. This enables identification of profitable originators, thereby giving SMM's the control to adjust margins for these originators in order to set the optimal level of profitability. Conversely, identifying originators with lower pullthrough and higher



Compass Analytics | 580 California Street, Suite 1725 | San Francisco, CA 94104 | 415-462-7500 | www.compass-analytics.com

hedge cost allows originators to pad margins where necessary, such as offsetting increased hedge cost in longer dated locks by increasing margins incrementally as the lock terms increase.

With the right tools and technology in place, Secondary Marketing Managers can greatly reduce the time and effort expended in generating rates using Mandatory execution. By pricing hedged loans with a Mandatory execution on Day-1, SMM's can take back control of their margins and will have more accurate data and therefore better metrics in place to identify what's working well and what areas need to be improved upon. Additionally, when asked, "Do you know what your profit margin is when you originate a loan?" SMM's pricing hedged loans to a Mandatory execution can answer "Yes" with confidence and conviction. *—Bob Gundel*