

The Month in Review

July 2009

What's New?

Looking for a reason to get to San Diego for the National MBA one day early? Come join Compass Analytics for its **User Conference** on **Sunday, October 11th**! Sessions will include Pipeline Risk Management, MSR Valuation, MSR Hedging and Whole Loan Valuation discussions. Please RSVP your interest in attending to Lucy Poole, lpool@compass-analytics.com.

Next month, Compass will be adding two new sections to the monthly newsletter – **Current Coupon Coverage** and **Quant Qorner**. For those of you who read Compass's Daily Color, you may have noticed the recent introduction of a pipeline current coupon level where Compass queries its national originators previous day lock volume to provide daily color on market current coupon values. Compass has closely followed the spread between its production current coupon and long standing current coupon measures (e.g. FNCL). In the last couple of months, Compass has observed this spread collapse with the quick run up in rate in early June to only widen back out as rates have ticked back down. Next month's article will review the previous month current coupon environment and discuss implications for originator profit margins and MSR current coupon spreads.

New in CompassPoint™!

Compass is pleased to report its recent development progress in CompassPoint™, including:

- Expanded Treasury Future and Treasury Future Options CTD Shocks, Functionality & Control
- Shock Variable Adjustors for OAS and Mortgage Spread
- Additional Reverse Mortgage Mortality Table Inputs/Options; Maximum Claim CF Termination
- Enhancements to Roll Matrix UI, Usability
- Retroactive Vector Adjustors for ADCO Vector Tuners
- Misc. Updates for ADCO Loan Dynamics model
- Additional Copy/Paste Functionality in Assumption Grid

CompassPoint™ features and capabilities reflect the business needs as defined and requested by its users. For additional information on new features or to submit suggestions and requests, please contact Rob Kessel at 415-462-7500 or e-mail at rkessel@compass-analytics.com.

Market Update

The month of June saw 10-yr treasury rates hit a near term high at around 4.00%, only to bounce off and fall to below 3.50%. Following a weaker-than-expected June employment report, released on July 2nd, the 10-yr pushed below 3.50% but volatility has ramped up in recent days as the market tries to get a

new read on the economy. The headline unemployment rate rose to 9.5%, with many expecting to see 10.0% before year-end. This, on top of further declines in home prices, though moderating in magnitude, should keep pressure on consumer confidence readings. The employment report in particular served to remind the markets that there's still much work to do before the economy shows consistent growth again.

Also to the benefit of treasury and mortgage rates was solid demand shown in the latest round of treasury auctions, even with rates ticking down in the days prior. Following the latest auction, yields on the 10-yr treasury hit 3.365%, the lowest level since May 21st, and yet the bid to cover ratio was the highest on record at 3.28, meaning the total amount of bids was 3.28 times greater than the amount of securities auctioned.

Mortgage pipelines, which slowed significantly as rates moved higher through most of the second quarter, have started to benefit from the recent drop in rates. While many would-be loan locks have taken a wait-and-see attitude recently, hoping for rates more like the ones seen at the end of last year, larger lock days are becoming more frequent and more participants are beginning to see the recent rally as an opportunity. While volatility may climb again in the third quarter, it may still be preferable to the fairly steady climb in rates seen in the second quarter, at least from the perspective of projected closing volumes. *—Lindsay Hill*

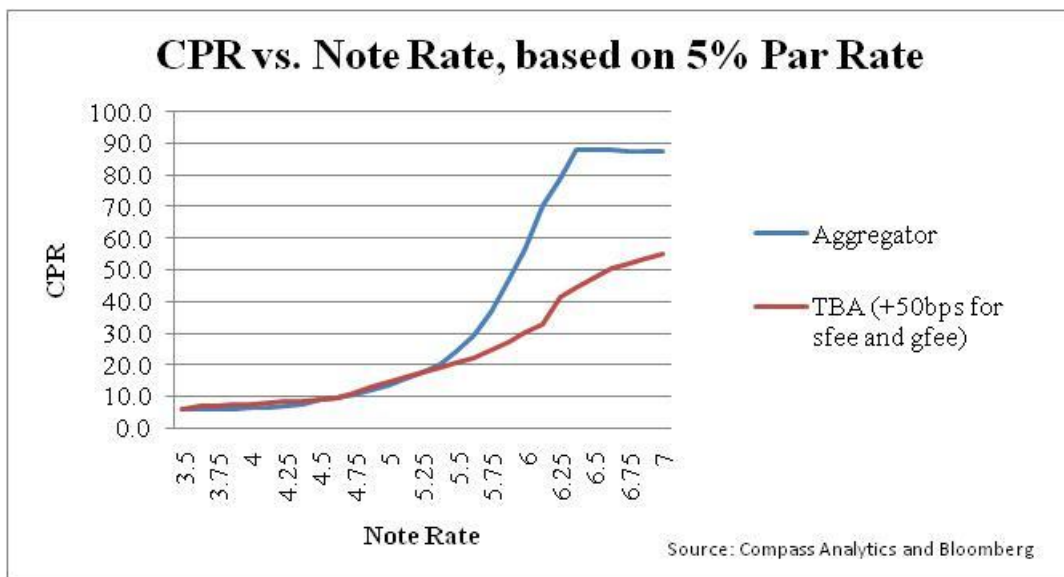
Topic of the Month: Hedging SRP's A Preview to SME's Publication Next Month

Hedging Changes in Servicing Released Premiums

A key issue for many mortgage lenders is how to hedge the fluctuations in servicing released premiums (SRPs) that occur when rates move during the rate lock period. When a lender sells loans on a servicing-released basis, the aggregator is purchasing both the base loan and the servicing rights. An SRP is the amount that an investor will pay for the right to service a given loan over time. Factors such as interest rate levels, market volatility, credit availability and current real estate price projections, among others, affect at what price an investor will buy servicing rights. For a lender that is selling loans on a mandatory basis, the value of this premium can change dramatically from the day the loan is locked until the day the lender sells the closed loan to an aggregator. The change in SRP value can cause fluctuations in month-to-month profit and loss for the lender that may not be adequately covered through its pipeline hedge strategy. Prepayment assumptions directly (and inversely) impact the SRP value. Current interest rates and interest-rate projections have the greatest influence over prepayment assumptions, and, consequently, the greatest influence over SRPs. As mortgage rates fall, SRP values decline as expected prepayment speeds for a given interest rate increase. The opposite happens as rates increase and prepayment expectations decline, pushing the value of servicing higher for a given rate. For a mortgage lender, the value of the base mortgage is moving in the opposite direction. As rates move up, the base value of the pipeline is decreasing, and vice versa. With these dueling price movements, although not equal in magnitude, a mortgage lender can use a portion of their own mortgage pipeline to hedge the changing SRP values.

Aggregator Assumptions

Each aggregator may calculate SRPs in different ways. For most, either a static grid and daily par rate is given to lenders for each loan type or a grid of note-rate level adjusters is used encompassing the daily par rate. As underlying mortgage rates change, the par rates or note-rate level adjusters also change, so that each note rate has its own specific SRP value. For the most part, lower note rates are assigned a higher value because the aggregator is assuming lower prepayment speeds. A lender should be aware that there is not a standard set of prepayment assumptions that the mortgage industry uses. Each aggregator may use a distinct set of prepayment speeds. The lender's profitability is subject to these speeds and thus should be hedged accordingly. Below is a chart that shows prepayment speed assumptions for a Fannie Mae 30-year TBA +50bps versus an actual aggregator's assumptions as described by their SRP adjusters. In this example, the CPRs (expected prepayment speed measurement) are coupled together closely for lower note rates, but the higher the note rate, the more the two sets of speeds begin to diverge. The higher aggregator speeds for the higher note rates lead to lower SRPs for lenders delivering those rates. One can also see that by the steepness of the prepayment curve that if rates move by 50bps between the lock date and when the closed loan is sold to the aggregator, the SRP value can be dramatically different. To hedge this risk, the lender first needs to break apart the individual risks in the pipeline.



Pipeline--The Put Option

A typical mortgage bank hedges pipeline interest rate risk by short-selling TBAs (mortgage-backed security forwards). Since the base value of a conventional mortgage lock is based off of a Fannie Mae or Freddie Mac mortgage-backed security, shorting this security will offset a majority of the rate lock price fluctuations. The lender, however, is also short a put option to the borrower. The borrower has the option during the lock period (barring cases, for instance, in which the underwriter denies the borrower) to exercise that option and close the loan at the locked rate and price. This is the option for which the

mandatory hedger may regularly add or subtract coverage. For example, a borrower is more likely to exercise this option if interest rates have climbed since the time of rate lock. Similarly, the probability of the loan closing at the original rate and price declines if rates fall during the lock period. Because of this, there is not a 100% chance of the lock closing at the original terms. Thus, on day one, the hedger may assign a percentage chance that the lock will close as locked. For this example, assume 70% is the pull-through probability assigned to the locked loan (the loan has a 30% chance of falling out of the pipeline or renegotiating to current rates). If the 30-day lock is a 5.5% note rate 30-year conventional loan, the hedger may sell 70% of the loan amount of a FN30 5% coupon TBA to offset the risk. If the mortgage market rallies, the lock increases in value and the TBA short that the hedger has on will decrease in value by roughly the same amount. With market prices higher, current rates are lower, and the borrower is less likely to exercise the option on the loan. The hedger can drop the coverage to 60% on this lock to reflect the lower chance of closing and will subsequently have to buy back 10% of the hedge at a loss. This hedge will help offset the price movements of a lock that the lender intends to sell servicing-released, but it does not completely take into account the expected change in price. The lender should take into account that, while the base mortgage has gained in value, SRP value has decreased.

SRP--The Call Option

Besides being short the put option (on the 30-day lock), the mandatory, servicing-released hedger is also short a call option (on the term of the mortgage), which is reflected by the variations in SRP. At any point during the mortgage term (30 years, for instance), the borrower can prepay some or all of the loan. Other than extreme circumstances, the borrower will likely exercise this option after rates have declined, e.g., the borrower has taken out a 5.5% loan and is able to refinance for 4.5% because mortgage rates have fallen. While the put option is the primary driver in whether or not a loan closes, it is not the sole determinant of profit and loss on the loan. The call option, the main component in pricing SRPs, also impacts the price at which the lender can sell the loan. Most pertinently, with both the call option and put option struck at the same note rate, the former will increase in value as the latter decreases.

For the same reason that the borrower is less likely to close a given lock if mortgage rates have dropped since the time of lock (the put option is out of the money), aggregators will pay less for SRPs because the prepayment odds have increased (the call option is in the money). The investor is likely to get this servicing cash-flow stream for a shorter period of time. Since SRPs have decreased in value as rates have fallen, a logical way to hedge this interest rate risk would be to buy TBAs. Given the scenario above, however, it would be costly to buy and sell the same TBAs to hedge the different risks. Instead, the lender can sell less coverage than the 70% required in the above example and then set up two sub-accounts to track the price movements of both the base loan and SRP. The lender can then transfer the amount of required hedge between the two, with the lower amount of short coverage required on the base loan balanced and displayed as a long position covering the servicing value. The hedger is effectively buying coverage from him- or herself, thereby avoiding paying the bid/offer fees to a dealer if actual long positions were executed to cover the SRPs.

Positive Externalities

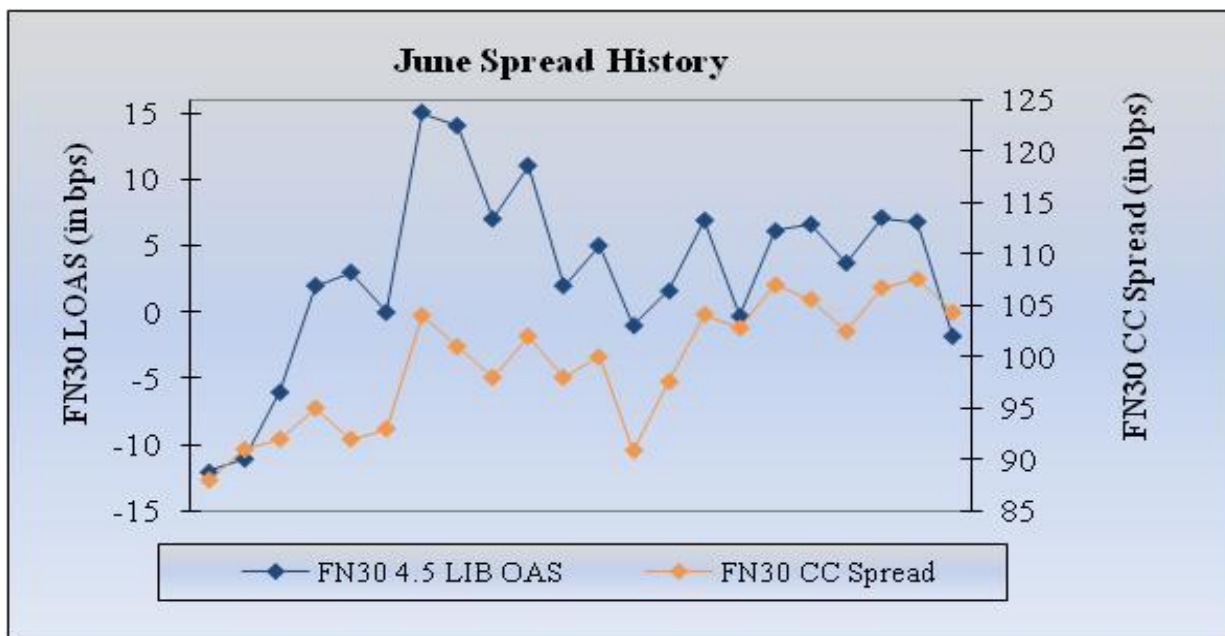
For a mortgage bank, there are several external benefits to employing one's own mortgage pipeline as a hedging mechanism. With the Federal Reserve committing \$1.25 trillion to purchase mortgage-backed securities through the end of 2009, interest rates have remained relatively low. Low borrowing rates combined with cheaper real estate values have resulted in lender pipelines doubling and tripling (in some

cases, increasing in greater multiples) in size. Meanwhile, there are fewer counterparties with which to hedge now than there were two years ago. With fewer entities with which to trade, credit has become scarcer. The result: the mandatory hedger has fewer places to hedge more pipeline volume. This has ultimately caused wider bid/offer spreads and has made hedging more costly. By selling less in TBA coverage to the Street through hedging SRPs with one's own pipeline, the mandatory hedger will be left larger open credit lines at a greater number of dealers and can get bids and offers with more dealers in competition. This approach may ultimately lead to tighter bid/offer spreads as transaction volumes decrease.

Tracking SRP Risk

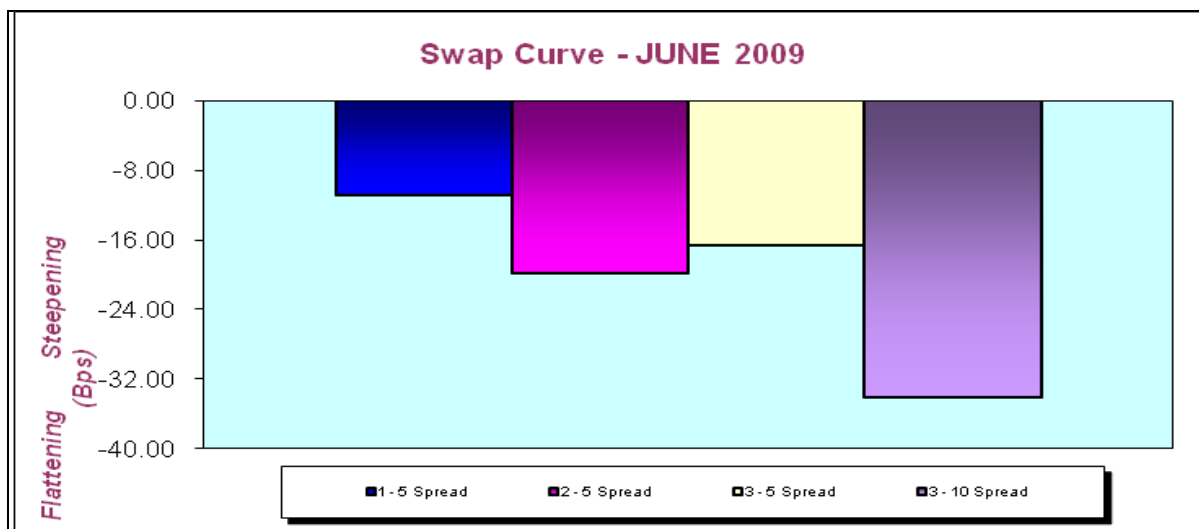
Instead of blending the coverage of the two risks—the pipeline risk and SRP risk—into one position, the mandatory hedger can separate out the two positions and track them separately. Though it may seem easier to run the position a little longer or lower pull-through assumptions to compensate for the SRP risk, segmenting out the individual risks actually makes the net position and profit and loss easier to track. Due to the optionality involved in both servicing values and base mortgage values and because of the different assumptions aggregators have for servicing, there will not be a one-to-one change in servicing-released loan values for a given change in TBA prices. But, by separating out the risks involved the hedger can see the change in value between the two positions, transfer TBAs between the sides, and then add or subtract coverage from either position as required. By successfully employing this approach, the mortgage hedger will more accurately depict the actual risks, better hedge the pipeline, and incur less profit and loss fluctuations from month to month. *—Dave Bennett*

Monthly Spreads



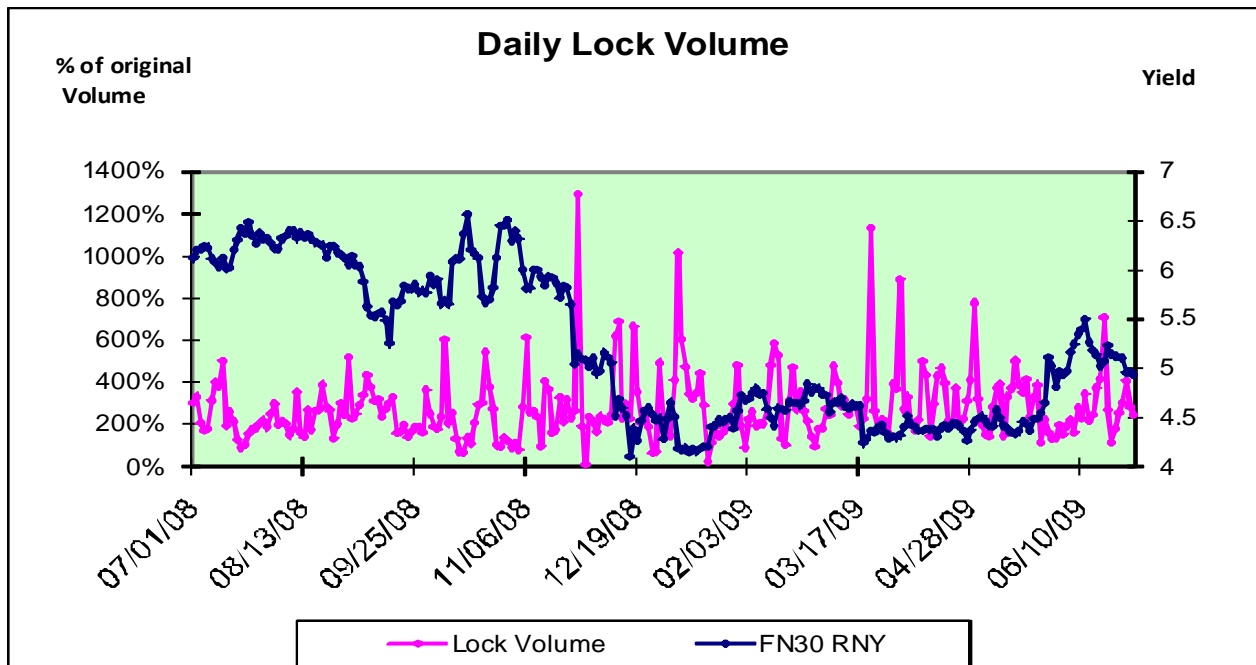
Worldwide write downs stand at \$1,473B and firms have raised \$1,268B in capital. FN30 Current Coupon spreads and LIBOR OAS both showed volatility throughout the month. In treasuries 2-10's tightened to 242bps at the end of the month (started month at 272bps). *-Glen Brown*

Swap Curve Analysis



The LIBOR/Swap curve flattened in June, reversing the steepening trend of the prior two months. Yields increased slightly at the short and middle areas of the curve, while the longer end shed yield with the 10 year swap off 27 bps. The 1-10 LIBOR/Swap spread tightened about 29 bps to finish the month at 216 bps.. –Virgil Caselli

Production Index



Production in June decreased while rates traded in a wider range (69bp range in June versus 56bp in May), with the average yield increasing month over month. Average volume for the month was 220% of our base volume (vs. 354% in May) ranging from a low of 115% to a high of 709%. The average yield on the FN30 RNY in June was 5.12% (vs. 4.52% in May) ranging from a low of 4.81% to a high of 5.50%.

– Brandon Case