

Several Methods Are Available To Handle Hybrid ARMs

Hedging hybrid ARMs is a core requirement for secondary marketing managers.

By Rob Kessel

One of the most pressing issues facing secondary marketing managers (SMMs) today is what to do about hybrid adjustable-rate mortgages (ARMs) - how to best sell and deliver the production, as well as how to best hedge it, if at all.

Recent and anticipated interest rate movements have swiftly shifted new originations from fixed-rate loans to ARMs and, in particular, hybrid ARMs, where borrowers pay a fixed rate for an initial period, such as two, three, five, seven or 10 years, after which the interest rate adjusts semi-annually or annually.

The shift to hybrid ARM production, reinforced by hot property markets, greater borrower mobility and endorsement by Fed Chairman Alan Greenspan, forces originators to make strategic decisions with respect to hybrid ARMs. Will they sell the product best-efforts or accept the risk and learning curve to develop hedging and mandatory delivery strategies in hope of becoming more competitive?

With some lenders reporting hybrid ARM production surpassing 50% of total production, an originator's mar-

ket share hangs in the balance.

In evaluating the prospect of hedging hybrid ARMs, SMMs apply the same prerequisites to prospective hybrid ARM hedge vehicles as they would to fixed-rate product. Specifically, they evaluate the fundamentals underlying the pricing and price movement of the collateral being hedged and search for a deliverable security.

In the absence of such securities, SMMs look for a hedge vehicle whose price movement is highly correlated to the underlying assets - in other words, one with limited basis risk - and whose liquidity is sufficient to insure reasonable bid/ask spreads when such hedges are traded and unwound.

Hedge vehicle prerequisites include:

- delivery,
- high correlation (limited basis risk), and
- liquidity (low transaction costs).

With respect to the pricing and delivery of hybrid ARMs, SMMs can choose from a variety of delivery methods. For conforming products, alternatives include agency cash or security (Fannie Mae's 5/1 mortgage-backed security) with servicing retained, agency cash with servicing released (Freddie Mac's Junior

Guarantor), and single loan or bulk whole loans sales (correspondent lenders and dealer/broker conduit programs or trade desks).

Alt-A and jumbo products are sold in single and bulk whole loan sales. In general, bulk hybrid ARMs trades are quoted as Z spreads. A Z spread is the zero volatility spread over current spot Treasury curve, assuming a certain prepayment scenario with balloon payment at reset, which in oversimplified terms represents excess yield an investor would receive for investing in hybrid ARMs over and above similar-term Treasury investments.

Although hybrid ARMs are quoted against Treasuries, many traders also consider hybrid yields in relation to interest rate swap yields for similar terms. For example, a three-year hybrid ARM yield may be compared against a two- to two-and-a-half-year swap yield, and a five-year hybrid ARM yield may be compared against a three to three-and-a-half-year swap yield. Many participants favor comparing mortgages to swaps, as mortgage rates tend to have higher correlations to swap rates than



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Possible Hedge Instruments

Different hedge instruments pose different advantages and disadvantages when it comes to delivery, basis risk and liquidity.

Category	Sample Instrument	Delivery	Basis Risk	Liquidity
Forward Cash Sales	30-Day Forward	Yes	Low	Poor - Medium
MBS Securities	5/1 MBS	Yes	Low	Poor - Medium
MBS Securities	15-Year MBS	No	Mid-High	High
Interest Rate Swap	Like Term Cash Swap	No	Low-Mid	Poor
Interest Rate Swap	Five-Year Swap Future	No	Low-Mid	Poor
Interest Rate Swap	Eurodollar Future Bundles	No	Low-Mid	High
IR Swap/MBS Basket	ED Bundles and 15-Year MBS	No	Low-Mid	High

SOURCE: Compass Analytics

to Treasury rates.

After reviewing delivery alternatives, four broad categories of hedge vehicles emerge: forward cash sales, mortgage-backed security (MBS) sales, interest rate swaps and combinations or baskets of the above.

In order to hedge their hybrid ARM production, some SMMs elect to sell part or all of their expected hybrid ARM closings forward, assuming expected pullthrough rates. Investors will typically provide buyup or buydown multiples to calculate delivery adjustments should delivered product differ in coupon from the coupon or yield sold forward. While this method provides a hedge instrument into which loans may be delivered and represents a hedge with minimal basis risk, this hedge may underperform when the SMM is unable to deliver committed amounts.

Although many investors will work with SMMs on forward trade pairoffs, some investors may limit pairoff amounts or charge pairoffs when rates improve and not pay pairoffs when rates worsen. SMMs must also continuously validate that forward trades represent similar execution to spot bulk trades and consider differences in operational efficiencies.

In an attempt to add liquidity to the hybrid market, Fannie Mae has created a 5/1 MBS into which conforming 5/1 hybrid ARMs may be delivered. Fannie sellers use a guarantee fee, buyup and buydown schedule, and current 5/1 MBS prices to calculate their execution.

Additionally, some correspondent lenders have indicated interest or varying degrees of progress in implementing assignment of trade programs for such forward trades. While the introduction of 5/1 MBS represents a delivery option with promising execution and limited basis, the market for 5/1 MBS remains asymmetric in respect to participants. In other words, participants are primarily sellers.

While the agencies appear agreeable to paying pairoff fees in worsening rate environments, the MBS lack the symmetric participation necessary to hedge alt-A and jumbo hybrids or conforming hybrids delivered to nonagency investors.

Exploring alternatives

Many SMMs have tested the water of hedging hybrid ARMs with 15-year MBS (for example, dwarfs). In stable or improving market environments, this strategy has performed reasonably well. However, on the basis front, given that hybrid ARM pricing is predominantly based on the short end of the swap curve, SMMs employing an all-dwarf strategy expose themselves to substantial curve risk. They face the risk that short-term rates increase while long-term rates stay relatively stable.

Considering a likely Fed tightening cycle before us, a quick review of the last two Federal Reserve tightening cycles is illuminating. The graph on page 12 tracks the spread between 10- and three-year swap rates through the

1994 Fed tightening cycle. Observe how 10/3 spreads tightened twice in this cycle. To illustrate the impact of this tightening, consider an oversimplified example where hybrid ARM rates are equal to three-year swap rates and 15-year MBS rates are equal to 10-year rates.

One of two relative scenarios plays out in each spread tightening: either hybrid ARM pricing worsens, with no gains on the 15-year MBS hedge, or hybrid ARM pricing remains constant, with losses on the 15-year MBS hedge.

In both cases, the SMM is left with only losses and, in the case of the second spread tightening of 1994, very significant losses - in excess of 4%. Although less dramatic in size, we see the same two spread tightening phases in the 1999-2000 Fed tightening cycle.

Given the tracking of hybrid ARMs to interest rate swaps, the transaction cost of forwards and 5/1 MBS, and the curve risk presented to us with liquid dwarf hedges, swaps or swap futures would seem to stand out as the instrument of choice for hedging hybrid ARMs. Indeed, for the largest of lenders and investors, interest rate swaps (and derivatives thereof) are frequently employed.

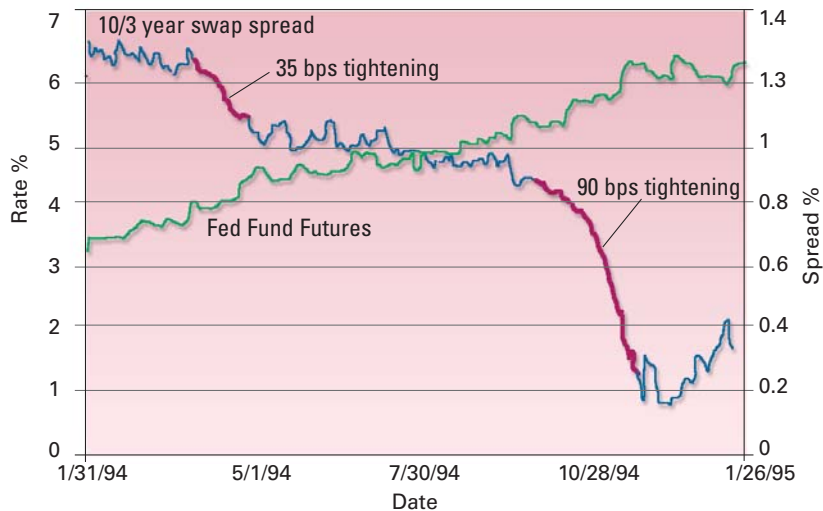
Unfortunately, efficient execution of cash interest rate swaps requires size and a credit rating beyond the size of most originators. SMMs turning to swap futures are again disappointed with poor liquidity (limited open interest) and limited flexibility (only five- and 10-year swaps). At last we turn to Eurodollar (ED) future bundles, or the selling or buying of a strip of ED futures.

ED future bundles

Given that a consecutive strip of ED futures (ED bundle) represents the futures version of the cash floating component of a like-term interest rate swap, the price movement or sensitivity of an ED bundle closely matches the price sensitivity of the like-term interest rate swap. ED futures, which trade through the Chicago Mercantile Exchange, also enjoy great liquidity and sizable

Swap Spreads In 2004 Fed Tightening Cycle

Spreads between 10- and three-year swap rates tightened twice during the 1994 Fed tightening cycle from February, 1994, to February, 1995.



SOURCE: JP-Morgan Chase, Compass Analytics

growing open interest. The attractive hedge characteristics of ED bundles have led to an increasing number of SMMs including ED bundles in their hybrid ARM hedges. One

downfall to ED bundles is that they represent more basis risk to SMMs than cash forwards or 5/1 MBS. Another downfall to ED bundles is the lack of any convexity, which can

add to hedge cost.

Finally, some SMMs may look to combine certain types of instruments to hedge hybrid ARMs. As one example, some SMMs may look to combinations of ED bundles and dwarfs to hedge 5/1 and 7/1 hybrids. The combination of instruments represents a compromise of hedging vehicles where perhaps some curve risk is assumed in order to introduce convexity.

Other SMMs may sell a minimum portion of their production forward and employ other hedge vehicles for the remaining share of their hedged pipeline. With this strategy, they minimize any nondelivery risk and reduce basis across the total hedge.

This article has only scratched the surface of issues, consideration and options available to SMMs with respect to their hybrid ARM production. Notwithstanding the initial learning curve, many of us who contemplate and model the different performance of delivery and hedge alternatives become increasingly convinced that the successful hedging of hybrid ARMs is not only achievable, but is a core strategic requirement for originators for the foreseeable future. **SME**