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Commentary

Market Opinions and Topics of Interest

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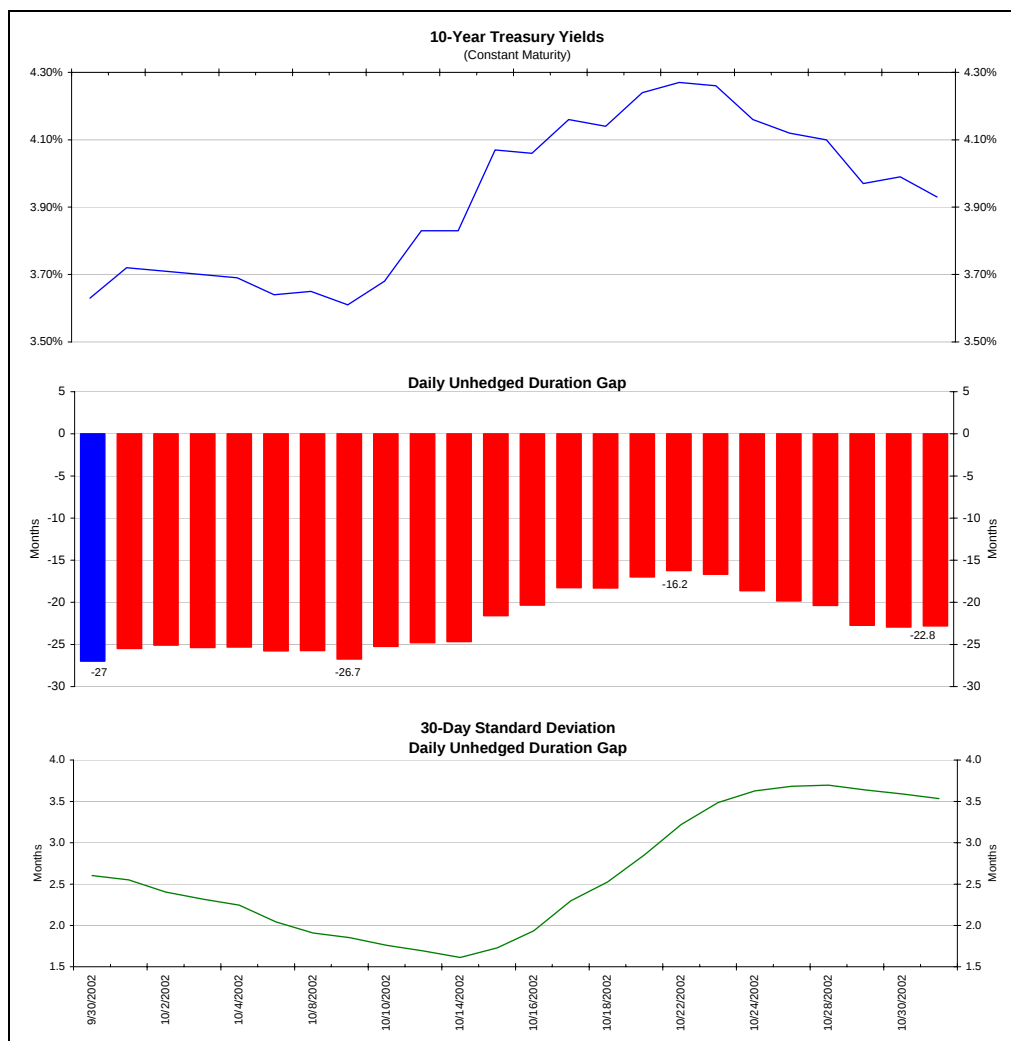
November 5, 2002

Fannie's Duration Gap Update

Now that October is over, we will offer our guess at what happened to Fannie Mae's duration gap. First, some assumptions:

We assume Fannie Mae's mortgage portfolio has the characteristics of the Merrill Fannie Mae Mortgage Master Index (how can it not - its portfolio was \$742 billion in September). We assume its debt obligations have the characteristics of the Agency Composite Master Index (this makes sense as Fannie Mae is the largest component of this index).

The chart below shows the yield of the 10-year Treasury in the top panel, the difference between the effective duration of the Merrill Agency Composite Index and the Merrill Fannie Mae Master Mortgage Index (or the "unhedged duration gap") in the middle panel, and a measure of the unhedged duration gap volatility in the bottom panel – a thirty day standard deviation.



The unhedged duration gap started at -27 months on September 30 (Fannie Mae piled another \$600 billion of notional value of derivatives on its books to close this gap to the reported -10 months). This gap remained fairly constant until rates bottomed on October 10. Then, as rates soared in mid-October (top panel, previous page), the unhedged duration gap narrowed to -16.2 months. **This means if Fannie Mae did nothing, its duration gap should have moved from its reported -10 months to +1 months by October 22. In other words, the rise in rates “fixed” Fannie Mae’s problem.**

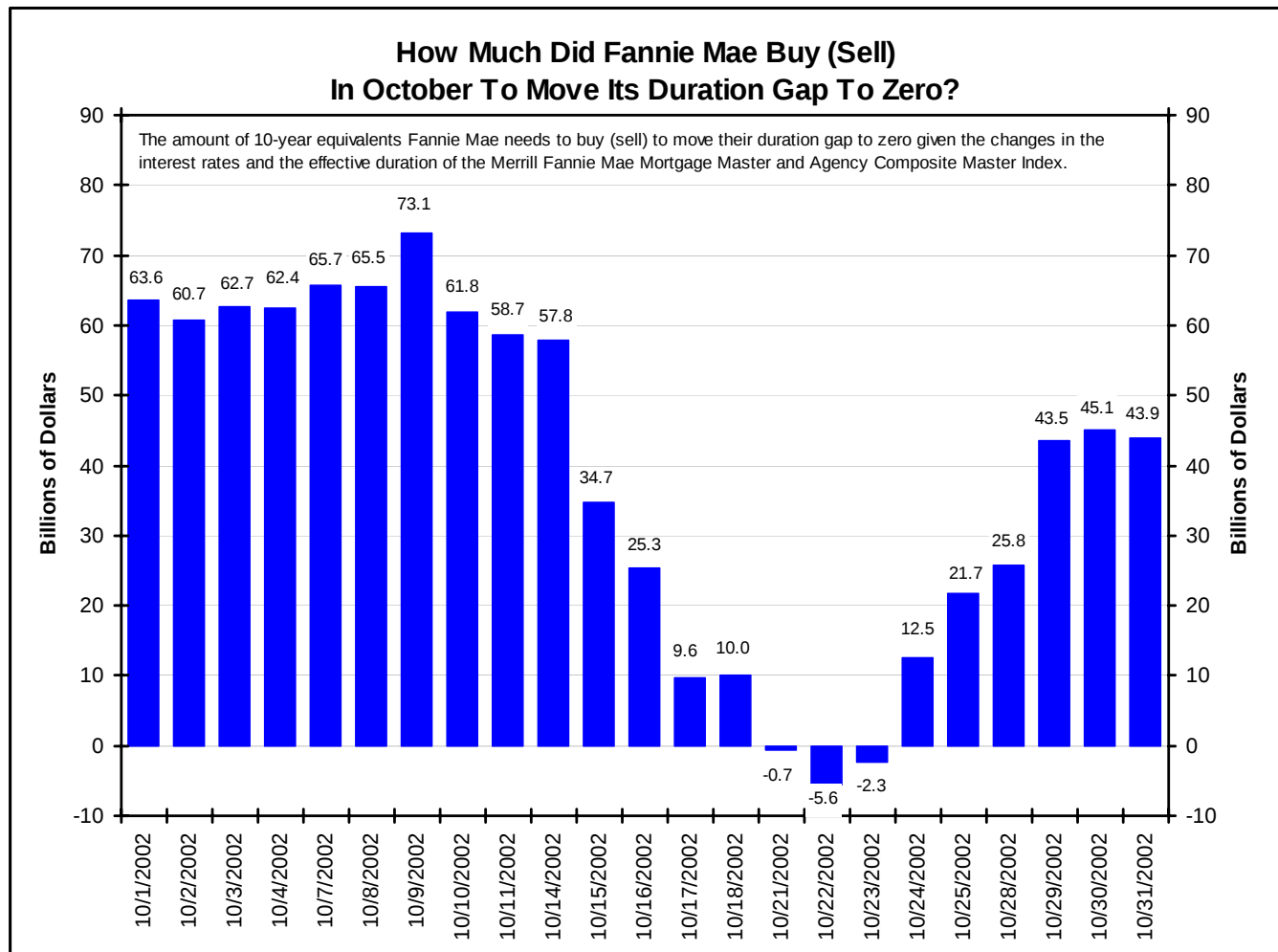
However, rates did not stay at these levels. From October 22 to October 31, rates plunged and the unhedged duration gap widened back to -22.8 months – a widening of 6.55 points in less than 10 days. For the month as a whole, the unhedged gap

fell 4.2 months. **If Fannie Mae did nothing this month, its duration gap should be -6 to -5 months. What they actually report depends on how active they were in managing this gap.**

Moving To Zero

The chart below shows how many “10-year equivalents” were needed for Fannie Mae to move its duration gap to zero on any given day.

(Note: This analysis uses the term “10-year Treasury equivalents.” Fannie Mae trades in many different instruments, especially derivatives, and rarely, if ever, buys Treasuries. We are not suggesting they buy Treasuries, let alone 10-year Treasuries. They do not. Rather, this measure is meant as a benchmark to gauge Fannie Mae’s hedging needs).



On October 10, Fannie Mae needed to buy \$73.1 billion of “10-year equivalents” to move its duration gap to zero. Thanks to the rise in rates, this measure moved to **negative \$5.6 billion** by October 22. By October 31, this measure settled the month at \$43.9 billion. If Fannie Mae wanted to move its

duration gap to zero in October, they needed to add \$43.9 billion of 10-year equivalents.

Why Should We Care?

Fannie Mae's duration gap is a big deal. It's their primary measure of interest rate risk (the secondary measures are the "rate shock" and "slope shock" statistics released with its duration gap number. These measures are dependent on the duration gap and tell us whether its interest rate risk is more yield curve or rate level oriented).

In July, Fannie Mae reported its duration gap was -9 months. In August, they reported it was -14 months. In September, it was -10 months. Fannie Mae wants to keep its duration gap inside a +/- 6-month band. When they are outside this band, its earnings incur interest rate risk. The fact they were outside this range since June means they are either voluntarily betting on the future direction of interest rates (something they steadfastly deny) or it was involuntary. If it was involuntary, then evidently they have grown so large they can no longer keep inside the +/- 6-month guideline.

We believe Fannie Mae is finding it hard to hedge and has no choice but to take on additional interest rate risk. In other words, it's involuntary.

They are trying to hedge a \$750 billion mortgage portfolio with a \$600 billion derivatives book (notional value). **We believe they have become so large they cannot stay inside the +/- 6-month range except when the markets place them inside the guidelines. Furthermore, as they attempt to stay inside the +/- 6-months range, they create a lot of bond market volatility because of their large hedging needs.**

Conclusion

The attention Fannie Mae's duration gap has garnered highlights how difficult it is to hedge this massive portfolio. We believe they have no choice but to incur interest rate risk. This is a nice way of saying they have to hope interest rates move in their favor.

Later this month, Fannie Mae will report its duration gap for October. Because rates rose during the month, the unhedged duration gap narrowed about 4.5 months. This means they should report they are back inside their self-imposed range of +/- 6-months.

Fannie Mae should tell us their duration gap closed in October because of superior risk management. However, this gap closed because rates rose in October – something they have been hoping for since June and finally got.

Fannie Mae wants to grow earnings another 20% next year. To do this, we believe their mortgage portfolio will approach \$1 trillion (with the notional value of the derivatives portfolio probably approaching a like amount).

If their interest rate management is to partially hedge and hope for interest rates to move in their favor, their earnings will eventually be at risk. If political and investor pressure demands they stay inside the +/- 6-month range in all environments, the sheer size and volume created by their rebalancing will cause even more bond market volatility than we have seen in recent months.

As long as they grow earnings 20% per annum into infinity, either earnings risk will emerge or bond market volatility will continue to grow until it becomes intolerable. Choose your poison.

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