

## GSE's: The Denouement

After all the finger pointing at greedy Wall Street big-wigs, a somnambulant FED, and "tulip-crazed" homeowners is over, the fact remains that the nexus of the housing market is Fannie Mae and Freddie Mac, aka, the GSE's (Government Sponsored Enterprises). And just as the beginning of this crisis can clearly be marked to the date that their financial situation tipped south, so can we be sure that our problems will not be truly over until they have been stabilized.

Although more opinion than fact, today's RateLab seeks to examine the many possible paths and then identify the most likely outcome and the market implications.

We at the RateLab focused early upon the GSE's where we predicted to within a week when they would be taken over by the Government. Below we repeat that introduction since this summary of the issues has not changed.

### From RateLab – "The GSE Solution", August 22, 2008

*The core issue for this entire financial debacle has been the **Bifurcation of Risk and Return**. This has occurred along the entire food chain of structured finance. What do I mean by Bifurcation of Risk and Return; It means that those who stand to benefit from some sort of financial (or any business) activity are not the ones who will absorb a commensurate portion of the risk. A variant of this is known as Moral Hazard.*

*Now let's examine the GSEs. Let me state foremost that their basic mandate of wrapping and standardizing MBS to stimulate and liquefy the transmission of Capital into the US Mortgage market is a vital public policy venture and must be maintained. That said, there has always been the potential for a Moral Hazard induced problem because of the **Bifurcation of Risk** underlying the GSE structure. The "Implicit US Government Guarantee" of a privately held company created the potential for the equity shareholders to have a proportionally greater share of the gains than the losses, and as such, to take on greater risk than a purely privately held company might. This may have been a contributing factor to their current situation and is at the core of the solution.*

*Most Financial participants have their view of an efficient strategy, but the only truly effective long-term solution must somehow **remove the Bifurcation of Risk**. This ultimately means either full nationalization or privatization over some reasonable course of time. Once those who stand to gain*

*also own a market valued proportional share of the risk, these entities will be managed in the most efficient manner and will once again add stability to the business of Mortgage Finance.*

This basic conclusion is unaltered. Moreover, it seems that the concept has expanded vastly beyond just the GSE's. The debate over Wall Street bonuses can be directly sourced to the concept of Bifurcated Risk.

## **Bring in King Solomon**

Although King Solomon did not actually "split the baby in half" [*Kings v.3 ch.16*], common usage today delivers this as a fine solution. The GSE's are comprised of two separate businesses. The first is the "G-fee" business whereby they "pool and wrap" with a guarantee (for the timely payment of P+I) qualifying mortgage loans into MBS securities. This was their direct mandate upon creation. The second is the "Portfolio" business, which in many respects mimics the activities of a large Hedge Fund. There is almost no question that these two businesses will be separated. Let's now examine each business.

## **The "G-fee" Business**

FNMA was established during the Great Depression in 1938 by FDR's New Deal to add liquidity to the mortgage market. It was converted into a shareholder owned corporation in 1968. As a private company, it could no longer offer the US Government's imprimatur so GNMA was created in 1970 to take on that function. FHLMC was formed soon after to create competition in the market so as to limit FNMA's potential for monopoly power. This was truly a brilliant idea. By combining the elimination of the massive cost of loan level analysis for investors with the savings of broad insurance diversification inherent in the "pooling" process, the risk adjusted rate required for lenders/investors was significantly reduced. By how much? There has been tremendous debate on this topic, but let's take the broad view.

GSE MBS bonds are created by pooling similar coupon loans that "conform" to certain standards. Wall Street built a similar function for high quality (Prime) loans that were larger than the GSE limit. To mimic the GSE guarantee, a 3% subordinate bond was clipped from the bottom of the pool to absorb losses. Until the "meltdown", these highly rated Triple AAA bonds traded about 24/32 behind similar GSE MBS bonds. That price difference would normally be worth about 15bps to 18bps. However, since the larger loans tend to exhibit more negative convexity, the OAS pick-up was far less. Moreover, the 3% haircut made the loans more expensive for the originator who held the subordinate slice. But it is difficult

to measure the value of fire insurance in a rain forest. One needs to have a few hot dry days to see what it's actually worth. Steadily rising housing prices since the early 1990's reduced investor demand for insurance. However, with the current mortgage firestorm, an examination now would be more interesting.

Although presently not that active a market, to create a Triple AAA security now would require about a 10% subordination and the remaining pooled bonds would trade about three points behind similar GSE MBS bonds. Three points on a par bond is worth about 60bps to 75bps, depending upon your assumptions. Add this to the cost of subordination and it is clear that the G-fee function significantly adds value to the housing market. It is for this reason we can be assured that this portion of the GSE's will not be eliminated.

## **What Happens to the G-fee Business**

Not quite water or power, the G-fee business is in most respects a classic public utility. Although the Government in general hates monopolies, the fact is that it is vastly more efficient to have a single water or power supplier. This is why the Government regulates these utilities to reduce their monopoly pricing ability. The problem is, it is not clear that one can assign a statutory ROE or ROA to the G-fee business since the cost structure, i.e., the credit losses, are unknown ex ante. So the pure utility model probably does not work.

This leaves either fully nationalizing the G-fee business, ala GNMA, or privatizing, similar to Sallie Mae or the PMI companies such as MaGIC or Radian.

Given the current politics, I think Politicians would prefer NOT to place the G-fee business under the Government's umbrella. Similarly, folding it into GNMA should be a non-starter.

This leaves the private route. Since multiple insurers would dilute the power of diversification as well as reduce the secondary liquidity of the pooled MBS bonds, they probably will opt to combine the G-fee businesses of FN and FH into a single shareholder owned company. However, present conditions would hinder the ability of the company raise private capital and charge a fee that is less than 50bps to 75bps (the current Triple AAA cost). So I suspect the Government might offer a deep deductible "umbrella wrapper" around this business to create a floor under the bonds. For example, the Government may charge 5bps to this private company to insure the bottom 80% of the loans conditioned upon the loans conforming to some "Prime" standards. Stockholders would absorb the first 20% of losses. If the new loans were made at a real 80% LTV, that would mean that the Government wrapper would not kick in until the original house price declined by 36% (80% of 80%). The Case-Schiller National index is down by 32% peak to

trough. Since not all loans, at any given time, are issued at the peak LTV, a 64% of initial value "catastrophic insurance" umbrella wrapper would not be overly costly to the Government yet would add tremendous value to the liquidity and pricing of these MBS bonds.

Since the Government already sponsors a bare bones catastrophic flood insurance program nationally, the concept of a catastrophic "umbrella wrapper" is not unfounded.

## **The Gorilla in the Corner**

The harder question is what to do with the massive mortgage portfolios built up over the years by the GSE's. Although hotly disputed by FN, FH and others, a detailed report was issued in 2005 that analyzed the impact the GSE's had on lowering mortgage rates for the consumer. Specifically, by the use of their advantageous borrowing costs, created by their Implicit Government Guarantee, to fund portfolio growth. (*"The GSE Implicit Subsidy and the Value of Government Ambiguity" by Wayne Passmore, 2005-05 Federal Reserve Board.*)

While it is difficult to separate the G-fee effect from the portfolio effect, the results of this study indicate that the ability to borrow at a Government subsidized rate to fund MBS purchases only lowered consumer mortgage rates by about 7bps. Furthermore, over half of the total value of the subsidy went to the private shareholders, not consumer borrowers. Finally, the present value of this subsidy made up as much as two thirds of the GSE's total stock market value.

One can haggle over the quality of this analysis as well as the motives for building a portfolio of MBS that at the peak owned nearly one third of the MBS market, but the bottom line is that this function was never built into their mandate. On a stretch, one can say that stabilizing the volatility of the mortgage origination process is a core value, much like a specialist on the NYSE buys stock for his own account when sell orders overwhelm the market. For this service, specialists are rewarded with some monopoly power. Yet the NYSE specialist will also sell into quickly rising markets and over some short cycle will be flat the stock. The specialist will NOT build and maintain a huge portfolio of stock that overtime equals 30% of the total outstanding shares !

The other obvious comment on the topic of the portfolio is to wonder why GNMA functions without a portfolio if it serves such a vital purpose. Many point to GNMA's recent losses and compare that to the GSE's. This is a false analysis. Of course GNMA will have much larger loan losses, they were the original Sub-Prime market. They make FHA loans to low-income families as well as through the VA to veterans. [As you read this RateLab in your cushy chair, you had better be willing

to subsidize the cost of housing to the men and women in uniform who protect the country and make it so you do not have to sit in the hot sand with a rifle.] This is also a key reason not to merge the GSE's into GNMA. The GSE business is to work with Prime borrowers while the core GNMA function is to work with Sub-Prime borrowers.

So once again, the answer jumps out. As it is obvious the G-fee business has to be maintained, it is similarly clear that the portfolio function has to be closed down, or at least vastly reduced, over time and delegated to Hedge Funds and other private market players. The only questions are how and how long.

### Good Bank, Bad Bank, No Bank ?

The Good Bank/Bad Bank concept has received a lot of airplay recently. The idea is to split out the bad loans from the GSE's and then send them on their merry way as in the past. This is certainly a possible interim step, but not an optimal solution. Let's examine the issues.

Current Coupon "Agency" OAS



All charts, unless otherwise noted, are sourced from BAC/MER data

	<u>Total Portfolio</u>	<u>Fixed Agency MBS</u>	<u>%-Total FN/FH Agcy MBS</u>
FNMA	\$792	\$420	11%
FHLMC	\$830	\$510	13%
NY FED	\$543	\$500	13%
Total		\$1,430	37%

Notwithstanding who reaped the benefits of building a huge Retained Investment Portfolio (RIP), the present situation is a loser from most perspectives. For better or worse, the FED presently owns \$543bn FN/FH/GN MBS bonds (August 5 SOMA report). Assuming a 4.5% average yield funded at 25bps with no hedging, this portfolio will generate about \$23bn of annual income. As for the GSE's, they are funding and hedging in the same manner as they have historically. As noted in – **the purple line**- above, Par MBS bonds presently have a negative OAS relative to the Agency funding curve. This means that theoretically, their holdings in Fixed-Agency MBS, if fully hedged, would create a \$2bn annual loss. By components, the \$42bn in coupon income would be more than offset by \$37bn in duration management and \$7bn in theta from Convexity hedging. Now one could argue that they are not fully using options to hedge the convexity risk, yet we know from the stability of their self-reported Duration Gap that they are delta trading the unhedged balance. With the market's extreme realized Volatility, one would suspect that manual delta hedging has been difficult, at best, and will surely absorb the theta savings.

The larger issue is the conflict between the FED's desire to reduce uncertainty (Volatility) and the impact of the GSE's delta hedging. (Recall, the short delta hedger buys higher highs and sells lower lows which accelerates and expands the trading range.)

This begs the question as to why the GSE's are hedging while the FED is not. They are both arms of the same Government. GSE hedging reduces Government income by about \$44bn on the Agency portfolio and maybe as much as \$65bn annually on the total RIP. This is serious money that could be used to offset credit losses in the G-fee and RIP sectors. At some point, someone will notice this hypocrisy.

Separately, the GSE's weakened financial position has reduced their willingness to "buy-out" and start to foreclose delinquent loans. The GSE's are required to pay the coupon rate on MBS bonds that are backed by tardy loans until they are bought-out of the pool. Since their borrowing rate is 475bps to 575bps lower than the note rate, it would create huge savings to buy-out these loans, fund them internally, and save the coupon payment. (This is a contributing reason as to why Prepayments are so slow on premium MBS bonds.) It may be the GSE's desire to maintain independent capital ratios that hinders this process.

More importantly, there is an inherent conflict between the G-fee business that should accelerate the buy-outs and the RIP business that would be harmed by higher prepayments. This should be eliminated.

The Government has nationalized the GSE's in all but legal name. This is because formally taking them onto the Government's balance sheet would significantly

worsen Government's financial ratios and worry our FCB lenders. Nonetheless, it suits the Government's purposes to somehow remove the RIP from the GSE's and place them into some sort of Held to Maturity entity. The sooner this occurs, the better.

## Market Implications

### Agency Debenture Distribution

	FNMA	FHLMC
2009	\$229	\$115
2010	\$163	\$142
2011	\$121	\$136
2012	\$68	\$80
2013	\$45	\$42
To 2018	\$127	\$113
To 2039	\$87	\$72

This is tricky, but here is our best guess. As seen above, most of the GSE's funding debt is inside five years. That means they have most likely paid fixed on swaps to create the proper duration hedge. If the RIP is collapsed faster than the expected amortization, the GSE's will need to buy back (receive) these swaps. Moreover, they will need to sell out their swaption hedges. Finally, the market will probably be sad that they are no longer buying MBS so the basis will initially widen. So this sounds a lot like the much dreaded Bull Flattener.

After the early market volatility, this would be a superior public policy outcome.

**A slightly flatter curve combined with massively lower Implied and Realized Volatility is a positive for GDP.** A flatter Curve increases the certainty of a businesses long-term funding costs and lower Volatility means reduced insurance premiums to hedge financial risk.

I have to assume that someone in the Government has figured this out and is planning on how to make this transformation. The question then becomes a matter of timing. If the Government executed some sort of accelerated RIP reduction in conjunction with a more effective Mortgage ReFinance program, the risk of a massive back end rally, at least as a short-term trade, is quite real. Remember, Prepayment speeds have been quite low. If speeds exogenously

increase via some Government program, these dollars would need to be reinvested at a faster pace than expected by the markets.

While I am not proposing that this is imminent, to ignore this obvious risk would be perilous. Once it is clear as to what the Government has to do, then all it becomes is a matter of timing the execution.

## **Concluding Thoughts**

It is clear that at some point in the future the core G-fee business will exist and that this entity will not have a Retained Investment Portfolio. The only question is how fast this process occurs. If the Government chooses to let prepayments and scheduled amortization do their magic, it could take upwards of a decade to work down these portfolios. That may be the least disruptive path to take politically, but not economically.

Combining some sort of portfolio reduction program with an involuntary ReFinance package, i.e., the Government ReFinances loans that back higher coupon Agency MBSs automatically, serves a huge public policy purpose and accelerates the process of eventual separation.

The FED is going to keep the curve ultra-steep as their prime tool to re-capitalize the banking system. This is almost identical to the medicine delivered in 1989 to 1993. If this medicine is good enough for the private sector, then the Government should avail the GSE's to a similar recovery package. Take off the GSE's hedges and let the power of positive carry create the cash flow needed to fund the loan modification program. As long as the FED can control the USD borrowing cost, the risk to an unhedged portfolio is de minimis.

Harley S. Bassman  
BAS/ML US Trading Desk Rates Strategy  
August 11, 2009



#### Important Note to Investors

The above commentary has been created by the Rates Strategy Group of Banc of America Securities LLC (BAS) for informational purposes only and is not a product of the BAS or Merrill Lynch, Pierce, Fenner & Smith (ML) Research Department. Any opinions expressed in this commentary are those of the author who is a member of the Rates Strategy Group and may differ from the opinions expressed by the BAS or ML Research Department. This commentary is not a recommendation or an offer or solicitation for the purchase or sale of any security mentioned herein, nor does it constitute investment advice. BAS, ML, their affiliates and their respective officers, directors, partners and employees, including persons involved in the preparation of this commentary, may from time to time maintain a long or short position in, or purchase or sell as market-makers or advisors, brokers or commercial and/or investment bankers in relation to the securities (or related securities, financial products, options, warrants, rights or derivatives), of companies mentioned in this document or be represented on the board of such companies. BAS or ML may have underwritten securities for or otherwise have an investment banking relationship with, companies referenced in this document. The information contained herein is as of the date referenced and BAS and ML does not undertake any obligation to update or correct such information. BAS and ML has obtained all market prices, data and other information from sources believed to be reliable, although its accuracy and completeness cannot be guaranteed. Such information is subject to change without notice. None of BAS, ML, or any of their affiliates or any officer or employee of BAS or ML or any of their affiliates accepts any liability whatsoever for any direct, indirect or consequential damages or losses from any use of the information contained in this document.

Please refer to this website for BAS Equity Research Reports: <http://www.bankofamerica.com/index.cfm?page=corp>