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Alan Jay Brazil Managing Director



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Alfred M. Pollard General Counsel Office of General Counsel Office of Federal Housing Enterprise Oversight 1700 G Street Washington, DC 20552

## Dear Mr Pollard:

In our capacity as a leading market maker in the U.S. interest rate derivatives market, we are writing to express our support of the Office of Federal Housing Enterprise Oversight (OFHEO) in its efforts to create a framework that will link the regulatory capital of the Federal Home Loan Mortgage Corporation and the Federal National Mortgage Association (the "Agencies") to their credit risk and market risk exposure. In particular, we want to highlight our support for OFHEO's revised cash flow haircuts for derivative transactions. These haircuts result in a level of regulatory capital that exceeds the amount indicated by our analysis of the counterparty credit exposure. Nevertheless, the capital requirements are now at a level that is less likely to inhibit the Agencies from using derivatives transactions to mitigate risk.

Goldman Sachs provides a wide range of financial services to the Agencies, including interest rate derivatives, debt underwriting, and dealer services for mortgage-backed securities. These activities are closely related because interest rate derivative transactions allow the Agencies to lower their financing costs and substantially mitigate the prepayment and interest rate risks associated with their mortgage holdings.

A necessary condition for linking regulatory capital to risk is that the relative capital requirements for different financial transactions reflect their relative risks. We believe that the revised version of the risk-based capital haircuts achieves this goal for derivatives. Using analysis ranging from state-of-the-art credit risk models to simple scenario analysis, the original proposed OFHEO risk-based capital charge for a collateralized derivative was so high that it would have inhibited the Agencies from using the derivatives market to manage their risk exposure. Significantly lower cash flow haircuts were justified, because the contractual provisions of the swap contract and the collateralization process itself substantially reduce both the size of loss to the Agencies in the event of default and the probability of default. It is true that the revised set of haircut rules still produces a level of regulatory capital in excess of that indicated by a conservative analysis of available market data; however, the revision comes closer to capturing the true risks faced by the Agencies from derivative counterparty risk.

As a general matter, our understanding is that the Agencies enter into collateral agreements that require their swap counterparties to post collateral based on a daily determination of the marked-to-market value of the swaps. The collateral is typically delivered to the Agencies under New York law collateral agreements that provide them with a perfected security interest in the collateral that is senior to other creditors of their swap counterparties. They also require their counterparties to sign master swap agreements that provide for early termination and close-out rights upon a default by their counterparties. If their counterparties do not post the marked-to-market collateral within the cure period (typically one or two days), the Agencies may declare an event of default, close out the swaps, calculate their net exposure, and set off the value of the collateral against such net exposure. If they desire, they can reestablish the positions with another dealer. In our internal counterparty risk model, we conservatively allow for 10 business days of exposure on collateralized derivative positions (i.e., a worst-case assumption of the time it would

take to close out and get a collateral set-off on the positions). Accordingly, the potential loss to the Agencies is limited to an adverse market move during this 10 business day period.

Along with the shield provided by the collateralization, the Agencies have an additional level of protection from defaults because they have the ability to change counterparties. It is market practice in the dealer community to permit the transfer of swaps. Since Agencies transact in highly liquid derivatives with extremely small bid/ask spreads (0.5 bp for five- and 10-year swaps), the cost of such transfers is minimal. Thus, if a derivative counterpart were downgraded, the Agencies could implement an assignment to another higher-rated dealer. Consequently, cumulative probabilities are much too high if they imply that the Agencies would be forced to live with a counterparty as they moved down through the ratings ladder to default over the 10-year scenario horizon. Instead, the real probability of default is limited to the two-week period between the call for collateral and the closing out of the swaps.

As a result, we believe that the credit risk from a collateralized derivative contract is quite small for the Agencies. Specifically, it is the product of two very small components: the probability of a move to default over a two-week period and the market value exposure on the derivative during those two weeks.

As Exhibit 1 shows, the revised haircut rules have brought the capital the Agencies would need to hold against a derivative position much more closely in line with the risks they face from the default of a derivative counterparty. And as the last column shows, the resulting capital requirements derived from the revised rules exceed a conservative estimation of the worst-case expected loss the Agencies would face from a counterparty default.

Exhibit 1

	Cash Flo	ow Haircuts	Risk-Based Capital for a 10-year Swap (% of Original Notional)			
Rating	Old Rules Revised Rules		Old Rules	Revised Rules	Worst-Case Expected Loss *	
AAA	2%	0.30%	0.4%	0.05%	0.01%	
AA	4%	0.75%	1.1%	0.14%	0.03%	
A	8%	1.20%	2.2%	0.22%	0.04%	

\*GS Estimate

This conservative estimation of the capital requirements can be justified by a historical analysis of the market pricing of the risk of default implicit in the yield differential between high-grade commercial paper and Treasury bills. This pricing is the product of (1) the market value loss on the collateralized swap from an adverse market move over a two-week period in the event of a default and (2) the probability of default over a two-week window implied by the commercial paper market. The results of this analysis are shown in Exhibit 2. The column labeled "A" is the marked-to-market move on a swap of the stated maturity in the event of a three standard deviation move in the relevant benchmark rate. (A standard deviation is calculated from a historical sample of two-week changes since 1988.) The columns labeled B and C are the implied three-month probabilities of default from the commercial paper market for A1/P1 and A2/P2 rated counterparties, respectively. These probabilities are based on the three standard deviations from the sample of implied probabilities over the last 10 years, assuming a 70% loss severity. The capital requirement as a percentage of notional on the collateralized swap is given in column D for counterparties rated A1/P1 and in column E for those rated A2/P2. Conservative estimations of the risk-based capital for derivatives, shown in Exhibit 1 above, are derived from the expected worst-case losses shown in the last two columns of Exhibit 2

Exhibit 2

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			Market Implied		Market Implied			
			Probability of Loss		Probability of Loss			
	Historical 3-Standard		Over 3 Months		Over 3 Months			
	<b>Deviation Event Over</b>		AAA/AA		A/BBB			
	Two-Week Period		(Using A1/P1)*		(Using A2/P2)*		Worst-Case Expected Loss	
		Resulting						
	Rate Move	Loss (\$)					AAA/AA	A/BBB
Maturity	(bp)	(A)	Average	3-SD (C)	Average	3-SD (C)	$D = A \times B$	$\mathbf{E} = \mathbf{A} \times \mathbf{C}$
2	64	1.2	0.30%	0.70%	0.50%	0.90%	0.008%	0.011%
5	59	2.6	0.30%	0.70%	0.50%	0.90%	0.018%	0.023%
10	55	4.2	0.30%	0.70%	0.50%	0.90%	0.029%	0.038%

<sup>\*</sup>Commercial paper ratings of A1/P1 roughly translate into triple-A/double-A bond ratings, while A2/P2 roughly translates into single-A/triple-B bond ratings.

The analysis presented above is very conservative in determining the right level of capital. The probabilities of default are derived from three-month commercial paper versus three-month Treasury bills. This overstates the probabilities of a two-week default that would be derived from two-week commercial paper versus Treasury bills. In addition, we used a three standard deviation assumption for both the rate shock and implied probabilities.

Based on our understanding of the Agencies' business models, without the OFHEO's revision to the original rules, the Agencies would probably exit the derivatives market, which would increase both their exposure to risk and their financing cost. In addition, under the new proposed Basel Accord, specific recognition was given to the risk-reducing impact of collateral held against derivatives. Accordingly, without the revision, the Agencies will be placed on an uneven playing field versus commercial banks.

Giving the Agencies access to the derivatives market is important, because it allows them to manage their risks more effectively relative to available cash alternatives. For example, OFHEO is faced with the dilemma of choosing the assumption for the size of callable debt issuance to replace paydowns in each interest rate stress scenario. The problem is that the Agencies should replace the paydowns in their option positions with appropriate options purchases. Issuing at-themoney par priced callable debt, however, does not match the risk of the deep-out-of-the money options that the Agencies are exposed to in the stress scenarios.

Interest rate derivatives are the solution to this dilemma: Have the Agencies refund paydowns of options and option-based debt by buying swaptions with strikes equal to the mortgage portfolio's average coupon at the beginning of the stress test. Set the notional and tenor equal to the notional and tenor that is being used in the current proposal for callable debt issuance. These swaptions would be out of the money to roughly the same degree as the mortgage portfolio and would therefore appropriately match the convexity that the GSEs would need to hedge. Furthermore, the out-of-the-money swaption market is well established and liquid.

We understand the difficulty of coming up with a system of risk-based capital for the Agencies that is easy to implement and linked to actual risk exposures. We also greatly appreciate OFHEO's responsiveness to the industry's comments on the original rules. Please do not hesitate to contact us if you would like to discuss these comments in more detail.

Sincerely,

Alan Jay Brazil

The information contained in this letter includes confidential business information, the disclosure of which would be likely to cause substantial harm to the competitive position of Goldman, Sachs & Co. It is therefore requested that the information provided be treated as confidential business data exempt from disclosure under the Freedom of Information Act (5 U.S.C. section 552 et seq.) and otherwise.