MEMORANDUM

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RE: Risk Management Reviews of Consolidated Supervised Entities

Office of Prudential Supervision and Risk Analysis ("OPSRA") staff met over the past four weeks with senior risk managers at the CSEs to review current market and credit risk packages.

There were several common themes in discussions with firms:

- **"It feels like August again."** In August, turmoil in the subprime mortgage market spread rapidly to other credit markets, including corporate leveraged loans and asset-backed commercial paper. This negatively impacted money markets and led to hoarding of US dollars by banks globally, causing inter-bank funding rates to spike and leading eventually to a series of emergency actions by the European Central Bank and the Federal Reserve. After Labor Day, fears of a full-blown banking crisis slowly abated as the ABCP market stabilized, investors regained their appetite for corporate credit, and subprime losses were revealed. In late October, however, this sense of stabilization and recovery began to recede. Illiquidity in the subprime and related structured product space (e.g., ABS CDOs) spread to other areas, notably Alt-A and prime residential, as well as commercial mortgage backed securities. This, coupled with doubts as to the efficacy of the M-LEC proposal to create a "super SIV", as well as nervousness about the impact of tight liquidity conditions around year end, contributed to a clear return to negative sentiment, volatile markets, tightening of credit, and flight to quality. Several senior risk managers and Treasurers at the CSEs noted that, "It feels like August again."

- **Credit risk managers have their eyes on the monolines.** Contributing to the negative sentiment were widespread concerns with financial guarantors, known colloquially as "monolines". These companies write insurance and provide default protection on a wide range of risks, primarily municipal debt but also super senior ABS CDOs. Monolines with high exposures to such structured credit products have seen their credit spreads widen significantly and stock prices plummet. The rating agencies put several on review, spooking markets even more. Getting downgraded from AAA would signal the beginning of the end for most, as their business models depend on not needing to post collateral. ACA, an A rated monoline with a large portfolio of subprime exposure, is widely expected to be downgraded. Should this occur, it would be required to post collateral, which it lacks the financial resources to do.

The CSEs have a variety of exposures to the monolines, some more direct than others. For instance, some CSEs have purchased subprime default protection from the monolines, generating direct credit risk exposure. In other instances, CSEs have in their inventory monoline-wrapped muni bonds, generating indirect exposure. The credit risk departments at all of the CSEs have prepared detailed exposure reports breaking down the different types of risk, the current and potential exposures, and assessments of each monoline. With the exception of ACA, the CSEs feel that their risks to the monolines are manageable and within tolerance, though OPSRA staff note that the amount of exposure (direct and indirect) varies considerably across firms. For the firms with direct exposure to ACA, some proactively took reserves against the likelihood of default. At one firm, this exceeded $500 million.

- **Munis: Another sleepy part of the market to worry about?** The ratings downgrade of Merrill Lynch and concerns about monolines sparked broader concerns with the municipal bond market. In particular, liquidity concerns were stirred with regards to tender option bond programs (TOBs). These do for municipal bonds what ABCP conduits do for asset-backed securities. In other words, money market fund investors invest in short-dated TOBs, which effectively fund long-dated municipal bonds. As with ABCP, TOBs need liquidity backstops in order to be highly rated. These arrangements have been provided by commercial banks and some CSEs. The fear is that downgrades of the large underwriters of TOBs (Citi and Merrill in particular) and/or downgrades of the monolines that wrap muni bonds could lead investors in TOBs or munis in general to step back from the market, much as they did from ABCP in August. This could affect the access of municipal issuers to credit as well as lead to underwriters supporting programs for either reputational or contractual reasons. Recently some spreads on monoline wrapped muni bonds have started to trade *wider* than non-wrapped debt.

- **There is good news and bad news on the leveraged lending front.** As chronicled in the last two monthly memos, sentiment in the leverage loan space appeared to be improving. For instance, the pricing and distribution of the First Data and TXU deals were highly positive from the underwriting banks' perspective. In addition, most of the CSEs were successful in working down some of their leveraged lending exposures as syndications went smoother than expected, while reducing the number of new non-investment grade lending commitments. This tone began to change at the beginning of November, however, as spreads on leveraged loans traded in the secondary market widened and investors cooled to new deals. Looking ahead, the distribution environment looks challenging. Thus, although leveraged lending exposures are down significantly at all of the CSEs, they are likely to face headwinds in terms of selling down that risk.

- **Beware basis risks.** Hedging mezzanine subprime risk by going short the BBB and BBB-rated ABX indices became quite expensive over the month as index levels fell even further. For instance, the ABX.BBB-.07-1 index, reflecting BBB- rated tranches of RMBS/ABS deals with mortgages originated in the early part of this year, fell below 20 cents on the dollar. Risk managers at several CSEs noted that this has prompted traders to seek out "proxy shorts" in other, less expensive, forms – e.g., through higher rated or older vintage ABX indices, the CMBX (commercial indices), LCDX (leveraged loan indices), single-name ABS CDS (including on CLO tranches), S&P puts and futures, home building stocks, etc. Reliance on these proxy shorts generates basis risk, as the primary risk being hedged, say to 2007 vintage mezzanine subprime or super senior CMBS, may not occur in correlated fashion with the proxy shorts. If done in size, as has occurred at some CSEs, this basis risk can become a material risk exposure in and of itself, as hedge gains may fail to offset losses when markets move adversely. The Chief Risk Officer at one firm noted that this had already started taking place in their subprime book.

- **Looking ahead: CMBS and PRDCs**. The securitization of commercial mortgage backed securities (CMBS) has slowed significantly on the backs of spread widening, as reported in recent memos. Some CSEs have pursued a strategy of closing deals at the cost of retaining greater portions of those deals with the hope of working those out over time. In addition, most have pared back on originating new loans in order to help manage their increased pipeline risk. On top of that, the rating agencies have begun tightening their ratings criteria, effectively lowering the amount of leverage commercial property buyers can take on. Taken together, these are likely to put upward pressure on capitalization rates, a possible pre-cursor to falling real estate prices. As a result, although most risk managers still believe that the fundamentals of commercial real estate are sound, increased volatility and sustained wider spreads have prompted some to be less quick to dismiss them as technically driven.

  Many CSEs – and commercial banks – also have significant exposure to Power Reverse Dual Currency notes (PRDCs). These exotic derivatives have been heavily marketed to Japanese customers searching for yield in Japan's low interest rate environment. The notes have a complex risk profile that can be hard to risk manage in certain environments. In particular, as the Japanese yen strengthens against the US dollar – perhaps driven by mass unwinding of the yen carry trade – the CSEs' risk profiles flip from being positive vega to being highly negative vega. In other words, the CSEs go from benefiting from increased rates volatility to bearing potentially big losses from increased volatility. Some risk managers have estimated that the point at which this occurs most rapidly is around an exchange rate of 100 JPY/USD. (The exchange rate has been around 107 recently.) Hedging this exposure is difficult because many dealers are in the same position. In fact, this has generated outsized long vega exposures at some firms already.

- **Management transitions at several CSEs**. Several firms are in the process of undergoing management transitions. Merrill Lynch ousted CEO Stan O'Neal and replaced him with John Thain (former CEO of NYSE/Euronext and Co-President of Goldman Sachs). At the same time, Ed Moriarty was named Chief Risk Officer and soon afterwards the head of Market Risk Management, Keishi Hotsuki, left the firm. Moriarty has begun the process of re-organizing both market and credit risk management. On November 29th, Morgan Stanley announced the departure of co-president Zoe Cruz and the reshuffling of senior management positions across the firm's major divisions. In September, Lehman Brothers announced that Chris O'Meara would replaced Madelyn Antoncic as the firm's new Chief Risk Officer. These shakeups are still playing themselves out.

We also expect to discuss the following firm-specific issues during the next round of meetings:

<u>Bear Stearns</u>

- Bear Stearns is facing its largest counterparty credit loss ever and has fully reserved its current exposure to ACA, the distressed monoline insurer. ACA has publicly stated that if it is downgraded (by S&P) it will have to post collateral on the CDS protection it has written and it will not be able to do so. The reserve currently stands at around $140 million but could increase further depending on changes in marks on the protection purchased. The current exposure to ACA comes from direct trades with ACA, where Bear has purchased protection on both senior corporate and asset backed tranches.

- During our recent meeting with risk management regarding the market risk exposures in the mortgage area, they discussed an interesting analysis they were conducting regarding the effectiveness of the hedges they had on in the subprime area. As of the middle of November, on a net basis, the firm was net short subprime RMBS exposure as they had over-hedged slightly. However, much of their protection referenced RMBS with early vintages (e.g. 2004 and 2005) which to-date have performed much better than the latter vintages (e.g., late 2006 and early 2007). As a result, the effectiveness of their hedges had been limited. The risk manager noted that with this "vintage mismatch" there was an "inflection point" with respect to further declines in home price appreciation ("HPA") assumptions, where the hedges referencing early vintages would start to outperform the net long exposure Bear had in the latter vintages generating losses. The firm is currently working on scenarios to stress the HPA assumption with the objective of gaining more insight into where the inflection point might be and the potential impact on the effectiveness of the subprime hedges under the various HPA assumptions. We will follow up on this topic at our next monthly risk meeting.

Goldman Sachs

- Goldman has been closely monitoring its counterparty credit exposure to sectors hit by the mortgage market turmoil, namely financial guarantors and derivative product companies (DPCs). They have limited direct exposure, which arises through the purchase of super senior ABS protection, to the guarantors. Goldman has no exposure to DPCs.

Lehman Brothers

- Credit Risk managers have been heavily focused on exposures to financial guarantors, notably ACA. If ACA is downgraded, Credit Support Agreements ("CSAs") signed with all of their approximately 30 counterparties will be triggered and ACA will not be able to fund the resulting collateral calls. ACA has asked all their counterparties to waive the collateral call and Lehman is in negotiations with them on the terms for such forebearances. As of October month-end, Lehman had taken reserves in excess of $500 million on the mark-to-market of their trades with ACA. Net of these reserves, Lehman has approximately $50 million in current exposure.

Merrill Lynch

- Merrill Lynch's 95% 1-day Value-at-Risk ("VaR") increased by 28% to $105 million at October month-end. The increase was largely due to the roll of time series to incorporate volatile September historical data and the subsequent impact on the large Super Senior ABS CDO position. The Portfolio Analytics Group is heavily focused on its modeling and has concerns that moves in this outsized position are overshadowing changes in the rest of the portfolio. Risk Management is in discussions with the Risk Operating Committee about potentially carving this position out of VaR for limit purposes. We will continue to monitor developments in this area.

- Affected by the turmoil in the credit market, the UK residential mortgage market has broadly been showing signs of decline in the last few months. Not immune to the downturn, Merrill's two UK mortgage platforms have been experiencing lower origination rates and a build up of inventory. As such, Merrill plans to divest the WAVE Lending platform within the next few months. WAVE Lending, which focuses on originating non-conforming near-prime residential mortgages, was originally purchased in July 2006 as part of Merrill's plan expansion to vertical integrate its UK mortgage securitization business. We will continue to monitor the divestiture process.

Morgan Stanley

- On October 31st, Morgan announced fourth quarter to date writedowns of $3.8bn. The bulk of the losses were from super senior mezz ABS CDO positions taken by the Securitized Products Group (SPG). The head of SPG was fired. OPSRA staff are focused on how the subprime book, as well as a number of other concentrated, illiquid positions in SPG with negatively convex risk profiles, are going to be managed going forward.

- The efficacy of the firm's model control process may require re-examination. In the two areas where the firm lost significant amounts of money – synthetic tranched credit and super senior ABS CDOs – the businesses were using "C" rated models. Despite the low ratings, business activity levels and risk exposures grew. More detailed and frequent discussions with model developers, model control and controllers are anticipated.