

JPMORGAN CHASE & CO.

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October 22, 2012

Via Electronic Mail

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Board of Governors of the Federal Reserve System
20th Street & Constitution Avenue, N.W.
Washington, D.C. 20551
Docket Nos. R-1430, R-1442
RIN 7100-AD87

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RIN 3064-AD95, 3064-AD96, 3064-AD97

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Docket IDs OCC-2012-0008, OCC-2012-0009, OCC 2012-0010
RIN 1557-AD46

Re: Response to Joint Notice of Proposed Rulemakings

Ladies and Gentlemen:

JPMorgan Chase & Co (“JPMC”) is pleased to provide comments on the following documents: (1) “Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Minimum Regulatory Capital Ratios, Capital Adequacy, Transition Provisions, and Prompt Corrective Action” (the “Basel III Capital Ratio Proposal”), (2) “Regulatory Capital Rules: Standardized Approach for Risk-Weighted Assets; Market Discipline and Disclosure Requirements” (the “Standardized Approach Proposal”) and (3) “Regulatory Capital Rules: Advanced Approaches Risk-Based Capital Rule; Market Risk Capital Rule” (the “Advanced Approach Proposal” and collectively, the “Proposals”) recently issued by the Board of Governors of the Federal Reserve (“Federal Reserve”), Office of the Comptroller of the Currency (“OCC”) and the Federal Deposit Insurance Corporation (“FDIC” and collectively, the “Agencies”).

JPMC broadly supports the comment letters on the Proposals submitted jointly by The Clearing House (“TCH”) and the American Securitization Forum (“ASF”) (collectively “TCH/ASF letter”) and the American Bankers Association (“ABA”), Securities Industry and Financial Markets (“SIFMA”), and The Financial Services Roundtable (“FSR”) (collectively the “ABA/SIFMA/FSR letter”). JPMC further notes that while not fully repeating all issues addressed in those letters herein, the Agencies should not view omission as disagreement. Rather, JPMC is highlighting herein those issues that are of particular importance to our firm.

JPMC supports the Agencies’ objectives to adopt the global Basel II and Basel III initiatives with appropriate adjustments as required by the Dodd Frank Wall Street Reform and Consumer Protection Act of 2010 (“Dodd-Frank”) and specifically to increase the level and quality of capital that banks are required to hold in order to strengthen the overall financial system, provide for more risk sensitive calculations of risk-based capital, establish a capital requirement for the market value of counterparty credit risk, provide for a more risk-sensitive approach for certain transactions with central counterparties and adjust the methodology used to calculate capital requirements for securitizations.

General Comments

The financial crisis made evident that regulatory capital and liquidity requirements for banks were in need of reform. JPMC agrees that banks should have appropriate capital to withstand stressed economic conditions and that adequate liquidity is essential to properly functioning financial markets. We further believe that the goal of financial reform should be to maximize financial stability at the least cost to borrowers and overall economic growth. Our recommendations outlined here are meant to be consistent with these principles.

JPMC is concerned that the Proposals will result in a number of unnecessary consequences including investor and bank confusion with regard to capital ratios, volatility in bank capital levels, decreased transparency with regard to a bank’s true financial condition, non risk-sensitive capital levels, competitive inequities for U.S. banks relative to their foreign counterparts and incentives for worse (not better) risk management practices. Our recommendations outlined here are intended to mitigate these undesirable outcomes while still upholding the stated goals of the Agencies.

When combined with the requirements mandated by Dodd-Frank, the Proposals could result in significant limitations on U.S. domiciled banks’ abilities to compete on a global basis. Specifically, we believe that the Proposals when combined with the requirements of Section 171 of Dodd-Frank¹ (“Collins Amendment”) and the newly proposed Standardized Approach Proposal that increased the capital under the Basel I rules that were in effect at the time of the passage of Dodd-Frank (the “General Risk-Based Capital”² requirements), will create new incentives that may result in U.S. banks exiting certain products, decreasing the size of their lending in certain market segments and increasing pricing of those products they continue to offer to the market.

¹ Collins Amendment requires that the risk-based capital calculations for U.S. banks may not be less conservative than the Basel I rules that were in effect for U.S. banks at the time of passage of Dodd-Frank.

²Also referred to herein as Basel I – these terms will be used interchangeably throughout this letter.

JPMC notes that the Agencies did not include in these Proposals the introduction of the Global Systemically Important Bank (“GSIB”) surcharge. We look forward to commenting on this issue once it has been formally proposed.

The Collins Amendment mandated that U.S. banks be subject to a capital floor equal to the regulations that were in effect at the time of the passage of Dodd-Frank. Through the imposition of this floor, the Collins Amendment renders largely ineffective the risk-based aspects of the capital rules. The Collins Amendment did not, however, dictate a wholesale increase in the level and change in approach used for these risk-based capital calculations. While JPMC supports the introduction of risk sensitivity into the Basel I rules, it is imperative that these changes be accomplished in a way that is truly risk sensitive and not merely an increase in risk-based capital. Failure to properly calibrate capital to the riskiness in exposures will encourage assets and activities to which capital is over-allocated to exit the U.S. banking system and either move to unregulated “shadow” banks, foreign banks (in the case of globally inconsistent regulations) or no longer be sustainable in the economy.

Among the issues that JPMC finds most concerning are³:

Basel III Capital Ratio Proposal

- Removal of the Accumulated Other Comprehensive Income (“AOCI”) filter⁴ which will result in an inappropriate increase in volatility of capital in particular for assets whose mark-to-market is primarily driven by movements in interest rates and will result in significant obstacles for banks’ management of their interest rate risk

Standardized Approach Proposal

- Changes in the capital calculation related to residential mortgages that are not appropriately correlated with risk
- Risk weighting for certain municipal revenue bonds that are not appropriately correlated with risk
- Removal of the 50% risk weight cap for over-the-counter (“OTC”) derivatives while maintaining use of the Current Exposure Method (“CEM”) approach

Basel III Capital Ratio Proposal

AOCI Filter

JPMC continues to strongly support maintenance of the filter applied to AOCI under U.S. regulations including gains and losses on available-for-sale (“AFS”) debt securities. JPMC notes that the removal of this filter will reduce banks’ abilities to effectively hedge their interest rate risk and will result in confusing and misleading capital levels that will no longer reflect banks’ true abilities to withstand losses. In addition, removal of the filter has the potential to cause significant volatility in capital levels for banks during times of interest rate

³ This letter has been organized by proposal for the Agencies’ convenience. Therefore, absolute ordering of the issues throughout this letter should not be interpreted as reflective of JPMC’s views of relative importance but rather as they have been proposed.

⁴ The AOCI filter refers to the current exclusion in the regulatory capital calculations of the mark-to-market gains and losses for all AFS debt securities. As proposed, this filter would be removed (and therefore the mark-to-market gains and losses relating to AFS debt securities will flow through Tier One Common Equity).

movements. This volatility will increase the challenges of capital planning because not only the risk-based assets in the denominator of the risk-based capital ratio will be fluctuating quarter to quarter but now changes in interest rates will introduce significant volatility into the numerator of the ratio. This regulation could also result in competitive inequity issues for U.S. banks relative to their foreign counterparts depending on the outcome of ongoing accounting discussions regarding AFS classification.

JPMC agrees with the Agencies' proposed changes to improve the overall quantity and quality of capital in order to provide for better coverage of losses during stressed periods. The removal of the AOCI filter will have the opposite effect and will result in either over or understated ratios that will no longer represent a bank's true ability to absorb losses. This will likely be confusing to the investing community.

Increased Risk, Complexity and Interconnectedness of Banks

Banks will be strongly incentivized to avoid unnecessary volatility in their Tier One Common Equity ratio and are likely to respond to these requirements in one of several ways. Some banks will significantly shorten the duration of their AFS securities and there is evidence that some banks have already begun to do so. This will decrease the overall effectiveness of the interest rate hedging that was intended to be provided by these investments and will result in a decrease in the safety and soundness for that bank as well as the overall banking system. In addition, this change in behavior is likely to result in a decreased demand for 30-year Fannie Mae ("FNMA") and Freddie Mac ("FHLMC") securities, which could have an adverse impact on the market for these securities and on available funding for 30-year mortgages.

Certain sophisticated banks will likely seek to engage in financial transactions using derivatives to more appropriately hedge their interest rate risk. These transactions may add to the complexity and interconnectivity within the banking system – two outcomes that JPMC believes should be avoided, and that the Agencies have specifically expressed an interest in avoiding wherever possible. In addition, JPMC notes that the requirements of the proposed Single Counterparty Credit Limits ("SCCL"), as mandated by Section 165 of Dodd-Frank, will significantly limit banks' abilities to enter into these hedging transactions due to the proposed imposition of a 10% limitation on transactions with major covered companies, which will again result in an increase in riskiness for the applicable bank as well as the overall banking system.

Asymmetry of Accounting Treatment

JPMC notes that the volatility that would result from the removal of this filter would be very misleading as it is strictly a result of asymmetric accounting treatment between the bank's deposits and AFS securities used to invest the proceeds and hedge the interest rate risk associated with those deposits. As required by U.S. Generally Accepted Accounting Principles ("U.S. GAAP"), deposits are accounted for on an accrual basis compared to the AFS debt securities that are required to be marked-to-market on an ongoing basis with changes in fair value recorded through AOCI. The removal of the AOCI filter would result in volatility in capital levels that is inappropriate as it forces the recognition of gains and losses on securities that in many cases will not be realized as significant quantities of positions are typically held for the full term of the investment. The effect of the removal of this filter is to add unnecessary volatility in Tier One Common Equity capital requirements which is not commensurate with an increase in risk and which will be particularly negatively affected by the rising interest rate environment that is highly anticipated given current record low interest rates. JPMC further notes that, in a declining interest rate environment, as was evident throughout the recent financial crisis, removal

of this filter would have resulted in a temporary overstatement of banks' capital levels that would then "evaporate" solely as a result of subsequent increases in rates.

In addition, there is the potential that the changes to U.S. GAAP and International Financial Reporting Standards ("IFRS") in combination with the removal of the AOCI filter will disadvantage U.S. banks versus their international competitors filing financial statements under IFRS. The Financial Accounting Standards Board ("FASB") has indicated that securities that may be sold for liquidity or interest rate risk management purposes may be inconsistent with amortized cost classification in their deliberations for the Classification and Measurement project. However, JPMC understands that international banks believe that amortized cost classification for liquidity portfolios may be consistent with the principles in IFRS 9. Therefore, the FASB proposal may require U.S. banks to classify securities at fair value with changes in fair value recorded in AOCI that, under IFRS 9, non-U.S. banks may classify in amortized cost. Depending on whether or not the FASB and International Accounting Standards Board ("IASB") align their guidance on the classification category for securities that may be sold in response to liquidity or interest rate risk management needs (and also depending on the consistency of the application of such guidance), the removal of the filter applied to AOCI could potentially disadvantage U.S. banks versus non-U.S. banks.

Alternative Proposal

JPMC includes herein a recommendation to apply the AOCI filter only to exposures predominantly tied to interest rate (and not credit) characteristics. This issue is of utmost concern as U.S. banks need to be able to appropriately hedge their interest rate risk without risking losing valuable Tier One Common Equity solely as a result of an increase in interest rates.

JPMC notes that the Basel III requirements for the high-quality, liquid assets that will qualify for inclusion in the numerator of the liquidity coverage ratio ("Liquid Asset Buffer") are still under development. Under the forthcoming Liquidity Coverage Ratio⁵, banks will be required to invest in a significant amount of these assets whose unrealized mark-to-market will undoubtedly decline as interest rates rise, resulting in a reduction in banks' Tier One Common Equity ratios if the filter is removed. JPMC notes that the Agencies seem to have created conflicting regulations: on the one hand the Basel III liquidity rules will require banks to hold a significant volume of highly liquid assets whose values will be tied to interest rates, and on the other hand the Basel III capital rules will result in significant Tier One Common equity volatility for the banks as a result of these liquid assets. Application of the AOCI filter to the Liquid Asset Buffer would alleviate this conflict between rules.

JPMC therefore recommends that the AOCI filter should be retained for use in connection with assets held in the Liquid Asset Buffer as required by Basel III. We fully understand that the eligible assets that will ultimately be included in this buffer are still under discussion but note that by definition, these assets will not be permitted to exhibit significant credit risk. JPMC therefore believes that it would be wholly appropriate to apply the AOCI filter to the assets within the Liquid Asset Buffer.

JPMC appreciates the Agencies' inclusion of Question 16 in the Basel III Capital Ratio Proposal with regard to AFS debt securities whose change in fair value is predominantly attributable to movements in benchmark

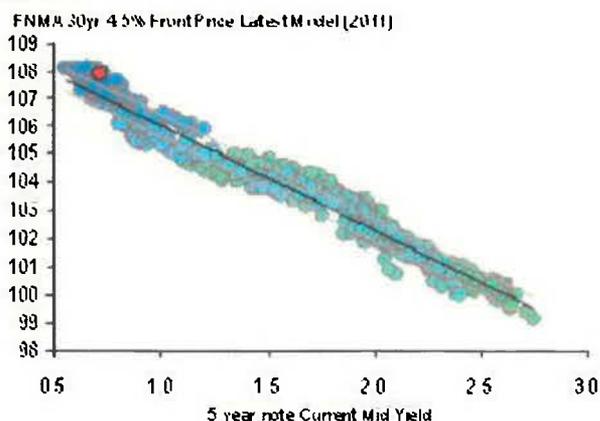
⁵ The Liquidity Coverage Ratio, as defined under Basel III, represents a measure of bank liquidity defined as the ratio of highly liquid assets to expected short term cash outflows during a market disruption.

interest rates. If the Agencies are unwilling to apply the filter to the entirety of the Liquid Asset Buffer, JPMC strongly recommends that the filter should, at a minimum, be applied to U.S. Treasuries, U.S. government agency or Government Sponsored Entity (“GSE”) debt and Mortgage Backed Securities (“MBS”) issued by FNMA, FHLMC or Ginnie Mae (“GNMA”). It is precisely these types of securities that banks are likely to hold, at least in part, in support of their Liquid Asset Buffer. JPMC firmly believes that these assets, in particular, should benefit from the AOCI filter as the change in their market pricing is primarily driven by changes in benchmark interest rates.

Analysis of Drivers of Changes in Fair Value Related to GSE MBS

In support of this position, JPMC ran a regression analysis comparing the market pricing for FNMA 30 year bonds with a coupon of 4.5% against the 5 year Treasury note rate over the period August 2010-August 2012. As illustrated below in Table 1, this regression analysis shows that nearly all (97%) of the change in the price of the FNMA bonds is explained by movements in the 5 year Treasury note rate.

Table 1

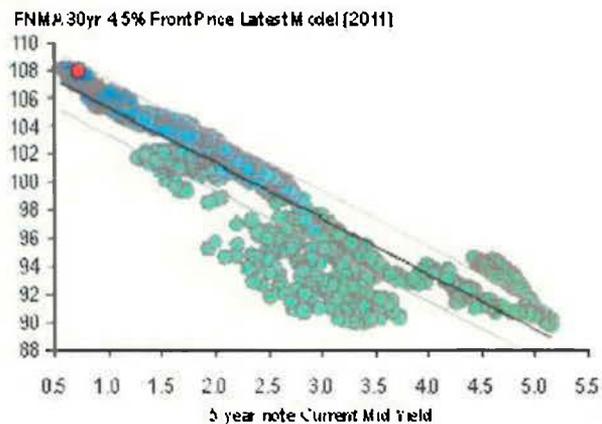


JPMC Research: FNCL 4.5 Price vs. 5yr Treasury note as measured August 2010-August 2012 (503 observations).

$R^2 = 97\%$

In addition, we ran a regression analysis for the period January 2007-August 2012 (Table 2)

Table 2



JPMC Research: FNCL 4.5 Price vs. 5yr Treasury note as measured January 2007-August 2012
 $R^2 = 85\%$

For this period which includes the full financial crisis, a period of extraordinary market volatility, the change in the price of the FNMA 4.5% was still overwhelmingly (85%) explained by the change in the 5 year Treasury note rate. While this analysis focused on one particular GSE MBS bond, the overall relationship between the price of GSE MBS and the relevant benchmark interest rate is consistent.

As illustrated above, the change in value of these debt securities is predominantly tied to changes in benchmark interest rates. Maintenance of the filter relative to U.S. Treasuries, U.S. government agency or Government Sponsored Entity (“GSE”) debt and Mortgage Backed Securities (“MBS”) issued by FNMA, FHLMC or Ginnie Mae (“GNMA”) will result in capital levels that are not misleading or confusing and will more accurately reflect a bank’s true ability to withstand losses, improve banks’ abilities to manage interest rate risk and will minimize the overall volatility in bank capital levels caused by the removal of this filter.

Definition of Additional Tier One Capital

The Basel III Capital Ratio Proposal related to the definition of Additional Tier One Capital details fourteen criteria that must be complied with in order for an instrument to count towards Additional Tier One Capital. JPMC understands and agrees that there should be qualifying criteria and generally supports the inclusion of such criteria in connection with this Additional Tier One Capital in order to ensure that the capital is available to cover losses incurred by banks. However, we are concerned about the seventh such requirement as detailed which indicates that, “the banking organization (must have) ... full discretion at all times to cancel dividends or other capital distributions on the instrument without triggering an event of default, a requirement to make a payment-in-kind, or an imposition of other restrictions on the banking organization except in relation to any capital distributions to holders of common stock.”

JPMC notes that as drafted, the above requirement is inconsistent with the current and long-standing market standard for preferred stock, since it appears to limit “dividend stoppers” solely to dividend stoppers on common

stock. In contrast, standard preferred stock dividend stoppers in the market today also (i) prevent dividend payments on all junior securities (not just common stock) if dividends on the preferred stock are not paid in full and (ii) require payment of dividends on pari-passu preferred stock on a pro rata basis with dividend payments on the Tier One preferred stock. We further note that the Basel III guidelines as issued by the Basel Committee indicate that dividend stoppers on additional Tier One Capital instruments are not prohibited.

In addition to the proposed requirement discussed above, the Agencies have also solicited comment on whether, in order to qualify as Tier One Capital, preferred stock should be required to permit the payment of dividends on common stock if dividends on the preferred stock are not current. This requirement is inconsistent with long standing market practice which does not permit the payment of dividends on common stock if dividends on preferred stock are not current. JPMC observes that there is approximately \$80 billion of preferred stock currently outstanding that would fail to qualify under these rules as Tier One, and modifying or refinancing those securities would be extremely disruptive to the markets. We further observe that the Agencies appear to have intended that current non-cumulative preferred stock would continue to qualify as noted in their Basel III comment that "...non-cumulative preferred stock, which currently qualifies as tier 1 capital, generally would continue to qualify as additional tier 1 capital under the proposal." JPMC therefore respectfully requests that the Agencies do not adopt these requirements in the criteria to qualify for Tier One Capital.

Given the inconsistencies of the above proposals with current market practices, we strongly urge the regulators to conform the requirements for preferred stock to current market structures specifically to allow both a dividend stopper on junior securities (in addition to common), and pro-rata payment of dividends on pari-passu preferred stock and to omit the requirement to permit dividends to common stock if preferred dividends are not current.

Capital Rule Complexity

Recently, a number of senior current and former regulatory officials have questioned whether the increasing complexity of financial regulation, in particular the regulatory capital regime, is truly enhancing financial stability and safety and soundness. The Proposals illustrate the issue. If implemented as proposed, large banks will be required to calculate and manage to **eight** different regulatory capital ratios compared to three today.

This already is complicating capital management processes in banks and contributing to some confusion in the investor and analyst communities. Risk-weights will be determined by a wide range of model-based and standardized requirements, which often deviate from the economic risk associated with underlying transactions, are not necessarily implemented in a consistent fashion across banks and result in burdensome processes for both banks and their primary regulators. Given these observations, JPMC would welcome the opportunity to engage with the Agencies regarding a regulatory capital regime that is robust from a safety and soundness perspective, transparent and readily understandable to key stakeholders, and consistently implemented across banks. Such a dialogue would necessarily include addressing the appropriate balance between risk sensitivity and simplicity.

Deductions Related to Indirect Investments in JPMC's Own Capital Instruments and Third Party Financial Institutions

The Basel III Capital Ratio Proposal outlines the requirement for a bank to deduct from capital any direct or indirect investment in that bank's own capital instruments. JPMC understands and appreciates the Agencies'

desire to avoid abusive practices by banks who could “indirectly” invest in their own securities while not running afoul of the prohibition to count this towards capital ratios if the regulation were only to reference direct investments. As these investments are made across a wide variety of businesses, the administrative challenges associated with this requirement as it relates specifically to “indirect” investments make it unworkable in practice. In addition, often the securities referenced in these indices may not be consistent over time making it even more very difficult for banks to accurately perform this calculation. It would not be feasible to ensure that all indirect exposures were properly captured. We agree that the Agencies’ should provide that direct investments in a bank’s own capital instruments should be deducted. In addition, the Agencies could accomplish their objective to avoid abusive practices with a definitive statement in the regulation to the effect that banks may not enter into transactions for the purpose of circumventing regulations.

JPMC also notes that there is a similar availability of information issue not only for our own capital instruments but also for indirect investments in financial institutions. The Basel III Capital Ratio Proposal requires banks to deduct from capital, subject to the overall threshold, any indirect investments in financial institutions held in either the trading or banking book in the form of fund investments. This required look-through has the same operational issues cited above relative to our own capital instruments. Banks make these fund investments across a wide variety of businesses. This would make it very difficult for banks to ensure that they have fully captured all relevant indirect exposures. Furthermore, the securities may not be consistently held in the funds over time making compliance even more challenging. The combination of these factors results in a practicable inability for banks to accurately comply with this requirement. We therefore recommend that the requirement for banks to track and account for their investments in funds that invest in financial institutions be eliminated. The administrative difficulties of compliance result in a requirement that banks will be unable to meet and which JPMC believes is not appropriate given the minimal risk presented through this form of indirect investments.

Mortgage Servicing Rights

The Agencies propose increasing the risk weighting of Mortgage Servicing Rights (“MSR”) without providing any empirical data to support heightened concerns over the risks associated with carrying the MSR asset.

JPMC believes that, given the already significant increase in risk weight from 100% to 250% for this asset class required under the international Basel III standards, and, in light of historical performance, the additional 10% Tier One Capital deduction is unwarranted and unnecessary. Moreover, as detailed more fully in the TCH/ASF letter, we do not agree that Section 475 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (“FDICIA”) requires that the Agencies adopt the proposed 10% additional deduction. Imposition of the additional deduction, particularly when such a deduction is not required by statute or historical experience, would unfairly and unnecessarily penalize U.S. banks engaged in the mortgage servicing business.

JPMC believes that adopting the proposed capital standard for MSRs is inconsistent with the economic risk associated with the MSR asset. The Agencies’ proposed substantial capital impact on MSR should be supported by data accounting for increases in credit risk attributable to MSRs. In fact, to our knowledge, MSR-related weaknesses have not been a noteworthy contributor to bank credit risk or bank failures. Our experience does not support the high level of losses implied by the proposed capital requirement, nor are we aware of any model that would support such an increase in the capital associated with the MSR asset.

The proposed MSR capital treatment, by substantially increasing the costs of servicing, could potentially reduce the depth and capacity of the pool of qualified long-term servicers. Higher costs and a less stable industry outlook will reduce the incentive for servicers to adopt long term investments in the servicing business or build mortgage servicing capacity. The GSEs' ability to manage their servicing portfolios would be adversely affected by the reduction in the number of servicers capable of absorbing servicing transfers in case of servicer failures or involuntary servicer terminations.

Calculation of Supplementary Leverage Ratio for OTC Derivatives

Under the Basel III Capital Ratio Proposal, the Agencies have limited the methodology for calculation of the exposure amount for OTC derivatives within the Supplementary Leverage Ratio to CEM. JPMC is concerned that such a limited approach will lead to misleading ratios relative to the true riskiness of the exposures. While we note that use of CEM is consistent with the Basel III treatment globally, the Basel Committee has noted the significant shortcomings of CEM and is working through the Basel Committee's Risk Management Group ("RMG") to improve CEM to make it more risk sensitive. JPMC welcomes this effort, is looking forward to these improvements and urges the regulatory community to prioritize this effort in order to ensure risk sensitive capital for a wide variety of financial products as soon as possible. We further observe that this limitation (use of only CEM) is inconsistent with the risk-based capital calculations under the Advanced Approach Proposal and the current U.S. Basel II rules. Under these rules, banks have the option, upon regulatory approval, to use the internal model method ("IMM") for calculating the exposure amount for OTC derivatives. Given that only Advanced IRB banks are subject to the Supplementary Leverage Ratio, JPMC believes that it is appropriate to give banks the option to use either CEM or IMM for OTC derivatives in the calculation of the Supplementary Leverage Ratio, which will allow for a better reflection of the true risk of the exposure. This change would also make the calculation of the exposure amount consistent between OTC derivatives for risk-based capital and the Supplementary Leverage Ratio.

Standardized Approach Proposal

Risk Weighting for Residential Mortgages

As stated previously, JPMC supports changes to the General Risk-Based Capital standard calculations that introduce appropriate risk sensitivity. However, we do not believe that the risk weights associated with residential mortgages as proposed under the Standardized Approach Proposal are properly calibrated to the riskiness of these underlying exposures. The importance of properly calibrating capital requirements to reflect the true economic risk of the underlying assets cannot be emphasized enough. Risk weight misalignments would reduce our ability to provide appropriate and competitively priced mortgage products to our customers, thereby reducing available credit to borrowers, limiting borrower choices, and increasing borrower costs.

We have made substantial investments in developing and testing our Advanced Internal Ratings-Based (“AIRB”) models which incorporate numerous risk metrics and observed loss history to dynamically estimate our capital requirements. The Agencies have been reviewing these models as part of the Basel II qualification process. Predominant risk drivers used in current AIRB models include nearly all the criteria used in the Standardized Approach Proposal to determine Category 1 versus Category 2 in addition to key risk differentiators, including payment history, Loan-to-Value (“LTV”) ratios, credit history, income stability, origination channel, credit line utilization and owner occupancy status. Our current AIRB models have benefitted from enhancements drawing from over 10 years of default and severity performance experience, including some of the most stressed economic periods in our history. In fact, we believe some estimates are overly conservative. For example, Loss Given Default (“LGD”) estimates going forward are extremely stressed based on our experience during the unprecedented nationwide economic weakness and home-price deterioration during the most recent crisis. While JPMC fully appreciates that the Standardized Approach Proposal will not be able to incorporate such sophisticated modeling approaches, our experience with the AIRB approach informs our view of necessary revisions to the more streamlined Standardized Approach Proposal that will allow for better alignment with the true riskiness of the exposures. Table 3 below illustrates the rank ordering of various risk parameters using a statistical test for possible risk drivers in the prime segment of the JPMC AIRB models.

Table 3

Risk Driver	Rank
Number of payments delinquent	1
60 days past due at least once in the last year	2
30 days past due at least once in the last year	3
Refreshed or updated FICO	4
Current Combined LTV ⁶	5
Documentation type, origination channel, and owner occupancy	6
Decision FICO	7
Origination Combined LTV ⁷	8
Interest only indicator	9
Current principal balance	10

JPMC respectfully offers the following suggestions to modify the proposed treatment of residential mortgage loans in order to provide improved risk alignment:

Proposed Risk Weights for Mortgages

We agree with the Agencies' recognition that full documentation and information verification are critical differentiators of mortgage loan quality. Moreover, we applaud the Standardized Approach Proposal's recognition of the importance of LTV ratios as a significant risk differentiator. However, the proposed risk weights suggested for Category 1 and Category 2 mortgage loans are inconsistent with our experience and empirically unsupported. Below, we provide our rationale to expand Category 1 to include certain mortgage loans with interest-only ("IO") features, first and subordinate liens on the same property, and seasoned mortgage loans.

Discussion of IO Loans

JPMC believes that it would be appropriate to include certain mortgage loans with IO features in Category 1 if the Agencies decide to retain the proposed categorization of mortgage loans in the final rule. (See our supporting data analysis attached as Exhibit I hereto) Specifically, we believe that fully-documented, 30-year mortgage loans with initial IO periods of three, five, seven and ten years that are scheduled to fully amortize through their remaining terms should be placed in Category 1. As illustrated in Table 3 above, based on our experience, IO structures are a lower risk indicator (ranking ninth in priority) for performance of the loan.

Mortgage loans with IO features are an important product offering for sophisticated customers with complex cash flow management requirements. The typical IO mortgage loan is offered to borrowers with lower LTV ratios, better credit histories, income, employment stability, net worth and other characteristics that are proven risk differentiators. Even in light of the industry's limited experience with recast risk, given the length of typical draw periods in IO mortgage loans and the recent low interest rate environment, JPMC believes that including fully-documented IO mortgage loans in Category 2 does not reflect the qualities of these loans at origination.

⁶ JPMC notes that in connection with the underwriting of second lien positions only, combined LTV is taken into account. JPMC does not agree that considering combined LTV in connection with the first lien is appropriate. See full discussion on this issue under the heading "Risk Weights for First and Subordinate Liens on the Same Property", included herein.

Our analysis indicates that there is no statistically significant performance difference between mortgage loans with an IO feature and those that are fully amortizing, when controlling for LTV and other credit factors. The IO variable consistently ranks lower on the order of magnitude behind other variables in our historical performance analyses. Logistic regression results indicate that loan performance can be better explained by other loan attributes such as effective LTV, credit history, documentation type, and even origination channel. For example, all other things being equal, an IO loan with low LTV to a borrower with established, clean payment history, excellent credit history, good and stable income, and reasonable net worth will have comparable risk to a non-IO mortgage loan.

Risk Weights for First and Subordinate Liens on the Same Property

JPMC believes that the Standardized Approach Proposal to evaluate the LTV related to first and subordinate liens on the same property on a combined basis is inconsistent with the actual risk profile of these loans and is not commensurate with the economic risks borne by a bank holding these loans in portfolio. Specifically, the Standardized Approach Proposal would create an uneven capital treatment for senior and subordinate loans that are not originated concurrently by (1) using the combined LTV of the first and subordinate mortgage loans when calculating the risk weights on the senior loan and (2) automatically designating the first lien as Category 2 if a subordinate lien is designated as Category 2.

Category 2 subordinate liens should not cause the re-categorization of a Category 1 first lien as a Category 2 if the subordinate loan was not originated concurrently with a senior loan. Rather, the capital treatment of each lien should be separately assigned based on the individual characteristics of each loan at origination. A recent Federal Reserve Bank of New York Staff Report reviewing subordinate financing during the most recent crisis underscores that for second lien origination that is not concurrent with the first lien, the quality of underwriting at origination is a more significant risk driver than lien priority.⁷ In addition, we believe that current industry practices such as full documentation, information verification and enhanced appraisal practices will further improve the quality of subordinate liens going forward. The final rule, therefore, should not bundle the treatment of first and second liens that are not concurrently originated for purposes of determining the risk weight on the senior loan.

Adopting the proposed capital treatment for first and non-concurrently originated subordinate mortgage loans in the final rule would lead to over-capitalization unrelated to the actual risks posed by such mortgage assets. Such uneven capital treatment will likely increase rates on subordinate mortgage loans which will discourage customers needing subordinate mortgage financing from seeking such financing from their first mortgage lender to avoid what is, effectively, a “relationship” penalty. This will weaken customer relationships and overall customer service, both important components to bank risk management.

⁷ Lee, Mayer and Tracy, A New Look at Second Liens, Federal Reserve Bank of New York, Staff Report No. 569, August 2012.

Seasoned Mortgages with Clean Payment Histories

JPMC believes that mortgage loans in Category 2 should have the ability to qualify for Category 1 treatment if the loans are seasoned three or more years and enjoy an established period of clean payment history. We have observed that loan performance experience outweighs origination characteristics and becomes a progressively more significant risk differentiator as loans age. Mortgage assets that fail to qualify for Category 1 treatment deserve a lower risk weight after a significant seasoning period when accompanied by a clean payment history (e.g., showing no more than two missed payments in the most recent 12-month period⁸). Table 4 below shows loans originated between 2005 and 2007 organized by their loan status as of December 2010 and subsequent status as of August 2012. By controlling for loans that were current after 36 to 60 months, approximately 95% of those loans were still current 20 months later. JPMC believes that this relatively clean performance should be given consideration in the risk weight treatment under the Standardized Approach. Additionally, we agree that if a loan were to be classified as Category 1 and later experienced delinquencies for two periods, the loan should be reclassified to a Category 2 loan.

Table 4

Loans originated 2005-2007	Status as of August 2012 of loans still open			
	Current	30 days past due	60 days past due	90+ days past due
Status as of 12/31/2010 (36 - 60 months of pay history)				
Current with no late payment in last 12 months	95%	1%	1%	4%
Current with at least one late payment in last 12 months	78%	5%	2%	15%
30+ days past due	35%	3%	2%	60%

Granular LTV Table

In addition to the refinement of categorization of mortgage loans, JPMC believes that the final rule should also provide for more granularity by LTV values. We reviewed our AIRB model results for the various risk factors identified and based on this analysis, would recommend the following enhancements to risk weights by LTV loan segments as shown in Table 5 below in order to better align the loan characteristics with the appropriate risk-based weighting:

⁸ Taking into account cure experience.

Table 5

LTV Ratio	Category 1		Category 2	
	Agency Proposal	JPMC Recommendation	Agency Proposal	JPMC Recommendation
Less than or equal to 60%	35%	35%	100%	50%
Greater than 60% and less than or equal to 70%	50%	40%	100%	65%
Greater than 70% and less than or equal to 80%	50%	50%	100%	80%
Greater than 80% and less than or equal to 90%	75%	75%	150%	130%
Greater than 90%	100%	100%	200%	200%

If preserved in the final rule as proposed without further refinement, the segregation of Category 1 and Category 2 loans combined with the less granular risk weights would render 30 year, fully documented IO mortgages described above that address important consumer needs unreasonably costly to provide. In addition, mortgages used to provide subordinate financing including HELOCs will become much more costly to borrowers. Finally, the lack of recognition of PMI would result in some borrowers being unable to gain financing for their mortgages. Table 6 below shows the approximate range of interest rate increases that borrowers will face under the proposed treatment of mortgages.

Table 6

LTV	Proposed Risk Weights		% Increase in Required Capital Category 1 to Category 2	Resulting Increase in Customer Interest Rate	Estimated Cost to Customer per \$100K of Unpaid Principal Balance ("UPB") ⁹
	Category 1	Category 2			
< 60%	35%	100%	186%	1.36% to 1.88%	\$5.560 - \$9.362
60%-80%	50%	100%	100%	0.69% to 1.05%	\$3.245 - \$5.121
80%-90%	75%	150%	100%	0.69% to 1.05%	\$3.245 - \$5.121
> 90%	100%	200%	100%	0.69% to 1.05%	\$3.245 - \$5.121

⁹ Estimated cost is adjusted for weighted average life assumption of the mortgage and does not reflect net increases from current risk weight capital costs. This cost represents the incremental cost associated with a mortgage solely as a result of the characterization of certain mortgages as Category 2 and less granular risk weights.

Additional Mortgage Recommendations

Legacy Mortgage Loan Exposures

JPMC believes that the application of the Standardized Approach Proposal related to mortgages should be enacted on a prospective basis only. Prospective treatment is justified because much of the data necessary to categorize legacy mortgage assets is unreasonably difficult and/or extremely expensive to obtain. Many of the required mortgage categories did not exist at the time these mortgages were originated and the requisite data is not recorded or reasonably available from current information repositories. Finally, the retroactive application of higher capital requirements, and the potential for a substantial increase in required capital retention relating to legacy mortgage assets merely as a result of a rule change, does not appear to be reasonably related to the risk of legacy mortgage loan assets that will be substantially seasoned by the time the final rule becomes effective.

Proprietary Loan Modifications

JPMC believes that the final rule should treat all assets sharing similar characteristics consistently. Accordingly, we recommend that all mortgage loans modified under proprietary modification programs with affordability, underwriting and post modification performance parameters similar to those of Home Affordable Modification Program (“HAMP”) should enjoy consistent treatment. Mortgage loans modified under such proprietary modification programs should not be considered modified or restructured for purposes of the LTV reset requirements under the Standardized Approach Proposal and the value should remain the same as at the time of origination.

Compared to HAMP, JPMC’s proprietary mortgage modification program has similar underwriting policies, affordability targets and modification “waterfall” (the sequence of adjustments to the terms of a mortgage to reach target payment). Our proprietary modifications program also generally follows the same step-rate structure as HAMP and targets forgiveness as the first step in the modification “waterfall” and forbearance as the last step. Finally, after adjusting for payment reductions, our historical experience indicates similar post modification performance when comparing mortgages modified under HAMP and our proprietary loan modification program.

Private Mortgage Insurance

JPMC believes that mortgage insurance can be an effective credit enhancement and that the final regulations should recognize private mortgage insurance (“PMI”) for purposes of calculating the LTV ratio of a residential mortgage. A 2011 study by Promontory Financial Group underscores the value of PMI in decreasing default loss severities.¹⁰ The Standardized Approach Proposal does not recognize PMI at the individual or the pool-wide level “due to the varying degree of financial strength of mortgage providers.”

While it is true that the recent credit crisis exposed weaknesses to the claims paying ability of some PMI providers that became subject to regulatory intervention and were unable to pay 100% of obligations, JPMC believes that such experience is not sufficient to justify discounting the value of PMI in its entirety. Many PMI providers have continued to pay fully on their obligations, and those that failed continued to partially cover their obligations. Instead, it would be more constructive to adopt a framework that preserves the value of PMI as a risk mitigation tool. Such a framework should include (1) closer coordination among federal banking and state

¹⁰ Assessing the Delinquency and Default Risk of Insured and Non-Insured High LTV Mortgages, July 15, 2011. Promontory Financial Group, LLC.

insurance regulators to enhance PMI supervision, (2) a common, agreed upon, stress testing regime to help banks and regulators assess the financial soundness of individual PMI providers, and (3) an explicit approach to capture each PMI provider's capacity to meet its financial commitments for the projected life of its exposures. The final rule should recognize only the products of those PMI providers that meet specific regulatory requirements under the framework outlined above.

PMI increases housing affordability, particularly for first time home buyers. The availability of PMI often allows borrowers who are unable to make large down payments to secure credit on more affordable terms. In many cases, PMI also enables many families, particularly younger households and households of limited wealth, to achieve homeownership sooner than if they had to contribute larger down payments. In particular, failing to recognize PMI's credit enhancement will adversely impact consumers, particularly low and moderate-income borrowers and minorities who traditionally have less available wealth to make larger down payments.

Finally, failing to recognize PMI's credit enhancement will impair the banking industry's ability to hold mortgage assets relative to Federal Housing Administration ("FHA") and the GSEs. In the absence of a viable private securitization market, decreasing the attractiveness of holding mortgage assets within the banking sector will decrease the aggregate amount of funds available for investment in U.S. housing and increase the concentration of mortgage risk in federally-related investors such as FHA, FNMA and FHLMC at a time when the U.S. government's policy predicates the desirability of reducing the U.S. government's footprint in the U.S. housing market.

Past Due Residential Mortgage Loans

Under the Standardized Approach Proposal, mortgage loans that have been partially charged-off will be classified as Category 2 as the charge-off would occur for any mortgage that is 150 days or more past due. The loans, adjusted to reflect the underlying assets' net realizable value, will receive risk weights depending on the adjusted LTV ratios of up to 200%. Given that the asset values in such cases are already reduced to net realizable value, JPMC believes that a 100% risk weight is sufficient. In addition, we note that the net realizable value is updated periodically and subsequent write-downs are taken as needed.

Credit Enhancing Representations and Warranties

Within the Standardized Approach Proposal, "if a banking organization provides a credit enhancing representation or warranty on assets it sold or otherwise transferred to third parties, including in cases of early default clauses or premium-refund clauses, the banking organization would treat such an arrangement as an off-balance sheet guarantee and apply a 100% credit conversion factor to the exposure amount". The final rule should clarify that the contractual risks arising under bona fide mortgage sale agreements will not be subject to risk-based capital charges under the Standardized Approach Proposal. Failure to provide such clarification will radically alter the current treatment of residential mortgage sales and will require substantial capital retention that is out of proportion with historical loss experience. Contractual warranty risks arising from mortgage sales to third parties are fundamentally different from the risks relating to holding these assets in portfolio. Delaying capital relief and requiring capital retention with respect to bona fide mortgage sales equal to the same level as

continuing to retain the entire risk (even if such retention is temporary) will unnecessarily increase borrower costs.¹¹

JPMC respectfully requests that the Agencies devote additional time to appropriately review historical loss experiences and determine whether a specific capital retention requirement relating to any credit enhancing representation and warranty is necessary and, if so, adjust capital retention requirement that reflect these risks more accurately. The Proposal provides no justification to assign risk-based capital charges to such contractual obligations in a manner that is indistinguishable from risk-based capital charges that would apply if we were holding the assets in portfolio.¹² This deficiency is particularly stark in the case of premium-refund clauses. These obligations arise from ordinary mortgage prepayments unrelated to defaults where the amount at risk is only the premium paid by the purchaser.¹³

50% Risk Weight Cap on OTC Derivatives

Under the Basel I Rules, the risk weight applied to an OTC derivative contract is limited to 50% even if the counterparty or guarantor would otherwise receive a higher risk weight. The Agencies have proposed to remove the 50% risk weight limit for OTC derivative contracts. JPMC notes that use of CEM without this cap will result in an inappropriate capital charge relative to the risk of these exposures. While we are supportive of the removal of the 50% cap, the capital associated with OTC derivatives, absent the cap, will be punitive due to the use of CEM in the calculation of the exposure amount. CEM needs to be amended to take netting and collateral more fully into account in order to accurately reflect the risk of the exposure. The Basel Committee has noted the significant shortcomings of CEM and is working through the Basel Committee's RMG to improve CEM to make it more risk sensitive. JPMC welcomes this effort, is looking forward to these improvements and urges the regulatory community to prioritize this effort in order to ensure risk sensitive capital for a wide variety of financial products as soon as possible. In the interim, until such changes can be put into effect, we believe that the 50% risk weight cap should remain in effect in order to ensure that there is not an inappropriate excess of capital held against OTC derivatives and/or that banks should have the option to use the IMM to calculate the exposure amount if they have been approved by the applicable agency to use such method as it represents the most risk sensitive capital calculation approach.

Risk Weights for Municipal Revenue Bonds

The Standardized Approach Proposal details a 50% risk weight requirement for municipal exposures backed by revenue bonds and a 20% risk weight for general obligation ("GO") municipal securities. This is consistent with the treatment of these exposures under Basel I. However, JPMC notes that in connection with other exposures, the Agencies have utilized the newly proposed Standardized Approach Proposal to better align risk-based capital with the riskiness of the assets and observes that in the case of certain revenue bonds, an adjustment to better

¹¹ This is in addition to the impact of the expected 5% risk retention requirement under Section 941(b) of Dodd-Frank which is calculated with respect to the credit risk of the asset and not the entire principal balance of the obligation.

¹² Early payment defaults, defined as two or more missed payments within the first six months from origination, for JPMC are less than 20 bps for loans originated since 2009 (ex HARP). At the height of the crisis, JPMC's early payment defaults did not exceed 100 bps.

¹³ The premium amount at risk of recoupment in cases of prepayments unrelated to default is significantly less than the amount of the related mortgage loan, which does not justify holding capital by reference to such mortgage loan.

reflect the relative riskiness of these exposures is warranted. We note that certain revenue bonds have performed similarly to GO bonds within the investment grade ratings range throughout their collective histories. JPMC also fully appreciates that, pursuant to the requirements of Section 939A of Dodd-Frank, the Agencies are not permitted to rely on Nationally Recognized Statistical Rating Organizations (“NRSRO”) ratings within the regulations. Therefore, JPMC recommends an alternative approach to segregate the highest performing sector of the revenue bond universe and believes that for this universe a 20% risk weight is wholly appropriate. Specifically, we recommend that revenue bond deals in amounts greater than \$25 million that are not classified as industrial revenue bonds (including land-secured bonds and private activity bonds), housing, healthcare, retirement or non government conduit issuers (including private healthcare/higher education, tobacco settlement, gas prepay and student loan bonds) (collectively, “Liquid Revenue Bonds”) should receive the preferential risk weighting.

There are currently \$3.7 trillion in municipal bonds outstanding in the market¹⁴ of which 69%¹⁵ are revenue bonds. Approximately 49% of these revenue bonds qualify as Liquid Revenue Bonds. Revenue bonds finance many of the same essential projects as GO bonds but differ from GO bonds in that they are secured by pledged revenues generated from dedicated special taxes (i.e., sales, gas, income), specific projects (i.e., toll roads, utilities, airports) or appropriations for debt service (i.e., lease and appropriation-backed bonds). Revenue bonds require no voter approval. These bonds are largely isolated from the credit risk of the municipality. Revenue bonds are generally secured obligations in a Chapter 9 bankruptcy (unless designated otherwise by state law). Performance on revenue bonds depends on the essentiality of the service provided and approximately 75% of the historic defaults on revenue bond originated from smaller issuances (less than \$25 million), industrial development bonds, housing, healthcare/retirement or non-government conduit issuers.

JPMC evaluated performance on the universe of revenue bonds. 73% of municipal defaults were in either the industrial development (28%), healthcare and retirement (28 %) or housing (17 %) ¹⁶ sectors. In addition, over 70%¹⁷ were conduit borrowings. By removing certain less creditworthy sectors, Liquid Revenue Bonds equate to 3% of the number of revenue bond defaults and 17% of the par amount of revenue bond defaults.¹⁸ The incidence of defaults is therefore concentrated in a few sectors of the revenue bond market – principally health care, industrial development, housing, healthcare/retirement and conduit borrowings.

In addition, we note that this similar treatment for revenue bonds and GO bonds would allow for consistency between the newly finalized Market Risk Rules and these Proposals. Specifically, for CRC countries rated 0 or 1, the risk weight calculation in the Market Risk Rules would be identical between revenue and GO bonds. The Agencies have expressed a desire to provide for consistency in capital calculations between the banking and trading books and JPMC notes that a revision to the revenue bond risk weights would help to further this goal.

Based on this data, JPMC strongly believes that a 20% risk weight would be appropriate for Liquid Revenue Bonds and, at a minimum, Liquid Revenue Bonds should be permitted in the Liquid Asset Buffer under Basel III. (See detailed discussion of Liquid Revenue Bonds attached hereto as Exhibit II)

¹⁴ Federal Reserve Flow of Funds Accounts of the United States, Second Quarter 2012.

¹⁵ SIFMA Municipal Bond Credit Report, Second Quarter 2012.

¹⁶ Federal Reserve, “The Untold Story of Municipal Defaults,” August 2012.

¹⁷ SEC, Report on the Municipal Market, July 31, 2012.

¹⁸ Richard Lehmann, Municipal Default Study for JPMorgan, October 2012.

Past Due Exposures

Basel II calls for an increase in risk weights for exposures that are 90 days or more past due or nonaccrual (that are not guaranteed, not secured, not sovereign exposures and not 1-4 family, residential mortgage exposures) from the Basel I level of 100% to 150%. JPMC understands and supports the Agencies' desire to have adequate capital held against past due exposures. However, we are concerned about the method that the Agencies used in calculating this increase. This proposed approach will result in U.S. banks being treated inconsistently relative to their foreign counterparts. The U.S. proposal is inappropriate as it fails to give credit to the requirement of banks to reserve against these exposures and to deduct directly from capital for certain of those increases in reserves (when reserves exceed 1.25% of standardized assets). In contrast to the U.S. Standardized Approach Proposal, the international Basel II rules calculate risk weights for past due exposures net of specific provisions (including partial write-offs) and for the remainder of the exposure give some credit to specific loan loss provisioning when provisioning exceeds 20% of the outstanding loan amount (100% risk weight) and allow for further credit to be given, at the discretion of the Agencies, in cases where specific provisioning has exceeded 50% of the outstanding loan amount (as low as 50% risk weight). JPMC generally considers the international Basel II approach reasonable as it gives credit (albeit not full credit) to the double count issue of loan loss provisioning relative to higher risk weights on the same assets and respectfully requests that the Agencies revise the past due exposures language in recognition of the double count and, at a minimum, to match the international standards.

Hedge Pair Treatment of Equities – Banking Book

JPMC believes that there should be a test of hedge effectiveness used in the calculation of publicly traded equities. However, we believe that this test should fully evaluate all components of the transaction in order to accurately determine the appropriate risk weight. While the Standardized Approach Proposal is consistent in this respect with the Basel I rules, as the Agencies have indicated a desire to make these rules more risk sensitive, JPMC believes that an adjustment to this calculation to fully take into account all aspects of the transaction is warranted. We are concerned that the Standardized Approach Proposal, does not fully accomplish this objective. For example, even if the hedge is fully effective (e.g., a forward sale which is effective and has a -1 delta completely offsetting the +1 delta for a long equity position), the hedge pair is subject to a 100% risk weight. This effectively means (to the extent that total equity held by the bank is less than 10% of bank's Tier One Capital) a publicly traded equity in the banking book has 100% risk weight with or without a hedge. Additionally, a bank might have an equity position hedged by a fully cash collateralized forward sale where there is no residual risk to the bank – and these hedged pairs are subject to 100% risk weighting. This punitive treatment would be true even in cases where the bank receives the cash from the client upfront to acquire shares resulting in no point in the transaction cycle where the bank is exposed to any equity position risk. JPMC therefore recommends that the Standardized Approach Proposal allow for the full recognition of hedge pair treatment within the banking book including, but not limited to, the allowance for the consideration of cash posted in this evaluation of the risk.

Standardized and Advanced Approach Proposals

1250% Risk Weight for Certain Assets

JPMC notes that the Agencies have generally required the deduction of certain high risk exposures in the Proposals. JPMC is concerned, however, that the Agencies have indicated that for certain higher risk securitization exposures as well as default fund contributions for non-qualified central clearing parties (non-QCCPs), the requirement will instead be a 1250% risk weighting. This treatment is inconsistent with Basel II and Capital Requirements Directive (“CRD”) IV which allow bank’s the option of a capital deduction or 1250% risk weight. The removal of the option in the Proposals will result in U.S. banks being placed at a significant disadvantage relative to foreign banks. While the 1250% risk weight was appropriate when capital levels were limited to 8%, given the new capital requirements for Basel III, banks will be held to a much higher capital standard of 9.5% Tier One Common equity for well capitalized banks once the Capital Conservation buffer and GSIB surcharge are in full effect. At any capital level above 8%, reference to a 1250% risk weight would be inappropriate as it would result in required capital that exceeds the maximum exposure at risk of loss. For example, a \$100,000 exposure to a high risk securitization exposure would be charged \$125,875 of Tier One Common Equity capital¹⁹. While the Agencies have indicated in the Proposals that this is intentionally building in a level of conservatism, one that results in such a significant excess in capital over the risk of loss is inappropriate. JPMC recommends that the Agencies adopt the approach used in the advanced approach within the Basel II²⁰ rules and allow for an option of either 1250% risk weight or direct deduction from Tier One Common Equity of the exposure. This will result in capital treatment for these exposures that is globally consistent. If the Agencies deem more conservatism in the risk-based capital calculations necessary, they should propose specific changes as opposed to an arbitrary gross-up that requires a multiple of capital for certain exposures far higher than the bank could possibly lose.

Trading Book Risk Weights for Corporate Exposures

Under the Basel I Rules, corporate exposures within the trading book are allocated specific risk based on the external rating (investment grade versus non-investment grade). Under the Proposals, banks will be required to evaluate these investments as either investment grade or non-investment grade based on OCC Guidance. JPMC understands the need to remove references to ratings and to reduce reliance on NRSROs within the system as required by Section 939A of Dodd-Frank. However, Section 939A does not require the increase in risk-based capital associated with these exposures. JPMC was surprised, therefore, to discover in the Market Risk Final Rule that the Agencies were not solely replacing ratings with the new internally deemed equivalents, but were simultaneously significantly increasing risk weights associated with these exposures. JPMC notes that these higher risk weights are inconsistent with both the international Basel II and the Basel I risk weights for the same exposures which will result in U.S. banks being placed at a significant disadvantage relative to their global competitors. JPMC respectfully requests that the Agencies disclose any data that was used in the determination of higher risk weights for these exposures and allow for industry comment. In the interim, we request that the risk weights be set consistent with international standards.

RMBS under the SSFA for Securitization Exposures

¹⁹ Calculated as \$100,000 multiplied by 1.06 RWA multiplier multiplied by 1250% risk weight multiplied by Tier One Capital Ratio of 9.5%.

²⁰ U.S. Basel II and international Basel II.

JPMC very much appreciates the Agencies' efforts, in response to the requirements of Section 939A of Dodd-Frank, to simplify the Supervisory Formula Approach ("SFA") for use in calculating capital associated with securitization exposures. This new alternative, the Simplified Supervisory Formula Approach ("SSFA"), is required under the Standardized Approach Proposal and is optional if a bank does not have sufficient detailed historical data to calculate the SFA under the Advanced Approach Proposal. The SSFA allows U.S. banks to calculate risk-based capital for securitization exposures with far less detailed information than was required under the SFA. According to the SSFA formula, K_g serves as the starting point for the calculation. K_g is defined as the risk-based capital that a bank would need to hold for the securitized pool of assets if they were directly on balance sheet under the Standardized Approach Proposal. In order to adjust for performance issues with the underlying assets within the securitized pool, the SSFA formula adds a component to the K_g calculation " W " that represents delinquent assets. As defined in the Proposals, W would include those assets that are 90 days or more delinquent, subject to a bankruptcy or insolvency proceeding, in the process of foreclosure, held as real estate owned or in default or have contractually deferred interest payments for 90 days or more. We understand the Agencies' desire to have banks obtain more granular information on the assets within securitization exposures such that they can appropriately determine the risks of these exposures. JPMC is concerned, however, that as proposed in the calculation, banks will be required to have access to granular data on the underlying mortgages being securitized that they will be unable to obtain in order to properly categorize the underlying mortgages for the purposes of calculating K_g . These banks will therefore need to assume Category 2 classification for all of these mortgages (as they will have insufficient information to prove Category 1 classification) which will result in an inappropriate amount of capital associated with these Residential Mortgage Backed Securities ("RMBS").

JPMC would therefore recommend that for legacy RMBS investments made prior to the effective date of the final rule, the Basel I Rules be used as the basis for the calculation of the weighted average total capital requirement of the underlying exposures (" K_g ") in the SSFA formula (50% risk weight for prudently underwritten mortgages and 100% risk weight for other mortgages). Given the lack of necessary information on the mortgages which, as defined, would require a full evaluation of the original loan files to determine underwriting approach, as well as the introduction of the " W " parameter in the SSFA formula to capture delinquencies in the mortgages, this approach would allow for an appropriate amount of capital.

JPMC also agrees with the Agencies that requiring granular data on the underlying mortgages in the future is reasonable. We believe that for securitizations completed after an appropriate transition period, requiring more granular calculations for U.S. RMBS would be appropriate. We further note that banks will not have access to original underwriting information to calculate appropriate risk weights and, post transition, would need to be able to rely on a representation made by the issuer with respect to such criteria if they were included in the final rule. The transition period would need to allow adequate time for issuers to ensure that they have appropriate systems capabilities to report detailed information on the mortgages included in the securitization. During the transition period, we would recommend that investing banks be permitted to use the Basel I risk weights or alternatively rely on a representation from the issuer as to the proper categorization of the mortgage loans.

In addition, for RMBS issued from a jurisdiction other than the United States, an alternative approach will be necessary as the underwriting standards and approach differ by jurisdiction. JPMC therefore recommends that for RMBS backed by real property located in a jurisdiction other than the United States that has adopted the global Basel Committee Banking Supervision's ("BCBS") regulatory capital framework, U.S. banks should be

permitted to use the general or standardized risk weights²¹ for that jurisdiction for purposes of the Kg parameter for the SSFA formula.

Resecuritization Definition

The Agencies currently define resecuritization as a securitization in which one or more of the underlying exposures are securitization exposures. JPMC requests that the Agencies allow for a de minimus bucket of securitizations as underlying collateral in a securitization without deeming the entire securitization transaction to be a resecuritization. In particular, resecuritizations are severely penalized in the SSFA calculation with the p factor²² increasing from 0.5 to 1.5. For example, a AAA Collateralized Loan Obligation (“CLO”) that has no underlying securitizations would have a risk weight of 20%, but if there is one underlying exposure that is a securitization, the risk weight would increase to 98%. This is an increase of 5x for what is a minimal increase in risk.

JPMC notes that inclusion of a 5% bucket for CLO transactions within an arbitrage CLO transaction was market standard until 2010.²³ As recently published by Moody’s Investors Service²⁴, actual losses on CLOs have been extremely low. Specifically, of the 4,118 tranches that Moody’s rated in 719 transactions since January 1996, principal losses have only occurred on 32 tranches in 14 transactions all of which closed between 1997-2001 and most of these had invested heavily in high-yield bonds which deteriorated significantly in the stressful credit environment of 1999-2002.

JPMC respectfully requests that the Agencies allow for 5% of the underlying collateral to be securitizations without deeming the entire transaction to be a resecuritization for transactions originated prior to October 30, 2012. While it is possible to change future structures to accommodate the Agencies’ desire to reduce “excessive” leverage in the financial system, this rule would severely penalize transactions that were market standard and which have performed well including during the recent financial crisis.

If the Agencies are uncomfortable with an absolute exclusion of transactions that include securitizations for up to 5% of their underlying assets from the resecuritization definition despite the strong historical performance, JPMC requests that the Agencies, at a minimum, allow for a weighting of the p factor in the SSFA calculation based upon the percentage of the underlying assets that are securitizations provided that if more than 5% of the underlying assets were securitization exposures, the entire transaction would be deemed to be a resecuritization.

In addition, JPMC respectfully requests that the Agencies clarify that the definition of resecuritization is meant to include transactions where the underlying assets securitized include more than one securitization. JPMC notes that, for example, with regard to Re-REMICs, the structure of these transactions is equivalent to taking an RMBS security and adding additional enhancement. It would therefore be inappropriate to treat a Re-REMIC which has more protection as higher risk than the underlying RMBS. In order to avoid an inappropriate outcome, JPMC respectfully requests that the Agencies clarify in the final rule that this resecuritization

²¹ As these terms are defined in each of the relevant jurisdiction’s Basel II rules.

²² The p factor represents a constant within the SSFA formula that is set to 0.5 for securitization exposures that are not resecuritization exposures or 1.5 for resecuritization exposures.

²³ J.P. Morgan U.S. Fixed Income Markets Weekly, June 15, 2012.

²⁴ Moody’s CLO Interest, July 25, 2012.

definition is meant to cover “securitizations with *more than one underlying exposure* in which one or more of the underlying exposures is a securitization exposure”.

SSFA Calculation for Deferred Interest

As discussed above, in order to adjust for performance issues with the underlying assets within the securitized pool, the SSFA formula adds a component to the Kg calculation “ W ” that represents delinquent assets. As defined in the Proposals, W would include those assets that have contractually deferred interest payments for 90 days or more. While this is wholly consistent with treatment for otherwise delinquent assets, JPMC is concerned that, as worded, this would scope in products that by design defer interest during the initial periods of the loan but that are not tied to deteriorated performance of the loan. For example, the typical structure of a student loan allows deferral for principal and interest while the student is in school, provides a grace period after the student leaves school prior to requiring payments and provides for further deferment if the student re-enters school in pursuit of an advanced degree. We do not understand the rationale for such treatment for the student loan asset class and questions whether the Agencies were specifically focused on the RMBS sector and the desire to capture deteriorating performance of the pool of assets being securitized. As defined, the risk-based capital under the SSFA unfairly penalizes certain assets that provide for deferred interest including student loan or some credit card securitizations. We believe that an increase in capital for these assets is wholly inappropriate as these deferrals are not tied to deteriorating performance issues for the underlying assets. JPMC recommends that the Agencies clarify within the Final Rules that the inclusion of these terms of deferral for student loans or initial deferral terms for other assets will not result in the asset being classified as delinquent for purposes of the “ W ” input to the SSFA formula for risk-based capital for securitization exposures.

Treatment of Non-Publicly Traded Equity

The Market Risk Final Rule will narrow the definition of “covered positions” in the trading book. The Proposals, consistent with this treatment, require that all non-publicly traded equity be excluded from the trading book (e.g., hedge funds and unlisted mutual funds). This change will result in some positions that were used to hedge trading book positions being moved to the banking book under the new Standardized and Advanced Approach Proposals and consequently will result in risk-based capital that is not reflective of the true risk of the combined exposure. Within the trading book, these exposures were modeled under VaR models that recognized the offsetting hedge position for non-publicly traded equities within the calculation. Within the banking book, under both the Simple Risk Weight Approach (“SRWA”) and the Internal Models Approach (“IMA”), a hedge pair is defined as two equity exposures that form an effective hedge as long as each equity exposure is publicly traded or has a return that is primarily based on a publicly-traded equity exposure. These non-publicly traded equity exposures such as hedge funds and unlisted mutual funds will fail this hedge pair definition and therefore will be risk weighted on a gross basis on both sides (trading and banking book). JPMC believes that a more appropriate treatment would be to recognize hedge pair treatment for these exposures to the extent that the bank can demonstrate that the risk is managed internally as a hedge pair. Banks should be required to have policies in place subject to supervisory review regarding the support for hedge pair treatment.

Increased Asset Value Correlation Factor

The Proposals call for a new asset value correlation factor for non-defaulted wholesale exposures to unregulated

financial institutions or financial institutions above \$100 billion which is consistent with the general concepts introduced in the Basel II accord globally. However, as proposed, this 25% multiplier is being applied to the incorrect formula which is otherwise used for the calculation of risk-based capital on high volatility commercial real estate (“HVCRE”) exposures. There was no rationale provided to explain why the multiplier is being applied to this formula rather than the wholesale formula. This results in an increased level of conservatism that is inconsistent with the international Basel II rules and results in an inappropriate amount of capital for these exposures that will significantly disadvantage U.S. banks relative to their foreign competitors. JPMC is unclear whether this additional level of conservatism was intentional and respectfully requests that the Agencies change the formulation such that the 25% multiplier is applied in the correct formula (general wholesale calculation) consistent with the international rules.

Requirement for Internal Ratings Determination Pursuant to Section 939A of Dodd-Frank

While JPMC fully appreciates that Section 939A of Dodd-Frank requires the Agencies to remove reliance on NRSRO credit ratings from their capital (and other) regulations, we have concerns about the timing and guidance within the Market Risk Rule and Proposals for banks to implement an internal replacement process.

External ratings, despite shortcomings evidenced, especially for structured obligations, during the most recent economic downturn, have been an extremely useful tool for banks, investors and issuers alike. This is especially true with respect to smaller issuers, including municipalities, where the cost of independent de novo credit analysis may be prohibitive. JPMC believes the Agencies should allow banks to place greater weight on external ratings in developing their internal processes than our interpretation of the Market Risk Rule and Proposals allows.

An example of the challenges faced by banks to implement an independent process is securities financing (repo style transactions). When a customer asks a bank to finance a security position through a repurchase agreement, that bank must instantaneously evaluate whether the security is investment grade or non-investment grade under the Proposals in order to know the regulatory capital requirement and to be able to price the transaction. If the issuer is not represented in the bank’s loan, trading or investment books it is unlikely that the bank would today have any information readily available beyond the public ratings. Given the timing considerations, a bank will effectively have to independently pre-evaluate every security, which it could be asked by a customer to finance. In the case of major market participants, such as JPMC, this would effectively be the investable universe comprised of hundreds of thousands of issues. Therefore, from a practical perspective, the Proposals will result in a much narrower universe of collateral that may be financed. We respectfully request that the Agencies work with the industry on a workable approach to this issue.

Advanced Approach Proposal

Counterparty Valuation Adjustment

Market Based Fair Value Calculation for Counterparty Valuation Adjustment

The Advanced Approach Proposal provides that in the market based assessment of Counterparty Valuation Adjustment (“CVA”) for fair value purposes, the LGD must be determined based on direct market observations or, if unavailable, on market driven proxies. JPMC notes that LGDs on derivatives are not directly observable

in the markets as these are typically structured as individually negotiated transactions between two counterparties and so require the use of proxies for the CVA calculation. We also note that in the proposal the Agencies have been very specific in terms of the required inputs to such proxies (specifically credit quality, industry and region) that do not reflect current market practices that have been reviewed and approved by the Agencies. JPMC does not believe that observable credit derivatives LGDs represent the best estimation of LGD for these exposures. We instead take an alternative approach in the determination of LGDs for CVA fair value calculations that considers a number of parameters including market observable recovery rates on unsecured bonds for the relevant issuer, relative comparisons between loan and bond recovery rates and structural components of the derivative that lead to the conclusion that the derivative LGD is best estimated similar to a secured loan (see detailed analysis attached as Exhibit III hereto).

We therefore urge the Agencies to clarify in the final rule that banks should document their rationale via a written policy in calculating appropriate, conservative estimates of LGD for these purposes using market observable data which could be subject to supervisory review and remove the exclusive reliance on credit derivative markets.

CVA Market Risk Calculation

The Advanced Approach Proposal requires that the CVA market risk calculation be computed on a standalone basis without taking into account the diversification that the remainder of the trading book provides. In addition, the Advanced Approach Proposal provides that the CVA market risk take into account any relevant credit hedges in the form of a single name CDS, single name contingent CDS or CDS index. The interest rate hedges are taken into account separately in the bank's overall Value at Risk ("VaR") and stressed VaR calculations in the trading book. JPMC recommends the removal of CVA related interest rate hedges from the overall VaR and stressed VaR calculations in the trading book. This is consistent with regulatory intent to avoid asymmetry in capital treatment between the asset and its hedge as reflected in the removal of interest rate hedges from the trading book on MSRs. MSRs are intangible assets and ineligible as trading book assets as per the Market Risk Rules. The interest rate hedges (historically held in the trading book) will also move out of the trading book for regulatory capital purposes as required by the Market Risk Rules. Our recommendation for CVA market hedges is consistent with such treatment. JPMC further notes that ultimately the overall capital requirements for CVA might be more appropriately addressed in a holistic manner as a trading book issue in the Fundamental Review of the Trading Book.

CVA EAD Calculation Assumptions

The Advanced Approach Proposal provides that in the CVA calculation, the expected exposure ("EE") constant must assume a maturity based on the higher of (i) half the longest maturity of a transaction within the netting set, and (ii) the notional weighted average maturity ("WAM") of all transactions in the netting set. Although this treatment is consistent with the international Basel III rules, we observe that this treatment is inappropriate. The problem with proposed treatment could perhaps best be illustrated with a real example of a netting set within our portfolio where the longest deal matures in 2041. Taking half of this maturity, as dictated in the Advanced Approach Proposal, results in a calculated maturity of 2029 (17 years) when the WAM for this portfolio is a mere six months. This results in \$1.175 million in risk weighted assets vs. \$137 thousand using the WAM methodology. This example clearly illustrates the inappropriateness of such an approach. JPMC believes that a more appropriate calculation for these purposes would be to use the WAM of the portfolio which

appropriately takes into account the longer dated maturity but does not inappropriately skew the overall results based on this single exposure.

Implementation of CVA Market Risk Capital across Jurisdictions

JPMC understands that the current CRD IV proposal calls for the exclusion of sovereign, pension fund and corporate counterparties from CVA market risk calculations based on the fact that these exposures will be exempt from central clearing through European Market Infrastructure Regulation (“EMIR”). The Proposals do not call for a similar exclusion in the calculation of market risk capital relative to these exposures for U.S. banks. We support the calculation of capital related to all risk exposures for banks and therefore do not fully comprehend the rationale for such an exclusion. However, JPMC notes that if CRD IV becomes final as proposed with regard to this exclusion, this will result in a serious competitive issue for all U.S. banks vis-à-vis European counterparts which will make it very difficult for U.S. banks to effectively compete in the derivative, repo and margin lending markets. We therefore urge the Agencies to make these Proposals consistent on an international basis.

Money Fund Approach

The Advanced Approach Proposal eliminates the 7% risk weighting for exposures to (i.e., investments in) the highest rated Rule 2a-7 money market funds and replaces it with a requirement that the exposure be evaluated using the full-look-through approach, the alternative look-through approach or the simplified look-through approach²⁵. The Agencies argue that this change is necessary due to the requirements of Section 939A of Dodd-Frank as well as the negative performance associated with money funds throughout the crisis which resulted in their view that a 7% risk weight was too low. JPMC agrees that there were significant issues associated with 2a-7 money funds throughout the crisis. However, JPMC notes that there have been significant changes within the money fund industry since the financial crisis some of which have already taken effect and others of which are still being discussed. Already, there have been significant liquidity and maturity restrictions instituted for Rule 2a-7 money funds to better allow them to deal with redemptions of the funds during periods of stress without incurring significant problems including:

- Liquidity restrictions
 - Maturity restrictions (10% of assets liquid within one day/30% liquid within one week)
 - Liquidity restrictions (no more than 5% of holdings in illiquid investments)
- Portfolio maturity restrictions
 - WAM
 - Weighted average life (WAL)
- Eligible securities – no more than 3% in second tier securities
- Periodic required stress testing of ability to maintain constant Net Asset Value (“NAV”)

²⁵ Using the Full Look-Through Approach, a bank would risk weight each of the fund investments as though the bank directly owned such investment and then utilize a weighted average of these risk weights for the 2a7 fund invest. Under the Simple Modified Look-Through Approach, a bank would assign a risk weight for the exposure based on the adjusted carrying value of the exposure multiplied by the highest risk weight assigned to any investment that the fund may purchase. For the Alternative Modified Look-Through Approach, a bank would determine its risk weight for the fund investment as the weighted average of the maximum risk weights for each of the permitted investments that the fund can make. In cases where the weighting exceeds 100%, the maximum weight is given to the investment with the highest risk weighting.

- Run protection – Board of the fund is authorized to bar investors from redeeming shares when the NAV falls below \$1 if a fund breaks the buck and chooses to redeem portfolio holdings. With notice to the SEC funds may process transactions with investors at less than the \$1 NAV

In addition, regulators across the globe continue to discuss other possible changes to enhance the safety of the Rule 2a-7 money funds including but not limited to:

- Floating NAV
- Capital buffer to allow for a cushion against changes in valuation for the fund assets as well
- Holdback period during which investors would not be permitted to redeem their shares

Given all of these existing and proposed changes intended to enhance the safety of Rule 2a-7 funds, JPMC believes that, at a minimum, Agencies should give appropriate credit in the look-through approach to take into account the very short tenor of investments made by these funds which could be accomplished through the use of risk weights that are similar to the risk weights used for corporate risk weights under Subpart F of the Proposals.

Standard Supervisory Market Price Volatility Haircuts

The Agencies have proposed a modification of the standard supervisory haircuts for repo-style transactions. The revised table includes a new category labeled, “Investment grade securitization exposures”. The Agencies do not provide guidance on how to determine investment grade status for a securitization exposure without utilization of external ratings. JPMC requests that the Agencies work with the industry to develop a methodology to determine investment grade status for securitizations. We further note that the addition of the securitization column is inconsistent with the international standards, which puts U.S. banks at a competitive disadvantage with non-U.S. banks.

The revised haircuts included in the Advanced Approach Proposal increase substantially for all corporate exposures to 25%. Corporate exposures are classified in the table, “Non-sovereign issuers that receive a 100 percent risk weight”. Under the global Basel II rules, the corporate exposure haircuts range from 1%-12% for investment grade exposures and 25% for non-investment grade exposures. We believe that given the actual volatility of corporate debt and that the proposed definition of “financial collateral” for purposes of the collateral haircut approach only includes debt securities that are “investment grade”, the proposed 25% haircut is inappropriate. JPMC recommends adding granularity for corporate exposures using OCC Guidance to determine investment grade status. Table 7 below details the 10-day price volatilities calculated to one standard deviation²⁶ of corporate bonds in 2008 at several ratings levels. As may be noted in the table, even at the lowest category of investment grade corporate debt, volatility did not exceed 8%.

Table 7

Corporate Bond Ratings	Pricing Volatility by Maturity ²⁷			
	1YR	5YR	10YR	30YR
AA	2.25%	3.07%	4.02%	5.98%
A	1.80%	3.89%	5.38%	6.96%
BBB	3.42%	5.15%	5.82%	7.91%

In addition, the revised haircuts for securitization exposures will increase substantially for “AAA” Federal Family Education Loan Program (“FFELP”) student loans. Given these assets will most likely have a residual maturity greater than 5 years, the haircut for these assets will increase from 8% to 24%. JPMC believes that given the actual volatility of this asset and that the underlying assets generally have a 97% government guaranty, this increase is unwarranted. Table 8 below summarizes the 10-day price volatilities calculated to one standard deviation²⁷ for FFELP student loan securitizations in 2008, a year during the recent financial crisis in which the highest volatility in recent history was observed.

Table 8

²⁶ JPMC analyzed volatility during 2008, the most volatile year experienced in recent history.

²⁷ Pricing Direct and JPM research.

Asset and Rating	Pricing Volatility ²⁸
AAA FFELP, 5 YR	0.91%
AA FFELP, 6 YR	1.11%

JPMC recommends the following haircuts for investment grade corporate and FFELP student loan securitization exposures:

Table 9

Residual Maturity	Haircut
0-1 YR	3.0%
1-5 YR	6.0%
5+ YR	12.0%

Cleared Transactions with Central Counterparties

JPMC is supportive of a non-zero risk weight for guarantee/default fund exposures and the need for a strong, single set of requirements to distinguish qualified central counterparties (“QCCPs”). JPMC believes, however, that the capital requirements for default fund contributions as detailed in the Advanced Approach Proposal will be too high under the proposed modified CEM. As previously discussed, the CEM lacks the risk sensitivity of the sophisticated methods used by central clearing parties (“CCPs”) to calculate margin requirements. JPMC believes the Agencies should allow CCPs to use the IMM for calculating their capital requirement. If capital charges for default fund contributions are too high, banks will be disincented to be members of CCPs and thus not be inclined to clear transactions through CCPs.

JPMC also notes that the Proposals do not provide an incentive for banks to act in a financial intermediary role as clearing members for their clients due to the excessive capital requirements associated with the client side of the transactions. JPMC strongly supports use of a shorter holding period for these transactions as these transactions are centrally cleared and therefore by definition should be more liquid. JPMC notes that the recently released Basel interim rules give some credit in this regard, replacing the minimum 10 day holding period with a period as low as 5 days for client facing transactions and provides for a scaling grid for holding periods between 5 and 10 days. We would strongly urge the Agencies to adopt a consistent approach.

If the Agencies are not prepared to offer the option of IMM for calculating default fund contributions and given the Basel Committee has only implemented interim rules, JPMC would prefer that the rules for CCPs have a delayed implementation to incorporate the final Basel rules for CCPs. If the Agencies are not willing to delay implementation, we would welcome the replacement of the current proposed CCP rules with the interim rules from the Basel Committee contained in capital requirements for bank exposures to central counterparties²⁸

²⁸ There are various changes to the proposed capital framework for exposures to CCPs which were introduced by the BCBS that differ from the Proposals. These changes include the “highly likely” threshold for the requirement for portability of client trades to a replacement clearing member, the three months grace period for preferential capital treatment of CCP cleared exposures to a CCP that has ceased to be qualifying, the ability of the banking supervisor to designate a CCP as

(Basel Committee on Banking Supervision (“BCBS”) 227). Although JPMC still believes Method 1 and Method 2²⁹ as outlined in BCBS 227 are risk insensitive, we believe these are better options than what is currently proposed in the U.S. and would allow for international consistency.

If the Agencies decide to implement BCBS 227, we would request the inclusion of a transitional period of at least one year to allow for time to meet:

- The requirement for a CCP to qualify as a QCCP.
- The requirements of paragraph 114(b) of BCBS 227, “*Relevant laws, regulation, rules, contractual, or administrative arrangements provide that the offsetting transactions with the defaulted or insolvent clearing member are highly likely to continue to be indirectly transacted through the CCP, or by the CCP, should the clearing member default or become insolvent. In such circumstances, the client positions and collateral with the CCP will be transferred at market value unless the client requests to close out the position at market value*”.
- The requirement that netting agreements are legally enforceable regardless of whether the central and client counterparties are insolvent or bankrupt.

Should this approach be taken, JPMC also seeks clarity in the U.S. final rules on the following:

- The treatment of unfunded default fund amounts and the potential future contributions to qualifying CCPs. There is mention of these for non-qualifying CCPs in BCBS 227, but not for qualifying CCPs.
- Guidance on how to determine “*highly likely*” in paragraph 114(b) of BCBS 227 as quoted above.

Holding Periods and Margin Periods – Counterparty Credit Risk

Under the existing advanced approach within Basel II, a bank has a number of options for the purposes of giving credit to underlying financial collateral as a mitigant to counterparty credit risk associated with repo-style transactions, margin loans and OTC derivatives. These rules call for consideration of the potential mark-to-market on this financial collateral. The Advanced Approach Proposal details several changes to this treatment for holding periods for collateral and margin periods of risk which while consistent with the international Basel III framework, do not represent a reasonable approach to this calculation. The Advanced Approach Proposal and International Basel III instead require banks to assume a 20 business day holding period or margin period of risk for the IMM under certain circumstances including where the netting set includes more than 5,000 trades, includes any illiquid or exotic collateral or any OTC derivative that cannot be easily replaced. In addition, international Basel III dictates that a bank must assume a holding period of twice the minimum period otherwise allowable for the netting set where there have been two or more margin disputes within the prior two quarters. JPMC believes that the approach relative to illiquid collateral, OTC derivatives that cannot be easily replaced and margin disputes is not in the overall spirit of the Advanced Approach Proposal which, by definition, is meant to be more risk sensitive in its application. For example, if there is one \$5 million illiquid exposure within a netting set of \$500 million, it would result in a tainting of the entire netting set.

qualifying in the absence of a national regime for authorization and licensing of CCPs, increased risk sensitivity for the default fund contributions, and the cap on risk weighted exposure amounts of all exposures to a QCCP.

²⁹ Method One utilizes the CEM methodology for default fund contributions for all members of the central clearing house and then allocates back to the clearing members based on their pro-rata contribution to the default fund. Method Two takes the lesser of (1) the sum of 1250% of default fund contributions and 2% of exposures to the central counterparty and (2) 20% of the exposures to the central counterparties.

As this rule only applies to banks that will be required to calculate capital under the Advanced Approach Proposals (the “Advanced Approach Banks”), we recommend a 1% materiality threshold (calculated based on current mark-to-market values) be applied to illiquid collateral, OTC derivatives that cannot be easily replaced and margin dispute calculations in order to accommodate this issue.

As discussed out the outset of this letter, JPMC agrees that reform for regulatory capital and liquidity requirements are needed. JPMC believes that banks need appropriate capital to withstand stressed economic conditions and adequate liquidity to withstand disruptions in the financial markets. We also believe that the appropriate reform should have as its goal the maximization of financial stability at the least cost to borrowers and overall economic growth. Our recommendations outlined here are meant to be consistent with these principles while at the same time mitigating any undesirable outcomes that may arise as a result of changes to the regulations.

JPMC appreciates the opportunity to comment on the Proposals. Please feel free to contact Adam Gilbert at 212-270-8928 or me at (212) 834-4000 to discuss the contents of the letter at your convenience.

Very truly yours,

A handwritten signature in cursive script, appearing to read "M. J. Jans".

Glossary of Defined Terms

ABA	The American Bankers Association
ABA/SIFMA/FSR Letter	Comment letter submitted jointly in response to the Proposals October 2012
Advanced Approach Proposal	“Regulatory Capital Rules: Advanced Approaches Risk-based Capital Rule; Market Risk Capital Rule”
AFS	Available for Sale
Agencies	Federal Reserve, OCC and FDIC, collectively
AIRB	Advanced Internal Ratings-Based
Alternative Look Through Approach -	Risk weighting approach for equity investments in investment funds where the weighted average of the maximum risk weights for each of the permitted investments that the fund can make is used in the calculation - In cases where the weighting exceeds 100%, the maximum weight is given to the investment with the highest risk weighting
AOCI	Accumulated Other Comprehensive Income
ASF	The American Securitization Forum
Basel I	Basel I rules in effect at the time of the passage of Dodd-Frank (used interchangeably with General Risk Based Capital Rule)
Basel III	International Basel III rules released by the Basel Committee
Basel III Capital Ratio Proposal	“Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Minimum Regulatory Capital Ratios, Capital Adequacy, Transition Provisions and Prompt Corrective Action”
CCP	Central Clearing Party
CEM	Current Exposure Method

Collins Amendment	Section 171 of Dodd-Frank that provides that the risk based capital calculations for U.S. banks may not be less conservative than the Basel I rules that were in effect for U.S. banks at the time of passage of Dodd-Frank
CRD	Capital Requirements Directive
CVA	Counterparty Valuation Adjustment
Dodd-Frank	The Dodd Frank Wall Street Reform and Consumer Protection Act of 2010
EAD	Exposure at Default
FASB	Financial Accounting Standards Board
FDIC	Federal Deposit Insurance Corporation
FDICIA	Federal Deposit Insurance Corporation Improvement Act of 1991
Federal Reserve	Board of Governors of the Federal Reserve
FFELP	Federal Family Education Loan Program
FHA	Federal Housing Administration
FHLMC	Freddie Mac
FNMA	Fannie Mae
FSR	The Financial Services Roundtable
Full Look Through Approach	Risk weighting approach used for equity investments in investment funds where each of the fund investments is risk weighted as though the bank directly owned such investment and then utilize a weighted average of these risk weights for the 2a7 fund investment
General Risk Based Capital	Basel I rules that were in effect at the time of the passage of Dodd-Frank (used interchangeably with Basel I rules)

GNMA	Ginnie Mae
GO	General Obligation
GSE	Government Sponsored Entity
GSIB	Global Systemically Important Bank
HAMP	Home Affordable Modification Program
HELOC	Home Equity Line of Credit
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
IMA	Internal Models Approach
IMM	Internal Model Method
IO	Interest Only
JPMC	JPMorgan Chase & Co
LGD	Loss Given Default
Liquid Asset Buffer	Requirement under Basel III for highly liquid, unencumbered assets that will serve as the numerator for the Liquidity Coverage Ratio calculation
Liquidity Coverage Ratio	Represents a measure of bank liquidity defined as the ratio of highly liquid assets to expected short term cash outflows during a market disruption.
Liquid Revenue Bond	Municipal revenue bond deals in excess of \$25 million that are not classified as industrial revenue bonds (including land-secured bonds and private activity bonds), housing, healthcare, retirement or non government conduit issuers (including private healthcare/higher education, tobacco settlement, gas prepay and student loan bonds)

LTV	Loan-to-value
Market Risk Rule	Final Market Risk Capital Rule released simultaneous with the Proposals
MBA	Mortgage Bankers Association
MBS	Mortgage Backed Security
MSR	Mortgage Servicing Rights
NAV	Net Asset Value
NRSRO	Nationally Recognized Statistical Rating Organization
OCC	Office of the Comptroller of the Currency
OCC Guidance	Guidance issued by the OCC to be used by banks in the determination of investment grade versus non investment grade corporate exposures in the absence of relying on NRSRO ratings
OTC	Over-the-counter
PMI	Private Mortgage Insurance
Proposals	The Basel III Capital Ratio Proposal, the Standardized Proposal and the Advanced Approach Proposal collectively
QCCP	Qualifying Central Clearing Party
RBA	Ratings Based Alternative
RMBS	Residential Mortgage Backed Security
RMG	Risk Management Group
SCCL	Single Counterparty Credit Limits
SFA	Supervisory Formula Approach

SIFMA	Securities Industry and Financial Markets Association
Simplified Look Through Approach	Risk weighting approach used for equity investments in investment funds where the calculation is based on the adjusted carrying value of the equity exposure multiplied by the highest risk weight assigned to any investment that the fund may purchase
SRWA	Simple Risk Weighted Average
SSFA	Simplified Supervisory Formula Approach
Standardized Approach Proposal	“Regulatory Capital Rules: Standardized Approach for Risk-weighted Assets; Market Discipline and Disclosure Requirements”
TCH	The Clearing House
TCH/ASF letter	Comment letter submitted jointly regarding the Proposals October 2012
U.S. Basel II	Basel II rules applicable to U.S. banks prior to the effective date of the Proposals
U.S. GAAP	U.S. Generally Accepted Accounting Principles
UPB	Unpaid Principal Balance
VaR	Value at Risk
WAM	Weighted Average Maturity

Exhibit I

Mortgage Default Study

Mortgage Default Study

Average 2000-2011 default rates	Category 1 per NPR (full-doc performing non-I/O fixed loans)	Adjusted Category 2 excluding Home Equity (1st and 2nd lien)
0<LTV<=60	0.29%	2.52%
60<LTV<=80	0.73%	4.73%
80<LTV<=90	1.31%	7.55%
90<LTV or LTV=MISSING	2.18%	9.30%

Average 2000-2011 default rates	Full-doc performing fixed and ARM I/O loans	Full-doc performing ARM non-I/O loans	I/O vs. Non-I/O	I/O vs. Adj-Cat 2	Non-I/O vs. Adj-Cat 2	I/O vs. Cat 1	Non-I/O vs. Cat 1
0<LTV<=60	0.34%	0.25%	0.09%	-2.18%	-2.27%	0.05%	-0.04%
60<LTV<=80	1.60%	0.88%	0.73%	-3.14%	-3.87%	0.87%	0.13%
80<LTV<=90	2.33%	1.58%	0.75%	-5.22%	-5.97%	1.02%	0.27%
90<LTV or LTV=MISSING	3.71%	1.83%	1.88%	-5.59%	-7.47%	1.55%	-0.33%
Recommendation/Notes:	Move to Category 1	Move to Category 1					

Analysis Description:

Category 2 loans are comprised of two broad groups of mortgage loans. A distinct group of mortgage loans within Category 2 is comprised of mortgage loans with characteristics that correspond to clear risk drivers such as loans that are not fully documented, Option-ARMs, and non-prime loans. On the other hand, the second group of mortgage loans within Category 2 is comprised of mortgage loans that are deemed riskier as a matter of policy and include mortgage loans categorized as home equity first liens, HELOCs and other home equity subordinate liens. Our analysis above isolates such loans out of Category 2 (“Adjusted Category 2”) in order to allow for the true comparison of risk drivers for the remaining loans within Category 2. Inclusion of these loans in Category 2 data analysis would result in Category 2 default rates looking very similar to Category 1 default rates due to the overwhelming majority of Category 2 that is comprised of strong performing home equity loans. Exclusion of these strong performing home equity loans from this analysis is therefore required to allow for a true comparison of the remaining Category 2 loans to determine which of those exhibited worse performance through the recent cycle.

Should the Agencies seek broader empirical evidence from the industry, we strongly believe that excluding the strongly performing home equity loans from Category 2 that are included in Category 2 as a policy matter rather than based on performance issues, will allow for a more appropriate determination for the remaining assets that have been suggested in Category 2 due to their relative riskiness compared to other Category 1 or Category 2 mortgages. Such an approach would build upon the favorable findings discussed in the Federal Reserve Staff Paper, cited in footnote 7 of this letter, that support distinguishing certain HELOCs and other subordinate loans from Category 2.

Based on our experience, we believe that the interest-only feature of mortgages is not a significant risk driver, when controlling for documentation, and that all prime fully-documented performing first liens (excluding non-prime and Option-ARMs) should be included in the Category 1 definition because our actual experience suggests that their performance is better than implied classifying them in Category 2.

Exhibit II

Liquid Revenue Bond Capital Proposal

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1. Proposal

The Standardized Approach Proposal proposes that banks assign a 20 percent risk weight to a GO exposure to a U.S. Public Sector Entity (“PSE”) and a 50 percent risk weight to a revenue obligation exposure to such a PSE. The Standardized Approach Proposal states:

“The risk weights assigned to revenue obligations are higher than the risk weight assigned to general obligations because repayment of revenue obligations depends on specific projects, which present more risk relative to a general repayment obligation of a state or political subdivision of a sovereign.”

In response to the Agencies’ request for comment, this white paper argues that risk-sensitivity in the Standardized Approach Proposal can be enhanced by more accurately aligning risk weights with underlying credit quality for certain revenue obligation exposures.

This white paper makes the case that certain high quality revenue exposures (“Liquid Revenue Bonds” or “LRBs”) issued by PSEs should receive a 20 percent risk weight, as justified by analysis of underlying credit fundamentals, historical default experience and observable market activity.

The proposed definition of LRBs is:

All revenue obligation bonds from transactions with a total size greater than \$25 million that are not classified as industrial revenue bonds (including land-secured bonds and private activity bonds), housing, healthcare, retirement or non-government conduit issuers (including private healthcare/higher education, tobacco settlement, gas prepay and student loan bonds)

The exclusion of these sectors will result in a LRB population consisting of bonds that finance essential public projects, such as public utilities, transportation assets, public universities and other public infrastructure.

LRB par outstanding totals approximately \$1.4 trillion, or 36% of the municipal bond market and 49% of Revenue Bonds.

Pursuant to the requirements of Section 939A of Dodd-Frank, the definition of an LRB does not rely on NRSRO ratings.

2. Justification

I. Summary

The proposed 20% risk weight for LRBs is justified due to the following:

- Strong underlying credit quality, as demonstrated by very low default incidence and high recovery
- Robust secondary market liquidity, reflected in trading volumes
- Low yield volatility

II. Credit Quality / Default Incidence of LRBs

LRBs and GOs each finance essential government services and infrastructure, such as schools, police stations, highways, and public utilities, and the strong public support for these projects results in very low default rates for each type of bond. Many municipalities issue both types of securities, depending upon the type of project that is being financed. For example, New York State has \$53 billion of state-supported debt outstanding, of which \$3 billion are GO bonds and \$49 billion are LRBs.³⁰ The largest GO and LRB issuers are detailed below.

Exhibit 2.1

Top GO Issuers	
1/1/02 - 8/1/12	Par (\$bn)
California (State of)	90.8
New York (City of)	55.1
Illinois (State of)	33.3
Massachusetts (State of)	26.7
Washington (State of)	23.5

Exhibit 2.2

Top LRB Issuers	
1/1/02 - 8/1/12	Par (\$bn)
New York City (TFA, Water, MTA, TBTA)	90.1
Puerto Rico (Sales Tax, PREPA, Highway, GDB)	66.3
New Jersey (TTFA, EDA, Turnpike)	43.2
New York State (Thruway, UDC, DASNY, EFC)	34.7
Port Authority of New York & New Jersey	17.8

Source: Thompson SDC

GO and LRB Security Overview

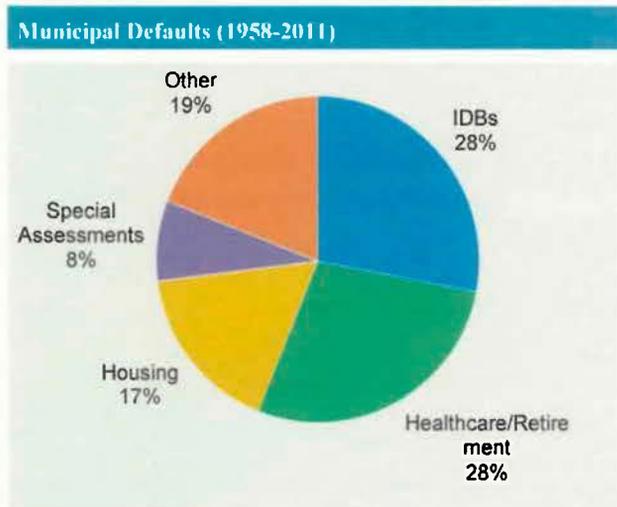
GO and LRB security structures are fundamentally different but both offer strong bondholder protections. The GO pledge represents the full faith and credit and taxing power of the issuer, and is typically subject to voter or legislative approval. GO bondholders generally have the right to compel a tax levy or appropriation to cover debt service in an event of default. LRBs are secured by a pledge of specific revenues, usually from a dedicated tax, user fee from a project (utility, toll road, etc.), or covenant to appropriate for debt service. Revenue bonds do not require voter approval, enabling capital projects to be financed in a timely fashion. Revenue bonds are secured obligations in a Chapter 9 bankruptcy, unless subject to appropriation or otherwise classified by state law. **Because of LRBs' purpose of funding essential governmental projects and status as secured creditors under Chapter 9, LRBs' fundamental credit quality is comparable to that of GOs.**

³⁰ NYS Division of Budget, available at: <http://www.budget.ny.gov/investor/bond/BondCapChart.html>

GO and LRB Defaults

Municipal bonds have demonstrated a very low rate of default. From 1970-2011, cumulative default rate for all rated municipals was 0.13% compared to 6.0% for sovereign issuers, while recovery rates on rated municipals were also higher than for sovereigns.³¹ Studies have also indicated the risk of ultimate non-payment for municipal debt has been low when compared to both total municipal debt outstanding and total municipal debt in default. Since 1980, on average there have been approximately 8 municipal bankruptcies (Chapter 9) per year, out of the universe of 44,000 state and local issuers (Exhibit 2.6).³²

Exhibit 2.3



Source: Federal Reserve Bank of New York, "The Untold Story of Municipal Defaults" (Aug. 2012)

Default rates for municipal bonds vary considerably based upon the sector or project type, rating and ultimate obligor's status as a municipal entity or a private conduit borrower. According to the New York Federal Reserve, 73% of all municipal defaults (both rated and unrated) are attributable to Industrial Development Bonds (28%), Healthcare/Retirement Facilities (28%), and Housing (17%) during the period from 1958-2011 (Exhibit 2.3).³³

Additionally, a recent Bloomberg report indicates that more than 70% of municipal defaults can be attributed to non-governmental conduit issuers (primarily Industrial Development, Healthcare/Retirement Facilities issuers).³⁴ In a report on defaults in the 1990s, S&P notes that non-rated bonds have historically accounted for 85% of all defaults.³⁵ A similar report issued in 2011, shows that 67% of defaults from 1980-2011 were attributed to industrial development revenue bonds

followed by bonds supporting healthcare and housing.³⁶

The definition of LRBs has been explicitly written to exclude the sectors in the market for which defaults are most prevalent, such as industrial revenue bonds, housing, healthcare, retirement or non-government conduit issuers. By excluding these sectors, the LRB universe segregates high quality credits from a subset of high risk projects that have historically had higher defaults. LRBs exhibit default incidence that is approximately in line with that of GO bonds. Despite comprising 30% of the municipal market, GOs have accounted for 2% of the number of municipal defaults and 5% of the par amount of defaults since 1980. If revenue bonds are divided into LRBs and non-LRBs, more than 75% of defaults are contained in the non-LRB

³¹ Moody's special report, U.S. Municipal Bond Defaults and Recoveries, 1970-2011.

³² U.S. Securities and Exchange Commission, "Report on the Municipal Securities Market" (Jul. 2012), available at <http://www.sec.gov/news/studies/2012/munireport073112.pdf> (citing Bloomberg, Lehmann)

³³ Federal Reserve Bank of New York, "The Untold Story of Municipal Defaults" (Aug. 2012) <http://libertystreeteconomics.newyorkfed.org/2012/08/the-untold-story-of-municipal-bond-defaults.html>

³⁴ U.S. Securities and Exchange Commission, "Report on the Municipal Securities Market" (Jul. 2012), available at <http://www.sec.gov/news/studies/2012/munireport073112.pdf> (citing Mergent and James Spiotto)

³⁵ U.S. Securities and Exchange Commission, "Report on the Municipal Securities Market" (Jul. 2012), available at <http://www.sec.gov/news/studies/2012/munireport073112.pdf> (citing S&P)

³⁶ U.S. Securities and Exchange Commission, "Report on the Municipal Securities Market" (Jul. 2012), available at <http://www.sec.gov/news/studies/2012/munireport073112.pdf> (citing Kroll)

group. LRBs equate to 3% of the number of revenue bond defaults and 17% of the par amount of Revenue Bond defaults.³⁷ Detailed default information can be found in Exhibits 2.4 and 2.5.

Exhibit 2.4

Municipal Default Data (1980-2012)

	All		>\$10mm		>\$25mm	
	#, %	Par (\$), %	#, %	Par (\$), %	#, %	Par (\$), %
GO Total	61 (2%)	4.105 (5%)	34 (2%)	3.988 (6%)	28 (4%)	3.896 (7%)
Revenue Total	3,652 (98%)	72.312 (95%)	1,367 (98%)	62.336 (94%)	618 (96%)	50.381 (93%)
All Muni Default	3,713 (100%)	76.417 (100%)	1,401 (100%)	66.324 (100%)	646 (100%)	54.277 (100%)

Source: Richard Lehmann, Municipal Default Study for JPMorgan (Oct. 2012).

Exhibit 2.5

Liquid Revenue Bond Default Data (1980-2012)

	All		>\$10mm		>\$25mm	
	#, % of all Revenue	Par (\$), % of all Revenue	#, % of all Revenue	Par (\$), % of all Revenue	#, % of all Revenue	Par (\$), % of all Revenue
Non-Gov Conduit	2,625 (72%)	49,544 (69%)	924 (25%)	42,448 (59%)	462 (13%)	34,924 (48%)
Housing Revenue	762 (21%)	8,980 (12%)	295 (8%)	6,652 (9%)	61 (2%)	3,128 (4%)
Non-LRB Total	3,387 (93%)	58,524 (81%)	1,219 (33%)	49,100 (68%)	523 (14%)	38,052 (53%)
LRB Total	265 (7%)	13,788 (19%)	148 (4%)	13,236 (18%)	95 (3%)	12,329 (17%)

Source: Richard Lehmann, Municipal Default Study for JPMorgan (Oct. 2012).

While bankruptcy and a monetary default are not always synonymous, legal barriers to declaring a municipal bankruptcy contribute to the relative rarity of municipal defaults. Only 12 states specifically authorize a municipal bankruptcy filing, another 12 states have conditional authorization, 3 states have limited authorization, 2 states generally prohibit a filing and the remaining 21 states provide no authorization for a municipal bankruptcy filing.³⁸ Another important protection for bondholders is that at least 23 states have implemented some form of municipal debt supervision or restructuring mechanism to aid municipalities in distress (e.g. Debt Advisory Commissions, State Oversight, Supervision and Assistance for Fiscal Emergencies of Local Government).³⁹

³⁷ Richard Lehmann, Municipal Default Study for JPMorgan (Oct. 2012).

³⁸ Chapman and Cutler, "Municipalities in Distress? How States and Investors Deal with Local Government Financial Emergencies" (2012).

³⁹ Chapman and Cutler, "Municipalities in Distress? How States and Investors Deal with Local Government Financial Emergencies" (2012).

III. Trading Volume/Liquidity for LRBs

LRBs have demonstrated strong liquidity, with normalized trading volume that is greater than that of GOs. LRB traded par amount as a percentage of market is greater than its relative market share. LRBs were approximately 40% of total par traded during 2008-2011, which is greater than their current 36% share of municipal market outstanding. The current ratio of LRBs to GOs outstanding is 1.2 while the 2011 ratio of LRBs to GOs par traded is 1.5. The cumulative 2008-2011 ratio of LRBs to GOs par traded is 1.7 (Exhibits 2.6 and 2.7). These statistics demonstrate the overall liquidity within the Revenue Bond universe and, more specifically, highlight the very liquid nature of the LRB universe.

Exhibit 2.6

Total par amount traded (\$bn)					
\$bn / % total	2008	2009	2010	2011	2008-11
General Obligation	957 (20%)	810 (26%)	800 (24%)	756 (27%)	3,323 (24%)
LRBs	1,892 (40%)	1,238 (40%)	1,304 (39%)	1,159 (41%)	5,593 (40%)
Other	1,903 (40%)	1,074 (34%)	1,211 (37%)	905 (32%)	5,093 (36%)
Total	4,752 (100%)	3,122 (100%)	3,315 (100%)	2,820 (100%)	14,009 (100%)

Exhibit 2.7

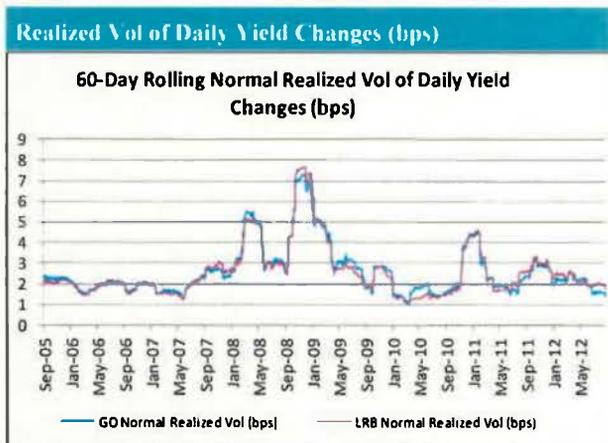
Total number of trades					
#mm / % total	2008	2009	2010	2011	2008-11
General Obligation	3.4 (32%)	3.6 (35%)	3.7 (36%)	3.7 (36%)	14.4 (35%)
LRBs	3.9 (37%)	3.8 (37%)	3.8 (37%)	3.9 (38%)	15.4 (37%)
Other	3.2 (30%)	2.8 (27%)	2.8 (28%)	2.7 (26%)	11.5 (28%)
Total	10.5 (100%)	10.2 (100%)	10.3 (100%)	10.3 (100%)	41.3 (100%)

Source: JP Morgan estimate using MSRB trade data and JJKenny security master data

IV. Yield Volatility Compared with GOs

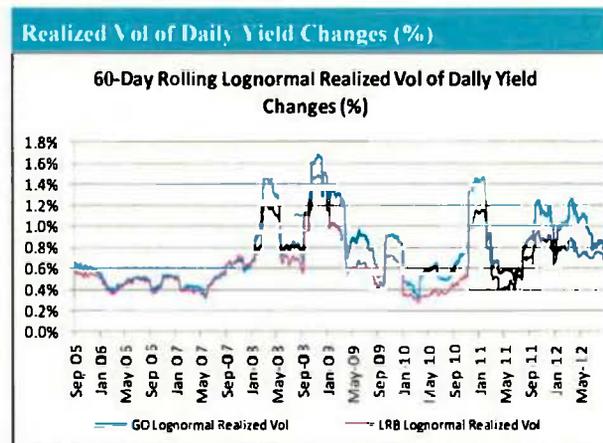
Municipal GOs and LRBs have very similar normal realized yield volatility. Due to the differences between yields on GOs and LRBs, lognormal volatility is a useful relative value metric for analyzing yield volatility as it standardizes changes into percentage terms. As shown in Exhibit 2.8 and 2.9, on a lognormal basis, LRBs have exhibited much lower realized volatility since 2008. This is in part due to increasing investor sentiment that LRBs are as creditworthy as GOs given their secured nature and the fact that they are supported by revenues derived from the provision of essential services.

Exhibit 2.8



60-Day Rolling Normal Realized Volatility is the 1 standard deviation daily basis point change in outright yield levels over the period

Exhibit 2.9



60-Day Lognormal Realized Volatility is the 1 standard deviation daily percentage change in yields over the period.

3. Public Policy Implications

The American Society of Civil Engineers' 2009 Report Card for America's Infrastructure assigned the United States a grade of "D" for the condition of top infrastructure categories. An estimated \$2.2 trillion of investment is needed to bring the nation's infrastructure to good condition, though only half of that amount is currently being spent. Given the role of PSEs in funding these projects, tax exempt municipal bonds are an important means of financing infrastructure investments. According to the OECD, approximately 70% of all infrastructure finance in the U.S. was funded by revenue obligations in 2006.⁴⁰

LRBs have become an increasingly important vehicle for financing infrastructure due to the passage of property tax initiatives since the late 1970s that have limited the growth of GO tax bases. For example, following the passage of Proposition 13 in California in 1972, property taxes dropped from 40% of California counties' general revenue to only 15% by the early 1990s. Consequently, LRB financing is widely utilized by PSEs to fund essential infrastructure projects through fees and consumption taxes that tie costs to users of assets. PSEs have relied on financing core governmental assets not only through GOs (i.e. School District bonds) but also have increasingly turned to revenue bonds to finance government owned and operated enterprises (i.e. airport bonds, toll road bonds, utility bonds, etc).⁴¹

LRBs were disproportionately represented in the Build America Bond ("BAB") program and widely accepted by a broad investor base, including taxable and non-U.S. based investors. Should the Build America Bond program return, LRBs would likely continue to be an important tool for PSEs to access new pools of capital beyond the traditional tax exempt municipal bond investor base. The OECD has identified Basel III rules as a potential barrier to infrastructure investment due to the illiquid nature of traditional project finance loans that, due to higher capital costs, will become less available.⁴² LRBs, issued under the BAB program or otherwise, would provide a liquid alternative to project finance loans and continued access to an already limited (and perhaps shrinking) pool of capital.

As written, the Standardized Approach will decrease the attractiveness of lending to PSEs for infrastructure projects secured by LRBs.

⁴⁰ OECD, "Pension Funds Investment in Infrastructure" (Sept. 2011), available at <http://www.oecd.org/sti/futures/infrastructureto2030/48634596.pdf>

⁴¹ Standard & Poor's, "On Prop. 13's 30th Birthday: How Tax Limits Affect Government Finances" (June 2008).

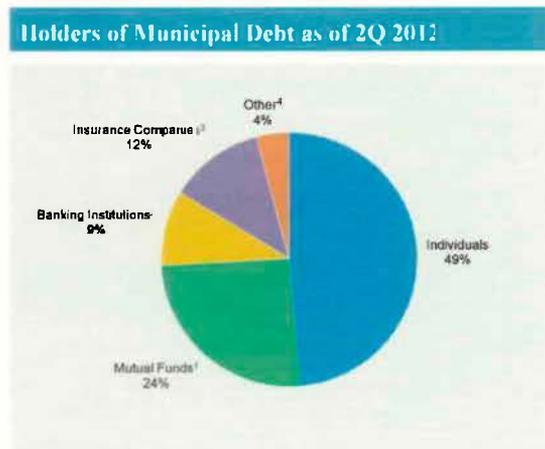
⁴² OECD, "Pension Funds Investment in Infrastructure" (Sept. 2011), available at <http://www.oecd.org/sti/futures/infrastructureto2030/48634596.pdf>

4. Benefits

The primary benefits of a 20% risk weighting for LRBs are as follows:

- **Enhances risk-sensitivity by more accurately aligning risk weights with underlying credit quality** - credit fundamentals, historical default experience, market liquidity, and yield volatility are comparable across GOs and LRBs, thereby justifying equitable risk treatment.
- **Lowers public sector borrowing costs for municipalities by incentivizing increased bank lending to a large, diverse and high quality subset of the municipal market** – U.S. banks currently hold 9% of outstanding munis, as shown in Exhibit 4.1, and their market share has been growing. Banks have increased their municipal holdings at an average rate of 5.4% since 1992, including 15.7% in 2011 and 13.7% in 2010. Increased demand from banks for this sector has supported municipal bond prices, thereby resulting in lower borrowing costs to finance essential public infrastructure.
- **Improves the safety of the banking sector by increasing and diversifying the supply of available LCR Level 2 eligible assets.** Results of the Basel Committee’s Basel III monitoring exercise as of 4Q2011 estimate the liquid asset shortfall to be at least \$2.3 trillion.⁴³ At that same time, the average LCR for large US banks was estimated to be 69%. US banks could see liquid security demand increase to \$100bn - \$200 bn per annum over the next 3 years.⁴⁴ At a standardized risk weight of 20%, LRBs should, we believe, be LCR Level 2 eligible, providing a \$1.4 trillion source of creditworthy and liquid assets for bank portfolio diversification, thereby decreasing concentration risk in other LCR assets.

Exhibit 4.1



Source: US Municipal Securities Holders. SIMFA Research Second Quarter 2012

<http://www.simfa.org/uploadedFiles/Research/Statistics/StatisticsFiles/Municipal-US-Municipal-Holders-SIFMA.xls>

Note: (1) Includes mutual funds, money market funds, close-end funds and exchange traded funds. (2) Includes commercial banks, savings institutions and brokers and dealers. (3) Includes property-casualty and life insurance companies. (4) Includes nonfinancial corporate business, nonfarm non-corporate business, state and local governments and retirement funds, government-sponsored enterprises and foreign holders.

The potential impact of not applying the 20 percent risk weight to LRBs will decrease banks’ appetite for LRBs, and likely result in an arbitrary over-concentration in GOs. This in turn could result in increased interest costs for revenue bond issuers (typically providers of essential public services) and decreased liquidity. Moreover, it will continue to misalign LRB risk weights with underlying credit risk.

⁴³ BIS, “Results of the Basel III monitoring exercise as of 31 December 2011” (September, 2012). Based on results from 209 participating international banks.

⁴⁴ Barclays, “Basel III: A Shadow Tightening of Policy” (May, 2012).

5. Conclusion

The proposed definition of LRBs are all Revenue Bonds deals in amounts greater than \$25 million not classified as Industrial Revenue Bonds (including land-secured bonds and private activity bonds), Housing, Healthcare, Retirement or Non-Government conduit issuers (including private healthcare/higher education, tobacco settlement, gas prepay and student loan bonds).

Certain high quality and liquid revenue bonds issued by US municipalities have credit fundamentals, historical default experience and observable market liquidity at least equal to GOs and should receive a risk weight of 20 percent under the Standardized Approach Proposal. Should the Agencies be uncomfortable changing the risk weight on LRBs, at a minimum, LRBs should be permissible eligible Level 2 assets for the calculation of the Liquidity Coverage Ratio, more appropriately aligning risk weights with underlying credit quality, incentivizing increased bank lending to a large, diverse and high quality subset of the municipal market and reducing borrowing costs a large subset of municipal issuers.

6. Appendix: Fundamentals of the Municipal Bond Market

I. Market Size

As of June 30, 2012, approximately \$3.7 trillion of municipal bonds were outstanding⁴⁵, of which 87.2% were rated investment grade.⁴⁶ The majority (75.2%) of municipal bonds outstanding pay interest coupons that are exempt from federal taxes, while 18.7% are taxable, and 6.1% subject to the AMT.⁴⁷ The interest on some municipal bonds is taxable because the federal government will not subsidize the financing of activities that do not provide significant benefit to the public. Bonds issued to finance the replenishment of a municipality's underfunded pension plan or investor-led housing are examples of issues that would generally not qualify for federal tax exemption. The use of funds for outstanding bonds can be found in Exhibit 6.1.

II. Revenue and General Obligation Bonds

All municipal bonds fall into one of two general categories: (i) GO Bonds which represent a full faith and credit pledge by the issuer to levy enough taxes as necessary to make full and timely principal and interest payments to investors, and (ii) Revenue Bonds where debt service is secured by revenues generated from specific projects being financed (typically essential services, i.e. airports, toll roads and utilities). Approximately 30% of municipal bonds outstanding are classified as GOs and the remaining 70% as Revenue Bonds.⁴⁸

Exhibit 6.1

Municipal Bonds Outstanding		
Sector	Par (\$bn)	% of total
Airport	88.7	2.4%
Development	123.8	3.3%
Education	743.0	19.9%
GO	756.8	20.3%
Healthcare	267.6	7.2%
Housing	115.7	3.1%
Other	607.2	16.3%
Pub. Facilities	29.0	0.8%
Student Loan	48.3	1.3%
Transportation	196.6	5.3%

⁴⁵ Flow of Funds Accounts of the United States (Flows and Outstandings, Second Quarter 2012), Board of Governors of the Federal Reserve System, September 20, 2012; p. L211

⁴⁶ Municipal Bond Credit Report, SIFMA Research Report Second Quarter 2012 ("Municipal Bond Credit Report") <http://www.sifma.org/research/item.aspx?id=8589939737>.

⁴⁷ Municipal Bond Credit Report.

⁴⁸ Municipal Bond Credit Report.

Utilities	468.4	12.6%
TOTAL	3,726.4	100.00%

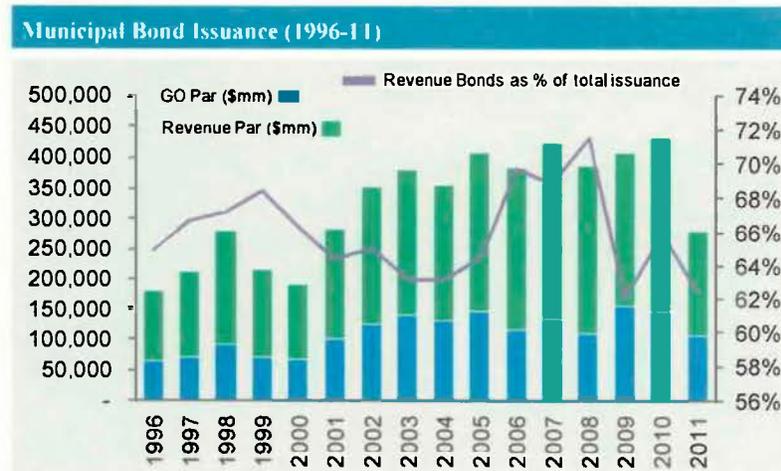
Source: Bloomberg, Federal Reserve Flow of Funds.

Revenue Bonds are secured by pledged revenues generated from either (i) dedicated special taxes (i.e. sales, gas, income); (ii) specific projects (i.e. toll roads, utilities, airports); and (iii) appropriation for debt service (i.e. lease and appropriation-backed bonds) with no other recourse to the issuing municipality. No voter approval is required prior to issuance. Lease and appropriation-backed bonds typically finance the same types of essential projects as GOs and are secured by a covenant to pay debt service. Lease and appropriation-backed bonds do not have recourse to a municipality’s full-faith and credit but do have recourse to annual appropriation or leased property. **Revenue bonds are secured obligations in Chapter 9 (unless subject to appropriation, lease-backed or classified otherwise by state law).**

approval is required prior to issuance. Lease and appropriation-backed bonds typically finance the same types of essential projects as GOs and are secured by a covenant to pay debt service. Lease and appropriation-backed bonds do not have recourse to a municipality’s full-faith and credit but do have recourse to annual appropriation or leased property. **Revenue bonds are secured obligations in Chapter 9 (unless subject to appropriation, lease-backed or classified otherwise by state law).**

The relative issuance of GO and Revenue Bonds is shown in Exhibit 6.2. Since 1996, Revenue Bonds have averaged 66% of total annual issuance.⁴⁹ Top issuers of both GO and Revenue Bond can be found in Exhibits 6.3 and 6.4.

Exhibit 6.2



Source: Thompson SDC

⁴⁹ Thompson SDC

Exhibit 6.3

Top GO Issuers	
1/1/02 - 8/1/12	Par (\$bn)
California (State of)	90.8
NYC - New York (City of)	55.1
Illinois (State of)	33.3
Massachusetts (State of)	26.7
Washington (State of)	23.5
Connecticut (State of)	19.6
Pennsylvania (State of)	16.0
Los Angeles USD	15.3
Fl. St. Board of Education	14.8
Puerto Rico (Commonwealth of)	12.8

Exhibit 6.4

Top Revenue Bond Issuers	
1/1/02 - 8/1/12	Par (\$bn)
NY State Dorm Authority	56.4
NY City Transitional Finance Authority	31.1
Metropolitan Transport Auth (MTA)	29.1
California Statewide Comm Dev Authority	26.7
California Dept of Water Resources	24.9
NYC Municipal Water Finance Authority	24.3
Illinois Finance Authority	24.3
New Jersey Economic Dev Authority	19.9
NYS Thruway Authority	17.7
Massachusetts Health & Ed Facilities Authority	16.8

Source: Thompson SDC

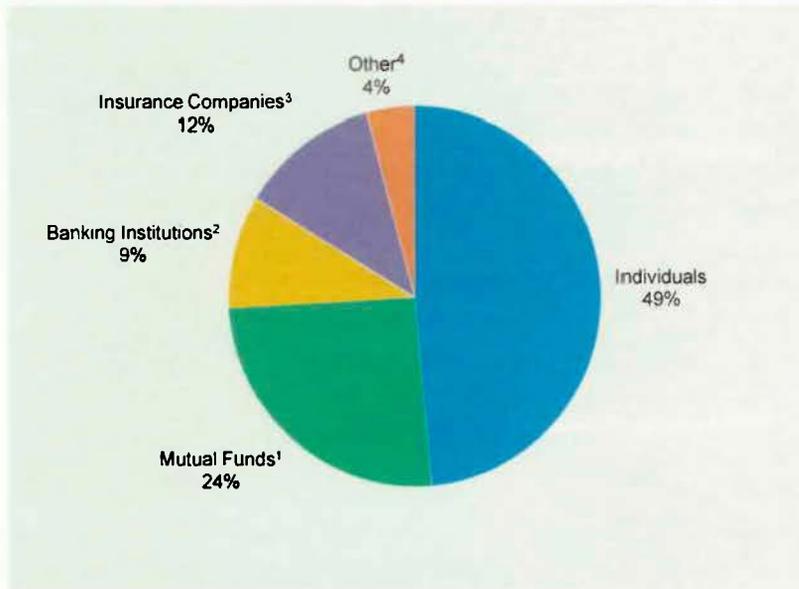
Conduit financings are a subset of Revenue Bonds. These bonds are non-recourse to the issuing municipality and can benefit either a governmental or non-governmental entity (such as Industrial Development, Healthcare/Retirement and Educational issuers). The supporting credit is the underlying not-for-profit or corporate entity benefiting from issuance. Upon default, remedies are generally limited to the not-for-profit or corporate entity benefitting from the issuance without recourse to the issuing municipality.

III. Holders of Municipal Bonds

Approximately half of all outstanding municipal bonds are held by households, with mutual funds, insurance companies and banking institutions holding most of the remaining share. The composition of municipal bondholders is shown in Exhibit 6.5.

Exhibit 6.5

Holders of Municipal Debt as of 2Q 2012



Source: US Municipal Securities Holders, SIMFA Research Second Quarter 2012
<http://www.sifma.org/uploadedFiles/Research/Statistics/StatisticsFiles/Municipal-US-Municipal-Holders-SIFMA.xls>

Note: (1) Includes mutual funds, money market funds, close-end funds and exchange traded funds. (2) Includes commercial banks, savings institutions and brokers and dealers. (3) Includes property-casualty and life insurance companies. (4) Includes nonfinancial corporate business, nonfarm non-corporate business, state and local governments and retirement funds, government-sponsored enterprises and foreign holders.

Since 1992, bank ownership of municipal debt has grown by an average rate of 5.4%.⁵⁰ In 2011 and 2010, bank municipal holdings rate grew by 15.7% and 13.7%, respectively.⁵¹ It should be noted that the acceleration over the past two years is due in part to the attractiveness of the municipal space from a credit perspective as well as increased direct lending to municipalities (via Direct Purchase as a substitute for liquidity facilities supporting VRDOs).

IV. Market Characteristics

Exhibit 6.6 demonstrates key market characteristics for the overall municipal market, GO Bonds, Revenue Bonds and Liquid Revenue Bonds (which are described in further detail in Section 3).

Exhibit 6.6

Municipal Bond Market Characteristics

	Municipal Bond Market	GO Bonds	Revenue Bonds	Liquid Revenue Bonds ¹
Par Outstanding	\$3.7 trillion ^{2,5}	\$1.2 trillion ²	\$2.7 trillion ²	\$1.4 trillion ²
Number of Issuers	61,851 ²	21,980 ²	11,851 ²	~4,000 ³
Number of CUSIPs	1.1 million ²	0.6 million ²	0.5 million ²	0.1 million ²
Avg Daily Trade Volume	\$9.5 billion ⁴	\$2.7 billion ⁴	\$7 billion ⁴	\$4.2 billion ³
Avg Trade Par	\$285,000 ⁴	\$225,000 ⁴	\$320,000 ⁴	\$308,000 ³
Median Trade Par	\$30,000 ⁴	\$35,000 ⁴	\$25,000 ⁴	\$25,000 ³
Household Ownership	49% ⁵	Not available	Not available	Not available

¹ Liquid Revenue Bonds are revenue bonds from deal sizes >\$25mm excluding the following issuer types: Industrial Development, Housing, Healthcare/Retirement Facilities, and Non-Governmental Conduit Issuers

² JPMorgan estimate using Bloomberg, September 2012

³ JPMorgan estimate using JJKenny data, September 2012

⁴ Municipal Securities Rulemaking Board, 2011 Fact Book

⁵ Federal Reserve, Flow of Funds Accounts of the United States, Second Quarter 2012

⁵⁰ Highline Financial LLC, a Thomson Reuters Company

⁵¹ Highline Financial LLC, a Thomson Reuters Company

Exhibit III

VCG Alpha Parameter Review

VCG Alpha Parameter Review

CPG – Valuation Control Group

Updated: October 17, 2012

1. Executive Summary

In the assessment of CVA we are interested in the recovery value of the derivative contract, however derivative LGDs are unobservable in the market. The LGD embedded in the typical market CDS spread reflects the expectation of recovery on a senior unsecured bond. Derivative receivables are not deliverable into the CDS contract and they are likely to have a different recovery rate which is often higher. There are a number of reasons for this including:

- Qualitative differences between bilateral contracts and public market securities.
- Documentation, structural differences and bilateral negotiations often based on a broad banking relationship.

Both internal evidence and statistical rating agency studies support an LGD ratio of bilateral contracts to bonds in the range of 0.38-0.84 (Table A). JPM embeds this LGD difference in a parameter known as Alpha which is applied on a counterparty by counterparty basis in the pricing and risk management of CVA.

2. Market Based Assessment of CVA

Fair Value and Basel III require the LGD used in the assessment of CVA to be based on market observations, rather than an internal assessment. More specifically, FAS 157 defines Fair Value as follows.

“The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”

Basel III defines the LGD used to assess the CVA risk capital charge as follows:

“LGDMKT is the loss given default of the counterparty and should be based on the spread of a market instrument of the counterparty (or where a counterparty instrument is not available, based on the proxy spread that is appropriate based on the rating, industry and region of the counterparty). It should be noted that this LGDMKT, which inputs into the calculation of the CVA risk capital charge, is different from the LGD that is determined for the IRB and CCR default risk charge, as this LGDMKT is a market assessment rather than an internal estimate.”

The unobservable derivative LGDs can be estimated using all relevant empirical data including, but not limited to, the derivative recovery rates realised in the past.

LGDs are used two ways in the calculation of CVA: first to back out obligor default probabilities from market credit spreads, and second to calculate expected loss (CVA) using those default probabilities applied to the estimated derivative counterparty LGD. It is the latter application that is the subject of this review as illustrated below.

$$CVA \equiv P(\text{Default}) \cdot EPE \cdot LGD \cdot \text{Duration}, \text{ where}$$

- $P(\text{Default}) \equiv CDS \text{ Spreads} \div (1 - RR_{CDS})$
- $LGD \equiv \text{Loss Given Default} \equiv (1 - RR_{\text{derivative}})$

3. Derivative Recovery Rates

Market based derivative LGDs are generally unobservable and it is necessary to look to other indications in the market as a proxy. The most widely available information on loss given default that can be observed directly is from the CDS market. However, the levels observed on a typical CDS represent the market's view of recovery on the senior unsecured bond of the entity referenced in the CDS contract, whereas derivatives often recover at a higher level. The higher recovery on derivatives is primarily attributable to:

- a) the bilateral nature of a derivative allowing for renegotiation directly with the counterparty
- b) the seniority it receives in those instances where a secured lending agreement is in place
- c) the option to closeout, collateralize, or assign prior to default under certain circumstances
- d) structural advantages as the derivative counterparty is typically an operating company
- e) the treatment of a derivative similar to a trade claim under certain circumstances
- f) the right of offset against other assets held by the bank

Each of these attributes represents an advantage the counterparty to a derivative may have over a bondholder, and often results in higher levels of recovery. These are discussed in detail below.

a) The Bilateral Nature of a Derivative

Derivatives are bilateral contracts that can be renegotiated directly with the counterparty and often have collateral agreements in place. This compares to a bond which is a multilateral contract that requires the majority of bondholders to agree to a change in terms, and as a result the renegotiation of a bond indenture is often done through a bankruptcy proceeding. In addition, unsecured bonds do not have collateral agreements and as a result the entire principal typically remains unsecured throughout the life of the security.

Prior to bankruptcy, the bank has more "bargaining power" on its derivative contracts than a bondholder, and can improve its position. This provides the bank an opportunity to take action as the credit is deteriorating such as calling for collateral or renegotiating the terms of the derivative contract. In those instances where a collateral agreement is already in place, a missed payment on a collateral call could be an early indication of credit deterioration providing the bank an opportunity to closeout the derivative or take other action in advance of a default.

Example - Closeout of an emerging markets corporate in 2009. The derivative was initially unsecured and when the Company ran into liquidity challenges, JPM negotiated converting the unsecured derivatives (\$63mm MTM) into two loans. The first loan of \$20mm was fully cash collateralized and the second in the amount of approximately \$43mm was unsecured. The Company refinanced approximately \$23b of total debt and in the

process JPM was paid approximately 50% of its converted loans. The unsecured claims received various recoveries based upon their position in the organizational structure.

b) Security Available to a Derivative

A standalone derivative transaction is typically pari passu with the senior unsecured bond holder. However, if JPM has a secured lending relationship with the counterparty, then the derivative is often pari with the senior secured loan. This is based on standard documentation that says the derivative is afforded the same collateral as the secured debt obligation.

In many instances, JPM has a secured lending relationship with clients that it transacts derivatives with placing those derivatives in a preferential position over the issuer's unsecured bond on default of the counterparty. In these cases, the expected recovery on the derivative claim will be consistent with that of a secured loan, and higher than the recovery that might be expected on the issuer's unsecured bond or CDS.

Example - European corporate: Standstill agreement on super senior swaps in 2010. The swaps enjoyed super-senior status both in right of payment (ranking pari with the RCF and Senior Secured Bonds and ahead of the Senior Unsecured Bonds) and following enforcement (in which case the RCF and IRS ranked ahead of all other debt). The second restructuring of the Company balance sheet closed in December 2010, by way of a pre-pack sale of the operating assets to the senior secured bondholders. The RCF and hedge providers (including JPM with \$30mm MTM) received full repayment, the senior secured notes were completely equitized and recovery on senior unsecured notes was zero.

c) Option to Closeout, Collateralize, or Assign Prior to Default

Under certain circumstances, such as a ratings trigger, JPM has the option to closeout a derivative prior to default of the counterparty. This provides the bank with the ability to recover at significantly higher levels than the bondholder as the closeout of a derivative requires any debt under the contract to become immediately due and payable. A ratings trigger also typically provides JPM the option of calling for collateral or assigning the derivative to a counterparty willing to take on the credit risk.

Example - European entity: In 2012 JPM was able to assign with no discount 74% (\$167mm MTM) of its Company-facing derivatives portfolio to a government owned bank ahead of the Company's default. Subsequently, upon the Company's default, the remainder of the portfolio (\$59mm MTM) was restructured into loans guaranteed by an AAA government-sponsored institution. Final recovery rate ended at 103%.

d) Structural Advantages of a Derivative

Derivatives are typically transacted with an operating company, whereas in many instances bonds are issued out of the parent or holding Company. In these cases the derivative has a structural advantage over the bond holder in the event of default as the operating company is often better capitalized as that is typically the entity where most assets of the organization reside.

Example - US mid-market corporate in 2009: Pre-Chapter 7 event. Swaps and loans were secured. When swap (\$150k MTM) was terminated the amount owed was rolled into the existing line of credit with the parent. JPM foreclosed on their assets and sold in a private sale for 58% recovery. Company filed Chapter 7 after asset sale and recovery for senior unsecured claims was close to zero.

e) Derivatives Treated Similar to Trade Claims

A derivative may be treated similar to a trade claim in those instances where it is necessary for the derivative to remain in place even after default so that the company can continue as a going concern. An example of this might be a derivative contract to supply power to a utility. In these cases the derivative is likely to receive preferential treatment and recover higher than the unsecured bond.

f) The Right of Offset

The right of offset would typically be afforded to a bi-lateral receivable such as a loan or derivative, and not likely to be available to a multi-lateral security such as a bond. Pursuit of the right of offset leads to better net recoveries, especially where the banking relationship is extensive.

4. The use of Alpha

As previously noted, derivatives often recover at levels higher than bonds. However, derivative LGDs are unobservable whereas Bond LGDs as observed in the CDS market are more widely available. In that regard, a factor known as Alpha is derived and is applied in the following way.

$$\text{Derivative LGD} = \text{Alpha} \times \text{CDS LGD},$$

where Alpha represents the LGD within a bilateral relationship, such as a derivative or a bank loan, relative to the LGD of a public market security, such as a bond.

The use of Alpha is an attempt to proxy the derivative LGD using market based CDS LGDs as the benchmark. An Alpha of 0.76 means the derivative LGD is expected to be 76% of the Bond LGD.

Assuming a senior unsecured bond recovery rate of 40% (typical) and an Alpha of 0.76 (also typical), the counterparty recovery rate used in assessing a majority of the CVA will be 54% as follows.

$$\begin{aligned} \text{Derivative Counterparty Recovery Rate} &= 1 - (\text{Alpha} * (1 - \text{CDS RR})) \\ 54\% &= (1 - (0.76 * (1 - 0.40))) \end{aligned}$$

There are more than 25,000 counterparties in the portfolio, whereas only a few hundred CDS actively trade in the market. As such, the method for calculating Alpha will vary depending on the liquidity of the counterparty, and in some instances depending on the segment (corporates, municipals, sovereigns, SPVs and so forth). In general, Alphas are assigned to derivative counterparties in the following manner:

- a) Illiquid names marked off generic credit spread grids are similarly marked to a grid based Alpha
- b) Liquid names are typically marked to an Alpha of 0.76
- c) Munis are largely marked to an Alpha greater than 1
- d) For distressed counterparties CVA is based on specific analysis of the expected recovery
- e) SPVs are in some cases marked at extremely low Alphas

Each of these is discussed in more detail below.

a) Illiquid Counterparties: Grid Based Alpha

Most derivative counterparties are illiquid meaning they do not have actively traded CDS from which to observe a credit spread or recovery rate. As such, credit spreads for these names are derived from generic grids based on the rating, maturity, and sector of the counterparty. In a similar fashion, the Alpha assigned to these illiquid names is also based on a grid derived from the derivative facility LGD and generic CDS LGD for each counterparty (see table 1 in the appendix). The X and Y axis of the grid reference a range of derivative and CDS LGDs recognizing the imprecision involved in arriving at a market based estimate of the derivative counterparty recovery rate for highly illiquid names. The Alphas in the grid generally result from applying the Alpha formula (Facility LGD/CDS LGD) to the mid-point of each range.

b) Liquid Counterparties: 0.76 Alpha

For liquid names the market price of credit risk is reflected in credit spreads which incorporate the probability of default and loss given default. However, the market does not actively think about recovery until a name becomes distressed and recovery rates take on more significance. Until that point, most recovery rates observed in the CDS market represent generic levels, including those observed on liquid CDS. Recovery rate swaps provide a direct observation into the market’s view of recovery; however, this is a nascent market and more liquid observable recovery rate swaps are often only traded on distressed names. In determining levels of Alpha we can make use of empirical evidence. Table A summarizes the Alpha implied in recent recovery rate studies, both internal and external (further details provided in Appendix Tables 3-5).

Table A: Summary of Recovery Rate Studies

Source	Avg JPM RR	Avg Unsecured RR	Avg JPM LGD	Avg Unsecured LGD	Implied Alpha
JPM IB Historical Experience	61%	36%	39%	64%	0.61
Source	Unsecured Loan RR	Unsecured Bond RR	Unsecured Loan LGD	Unsecured Bond LGD	Implied Alpha
Moody's 2012 Default Study Post Default Trading	47%	37%	53%	63%	0.84
Moody's 2012 Default Study Ultimate Recoveries	80%	49%	20%	52%	0.38

JPM IB Historical Experience: An Internal review⁵² covering 156 JPM client derivatives that defaulted from Jan 2008- Mar 2011 shows how JPM IB realised an average LGD of 39% compared to 64% average for the other unsecured creditors. This suggests an overall Alpha of 0.59. Furthermore JPM’s realized recovery rate of 61% is higher than the standard market recovery assumption of 40%.

Moody’s 2012 Default Study: We have also derived the relationship based on the Moody’s study⁵³ of issuer weighted recovery rates between 1982 and 2011 for both post-default trading prices and ultimate recoveries. With respect to unsecured debt we derive an Alpha of 0.84 in post default trading and 0.38 based on the ultimate recovery.

c) U.S. Munis: Alpha > 1

⁵² Defaulted Derivatives Recovery rate / Project Alpha dated December 2011 (Tables 5 and 6).

⁵³ Moody’s ‘Corporate Default and Recovery Rates’ study dated March, 2012 (Table 3).

While Alpha is typically used to adjust the bond recovery rate up to reflect the market derived LGD on a derivative, in some instances it is used to adjust the recovery rate down. An example of this is U.S. Municipal counterparties where in most cases JPM would be subordinated upon termination. To account for the subordination an Alpha of approximately 1.85 is applied to the 75% recovery rate observed on the Muni CDS Index thereby adjusting it down to a derivative counterparty recovery rate of 40%. Hedge funds are also generally marked at an Alpha approaching 2 on the basis that the recovery rate is likely to be very low on any uncollateralized hedge fund exposure at the time of default.

d) Distressed Counterparties: n/a

For distressed counterparties Alpha is not utilized as the LGD is established based on an analysis of the expected recovery on the derivative for a particular name.

e) SPV's: Very low Alphas

In some cases the Alpha is set at an extremely low level thereby resulting in a derivative counterparty recovery rate that is approaching 100%. This is largely applicable to SPVs where the derivative has the most senior claim on assets in the vehicle.

5. JPM Recovery Experience on Derivative Defaults

The premise that derivatives typically recover at levels higher than the senior unsecured bond is illustrated through an analysis of JPM derivative defaults that occurred through the credit crisis. In reviewing JPM's experience with derivative defaults we find the following:

- Since 2008, 156 derivative defaults have occurred in the IB with an average recovery of 61% compared to 36% on the senior unsecured. Section 4b of this document explains the different recovery rates obtained within the IB and Non-IB (Commercial Banking, Private Wealth, Retail and Business Banking).
- The substantially higher recovery observed on derivative defaults throughout this period can be directly attributed to the advantages a derivative counterparty has over a bondholder (outlined in sections 3a – 3f).
- JPM Special Credits Group has conducted a detailed analysis on defaulted derivatives recovery at the end of 2011 that details the firm's experience with recoveries on IB and non-IB defaults.

To further illustrate the point that the Alpha results in CVA that is adequate, an analysis was performed on a) the variability of CVA relative to the market, and b) JPM realized loss experience on derivative defaults relative to the outstanding derivative receivable and CVA balance (see Table 2 in the appendix). The analysis suggests the following:

The CVA balance was extremely volatile during the credit crisis, increasing several fold from peak to trough, consistent with the movement in the market as reflected in the increase observed on several credit indices over the same period.

- Between June 2007 (credit peak) and November 2008 (credit trough), the CVA balance increased 1,375% (from \$548mm to \$8.1bn) as compared to the average 500% increase in spreads observed on the CDX IG and ITraxx Main indices.

- The CVA balance subsequently declined between November 2008 and March 2011 by 53% (from \$8.1bln to \$3.8bln) as compared to the similar decrease in spreads observed on the same indices.
- Realized losses as a percentage of the outstanding derivative receivable (also known as the charge off ratio) was less than 1% in any given year.

Appendix

Table 1

Alpha Grd				
CDS RR	CDS RR < 30%	30% < CDS RR < 70%	CDS RR ≥ 70%	
LGD ≤ 10%	0.05	0.05	0.50	
15% ≤ LGD ≤ 20%	0.20	0.30	1.00	
25% ≤ LGD ≤ 30%	0.40	0.50	1.25	
35% < LGD < 50%	0.50	0.76	1.85	
55% ≤ LGD < 70%	0.76	1.00	2.50	
75% ≤ LGD ≤ 90%	1.00	1.30	3.50	
LGD > 90%	1.30	1.65	4.00	

Table 2

JPM Derivative Charge-Offs (\$ in mm)				
Period	Derivative Receivable (Net of Collateral)	Derivative Write-Down (gain)/loss	Charge-Off Ratio	
Feb YTD 2011	58,118	0.23	0.00%	
FY 2010	63,995	160	-0.25%	
FY 2009	64,691	615	-0.95%	
FY 2008	142,811	726	-0.51%	
FY 2007	67,312	11	-0.02%	
FY 2006	49,009	-38	-0.08%	
FY 2005	43,787	11	-0.02%	

Table 3

Exhibit 8 - Average Corporate Debt Recovery Rates Measured by Post-Default Trading Prices								
Lien Position	Issuer-weighted				Volume-weighted			
	2011	2010	1982-2011	20112	20103	1982-20114		
1st Lien Bank Loan	70.9%	70.9%	66.0%		77.8%	72.3%		59.9%
2nd Lien Bank Loan*	66.2%	18.1%	29.7%		66.2%	18.1%		28.1%
Sr. Unsecured Bank Loan	23.1%	n.a.	47.1%		43.0%	n.a.		40.2%
Sr. Secured Bond	64.1%	62.5%	51.5%		57.8%	54.7%		50.3%
Sr. Unsecured Bond	40.4%	49.5%	36.8%		56.1%	63.8%		37.8%
Sr. Subordinated Bond	36.7%	37.5%	30.9%		31.5%	42.8%		25.6%
Subordinated Bond	35.4%	33.7%	31.5%		35.2%	32.2%		25.3%
Jr. Subordinated Bond	n.a.	n.a.	24.7%		n.a.	n.a.		17.1%

*The recovery rates for 2011's second lien and unsecured bank loans were based on one and two observations, respectively

Source: Moody's Default Study 2012

Table 4

Exhibit 9 - Average Corporate Debt Recovery Rates Measured by Ultimate Recoveries: 1987-2011								
Lien Position	Emergence Year				Default Year			
	2011	2010	1987-2011		2011	2010	1987-2011	
Loans	68.4%	79.7%	80.3%		81.1%	75.8%		80.3%
Sr. Secured Bonds	43.3%	65.1%	63.7%		43.3%	62.6%		63.7%
Sr. Unsecured Bonds*	4.8%	44.2%	48.5%		3.1%	67.0%		48.5%
Subordinated Bonds**	24.1%	22.5%	28.7%		24.1%	21.4%		28.7%

*The recovery rates for 2011's senior unsecured bonds were based on three defaults.

**Includes senior subordinated, and junior subordinated bonds

Source: Moody's Default Study 2012

Table 5

IB vs Non-IB Comparison (\$ in mm)							
LOB	Occurrences	Occurrences converted to loan	Average JPM recovery	Average Unsecured recovery	Sum of JPM MtM claims	Average JPM MIM claims	MIM
JPM Derivative Recoveries	66	11	61%	36%	\$ 6.907	\$ 104	

Source: Defaulted Derivatives Recoveries / Project Alpha - December 2011 (recovery weighted to total claim)