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August 31, 2010

Jennifer J. Johnson  
Secretary  
Board of Governors of the Federal Reserve System  
20th Street and Constitution Avenue, NW  
Washington, DC 20551

**Re: Docket No. R-1391**

To Whom It May Concern:

Dear Sir/Madam,

We submit the following in response to your advanced notice of proposed rulemaking (ANPR) in respect of the Agencies' (i.e., FDIC, FRS, OCC and OTS) delicate deliberations into alternatives to credit ratings in determining risk-based capital guidelines.

As Directors of PF2 Securities, which consults on structured finance securities including corporate and TruPS CDOs, we are keenly aware of several of the challenges you face in constructing the ideal regulatory capital allocation system. As former rating agency analysts, we appreciate and are familiar with the various limitations that accompany the application of a risk-based or ratings-based system.

Our comments, thus, will be limited to those supported by our direct experience with credit risk and other types of risk that are prevalent in the realm of structured finance. We have also added as an addendum to this submission a list of referential pieces that we have published that relate to the topics of rating agency reform or ratings alternatives.

We recognize the serious nature of your task and hope that you will not hesitate to contact us should you value further communication.

Sincerely,

Guillaume Fillebeen and Gene Phillips



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## Principles-based Credit-worthiness Standards (Question 1)

We wholeheartedly endorse your interest in formulating credit-worthiness standards that center on transparency and accuracy. We would propose to add only the following nuances to the set of governing principles you have put forth:

- (a) **“Ratability”**: If the Agencies are to rely on an external rating provider, we would recommend that each rating relied upon be accompanied by a signed letter that states that the provider believes the rated security is inherently “ratable” and that the provider has the systems in place to rate and monitor<sup>1</sup> the rating of the security. The ratability condition should, in turn, be fulfilled in two parts:
- **Supportability**: Not only should the assumptions used be transparent (e.g., “a default rate of 3% was assumed”) but they should be supportable (e.g., “a default rate of 3% was assumed based on...”). The necessity to support each assumption made encourages the assessor to perform an additional level of due diligence before providing each assumption; and from a liability perspective it advantageously serves to heighten the likelihood that the assessor will revisit her assessment immediately a material change occurs in respect of the information or data supporting any assumption.<sup>2</sup> Last, the need to support assumptions serves as a material impediment to rating agencies massaging data or creating “magic numbers” to inflate their ratings.
  - **Predictive Content**: For a rating to be reliable and meaningful, it ought to hold some predictive content. Irrespective of the quality of a ratings model itself, the threshold to meet could be this: is there reason to believe that the outputs of the model adequately capture reality? For example, to the extent the accuracy of a rating depends on numerous assumptions — which are perhaps based on sparse, incomplete or unreliable data — and whose inter-dependencies themselves are imperfectly understood, we would consider the rating to hold little predictive content as the outputs of the model are as likely to hold true as they are to be false. This is not identical to the “monkey-throws-dart” problem, but essentially the test is whether the rater is sufficiently well positioned to make quantitative estimates as to future reality to command the fee charged for its service.

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<sup>1</sup> For the avoidance of doubt, this should include the ability to automatically adjust the ratings of financial securities whose ratings are directly or indirectly linked to the rating of alternative securities or companies, such as monoline insurers. If or when a linked security is acted upon, this should trigger an automatic investigation into, or action on, the original security.

<sup>2</sup> One of the key failures of the current financial downturn could have been mitigated had the rating agencies updated their assumptions, like correlation, as the market environment changed. Without having explicitly specified the source of their correlation assumptions, market participants were ill-positioned to question their continued application. Furthermore, absent the need to support their assumptions (and absent any liability for being wrong) rating agencies were incentivized to guess at appropriate assumptions and were not pressured to disclose if or when they were guessing. (E.g., “My understanding was that the correlation assumptions were educated guesses derived from discussions with analysts in these various securitization areas. Little data was available so little data was used.” – <http://www.fcic.gov/hearings/pdfs/2010-0602-Witt.pdf>).



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- (b) We feel that a credit analysis system should not only be applied to fostering prudent risk management, but also to encouraging thoughtful lending practices and prudent risk taking. This comment is instructive insofar as it protects against overly conservative risk-based capital allocations that would disincentive banks to lend to any other than the highest-rated counterparties. An effective capital reserve system would thus allow for and encourage prudent middle market lending. We will develop this theme throughout the remainder of this submission.

### **Risk Weights Based on Exposure Category – Alternative Approaches (Question 2)**

There are a number of routes to applying different weights to different asset classes. We are not convinced that the asset class-specific risk weighting approach is the optimal approach, but we recognize it to be a likely approach taken.

To the extent the decided-upon approach relies on differentiating between asset classes, we would encourage the performance of a study that examines the historical consistency (and reliability) of ratings in different asset classes. We anticipate that such a study will show that it is for the more complex assets that the ratings prove least meaningful — that is to say least predictive of actual performance both from an upgrade and downgrade perspective.

Conceptually, the more complex or complicated the ratings analysis, the more numerous the assumptions required and the greater the likelihood for error. Thus if an asset class-specific risk weighting were decided upon, we would recommend basing this analysis on the complexity of the rating class, to protect against the heightened uncertainty that comes with complexity.

One avenue to measuring the complexity of a securitized (or re-securitized) product is to consider the number of levels of credit intermediation that are occurring.<sup>3</sup> Briefly speaking, each credit transformation that occurs — e.g., liquidity, maturity, credit — brings with it an additional level of complexity, or risk. Further, assets that have undergone several transformations might be most susceptible to market shocks: in a stressed environment, long-term, illiquid assets will likely suffer greater market value losses than short-term liquid alternatives.

### **Consistent and Transparent Implementation (Questions 1, 3, 4, 5)**

We encourage the implementation of a solution that provides for the uniform treatment of the same asset across all banks. We generally feel that if each bank is allowed to approach a different rating

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<sup>3</sup> For further reference on the transformation process, visit Pozsar et al. "Shadow Banking," Federal Reserve Bank of New York Staff Report no. 458, July 2010.



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agency (or service provider) for each asset or asset class, each bank would be incentivized to approach the rating agency that provides the most optimistic rating, thereby allowing the bank to maximize its leverage while posting minimal collateral reserves. So-called “ratings shopping” runs counter to the principle advanced in part III.(a) of the ANPR -- to “[m]inimize opportunities for regulatory capital arbitrage.”

Banks ought to obtain from a central location all information pertaining to the risk, valuation and reserves required for each security. The central source might be internal or external, and comprise a single provider’s opinion or a combination of the opinions of several providers. From a cost and burden perspective, the economies of scale provided for by this function will save banks each having to conduct its own analysis internally or via a third party provider.

Note that we do not contend that each bank need reserve the identical amount of capital against its assets, but that each banks’ assets should be treated equally. For example, to the extent that two banks buy the same security on a different date at a different price, it may be practical to allow each bank to hold capital reserves against the same security in an order of magnitude that is proportional to its asset’s cost (or amortized cost) basis.

#### **Other Methods for Assessing Risk-based Capital for Corporate Exposures (Question 6)**

One alternative worthy of consideration is to require that banks reserve capital on a portfolio-level basis, rather than asset-by-asset. In this way, capital charges can be applied on an overall basis based on the net attributes (such as yield, quality) of the banks’ portfolio.

The first advantage of this approach would be to encourage prudent risk-taking. Banks which would previously have been deterred — by exponentially higher risk-weights<sup>4</sup> — from investing in any other than the highest-rated securities, might be encouraged to consider selective lower quality, higher yielding assets.

The precedent for this type of management would be the cash-flow collateralized bond obligation (CBO) or collateralized loan obligation (CLO) security.<sup>5</sup> CLOs are managed portfolio of loans whose investment restrictions differ from deal to deal. They are managed according to certain portfolio-level guidelines (weighted average spread, weighted average life, etc.) and certain asset level restrictions. In a similar fashion, one could examine banks’ portfolios and ensure they maintain, at all times, a certain overcollateralization level that might reflect the reserves as a function of the quality of their investments or the risk they’re taking (as determined by, for example, spread over LIBOR or T-bill, or yield).

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<sup>4</sup> See for example <http://www.bis.org/publ/bcbs107b.pdf#page=4>

<sup>5</sup> While they may technically be CDOs, their performance throughout the crisis differed vastly from that of asset-backed CDOs, which are often termed “toxic assets.”



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The second advantage of this approach is its simplicity, which affects the Agencies' cost and burden considerations. In this approach, reserves will essentially be held against all risk — not purely against credit risk. The bifurcation or disaggregation of risk into its credit and non-credit components — as adopted by existing accounting principles<sup>6</sup> — is a complex, expensive and controversial operation which allows for various accounting maneuverability at the expense of consistency and “arbitrage-ability.”

### Usage of Third Party Providers, Alternative Systems (Questions 2, 9)

As a third party provider ourselves, we will stave off any commentary on how they can be employed to the Agencies' advantage. Our comments here are focused solely on how the Agencies can develop an internal system (which may in the short-term be contributed to, or supplemented by, external providers) to allow for an improved appreciation and regulation of the assets their constituents are purchasing. Again, we limit our comments to the securitization structures with which we are most familiar.

The advantages of implementing a uniform, cross-asset class system are manifold:

- (1) Cost and Burden (Economies of Scale): The Agencies' (field) examiners will no longer be tasked with understanding (and/or mitigating against) the several intricate risks inherent in each of the supervised banks' various investments. This task can be performed once on the regulatory level.
- (2) Consistency and Reliability: Similarly, each examiner will be spared the arduous task of familiarizing herself with each internal or external (e.g. pricing vendor's) evaluation technique for, or scrutinizing the assumptions applied to, each bond in each asset class. Again, these tasks can be achieved once on the regulatory level, and passed on to each bank examiner. The dual advantages of cross-bank asset pricing and risk measurement consistency and reliability are in our opinions a primary motivation for proposing the development of such a system.

The system, if it were to encompass the features that we consider optimal, would enable both (1) data-model interdependency and (2) model-to-model interconnectivity throughout the banking system and shadow banking system. We have separated our discussion of these features into two parts, followed by an example.

#### **Part 1: Collateral Data (collection, verification, &c.)**

Collateral data ought to be comprehensive, usable and accurate. If the data supporting a deal is effectively scrubbed once, various economies of scale are created, and the necessity decreased for examiner scrutiny into the appropriateness of the data being used and applied in each security

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<sup>6</sup> Refer, for example, to FASB Statements No. 115-a and EITF 99-20.



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evaluation. Further, the data can be improved and added to in a more economic and scalable manner if performed by a single party, rather than by each market participant.

In sum:

- (1) Data can be cleaned and verified (for both accuracy and completeness);
- (2) Additional data fields can be added to complement the existing data fields, so that any subsequent analysis will be better informed and more closely aligned with the assets being described;<sup>7</sup>
- (3) One crucial concern is that the data scrubbers – whether an analysis is being performed inside the regulated bank or externally – are often middle-office or back-office professionals with no upside or incentive for being accurate, and little ability or expertise to verify accuracy. Performing this function once, centrally, thus minimizes data and model risk.

## **Part 2: Collateral Data-to-Model Parsing**

Any model may rely on collateral assumptions being made (e.g., prepayment curve, default rate, recovery rate) on the collateral-level, bucket-level (a.k.a. “rep lines” or stratification) or a mixture of the two.

Connecting the collateral data and model inputs to the liability model (a.k.a. “waterfall”) enhances the user’s capacity for measuring portfolio-level risk: to the extent the regulator has additional information or any particular concern, it can over-write inputs either on the loan-level<sup>8</sup> or an industry or sector or geographical level.<sup>9</sup>

The ultimate engine, to be most effective, ought to accept global assumptions (so that the same loan will consistently default at the same rate in whichever portfolio it resides) and allow for line-item over-writes.

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<sup>7</sup> For example, the typical collateralized loan obligation (CLO) deal will carry approximately 250 underlying loans. It is (almost) prohibitively expensive to analyze each individual loan separately; but if the necessary data is provided for each loan or borrower, one can make a more appropriate model-driven estimate as to an appropriate loss-given-default (LGD) that might be realistic for that loan and or similar loans. Thus, if the only data you have pertains to the name of the borrower, the interest rate on the loan and the maturity of the loan, you’re limited to applying a corporate loan recovery rate. If you happen to know more information about the loan or the borrower (e.g., loan covenants, borrower’s capital structure) you will be equipped to make a better-informed estimate as to recovery upon default.

<sup>8</sup> This would prove useful if you wanted, for example, to test or estimate the affect on all TruPS CDOS of, say IndyMac’s default, which is particularly concerning given the large exposures TruPS CDOs held to this single issuer. The overall utility of allowing a bank to prepay their preferred securities (at par or at a discount) can be similarly examined.

<sup>9</sup> See comment above. This would be useful if a regulator wanted to express its opinion of increased risk within one or more particular industries / sectors / regions (e.g. technology or real estate), and test the effect on a deal or a portfolio of deals.



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### Example

This simplified example (we hope adequately) describes the over-write capabilities that might be befitting a portfolio of loans, bonds and preferred securities that may reside, say, in a CLO:

TURN OFF ALL BUCKET-LEVEL ASSUMPTIONS?		YES/NO							
BUCKET-LEVEL ASSUMPTIONS		N							
Asset Type	Sub Type	Status	Balance	Default Rate	CDR/SDR	Prepayment	Recovery	Lag (months)	
Corporate Loan	1st Lien	Performing	\$20,075,313.90	6%	CDR	12%	70%	6	
Corporate Loan	2nd Lien	Performing	\$571,428.60	6%	CDR	15%	40%	6	
Corporate Loan	2nd Lien	Defaulted	\$20,000,000.00	100%	SDR	0%	38%	3	
Corporate Bond	SS	Performing	\$1,142,857.10	6%	SDR	5%	38%	6	
Corporate Bond	SU	Performing	\$18,358,895.70	6%	SDR	5%	15%	6	
Corporate Bond	SUB	Performing	\$9,923,857.90	WA	SDR	5%	10%	6	
Preferred Securities	Bank	Performing	\$150,000	15%	SDR	3%	3%	6	
Preferred Securities	Bank	Deferring	\$100,000	15%	SDR	3%	3%	5	
Preferred Securities	Bank	Defaulted	\$250,000	100%	CDR	0%	3%	3	
Structured Finance		Performing	\$30,000,000.00	10%	SDR	5%	5%	0	
Equity		Performing	\$19,066,666.70	100%	CDR	0%	0%	0	

APPLY ASSET-LEVEL ASSUMPTIONS?		YES/NO							
OVERWRITE ALL SECURITIES?		N							
ASSET-LEVEL OVER-WRITES									
Asset Name	Over-write	Asset Type	Sub Type	Status	Default Rate	CDR/SDR	Prepayment	Recovery	Lag (months)
Royalty Pharma Finance Trust	Y	Corporate Loan	1st Lien	Performing	6%	CDR	10%	70%	0
Fresenius Medical Care Holdings	N	Corporate Loan	1st Lien	Performing	Auto-fill	Auto-fill	Auto-fill	Auto-fill	Auto-fill
Capital Automotive	N	Corporate Loan	1st Lien	Defaulted	Auto-fill	Auto-fill	Auto-fill	Auto-fill	Auto-fill
Fresenius Medical Care Holdings	Y	Corporate Loan	2nd Lien	Performing	6%	SDR	5%	38%	0
URS Corporation	Y	Corporate Loan	1st Lien	Performing	6%	SDR	15%	15%	0
Affiliated Computer Services Inc	Y	Corporate Loan	1st Lien	Performing	6%	SDR	10%	10%	12
MGM Mirage Inc	Y	Corporate Bond	SU	Performing	15%	SDR	0%	3%	0
PGS Finance Inc	N	Corporate Loan	1st Lien	Deferring	Auto-fill	Auto-fill	Auto-fill	Auto-fill	Auto-fill
Chart Industries Inc	Y	Corporate Loan	1st Lien	Defaulted	15%	SDR	3%	3%	3
NSG Holdings LLC	Y	Corporate Loan	2nd Lien	Performing	10%	SDR	5%	5%	0

There is a subtle advantage if all data and analytical capabilities are maintained in a central location: one can uniformly implement and test the risks associated with any number of macroeconomic curve changes, such as a change in the LIBOR curve or geographic prepayment curve.

**Example:** It is important to recognize that the performance of a typical **funded** CDO is not a “zero-sum game:” an increased risk to the deal almost always hurts all investors. If all data and analytics reside in the same location, one can measure the overall effect of any curve changes on all deals simultaneously, and output an overall “net change” across whatever subset of the portfolio you wish to test.<sup>10</sup> The upside from a price perspective in one deal may offset the downside in another deal, and perhaps you might only care for the net effect.

Knowledge of the identity of the ultimate (or real-money) investor or investor category in each security then serves to enhance the power behind this feature. For example, imagine being able to examine a

<sup>10</sup> For example, one may wish to perform such an analysis for a certain stressed bank’s portfolio.



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SIV's direct exposure to LIBOR changes, or a region's exposure to prepayment speeds on mortgage loans? It seems to be useful if one were able to manage risk by identifying particular susceptibilities all the way through the shadow banking system. Perhaps one could ultimately conclude something as powerful as "due to having been sold the mezzanine debt of security type X by Florida broker-deal Z, Florida banks seem to be increasingly susceptible to LIBOR curve shifts of n basis points in conjunction with prepayment speed decreases of m%.

The third appealing feature is the reduction of modeling error by minimizing the "default timing disconnectedness" effect. Suppose you wanted to test the performance of a CDO backed by certain residential mortgage-backed securities (a CDO of RMBS, i.e., an "ABS CDO") under a matrix of varying home price appreciation assumptions and varying subprime and prime loss rate projections on the underlying mortgage loans that ultimately support the structure. If you were to model each RMBS separately, and run each model, you would be able to generate the "principal losses" on each RMBS tranche. If you were then separately to test the CDO's sturdiness to these ultimate mortgage loan losses, you would have to fit a default or loss curve (some form of "S" distribution, most likely) that distributes the defaults (losses) over time to the CDO in question.

This curve fitting leads to unnecessary errors, and need not be made: you could alternatively flow the proceeds directly through the RMBS tranches into the CDO in one effort, thereby mitigating against the risk that your loss distribution curve estimate was flawed. This has a leveraged effect as you move from one transaction to the next.

The optimal or ideal model would, in our opinion, generate – and maintain – projected cashflows (separated by interest and principal) for each securitized asset or asset class over time. Any updated assumptions would then be implemented globally and "refresh" all projections on all assets or asset classes.





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## Addendum — Resources

### Related Publications (available at <http://pf2se.com/Resources.asp?id=1>)

February 1, 2010: [\*Economies of \(Ratings\) Scales Part 1\*](#)

January 22, 2010: [\*A Centralized Solution\*](#)

January 8, 2010: [\*"Gaming" the Ratings System, or the Observer Effect\*](#)

September 14, 2009: [\*Special Report: First Steps Toward Real Rating Agency Reform\*](#)

### Related Blog Postings

RatingsReform: [www.ratingsreform.wordpress.com](http://www.ratingsreform.wordpress.com)

Expect[ed] Loss: <http://expectedloss.blogspot.com/search/label/Rating%20Agency%20Reform>