An Analysis of the Treatment of Asset Securitization under the Proposed Basel II Accord and the U.S. Banking Agencies' Advance Notice of Proposed Rulemaking (ANPR)

Master of Arts in Law and Diplomacy Thesis

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"Financial futurologists—mostly resident at universities, consulting firms and think-tanks—believe almost universally that securitization will defeat intermediation as surely as capitalism triumphed over communism… If securitization goes far enough, banks will become little more than managers of mutual funds holding portfolios of liquid securities. Like mutual funds they would mark their assets to their market values."

- *The Economist* (1992)[1]

"This is an historic opportunity for regulators and market participants to get things right for securitization and it should not be spurned or rushed."

- European Securitisation Forum (2003)[2]

I. Overview

International capital standards are a critical component to the successful functioning of today's global financial system. In recognition of this fact, efforts by the Bank for International Settlements (also known as the "Basel Committee") and regulators in various countries have sought to promote such success by developing and refining such standards. Since the late 1980s the Basel Capital Accord ("Basel I") has been in effect, and negotiations are currently underway for an enhanced accord ("Basel II").

Basel II seeks to take account of the changes in today's global financial environment in terms of new participants and new forms of financial innovation. One such innovation that has experienced significant growth especially since the inception of Basel I is asset securitization. The securitization process, which is discussed in depth below, has the capacity to significantly reduce an entity's overall risk profile and subsequently its capital holding requirement. As a result, banks that engage in securitization are likely to have lower capital ratios than banks with no securitization activities. In turn, banks with lower capital ratios are likely to have a lower overall cost of funds, which in turn will impact the banks' profitability and consumers' access to credit. At the same time, however, there are credit and other risks of securitization that must be accounted for—but are not, under the Basel I framework—in order to reflect the actual nature of such transactions.

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[1] Quoted in Lamia Obay, Financial Innovation in the Banking Industry: The Case of Asset Securitization (2000).
[2] European Securitisation Forum, Basel Accord Executive Briefing Paper, November 20, 2003, available at http://www.europeansecuritisation.com

Growth in securitization has been experienced worldwide, but nowhere as strong as in the United States. While a more detailed comparison between today's major securitization markets is provided later in this paper, for present purposes it is sufficient to note that the United States is characterized by larger securitization market size, longer experience with securitization deals, and more developed financial technology regarding such transactions. As a result, parties engaged in securitization activities in the United States are more in tune with "what works" for (i.e., the risks and benefits of) these transactions; they also have a greater vested interest in how securitization is treated under the new capital framework, and more to lose if Basel II goes awry. Given these factors, it is hypothesized that over the course of negotiations for both the proposed Basel II and the United States' banking agencies Advanced Notice for Proposed Rulemaking ("ANPR"), parties in the European Union ("EU")—including the Basel Committee—ultimately are going to follow the United States' lead with regard to the treatment of securitization for international capital standard purposes. Benefiting from the superior knowledge base and breadth of experience with securitization in the United States, markets in Asia, Latin America and elsewhere will in turn follow the course set by the United States and the EU.

This is *not* to claim that parties in the United States are "right" about the treatment of securitization for international capital standards purposes. Indeed, there remains much work to be done in this regard; one can think of Basel II as implementing a regime as a "holdover" regime until the international banking community and regulators are ready and able to adopt an entirely internal model-based framework (what some parties have already termed "Basel III"). Rather, what is put forth in this paper is that the actions of banking regulators and other interested parties in the United States will ultimately provide a more workable and useful baseline for the treatment of securitization deals internationally, and that the Basel Committee would do well—and is anticipated—to pick up this momentum set in motion by the United States. For while the

originally-proposed Basel II ran the risk of putting the securitization industry out of business,[3] thanks to the efforts of policy makers and industry participants on both sides of the Atlantic, this is no longer the case.

To be sure, issues of competitive equity remain. These issues are present between banks in the United States and the EU, between tiers of banks within a given country, and for countries in emerging markets and regions in which securitization is still in a nascent stage of development. But in large part the progress to date is due to the publication of the ANPR and the comments received regarding both the Basel II and ANPR documents. These comments and critiques ultimately led to the Basel Committee's Proposed Changes to Basel II Regarding Asset Securitization on January 30, 2004, which puts the treatment of securitization "back on track." As will be shown, this process of negotiation, critique, and reform represents recognition by the international financial community that securitization is a good thing whose responsible use should be encouraged and facilitated. At the same time, however, it needs to be subject to a reasonable and prudent regulatory regime and *appropriate* minimum capital standards. Securitization is here to stay, and the progress made so far should not be underestimated.

This paper proceeds as follows. Part II provides an introduction to the structure, types, and benefits of securitization and explains several issues particular to such transactions. Part III compares and contrasts the history and market size of securitization markets in the United States, Europe, Asia and Latin America. The treatment of asset securitization regarding international capital requirements under Basel I, the proposed Basel II and ANPR begins in Part IV, and critiques to these proposals are presented in Parts V and VI. International regulators and policymakers' responses to these critiques follow in Part VII, and the paper concludes in Parts VIII and IX with a discussion of the anticipated timeline and recommendations going forward.

[3] American Banker Online, Oct. 21, 2003: "Basel May Change Asset-Backed Market in Europe," available at http://www.americanbanker.com

II. Introduction to Asset Securitization

a. The Structure and Types of Securitization Transactions

The basic definition of securitization is "an issuance of securities backed by specific assets." Asset securitization (or the creation of asset-backed securities ("ABS")) refers to bonds or notes backed by pools of financial assets that are originated by banks and other credit providers and which are typically characterized by predictable income flows. These bonds or notes are then sold to outside investors using the pool of the underlying assets as collateral. These sales may be either undertaken on public markets or privately placed.

The oldest and most common type of asset securitization is the mortgage-backed bond ("MBS"), although today "one can expect virtually anything that has cash flow to be a candidate for securitization."[4] In a typical ABS transaction, the first step is to identify the underlying asset pool that will serve as collateral for the securities. The assets in this pool should be relatively homogeneous with respect to credit, maturity, and interest rate risks; common examples of ABS include credit card receivables, trade receivables, and auto loans.[5] Once the asset pool is identified, the pooled assets are sold to a grantor trust or other bankruptcy-remote, special purpose financing vehicle ("SPV").[6] In choosing the appropriate legal structure (i.e., grantor trust or SPV), it is important to ensure the legal insulation of the originator of the underlying assets from the issuer of the repackaged loans. Legal insulation of the two entities is important under the "true sale" doctrine in bankruptcy and for regulatory and accounting purposes.

Ownership under the grantor trust structure is evidenced by pass-through certificates. Pass-through certificates are treated as the owners of the trust, and the holders of such certificates are entitled to a pro rata share of principal and interest payments. In other words, investors in a

[4] Marcia Myerberg, "The Use of Securitization by Investors and Issuers in International Markets," Chapter 12 in Leon Kendall and Michael Fishman, eds. A Primer on Securitization (2000).
[5] Lamia Obay, Financial Innovation in the Banking Industry: The Case of Asset Securitization (2000).
[6] *See* Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001). According to Morrison, an SPE (or special purpose vehicle, "SPV") is "an entity that is established with a limited purpose, which is generally the acquisition and financing of receivables. The entity may be a corporation, partnership, limited liability company or trust, depending on the transaction, and it is not generally authorized (under its documents of establishment) to incur liabilities or engage in business except in ways that are necessary or advisable in connection with the securitization(s) in which it is involved."

pass-through structure own interests in the pool portfolio itself, and payments out are dependent upon the principal and interest of the pool. The composition of the underlying asset pool in a grantor trust structure cannot change over time, nor can the trust reinvest any payments received from the asset pool. As a result, qualifying collateral for a grantor trust structure is generally limited to fixed mortgage pools (for MBS) or medium-term or long-term debt (for ABS).

In contrast, ownership under the SPV structure (in some cases also known as an owner trust structure) is manifest by single- or multi-tranche certificates that are subsequently issued to purchasing investors. These certificates are also known as pay-through bonds. Investors in a pay-through structure own nothing of the underlying pool per se, but rather have contractual rights to payment that may be independent of the pool's performance. One advantage of the pay-through structure is that the cash flows of the underlying collateral can be rearranged to create bonds with various maturities and different payment priorities. Therefore, given the greater flexibility in terms of structuring the securities issued, virtually any securitizable asset may qualify as underlying collateral under the SPV/owner trust structure.

The securitization process often involves several functionally distinct parties. These parties include: the loan originator or broker (typically a bank or financial intermediary); the loan purchaser (i.e., grantor trust or SPV); loan packager (i.e., underwriter of the repackaged loans); guarantor of the securitization transaction (typically an insurance company); investors who purchase the repackaged securities; and the servicing agent. Although the majority of the repackaged asset securities are sold to outside investors, the originator often retains a portion (or "tranche") of the issue as well; the retained tranche serves to protect the originator against potential losses incurred. The originator also frequently acts as the servicing agent of the securitization transaction. .

There are a variety of possible types of securitization transactions. First, perhaps most important distinction for present purposes is between traditional securitizations (e.g., ABS and MBS) and synthetic securitizations. Traditional securitizations generally involve structures in

which the cash flow from the underlying pool is used to service (typically two or more) positions with different degrees of credit risk. Payment to investors in traditional securitizations normally depend upon the performance of the specified underlying exposures, rather than being derived from an obligation of the entity that originates those exposures. Synthetic securitizations also typically involve two or more positions with different degrees of credit risk. However, in contrast to traditional securitizations, in synthetic securitizations the credit risk of the underlying pool of exposures is transferred through the use of funded or unfunded credit derivatives that serve to hedge the credit risk of the portfolio.[7] The treatment of synthetic securitizations regarding international capital requirements is not analyzed here primarily due to the stricter operational requirements for such transactions[8], the coverage of which is beyond the scope of this paper.

Second, there is a distinction between term securitizations and revolving securitizations. Term (or "self-liquidating") securitization refers to pools of receivables in which collections are periodically paid out to holders of interests in the pool rather than being reinvested in new receivables. The most common underlying assets for term securitization are residential mortgages and retail auto loans. In contrast, under the revolving securitization structure the principal repayments received are reinvested in newly originated receivables rather than being paid out to holders of interests in the entity owning the receivables; as a result, the outstanding balance of the underlying pool remains constant.[9] The most common type of assets used for revolving securitizations are credit card receivables, although various very short-term receivables (e.g., trade receivables) may be securitized in a revolving pool.

[7] *See* ¶502 (definition of "traditional securitization"), ¶503 (definition of "synthetic securitization"), ¶516 (operational requirements for traditional securitizations), and ¶517 (operational requirements for synthetic securitizations) of the New Basel Capital Accord ("Basel II"). In terms of operational requirements, synthetic securitizations must comply with the requirements of ¶90 through ¶179 and are subject to additional restrictions on the instruments used to transfer credit risk and eligibility requirements for collateral and guarantors. Note that all "¶"citations refer to paragraphs of the Basel II document unless otherwise indicated.
[8] *See* ¶516 and 517.
[9] Neil Baron, "The Role of Rating Agencies in the Securitization Process," Chapter 7 in Leon Kendall and Michael Fishman, eds. A Primer on Securitization (2000).

Finally, one may distinguish between rated and unrated securitizations, as each is subject to different treatment under international capital accords. Consequently, the role of ratings agencies (such as Standards & Poors, Moody's, and Fitch Ratings) is of critical importance.

b. The Benefits of Securitization

The benefits of securitization are multifold, several of which are summarized in Table 1.

Table 1: The Benefits of Securitization[10]

Benefits to Originators	1. Ability to sell asset readily 2. Profit on sales 3. More efficient use of capital
Benefits to Investors	1. High yields on rated securities 2. Liquidity 3. Enhanced diversification 4. Potential trading profits
Benefits to Consumers and Borrowers	1. Lower cost of funds 2. Increased selection of credit forms 3. Competitive rates and terms nationally and locally 4. Funds available consistently
Benefits to Wall Street (Investment Banks)	1. New product lines 2. Continuous flow of originations and fees 3. Trading volume and profits 4. Potential for innovation and market expansion

Originators and lenders are able to use securitization to decrease overall risk by pooling and transferring the risk of the underlying assets to investors. The lending institution is thus better able to match the maturity of its assets (loans) with its liabilities (deposit accounts); this is particularly important in the case of longer-term assets such as mortgages. By enabling an originating bank to remove loans from its balance sheet, *ceteris paribus* securitization reduces the amount of capital that such bank holds on its balance sheet and therefore the amount of capital that it must hold to meet regulatory requirements. These funds (i.e., the capital that would need to be retained for regulatory purposes in the absence of securitization) may then be used to originate more loans or otherwise invested. Moreover, by reducing and/or eliminating the need to provide the financing for all of its loans, securitization enables banks to apply their credit analysis

[10] Adapted from Table 1.4 in Leon Kendall and Michael Fishman, eds. A Primer on Securitization (2000).

expertise on more loans (at decreasing marginal cost). Both of these phenomena can boost banks' earnings and lower their cost of accumulating capital. In turn, a lower cost of capital impacts the other two points of the "capitalization triangle,"[11] the cost of equity capital (equity capital ratio) and valuation. For example, if an originator can earn the same amount of money with less capital (i.e. lower cost of capital), its return on equity (i.e., equity capital ratio) will rise.[12] In sum, by facilitating unbundling and specialization, securitization allows banks opportunities to enhance risk management and to operate more efficiently and profitably than would otherwise be the case.

In addition to lowering the amount (and in turn, the cost) of capital required to be held by securitizing banks, securitization potentially reduces investor risk by creating a market for otherwise illiquid assets and thus creates new investment opportunities for investors. For not only do securitized assets have superior liquidity, but also each investor holds only a fraction of the risk of the underlying pool.[13] Given these conditions, participation in securitization activities is both available to and beneficial for a wider variety of investors, as compared to investing directly in the underlying would be. Consequently, the lower risks and relative costs of capital for borrowers contribute to the efficiency of the markets in which ABS products are traded. A summary of these and other macroeconomic and systemic benefits of securitization is provided in Table 2.

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[11] Meeting with Professor Laurent Jacque, The Fletcher School, November 20, 2003. The three points of the capitalization triangle—cost of capital, cost of equity capital, and asset valuation—are intimately related, and changing any one of them automatically changes the position and/or nature of the other two.

[12] It is important to link a bank's (a) return on equity to its cost of equity and (b) likewise, its return on capital to its cost of capital. A bank's cost of capital includes both debt and equity, while its cost of equity includes equity only. The key linkage between these two figures is leverage. As leverage increases, an entity's *cost* of capital increases because relatively fewer assets are securing relatively greater liabilities. The higher a bank's leverage ratio (i.e., ratio of loans to capital), the more capital the bank can lend out. For example, with a leverage ratio of 20, a bank can loan 20 times as much capital as it holds on hand. However, the bank's *return* on capital may increase or decrease, depending on the performance of the underlying assets; the higher levered an entity is, the greater the magnitude (variance) of its return (i.e., increase or decrease) on capital. As a general matter, leverage increases a bank's return on equity. For example, assume that there are two banks in competition with each other in the loan business, and that profit of $1 is made on every $100 loaned. Suppose further that the banks are leveraged differently as follows:

Bank	Capital	Loans	Leverage	% Capital	Profit	ROE [profit/capital]	
1	10	100	10	10%	1	1/10 = 10%	
2	10	200	20	5%	2	2/10 = 20%	

As is evident from the above, Bank 2 can take business away from Bank 1, simply by charging less on its loans. Because it is more highly leveraged, Bank 2 can use its higher return on equity to its competitive advantage and channel it into getting more business. Alternatively, Bank 2 may keep its loan prices and terms the same, and simply make more money. *See also* Hal S. Scott, International Finance course, Harvard Law School, Spring 2003.

[13] *See e.g.,* Appendix D, which provides information regarding the relationship between pooled assets, investor risk and loss distributions in a variety of securitization scenarios.

Table 2: Value Added Through Securitization[14]

Loans	Securities
Illiquid	Liquid/tradable
Valuation subjective and periodic	Market determines value—in some cases daily
Originator assesses risk	Third parties—rating agencies and enhancers—assess risk
Originators' operating costs high	Originators' operating costs low
Investor market local in scope	Investor market national/global in scope
Limited terms and rates offered to borrowers	Variety of terms and rates offered to investors

c. Definitions and Technical Issues Regarding Securitization

In order to fully appreciate the treatment of securitization under current and proposed international capital standards, definition and discussion of the following terms is warranted: credit enhancement; ratings agencies; ABCP conduits; liquidity facilities; revolving credit and early amortization; and accounting standards relevant to securitization.

i. Credit Enhancement ("CE")

Credit enhancement ("CE") refers to any mechanism or source of capital that takes a risk of loss that is disproportionately greater than more senior positions in a securitization.[15] An issuer generally considers CE options at the time of structuring the class of securities to be issued by the SPV or trust. The attainment of a given credit rating for each class of such securities is often the driving force behind the decisions of whether to employ CE and if so, which types of enhancement to use. With regard to international capital standards, the critical issue is whether and to what degree CE is taken into account when calculating the capital to be held for positions with such enhancement.

There are many types of CE, the most common of which include subordination of interests, overcollateralization, excess spread, reserve accounts, collateral interest, letters of credit, agreements to purchase defaulted receivables, financial guarantees and surety bonds. The first five mechanisms listed are examples of internal CE (i.e., provided by the originator of the securitization), and the latter four are examples of external CE (i.e., provided by a third party).

[14] Adapted from Table 1.1 in Leon Kendall and Michael Fishman, eds. A Primer on Securitization (2000).
[15] Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001).

Subordination of interests refers generally to a transaction in which the rights of junior classes of investors are subordinated to the rights of the senior class. In such a situation, the junior classes are in a "first loss" position and shield senior classes from potential shortfalls and losses from a given securitization transaction.[16] Having a senior-subordinated structure may also help to mitigate the risk of a downgrade in the security's rating in the event of a lowering of the credit enhancer's rating.[17]

Overcollateralization represents the difference between the certificate balance and the underlying loan balance, such that the senior holders can withstand losses up to the amount of the overcollateralization before incurring any losses directly. In other words, the amount of overcollateralization represents the excess value between (a) the principal amount of the receivables backing a given ABS (or MBS) transaction and (b) the actual outstanding ABS (or MBS). For example, if an entity issues $75 million of securitized assets which are secured by underlying collateral valued at $100 million, then the amount of overcollateralization is $25 million.

A final example of CE that merits mention is the existence of and access to future margin income ("FMI"). FMI serves to buffer parties to a securitization transaction by factoring in access to a portion of expected future cash inflows in order to cover expected losses on the portfolio *ex ante*. For example, an entity that securitizes credit card receivables may be able to use a portion of the expected future payments on such receivables to mitigate against later losses; in this regard, FMI is similar to excess and unfunded spread/reserve accounts. FMI is typically issued in the form of interest-only strips and is afforded exceptional treatment under the proposed international capital accords, discussed in greater detail below.

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[16] Leon Kendall, "Securitization: A New Era in American Finance," Chapter 1 in Leon Kendall and Michael Fishman, eds. A Primer on Securitization (2000).

[17] *See* Leon Kendall, "Securitization: A New Era in American Finance," Chapter 1 in Leon Kendall and Michael Fishman, eds. A Primer on Securitization (2000). For example, when the investors hold the senior debt and the seller retains the subordinated portion of the issue, the investors have first rights to all cash flows in the event of shortfalls, including cash flows to the subordinated interest.

ii. The Role of Ratings Agencies

As discussed above, the basis for the required CE is the estimated losses for each of the classes of securities holders. At this point the ratings agencies enter into the process; their job is to determine the required CE to ensure that security holders in a given transaction will be paid in full (in other words, to forecast the losses that a given class of securities must be able to withstand). With regard to securitization, the primary rating agencies are Standard & Poors (S&P), Moody's, and Fitch Ratings.

In determining a given rating, each rating agency assesses the structural basis of the transaction, the form and amount of CE proposed, and the potential loss coverage amount (the product of the probability of loan default and the magnitude of resulting losses). Each rating level (AAA, AA, A, BBB, etc.) requires a different degree of protection, and the highest-rated ABS transactions generally have protection—in other words, credit enhancements—at levels several times the highest historical default rates associated with the underlying assets.

iii. ABCP Conduits and Liquidity Facilities

Asset backed commercial paper ("ABCP") is commercial paper ("CP") whose principal and interest payments are derived from cash flows from an underlying pool of assets.[18] In the event that CP cannot be reissued in order to repay maturing CP, however, a backstop liquidity facility (see below) may be drawn upon to provide cash to repay investors.

An ABCP conduit is a legal entity that purchases underlying assets (ABCP conduit transactions typically focus on short-term assets) from one or more sellers and funds these purchases either through term securitizations or through the issuance of ABCP. A bank may originate an ABCP conduit of purchased receivables and provide that conduit with CE; alternatively, a bank may originate an ABCP conduit and sell receivables directly into that

[18] *See* Standards & Poors' Securitization Definitions, available at http://www.securitization.net/pdf/sp_gloss_060103.pdf (definition of "ABCP")

conduit. In both cases, the originating bank may then provide the ABCP conduit with a liquidity facility (e.g., internal CE) or purchase external CE from another entity.

A multi-seller ABCP conduit finances the assets of multiple sellers. A multi-seller ABCP conduit structure enables indirect access to the CP market by obligors of the underlying who wish to maintain anonymity[19] regarding the use of their receivables as collateral for subsequent securitization. Multi-seller ABCP conduits also broaden the base of potential participants in the CP market, as sellers who lack sufficient assets to undertake stand-alone securitization may benefit from the multi-seller ABCP conduit's economies of scale and lower cost of funds. Finally, it should be noted early on that although ABCP conduits are separate legal entities, they have yet to be afforded independent treatment under international capital accords; this has led to various problems (see part IV(b)) for banks who wish to originate and/or invest in such conduit transactions.

A liquidity facility is mechanism that is used to enhance the liquidity, but not the creditworthiness, of securitized assets.[20] Examples of liquidity facilities include letters of credit and legal obligations to lend (e.g., in order to repay maturing CP or to pay interest on other ABS) under certain non-insolvency situations.[21] A liquidity provider is the provider of a liquidity facility that ensures a source of cash with which to make timely payments of interest and principal on securities if there is a temporary shortfall in the cash flow being generated by the underlying assets. It should be noted that liquidity facilities are typically established by a group of commercial banks or other financial institutions, and that industry practice indicates that liquidity facility commitments are very rarely drawn down.

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[19] *See* Standards & Poors' Securitization Definitions, available at http://www.securitization.net/pdf/sp_gloss_060103.pdf (definition of "multi-seller conduit")

[20] In contrast to a liquidity facility, credit enhancement expressly refers to instruments and mechanisms that *elevate* the credit quality of the cash flow stream that one or more assets are expected to produce above the stream's inherent credit quality. A liquidity facility does not elevate the credit *quality* of the funds; rather, it serves as a stopgap measure to ensure that certain funds are *available*. *See* Standards & Poors' Securitization Definitions, available at http://www.securitization.net/pdf/sp_gloss_060103.pdf

[21] Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001).

Unlike amounts drawn under a CE facility, amounts drawn under a liquidity facility become a senior obligation of the issuer and rank at least *pari passu* with the related securities. Moreover, in contrast to CE that may be program-wide (i.e., applicable to various transactions), liquidity facilities are often transaction-specific; as a result, there may be overlapping coverage by the two different types of loss protection. A liquidity facility is typically established by a group of commercial banks or other financial institutions.

"Asset quality tests" are used to monitor ABCP conduit transactions by reducing the purchase price paid (and therefore the exposure) of a liquidity facility when all or a portion of its backup liquidity is triggered[22]; in other words, these tests protect the liquidity bank from funding defaulted assets in the event of a liquidity draw and thus reduce the risk of the associated ABCP conduit transaction. As a general rule, once excess reserves[23] and overcollateralization funds have been exhausted, asset quality tests kick in and reduce the purchase price of the affected securitized assets to the extent of defaulted receivables. For example, suppose a $100 million securitization is 10% overcollateralized (i.e., $10 million), has a letter of credit valid for an additional $10 million from a liquidity provider, and has no other excess reserves. Further, suppose that $15 million of the securitization's underlying is in default; therefore, not only is the entity's overcollateralization depleted, but also (depending on the contractual terms) the liquidity facility may be triggered to the extent of $5 million. In the case that such liquidity facility is triggered, an asset quality test could then be used in order to revalue the remaining underlying, taking into account the defaulted assets. In this example, the test technically could revalue the remaining underlying at $85 million.

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[22] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003). Davidson also notes that the appropriate asset quality test may vary depending on the type and structure of the transaction. For example, "a ratings trigger (i.e., no funding when the rating of a transaction or guarantor falls below a specified level) may be the appropriate asset quality test for transactions in which the public rating of the underlying transaction is relied upon by the applicable liquidity provider(s) rather than the underlying pool performance. In these circumstances, rather than a requirement that the facility not fund against defaulted assets, the appropriate threshold should be that they not fund when the relied-upon rating falls below BB, given that the average rating of corporate bonds held by US banks is in the area of BB."

[23] "Excess reserves" generally refers to the amount of capital that is set aside *ex ante* to cover potential losses on the underlying receivables. The purpose and function of excess reserves are similar to that of overcollateralization funds; the difference between the two is that the allocation of excess reserves is not necessarily derived from the underlying being securitized.

Allegations have been made that asset quality tests are "mere window dressing" and that a financial institution would put a transaction into liquidity prior to the time that asset quality tests would be triggered, i.e. as a sort of stop-gap measure. In defense of these tests, the American Securitization Forum has emphasized the facts that (i) ABCP conduit securitizations are typically structured to have increased pricing as well as an increased margin once liquidity facility funding is triggered, (ii) the importance of banks' reputation and credibility for banks will lead them to use caution and prudence before placing performing transactions into liquidity, and (iii) that even in the worst-case scenario, ABCP conduit transactions are structured to be managed.[24]

iv. Revolving Credit and Early Amortization

In contrast to term securitizations, revolving securitizations have two distinct phases: the revolving period and the amortization period. In the revolving period, which may be any length of time but usually ranges from 18 to 48 months, the seller receives principal payments, while investors only receive periodic interest payments. The source of these interest payments are the finance charges from the underlying securitized assets (and/or CE, if applicable). Any principal repaid during this period is used to purchase additional receivables, in order to maintain a constant underlying level to support investor interests.

The amortization period begins upon the termination of the revolving period and is when the securities are retired. During this period, which usually lasts approximately 12 months, principal collections are no longer used to purchase additional receivables but instead are paid out to investors over this time.[25] Amortization may also be triggered by unexpected events. Each of the above scenarios—contractual terms and unexpected events—may impact the treatment of revolving securitizations regarding minimum capital requirements. The former scenario is an example of "controlled amortization" (also known as "normal amortization"), in which a defined amount of principal collections is set aside each payment period for distribution to investors

[24] American Securitization Forum, Interim Capital Treatment of ABCP Program Assets/Permanent Capital Treatment of ABCP Program Assets (November 17, 2003), available at http://www.americansecuritization.com

[25] Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001).

according to a planned schedule.[26] In contrast, in an "uncontrolled amortization" period, investors receive their entire allocated share of principal collections each month, regardless of amount. Therefore, relative to uncontrolled amortization, the controlled amortization arrangement reduces investor uncertainty over the amount of principal that it will receive each month (and need to reinvest) during the amortization period.[27]

There are certain events that trigger commencement of the amortization period in uncontrolled securitizations. These "early amortization events" are roughly analogous to events of default in a commercial loan setting. Early amortization—that is, commencement of the amortization ahead of the predetermined schedule— may be triggered by one or more of the following events, depending on the terms of the securitization:[28]

- Certain events of default, bankruptcy, insolvency, or receivership of the SPV
- Failure or inability to make required deposits or payments
- Failure or inability to transfer receivables to the trust when necessary
- False representations or warranties that remain unremedied
- Excess spread disappears due to reduction in portfolio yield or increase in loss rates
- Monthly repayment rate falls below specified minimum
- Seller's participation falls below required minimum
- Portfolio principal balance falls below invested amount

In the event of early amortization, principal is no longer used to purchase new receivables. Rather, principal payments received are used to repay investors (in accordance with the senior-subordinated structure, if any). In addition, depending on the terms of the securitization the principal distributions that are normally allocated for repayment to sellers may be redirected to investors in order to accelerate repayment of the latter's interests.[29] As a result, the risk of early

[26] *See* Andrew Davidson, Securitization: Structuring and Investment Analysis (2003). There is an additional distinction—the "bullet payment"—that may be made for repayment of interest in controlled amortizations. Under standard amortization, the principal amount is gradually reduced over time. Under a bullet payment structure, interest is repaid on a periodic basis and the entire principal is returned in one single payment at maturity. Under this structure, the revolving phase is shorter and is followed by an accumulation phase (however, these two phases are indistinguishable to investors because payments made to them remain the same). There are two primary types of bullet payments that may be made to investors: hard bullets (with longer accumulation periods); and soft bullets (where the expected maturity of these payments is one to three years earlier than the legal final maturity). Soft bullets are the most common type of interest payment for credit card ABS transactions.

[27] Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001).

[28] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003). Note that only three deals in the history of revolving credit card securitization have experienced early amortization events.

[29] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).

amortization often provides significant incentive for the seller of securitized interests to maintain its participation well above the minimum required levels.

v. Accounting Treatment of Securitization Transactions

Close attention must be paid to the legal and financial structuring of securitization transactions in order to ensure that they are in compliance with the relevant accounting standards. These accounting standards establish the rules by which an institution may account for its assets and determine whether those assets are on- or off-balance sheet. The treatment for accounting purposes of the SPV created to undertake the securitization is particularly important in this regard. For only if the SPV and the originating entity are treated independently (i.e., with the SPV on an off-balance sheet basis) will the capital requirements which would otherwise be applicable (i.e., if the SPV and originating entity are treated on a consolidated, on-balance sheet basis) be eliminated.

The relevant international accounting standards for securitization include IAS 27 (Consolidated Financial Statements and Accounting for Investments in Subsidiaries) and SIC 12 (Standing Committee Interpretation on Consolidation of Special Purpose Entities). The comparable standards for securitizations in the United States are FAS 140 (Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities)[30] and FIN 46 (Consolidation of Variable Interest Entities).

The key to independent treatment of an SPV for accounting purposes (i.e., non-consolidation for the issuer) is complete and proper transfer of the risk of the assets to the SPV. Both IAS 27 and SIC 12 focus on the *control* of the entity (i.e., SPV) in making such determination; the *ownership* of the entity is neither sufficient nor necessary to determine whether to consolidate it for accounting purposes. Commentary to the IAS regulations indicates that there is no definite answer to the question on an international level[31], although FIN 46 seeks to partially

[30] *See* Asset-Backed Securitization Rules Issued, 68 Federal Register 56530 (Oct. 1, 2003).
[31] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).

remedy this uncertainty. On the domestic level in the United States, FAS 140 provides that "a transfer of financial assets will be accounted for as a sale to the extent that the transferor surrenders control over the assets and receives consideration other than beneficial interests in the assets in return. Surrender of control occurs if three conditions are met:

(1) Isolation of the transferred assets from the transferor (and therefore, creditors in bankruptcy);
(2) The transferee has an unconstrained right to further pledge or exchange the transferred assets; and
(3) The transferor does not maintain effective control over the transferred assets through an arrangement through, for example, an obligation to repurchase or a call option on the transferred assets."[32]

FIN 46 (Consolidation of Variable Interest Rate Entities) was issued in January 2003. FIN 46 requires the consolidation of variable interest entities onto the balance sheets of companies deemed to be the primary beneficiaries of those entities. The likely result of FIN 46 is the consolidation of many ABCP programs onto the balance sheets of banking organizations, in contrast to the pre-FIN 46 accounting standards that did not normally require such consolidation. In response to this potential outcome, the four United States banking agencies (the OCC, Federal Reserve, FDIC and OTC) have proposed to amend their risk-based capital standards in order to permit sponsoring banking organizations to continue to exclude such consolidated ABCP assets from their risk-weighted asset base. This amendment is to be contingent upon the implementation of more risk-sensitive capital requirements for ABCP programs under Basel II and the ANPR regimes.[33]

III. Securitization in the United States and Europe

a. United States: History and Market Size

The development of the securitization industry in the United States dates back to the 1970s and was part of a larger process of disintermediation underway at that time. Prior to the 1970s, banks played an intermediary role (between investors and financial markets) with regard to traditional

[32] Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001).
[33] *See* Revised Text of FIN 46 at www.fasb.org/fin46r.htm and "What is FIN 46?" summary at www.vinodkothari.com/fin46.htm.

financial products. However, from the early 1980s forward, securitization and structured finance facilitated the disintermediation of banks from the financing process and allowed investors direct access to the markets. Structured finance refers to a type of finance in which the credit quality of the debt is assumed to be based on a direct guarantee from a creditworthy entity or on the credit quality of the debtor's assets (with or without CE), rather than on the financial strength of the debtor itself.[34] Thus, disintermediation occurs by removing the debtor's financial strength from the credit analysis and linking credit quality directly to the underlying assets; moreover, this direct linkage enhances the accessibility and broadens the potential scope of such investment opportunities.

In the United States the catalyst for securitization was the United States' government's objective of encouraging home ownership.[35] This goal was furthered by the creation of a secondary market for mortgages (i.e., the MBS market). Moreover, this government intervention resulted in the creation of various government and government-sponsored agencies[36] that could set standards and provide credit guarantees for loans, which provided homogeneity in the structure and provisioning of early securitization transactions and has proven to be invaluable for today's securitization sector in the United States.

The growth of the securitization industry in the United States is difficult to overstate. The total amount outstanding for ABS transactions is nothing short of astounding; it has grown from $316 billion in 1995, to $1.5 trillion in 2002, and was estimated at $1.7 trillion through the third quarter of 2003.[37] Table 3 provides a breakdown of ABS and MBS by asset class during the period 1995-2002. It indicates that although MBS retains by far the largest share of the securitization market, its relative significance continues to decline (albeit relatively little);

[34] *See* Standards & Poors' Securitization Definitions, available at http://www.securitization.net/pdf/sp_gloss_060103.pdf
[35] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).
[36] For example, the US government's direct sponsorship of the Federal Housing Authority ("FHA") and VA loan programs, and its indirect support of Fannie Mae and Freddie Mac.
[37] *See* The Bond Market Association website, available at http://www.bondmarkets.com

meanwhile, the sectors of greatest growth in securitization activity include home equity loans, student loans and auto loans..[38]

Table 3: Mortgage-Backed and Asset-Backed Securities Outstanding in the United States (amount in billions of US$ (%) of total MBS and ABS outstanding)[39]

	MBS	Credit Cards	Auto Loans	Home Equity Loans	Manu-factured Housing	Student Loans	Equip-ment Leases	Total
1995	2324.5 (89.5)	153.1 (5.9)	59.5 (2.3)	33.1 (1.3)	11.2 (.5)	3.7 (.1)	10.6 (.4)	2595.7 (100.0)
1996	2488.3 (87.6)	180.7 (6.4)	71.4 (2.6)	51.6 (1.8)	14.6 (.5)	10.1 (.3)	23.7 (.8)	2840.4 (100.0)
1997	2692.5 (85.6)	214.5 (6.8)	77.0 (2.5)	90.2 (2.8)	19.1 (.6)	18.3 (.6)	35.2 (1.1)	3146.8 (100.0)
1998	2997.0 (84.7)	236.7 (6.7)	86.9 (2.5)	124.2 (3.5)	25.0 (.7)	25.0 (.7)	41.4 (1.2)	3536.2 (100.0)
1999	3371.4 (84.1)	257.9 (6.5)	114.1 (2.8)	141.9 (13.6)	33.8 (.8)	36.4 (.9)	51.4 (1.3)	4006.9 (100.0)
2000	3602.7 (83.2)	306.3 (7.0)	133.1 (3.1)	151.5 (3.5)	36.9 (.9)	41.1 (.9)	58.8 (1.4)	4330.4 (100.0)
2001	4169.9 (82.2)	361.9 (7.1)	187.9 (3.7)	185.1 (3.6)	42.7 (.8)	60.2 (1.1)	70.2 (1.4)	5077.9 (100.0)
2002	4709.0 (81.1)	397.9 (6.9)	221.7 (3.8)	286.5 (5.0)	44.5 (.8)	72.4 (1.2)	68.3 (1.2)	5802.3 (100.0)

Finally, one may note how securitization affects the Federal Reserve's ability to conduct monetary policy.[40] Securitization impacts monetary policy in the United States in three principal ways. First, the Federal Reserve's ability to affect interest rates through open market operations (e.g., buying and selling securities to affect reserve levels) may be diminished by securitization activities. In other words, given open markets and the international operations of many US banks, the Federal Reserve's ability to control the federal funds rate is relatively narrow and changes in the actual and expected cost of reserves are transmitted (via arbitrage) with relative efficiency to other market rates.[41] Second, the availability of securitization as an alternative

[38] The 2003 composition is as follows: Automobile loans 14%; Credit card receivables 24%; Home equity loans 21%; and Student loans 6%. *See* The Bond Market Association, http://www.bondmarkets.com

[39] *2003 Mortgage Market Statistical Annual* and The Bond Market Association, reproduced from Davidson, Securitization: Structuring and Investment Analysis (2003).

[40] Susan Phillips, "The Place of Securitization in the Financial System: Implications for Banking and Monetary Policy," Chapter 11 in Leon Kendall and Michael Fishman, eds. A Primer on Securitization (2000).

[41] Taken to an extreme, one could imagine a situation in which banks securitized all of their assets. In this scenario, all bank assets would be absorbed into the capital markets; there would consequently be no bank liabilities—since a bank's assets must be matched to

financing technique may impact how the aggregate US economy reacts to changes in monetary policy. This issue is related to earlier discussions regarding disintermediation. One result of the fact that securitization furthers the development of disintermediation by making financial flows less dependent on specialized lenders is the enhanced adaptability of the economy during periods of stress. Third and finally, capital market innovations such as securitization may impact the behavior of the monetary aggregates that the Federal Reserve uses as guides in implementing monetary policy.[42] The development and growth of securitization in the United States impacts the credit channel (as opposed to the interest-rate and exchange-rate channels) of monetary policy. Theory posits that as monetary policy adds or removes reserves from the banking system, the forces of supply and demand will affect the availability (or lack thereof) of loanable funds for borrowers who rely exclusively on bank credit (i.e. the credit channel). However, as more money flows out of bank deposits and into securitization vehicles (and also notably, mutual funds), there is a rapid increase in the ratio of GDP to broader monetary aggregates. Although the magnitude of securitization activities would have to be immense in order to effectuate such a change (and thus, this argument may seem far-fetched under normal circumstances), nevertheless it should provide pause for thought for monetary policymakers. In summary, while these factors are not problematic *per se* for securitizations, they do have the potential to substantially impact the securitization industry; thus, policymakers should seek to ensure that they are taken into careful account.

b. Europe: History and Market Size

The history and market size of securitization in Europe is significantly different from the United States for several reasons. First, there has been no government body in Europe to act as a catalyst for securitization; rather, the various governments often find themselves fulfilling this function. This means that there has been no homogenization of standards and provisions between (e.g.,

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liabilities— and hence no demand for reserves. As a result, the Federal Reserve's mechanisms for influencing market interest rates would not function properly.

between ABS and MBS on a pan-European level) and/or within (e.g., between national ABS markets within Europe) the European markets. This fact, coupled with the lack of comparable statistics on underlying assets in Europe, has necessarily resulted in transaction-by-transaction due diligence and analysis (and therefore higher transaction costs). Second, various legal obstacles to securitization—both within and between different European countries[43]—have limited the potential for securitization to date. While Europe has been able to make use of the knowledge of the securitization industry in the United States, it has had to alter it to fit specific European needs. Finally, a "very important but nonquantifiable hindrance to the development of the European securitization market is a suspicion of new financing techniques"[44] is arguably present within (at least continental) Europe.

In most of the European countries with active securitization markets, large commercial banks have been the first originators of such transactions. However, several governments in Europe have provided a boost to the securitization via privatization and securitization of the assets of state-owned companies in order reduce balance-sheet debt and meet the requirements of European Union ("EU") regulations. Governments in Europe have securitized assets ranging from real estate to lottery revenues to future tax revenues.[45] With the euro in use since 2000 it is likely that securitization will continue to play an ever-increasingly important role in Europe.

However, in order for securitization to be successful in Europe over the long term, legal and psychological barriers will to be overcome. In terms of legal diversity, it is necessary to develop standard criteria and procedures for originators and investors and to implement a degree of legal uniformity at the EU level. These steps will help to harmonize securitization transactions both between countries, as well as from different issuers within the same country.

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[43] For example, in many European jurisdictions (e.g., the Netherlands) a pledge structure—rather than a true sale structure—is used to isolate assets.

[44] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).

[45] Italy appears to have taken the lead in this regard, having securitized both lottery and tax revenues. Not only did this help the Italian government's balance sheet, but also it provided a substantial increase in volume to the Italian market. Note also the case of Finland, where the government housing agency remains the only securitization issuer to date.

Nevertheless, differences between the securitization markets in Europe and the United States are likely to remain, at least in the short-term. For example, securitization in the United States involves mostly retail assets, while in Europe it involves more corporate assets. In addition, almost all MBS issued in Europe have been structured as pay-through securitizations rather than the pass-through structure typical in the United States. Indeed, the pass-through structure remains virtually nonexistent within Europe.

Separate from yet related to legal obstacles, the psychological barriers to securitization in Europe come primarily from two sources. First, the banking industry in Europe has been highly regulated and protected. This has resulted in a somewhat oligopolistic banking sector; partially as a result of this, the typical financial structure of many European countries consists of a large government bond sector, a significant mortgage bond sector, an extremely small corporate bond sector, and a "fairly insignificant" securitization sector.[46] Part of the skepticism towards securitization—of both potential originators and investors in Europe—may come from a more pronounced aversion and/or fear of the "unknown." However, EU regulations[47] permitting EU banks that are regulated in one EU country to provide banking services (including securitization transactions) in any other EU member country are serving to decrease such apprehension among investors as well as increase competition between banks. Given the ability of banks to reduce their cost of capital via securitization, it is projected that this increased competition will lead to greater acceptance and use of securitization in Europe.

The second psychological barrier to overcome is a result of the fact that achieving high returns on equity has traditionally had little importance in Europe. However, this also is changing gradually as public participation in the stock market (and therefore shareholder pressure) is increasing in Europe. Indeed, the growth in demand for securitization in Europe appears to be driven by several factors, including: more knowledgeable and active investors; a maturing

[46] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).
[47] EU Investment Services Directive (ISD/ 93/22/EEC).

marketplace; increasing issuance volumes; improved dissemination of reliable information to the public; and new market indices and indicators to provide guidance to potential investors.[48]

In 2003, the European Securitisation Forum ("ESF") conducted a survey to determine the primary areas in which the North American and European securitization markets differ. For present purposes, the following findings are worthy of note:

- When the numerous national variants are taken into account, there is a broader spectrum of securitization structures available in Europe than in the United States. At the same time, however, the European market is hindered by this lack of structural uniformity.
- As a group, European banks are better capitalized than their US counterparts. *Ceteris paribus*, this may reduce somewhat the incentive for securitization in Europe.
- Securitization of credit cards and other consumer assets is not widespread in Europe (outside of the UK and Italy). This is in line with the earlier, more general observance that securitization in Europe is characterized by corporate assets, in contrast to retail assets in the United States.
- The concept of "whole business" securitization[49] is a distinctly European innovation and despite its limited suitability[50] has the potential to become a popular source of corporate funding in both Europe and the United States.

Although the size of the European securitization market continues to grow,[51] it remains significantly smaller than that of the United States; for example, 2001 marked the first time that new issuance in the European securitization market exceeded 150 billion euros ($132.9 billion).[52] In 2003, total issuance of securitizations in Europe was 197 billion euros ($246 billion), and this figure is forecast to increase by 19% to 235 billion euros ($294 billion) in 2004.[53] The euro has

[48] European Securitisation Forum Survey Forecasts Significant Issuance Growth in 2004, December 2003, available at http://www.europeansecuritisation.com

[49] *See* Andrew Davidson, Securitization: Structuring and Investment Analysis (2003). According to Davidson, "whole business" securitization focuses on the entire set of cash flows generated by a business in its day-to-day operations, rather than the cash flows from a single identifiable asset as is the case in traditional securitization transactions. The idea behind whole business securitization is "to isolate the cash-flow-producing assets from the originator/borrower so that, in case of default, the *control* of the assets is given to the trustee/receiver to be managed and operated for the realization of cash flows over time. Thus, the ultimate credit quality is based on the stability of the operating cash flows, rather than the ability to 'sell' the assets." Whole business securitization gained 3.6% of the European securitization market in 2001, with activity limited to the UK and France.

[50] Given structuring limitations, whole business securitization is suitable only for businesses that can demonstrate very stable historical cash flows.

[51] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003). According to Davidson, the European securitization market has grown by an average of 61% annually since the first European MBS was issued (in the UK) in 1987.

[52] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003). This figure is calculated based on the dollar/euro exchange rate of $1: 1.1289 euro on December 31, 2001, by www.economist.com

[53] European Securitisation Forum Survey Forecasts Significant Issuance Growth in 2004, December 2003, available at http://www.europeansecuritisation.com

been the preferred currency of securitization issuance in Europe for several years, followed by the pound sterling and US dollars.[54]

Participation in European securitization markets varies widely among European countries. The UK has consistently had the largest share of securitization issuance, while the rest of Europe has participated "in fits and starts."[55] As a general observation, Germany and Italy have maintained the second and third most active securitization markets, followed by the Netherlands, Spain, and pan-European deals. Looking forward, the European Securitisation Forum predicts that Germany and Italy will experience the most significant growth in their markets in 2004, followed by Greece and Eastern European countries (due to recent legislative initiatives designed to facilitate securitization transactions in those countries). Increase in issuance activity is also expected in France and Spain to a lesser degree, while growth is expected to be flat in the UK (due to rising interest rates) and to decline in Portugal (due to concerns about credit quality).[56]

c. Other Markets: Asia and Latin America

Relative to the United States and Europe, securitization is in a nascent stage in the rest of the world. The first securitization deal from an emerging market was undertaken by the International Finance Corporation in 1995.[57] Although issuers in emerging markets in both Asia and Latin America are gradually turning towards securitization as an alternative source of financing—especially during times when hard currencies are scarce—they tend to use it for one-time deals rather than for repeat issuance.

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[54] For example, in 2000 54% of all securitization deals in Europe were issued in euros, 29% in pounds sterling and 17% in US dollars. *See* Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).
[55] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).
[56] European Securitisation Forum Survey Forecasts Significant Issuance Growth in 2004, December 2003, available at http://www.europeansecuritisation.com
[57] In 1995 the IFC securitized $400 million of its loan portfolio to privately owned companies in 11 developing countries in Asia and Latin America. In 1996 the IFC completed its first country-specific securitization when it structured a $130 million financing package for the Mexican conglomerate Grupo Industrial Bimbo. Since that time the IFC has pioneered several securitization transactions in emerging markets, including: the first cross-border lease and loan receivables securitization in Korea; the first lease receivables securitization in Turkey; the first corporate bond securitization in South Africa; and the first synthetic student loan securitization in India. For more information on the IFC's activities, *see* www.ifc.org

After the United States and Europe, Japan has the next most active securitization market. Despite the ability of securitization to improve an issuer's balance sheet, however, prior to the 1990s securitization was not an exceptionally popular financing mechanism in the country. This fact is somewhat surprising, especially given the quantity and magnitude of non-performing loans ("NPL") and real estate held by (both public and private) Japanese entities. However, in part this was due to legal and other restrictions[58] in the country which were mitigated by the subsequent passage of the Financial System Reform Act in 1993 and the Act Concerning the Foundation of Financial Services in 1998. Since the latter act in particular, securitization activity in Japan has taken off. It expanded more than 100% in both 1998 and 1999, and 41% in 2000. By 2001, total issuance in Japan was $24.6 billion. This growth trend is expected to continue in Japan, especially as Japanese banks attempt to deal with the loans (i.e., NPLs) extended before the collapse of real estate and stock prices in the country.

Aside from Japan and Australia[59] securitization market activity in Asia and the South Pacific has been relatively limited to date. The most common reason given for the region's slow growth in this regard is the lack of infrastructure and legal systems to adequately structure and protect the interests of parties to securitization transactions. Indeed, given the region's fast-growing corporate and banking sectors, one might reasonably expect for securitization markets to develop in short order. This appears to be most probable in South Korea and Singapore, countries that had a combined issuance total of more than $3.6 billion in 2001 (over 90% of the Asian market excluding Japan).[60] Hong Kong has issued several property-based deals, and more limited securitization activity has also occurred in Thailand, Indonesia, Malaysia and the Philippines.

All things are relative, and securitization activity in Asia and the South Pacific is substantial in comparison to Latin America, where total market issuance for the entire region was

[58] For example, prior to 1993 securitized loans were restricted to fixed rate instruments, but the majority of new housing loans carried floating rates. This mismatch reduced the desirability of securitization from both the issuer's and investor's points of view. In addition, the financial disclosure requirements for loan sales of corporate debt in Japan hindered the development of a secondary market for securitized corporate loans.
[59] Total securitization issuance in Australia was more than $14 billion in 2001.
[60] Andrew Davidson, Securitization: Structuring and Investment Analysis (2003).

only $6.7 billion in 2001. Most of the securitization issuance in the area is in the form of future-flow deals backed by US dollar-denominated receivables such as oil. As one might expect, Brazil, Venezuela and Mexico are the Latin American countries most active in securitization.

Several issues related to securitization in emerging markets remain to be addressed before it can become a widespread financing and risk mitigation technique in those areas. First and most basic is the question of how best to structure and sell securitization deals to provide the lowest cost to issuers and to maximize the outreach to potential investors. Second, the problem of how to establish an AAA debt sector in countries with sub-AAA ratings must be solved. And finally, common to various other financial and strategic interests in emerging markets is the need to develop mechanisms to assess and control the commercial and political risks that may impact the existence—and success—of securitization in these new markets.

IV. Treatment of Asset Securitization Regarding International Capital Requirements

a. The Basel Accord of 1988 ("Basel I")

The Basel Accord of 1988 ("Basel I") provides general guidelines for the minimum level of capital required by banks in the countries that signed the Accord. Basel I formally recognized for the first time the need for international capital requirements in order to address the increasingly global nature of financial services.[61] The guidelines are specified in terms of the ratio of bank capital to risk-weighted assets, with all assets held by banks assigned risk weights ranging from 0% to 100%.[62] The minimum overall risk-weighted capital to be held by participating banks under Basel I was 8%. Therefore, for example, a 100% risk-weighted asset meant that a back

[61] Prior to Basel I, capital requirements were generally ad hoc and given in absolute terms (i.e., a fixed amount of capital). There were, however, limited examples of bilateral treaties with more formalized treatment of capital requirements (e.g., the US-UK interim capital accord which was in effect between 1986-1988).

[62] The risk weights under Basel I may be summarized as follows:

Weight	Description of assets
0%	cash and loans to OECD governments
20%	short-term claims on non-OECD banks
50%	secured residential mortgage loans
100%	all other loans

In addition, note that capital under Basel I was divided into Tier 1 (e.g., equity and near-equity) and Tier 2 (e.g., junior debt). The amount of Tier 2 capital retained was limited to 100% of the amount of Tier 1 capital retained. For example, for a bank required to hold 8% of capital, if 4% of such capital comes from Tier 1 then no more than 4% of such capital may come from Tier 2.

would have to hold a minimum of 8% of capital against that asset, whereas a 50% risk weighting would require a minimum of 4% of capital against such assets. As a result, banks that held more risky assets were required to hold a greater amount of capital relative to banks that held less risky assets; *ceteris paribus,* the amount of capital to be held by the former banks would be higher than for the latter banks. Having to retain a greater amount of capital restricts the amount (as a percentage of total assets) of funds that a bank can lend; this in turn increases the bank's cost of capital. This increased cost of capital may be passed on to consumers through higher finance charges, or it may lead to competitive disadvantages for less risk-averse banks.[63]

Securitization *per se* was not substantially addressed in Basel I. In fact, the growth of the securitization industry is partially responsible for undermining Basel I because it increased regulatory arbitrage. Securitizing banks were able to use regulatory arbitrage to reduce their capital requirements under Basel I in at least two different ways. First, by moving certain assets off-balance sheet, a bank holds less capital overall—and therefore less capital must be retained for these funds. Second, if a bank then replaces these assets (i.e., the assets that were moved off-balance sheet via securitization) with other assets for which less capital is required to be held, then the bank's capital requirements decrease due to a different risk weight distribution of its assets. The combination of these opportunities led to incentives for banks to undertake securitization activities in order to avoid regulatory capital charges, which may have jeopardized the bank's financial soundness.[64]

[63] One should also keep in mind that capital protection against risk is manifest in the concept of levered beta in the Capital Asset Pricing Model ("CAPM"). Beta is a function of (i) business risk, which is entity-dependent, and (ii) financial risk, which is not entity dependent. By levering beta when pricing assets, both types of risk are taken into account.

[64] However, the extent to which securitization can achieve such results also depends on the laws and regulations in place in a given country. For example, in the United States such opportunities for arbitrage existed only for banks that actually undertook the securitization transaction. Banks that provided CE to securitizations and/or transferred assets with recourse as part of the securitization process were still required to hold capital against the related off-balance sheet exposures. *Ceteris paribus,* these holding requirements tended to raise the costs of securitization activities for these banks. *See* Lamia Obay, Financial Innovation in the Banking Industry: The Case of Asset Securitization (2000).

b. The Proposed New Basel Accord ("Basel II")

i. History and Scope

Over time, international banks and financial regulators realized the shortcomings of the Basel I Accord. Among other things, the assignment of credit weights often proved to be too rudimentary and at times inappropriately treated different entities the same (e.g., the risk profiles of all OECD governments are not the same). Acknowledging these credit risk-related flaws as well as the opportunities for capital arbitrage discussed above, the national differences regarding the use and treatment of securitization (for various purposes, both good and bad), and the growth in securitization markets worldwide, the Basel Committee recognized the need to address capital requirements for securitization transactions specifically. To this end, one of the goals of Basel II is to limit or remove the opportunities to engage in capital arbitrage while creating neither incentives nor disincentives to participate in securitization activities.

The structure of Basel II is built upon three distinct pillars: minimum regulatory capital requirements for credit risk (including treatment of securitization in ¶501through 606) and operational risk; supervisory review; and market discipline. Capital coverage is required for credit risk, market risk, and operational risk; it is not, however, required for interest rate risk or business risk. A key change of Basel II is the use of internal ratings-based models, which allow more analyses to be derived from a financial institution's internal information and assessments. In developing and refining the new provisions, the drafters of Basel II have incorporated the use of quantitative impact studies ("QIS") and consultative papers ("CPs"). QIS test the sensitivity and impact of the proposed rules via multiple scenario analysis at participating banks. CPs are addressed to the public at large, and they serve to solicit feedback from industry experts and other interested parties. To date there have been three QIS and three CPs issued; a fourth QIS is expected in the first half of 2004.

Securitization was not substantially addressed in CP2, issued in January 2001. However, it was discussed in detail in CP3, issued in April 2003. Specifically, CP3 specified and explained

the proposed capital treatments for externally rated and unrated exposures, ABCP conduits[65] and liquidity facilities, and securitizations containing early amortization provisions. More than 200 parties submitted comments and recommendations to the CP3, [66] many of which were taken into account in the Basel Committee's Proposed Changes to Basel II Regarding Asset Securitization issued in January 2004 and are discussed in part VII(b) below.[67]

The scope of what may be securitized is provided in ¶505 of the New Basel Capital Accord (Basel II): "Underlying assets in the pool being securitized may include but are not restricted to the following: loans; commitments; asset-backed and mortgage-backed securities; corporate bonds; equity securities; and private equity investments. The underlying pool may include one or more exposures."[68] This is broadly in line with industry norms, as is the definition of special purpose entity.[69]

ii. The Standardized Approach and the Internal Ratings-Based Approach to Securitization Transactions

There are two general approaches to credit risk as applied to securitizations under the proposed Basel II, the Standardized Approach and the Internal Ratings-Based Approach ("IRB"). The Standardized Approach is based on the ratings of securitization tranches by qualified external rating agencies. It is considered to be the default rule under the Basel II regime, and must be used when the IRB is not available (i.e., when the bank and/or exposures do not qualify for use of the IRB methodology). The IRB, in turn, is novel in that it derives capital requirements for a financial institution based on that institution's internal estimates of key risk drivers.[70] Within the IRB, there is an additional distinction between the two different methodologies that may be used. These methodologies are the Ratings-Based Approach ("RBA", in which some risk-weighted

[65] Only ABCP conduits are treated under the Basel II regime. It is unclear exactly why other types of conduits were not treated, and may be surmised that ABCP conduits are the principal means of intermediation by originating banks of securitization transactions.
[66] All comments to the CP3 are available online at http://www.bis.org/bcbs/cp3comments.htm
[67] The Basel Committee on Banking Supervision, "Changes to the Securitization Framework" (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf
[68] ¶505.
[69] ¶514.
[70] Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord. Federal Register, Vol. 68, No. 149 (August 4, 2003), p. 45900 – 45988. The key risk drivers that may be considered under the RBA are listed in ¶582 and include credit rating grade and duration (i.e., long-term or short-term), the granularity of the underlying pool and the seniority of a given position relative to the size of the pool. Each of these factors is discussed in greater detail in part IV(b)(iv).

inputs are provided by supervisors and others by the bank) and the Supervisory Formula Approach ("SFA," in which all of the risk-related inputs are provided by the bank based on its internal data and modeling systems).

As presented above, there are essentially two questions that a bank participating in a securitization transaction must answer under the proposed Basel II regime: first, whether the Standardized Approach or IRB applies; and second, if the IRB applies, whether the RBA or the SFA is to be used. It is important to note early on that for banks in the United States, the RBA methodology will not be available. Rather, some banks in the United States will be required (and in certain cases, may elect) to use the more advanced SFA methodology. All other banks will remain subject to the Standardized Approach.

One final preliminary note concerns the effect of deductions from capital under Basel II. In various instances (typically for below-investment grade and unrated transactions) a bank is required to deduct a securitization position from regulatory capital. When this happens, such capital must be taken 50% from Tier 1 capital and 50% from Tier 2 capital. The effect of a deduction is to reduce dollar-for-dollar the amount of the position held by the bank; in turn, this (often significantly) increases the affected bank's capital ratio. There is one exception to the general 50%/50% rule for FMI; under ¶522 and 523, banks are required to deduct 100% of any expected FMI that has been capitalized and carried as an asset on the bank's balance sheet from Tier 1 capital only.

iii. Application of the Standardized Approach

As noted above, the Standardized Approach essentially builds upon Basel I and is based on the external ratings of securitization tranches. Under ¶526, if a bank applies the Standardized Approach to the credit risk of the underlying assets in a securitization, then it must apply the Standardized Approach to the securitization as well. This distinguishes situations in which a bank simply originates a securitization from those in which a bank also retains some of the

securitized assets. Table 4 provides the proposed risk weights to be used under the Standardized Approach.[71]

Table 4: Risk Weights Under the Standardized Approach

Exposures with Long-Term Ratings		
Credit Rating	**Basel Risk Weight (Corporate)**	**Basel Risk Weight (Securitization)**
AAA to AA-	**20%**	**20%**
AA+ to A-	**50%**	**50%**
BBB+ to BBB-	**100%**	**100%**
BB+ to BB-	**100%**	**350%**
B+ or below	**150%**	**Deduction**
Unrated	**100%**	**Deduction**
Exposures with Short-Term Ratings		
A-1/P-1	**20%**	
A-2/P-2	**50%**	
A-3/P-3	**100%**	
Other ratings or unrated	**Deduction**	

As evidenced in Table 4, sub-investment grade and unrated securitization transactions are treated much more harshly than their non-securitized corporate equivalents. However, there are two exceptions to the general rule that unrated transactions be deducted from capital under the Standardized Approach. First, if the most senior tranche of a securitization is unrated, then a bank that holds or guarantees that exposure may apply a "look-through" approach.[72] In such a case, the senior tranche position will be assigned a risk weight equal to the average risk weight of the underlying exposures. Second, qualifying exposures in ABCP conduit transactions that are in a second-loss position or better may be eligible for special treatment under the Standardized Approach.[73] In order to qualify, (i) such exposures must be in a second-loss position or better, and the first loss position provides significant credit protection to the second loss position, (ii) the associated credit risk must be equivalent to investment-grade or better, and (iii) the institution holding the unrated exposure must not retain or provide the first-loss protection as well. If this

[71] Mayer, Brown, Rowe & Maw LLP, "Advance Notice of Proposed Rulemaking—Risk-Based Capital Guidelines" (September 8, 2003), available at www.mayerbrownrowe.com

[72] ¶532 and 533. Under the look-through approach, a bank "looks through" the unrated securities issued pursuant to the securitization to the underlying asset(s) and determines the applicable risk weight(s) for the underlying on an unsecuritized basis. Note that in order to qualify to use the look-through approach, the composition of the underlying pool must be known at all times. Furthermore, depending on an entity's status (e.g., liquidity facilities), additional risk-weighting provisions may apply.

exception applies, then the bank holding such exposures may apply a risk weight to the non-senior position that is the greater of (i) 100% and (ii) the highest risk weight assigned to any of the exposures in the underlying asset pool.[74]

iv. Application of the Internal Ratings-Based Approach ("IRB")

As noted above, there are two potential methodologies that may be used under the IRB—the RBA and the SFA—each of which shall be discussed in turn. The approach to be used by a bank is determined primarily based upon whether the bank is an originating bank or an investing bank.[75] An *originating* bank[76] that qualifies to use the SFA generally must use the SFA for securitizations whenever possible. If the SFA is not available for use, then (i) if the party is an eligible liquidity facility[77] for the transaction, then it may use a look-through approach, and (ii) if not, then such originating bank must use the Standardized Approach. An *investing* bank that has received approval to use the IRB must use the SFA approach for securitization exposures on which an external rating is available or a rating can be inferred.[78]

1. Application of the Ratings-Based Approach ("RBA")

Under the RBA, the risk-weighted assets in a securitization transaction are determined by multiplying the amount of a given exposure by the appropriate risk weight. Specifically, the RBA risk weights for securitization exposures depend upon (i) the external rating (or inferred rating) grade, (ii) whether the rating is a long-term or short-term rating, (iii) the granularity[79] of the underlying pool, and (iv) the high-level seniority of the position relative to the size of the

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[74] ¶534 and 535.
[75] "Originating bank" is defined in ¶507 and "investing bank" is defined in ¶506.
[76] For purposes of Basel II and the ANPR, the term "originating bank" also includes ABCP conduit sponsors, ABCP placement agents, credit enhancers and liquidity providers.
[77] *See supra* note 78 (liquidity facilities are treated as originating banks under Basel II) and ¶538 for the eligibility requirements of liquidity facilities.
[78] ¶588 provides the operational requirements for assigning an "inferred rating" to a securitization exposure. These include:
(a) The reference securitization exposure (e.g., ABS) must be subordinate in *all* respects to the unrated securitization exposure;
(b) The maturity of the reference securitization exposure must be equal to or longer than that of the unrated exposure;
(c) An inferred rating must be updated continuously and on an ongoing basis to reflect any changes in the external rating of the reference securitization exposure; and
(d) The external rating of the reference securitization exposure must satisfy the general operational requirements for recognition of external ratings.
[79] Granularity refers to how "scattered" the assets of the underlying pool are based on the size of the pool. A "highly granular" pool exists when N is 100 or more and the seniority relative to the size of the pool is equal to or greater than 0.1 +25/N. A "non-granular" pool exists when N is less than 6. In all other cases, the default risk weights of Table 6 apply. *See* ¶585.

pool.[80] The applicable risk weights for securitization exposures are set out in Table 5 below; note that the figures in bold are those that would apply under the Basel Committee's January 2004 document, while the figures in parentheses represent the risk weights proposed in the original Basel II document.[81]

Table 5: Risk Weights Under the RBA

Exposures with Long-Term Ratings			
External Rating (illustrative)	**Risk weights for senior tranches backed by highly granular pools[82] (& eligible IAA[83])**	**Default risk weights (for non-senior tranches backed by granular pools)**	**Risk weights for non-senior tranches backed by non-granular pools[84]**
Aaa	7%	12%	20%
Aa	**8%** (10%)	15%	25%
A1	**10%** (20%)	**18%** (20%)	35%
A2	**12%** (20%)	**20%** (20%)	
A3	**20%** (20%)	**35%** (20%)	
Baa1	**35%** (50%)	50%	50%
Baa2	**60%** (75%)	75%	75%
Baa3	100%	100%	100%
Ba1	250%	250%	250%
Ba2	425%	425%	425%
Ba3	650%	650%	650%
Below Ba3 and unrated	Deduction	Deduction	Deduction
Exposures with Short-Term Ratings			
External Rating	**Risk weights for thick tranches backed by highly granular pools**	**Base risk weights**	**Risk weights for tranches backed by non-granular pools**
A-1/P-1	7%	12%	20%
A-2/P-2	20%	20%	35%
A-3/P-3	75%	75%	75%
Other ratings and unrated	Deduction	Deduction	Deduction

[80] ¶582.
[81] The Basel Committee on Banking Supervision, "Changes to the Securitization Framework" (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf. *See also* part VI(d)(ii) below for details regarding revised risk weights for certain highly-rated exposures.
[82] *See* ¶585. The risk weights of this column shall be applied if the effective number of credits in the pool ("N") is 100 or more, and the granularity of the pool is greater than or equal to 0.1 + 25/N.
[83] "IAA" refers to the Internal Assessment Approach which was introduced for ABCP conduit transactions as part of the Basel Committee's January 2004 revisions to the securitization framework. The IAA is discussed in greater detail in part VII(b)(i).
[84] *See* ¶585. "Non-granular" means that the effective number of *underlying* exposures is low. Under Basel II, the risk weights of column 4 shall apply if N is less than 6.

2. Application of the Supervisory Formula ("SFA")[85]

The SFA is a more advanced approach to calculation of regulatory capital for securitization transactions. Capital requirements for a securitization exposure under the SFA depends upon five bank-supplied inputs, when are then factored into a supervisory formula to determine the appropriate capital charge. Given its higher level of detail (and therefore—one may hope—accuracy), the SFA is to be used by qualifying banks[86] whenever possible.

There are three steps to apply the SFA. First, the following five bank-supplied inputs must be determined:

- The "Kirb" of the position;[87]
- The position's credit enhancement level ("L");[88]
- The position's thickness ("T");[89]
- The underlying pool's effective number of exposures ("N"); and
- The pool's exposure-weighted average loss-given-default ("LGD")[90]

The key step for banks using the SFA is to calculate Kirb.[91] "Kirb" is the capital charge of the underlying securitized exposures as if they had not been securitized.[92] It serves as a sort of

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[85] For the theoretical and quantitative bases of the SFA formula, *see* Vladislav Peretyatkin and William Perraudin, "Capital for Asset-Backed Securities," Bank of England, February 2003 ("P&P"). P&P assumed constant expected losses ("EL"), which they translated into an assumption of 50% LGD for senior positions with a probability of default ("PD") consistent with the PD for a like-rated corporate asset. The P&P assumptions were subsequently modified in Michael Gordy and David Jones, "Random Tranches," Risk (March 2003), p. 78-83. In particular, Gordy and Jones revised the P&P analysis to more accurately account for prioritization of credit losses, given the facts that (i) few securitizations require strict prioritization of all cash flows, but rather subordinated tranches typically are entitled to some form of limited payout before more senior investors are paid out in full, and (ii) even in cases of securitizations subject to strict prioritization, the available CE level generally understates the ability of more junior tranches to absorb losses (i.e., to the extent that their contractual yield is higher than the rate of interest on the underlying loans in the pool). The Gordy-Jones analyses were incorporated into the originally-proposed Basel II and supported by CP3.

[86] Qualification to use the SFA requires, *inter alia,* approval by a bank's national regulators.

[87] Kirb refers to the capital charge (K) as calculated under the IRB approach—thus, K + IRB = Kirb.

[88] L is measured as the ratio of (a) the notional amount of all exposures subordinate to the tranche in question to (b) the notional amount of exposures in the pool. *See* ¶593. In other words, more senior positions have higher L values. Under ¶593, banks are required to determine L before considering the effects of any tranche-specific CE such as third party guarantees (i.e., external CE). Interest rate or currency swaps that are more junior than the tranche in question may be measured at their current values in calculating the CE level. Moreover, if the bank has set aside specific provision for an exposure in the pool (i.e., internal CE), then the amount of such provision may be treated as CE and included in the calculation of L.

[89] T is measured as the ratio of (a) the nominal size of the tranche of interest to (b) the notional amount of exposures in the pool. *See* ¶595.

[90] LGD is calculated as:

$$LGD = \frac{\sum_i LGD_i \cdot EAD_i}{\sum_i EAD_i}$$

Where LGD_i represents the average LGD associated with all exposures to the i^{th} obligor and EAD represents the exposure at default of such obligations. *See* ¶597.

For example, in a securitization transaction with 10 obligors, an average LGD of $10 million per obligor, and an estimated EAD of $2 million (i.e., 20% actual exposure) in the case of default, then LGD = [(10 x $10M) x $2M]/[10 x $2M] = $10 million. Thus, the exposure-weighted average LGD is $10 million. Of course, this calculation assumes that each obligor holds the same position amount; it would of course change if the obligors hold different amounts.

[91] ¶575 through 577.

[92] Kirb is calculated as the ratio of (a) the IRB capital requirement for the underlying exposures in a pool to (b) the notional or loan equivalent amount of exposures in the pool. In other words, Kirb equals the capital charge that would have been assessed against the

"baseline" capital charge, which can also be compared with the relevant post-securitization capital charge. The treatment of positions vis-à-vis Kirb are summarized in Table 6:

Table 6: Treatment of Kirb Positions

Position	Capital Rule
Positions less than or equal to Kirb	Deduction[93]
Positions in excess of Kirb	Apply external rating (if is available or can be inferred—see below) or the SFA[94]
Positions that straddle Kirb	Treat as two separate positions and apply two separate rules
If Kirb cannot be calculated	Deduction of entire retained position

Once the five bank-provided inputs are obtained, the next stop is to calculate the capital charge for a given securitization exposure according to the following formula:[95]

> Capital charge for a given exposure = (i) the notional amount of the exposures being securitized, multiplied by (ii) the greater of (a) (Supervisory formula [L+T] – Supervisory formula [L]), and (b) 0.0056*T

As part (b)(ii) of the above formula indicates, the capital charge for any securitization exposure is subject to a minimum 56 basis point floor.

In the final step of the SFA, the capital charge obtained from the above formula is multiplied by 12.5 to result in the applicable risk weight to be used for the securitization exposure in question.

The basic approach employed in the SFA (as above)is known as the "bottom-up" approach; in other words, a bank supplies the basic data at the "bottom" level, which is then incorporated into the SFA formula at a "higher" level for more refined analysis. However, the bottom-up approach may be problematic in cases of securitization of third-party assets, since

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underlying exposures if the exposures had not been securitized, divided by the size of the exposure pool. For example, if an individual (or pool of) assets qualifies for a 50% risk weight in the absence of securitization, the holder of such securitized assets must use the 50% figure to calculate Kirb—even if the applicable risk weight will decrease as a result of securitization. When calculating Kirb for the underlying exposure, the IRB approach for that type of exposure should be used, and the calculation should include the effects of any applicable credit enhancement (i.e., L).

[93] Under current capital rules, an originating bank that retains a position in a securitization in which it is required to absorb losses up to the Kirb threshold is required to deduct dollar-for-dollar the retained position from capital. Under the proposed rules, however, such required deduction would be capped at Kirb for most exposures (known as the "Kirb cap").

[94] ¶575 states, "Except in the specific circumstances [regarding eligible liquidity facilities and servicer cash advance facilities], originating banks are required to calculate Kirb…*Where Kirb cannot be calculated,* the entire retained position must be deducted" (emphasis added). Several parties have noted the inherently subjective—and therefore problematic—nature of this wording regarding when Kirb "can" or "cannot" be calculated. This is referred to as the "cliff edge" effect of Kirb calculation for originating banks. *See, e.g.,* comments submitted by Citigroup and Credit Suisse First Boston.

[95] ¶589. Separate inclusion of both S[L+T] and S[L] (i.e., as opposed to the sole inclusion of S[T] appears to be due the fact that S[L] considers cumulative beta distributions which do *not* incorporate potential future exposure, while S[T] alone *does* incorporate potential future exposures. Therefore S[L+T] may allow for offsetting between these two calculations.

many of the data upon which the calculations are based are unknown or unavailable. In part as a result of this, a "top-down" approach is available to calculate Kirb for exposures to eligible corporate receivables[96] under ¶340 through 344 of Basel II. This approach may be applied under both the RBA and the Standardized Approach, although it is more difficult to apply the latter approach due to relative lack of data. The top-down approach is discussed in more detail in part VI(d)(iii).

v. Treatment of Credit Enhancement

Credit enhancement ("CE") is defined in ¶509 as "a contractual arrangement in which the bank retains or assumes a securitization exposure and, in substance, provides some degree of added protection to other parties to the transaction." Both the Standardized Approach and the RBA seek to incorporate the benefits of CE in the determination of capital requirements (at least for rated transactions).

Generally speaking, a bank that *receives* some form of CE may elect to treat it for capital purposes in one of two ways. Such bank may (i) *substitute* the risk weight of the collateral (i.e., the assets guaranteeing the enhancement) for the risk weight of the exposure (i.e., the assets benefiting from the enhancement), or (ii) *reduce* the exposure amount by the value ascribed to the credit-enhancing collateral.

A non-originating bank that *provides* CE to a rated securitization exposure must calculate its capital requirement for such exposure as if it were an investing bank in the securitization. In other words, if the securitization exposure is rated, then the bank must apply the SFA if possible; and if the exposure is unrated, then such bank must treat the CE as if it held the unrated exposure directly. For example, an originating bank may issue $75 million of senior securities and secure them by a pool of assets valued at $100 million; this structure results in overcollateralization of 25%. If this transaction is rated, then the originating bank may be able to deduct the $25 million

[96] ¶211 provides eligibility criteria for the top-down approach.

of CE and be subject to hold capital only on the $75 million actually issued. If the transaction is unrated, however, then the required capital would be calculated on a $100 million basis.

It is clear from the above discussion that the treatment of CE for originating banks is different from that of investing banks. This disparity of treatment was a principal complaint of industry participants and is discussed in greater detail in part VI(c) below.

vi. Treatment of Liquidity Facilities

The basic approach to the treatment of the use of "eligible" liquidity facilities[97] under both the Standardized Approach and the IRB Approach is that such facilities are to be treated as any other securitization exposure, and that the risk weight to be applied to such facilities is equal to the highest risk weight assigned to any of the underlying exposures covered by a given facility.[98]

Although banks may rely on the quality of an external rating of a rated liquidity facility under the RBA,[99] it is not clear that this is the case under the Standardized Approach. In the latter scenario, if the facility is not rated then the bank must apply the SFA.[100] For unrated liquidity facilities, the SFA methodology must be applied regardless. Finally, the treatment of liquidity facilities associated with revolving securitizations is discussed in the following section.

vii. Treatment of Revolving Securitizations with Early Amortization Provisions

The general rule regarding revolving securitizations with early amortization provisions is that an originating bank is required to hold capital against the investors' interest—in addition to any

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¶538 outlines the eligibility requirements for liquidity facilities, which include:

(a) The facility documentation must clearly identify and limit the circumstances under which it may be drawn, and must not be used to provide credit support at the time it may be drawn by covering losses already sustained or be structured such that the draw-down is certain;
(b) The facility must be subject to an asset quality test that precludes it from being drawn to cover credit risk exposures that are in default;
(c) The facility cannot be drawn after all applicable credit enhancements have been exhausted;
(d) Draws on the facility must not be subordinated or subject to deferral or waiver; and
(e) If the quality of the underlying pool falls below investment grade, then the facility must result in (i) a reduction in the amount that can be drawn or (ii) early termination of the facility in the event of default.

[98] ¶536.

[99] A "look-through" approach may be applicable for those entities using the advanced framework. Under the "look through" approach, the liquidity facility's capital charge would be calculated as the product of (a) 8 percent, (b) the maximum potential drawdown under the facility, (c) the applicable CCF, and (d) the applicable risk weight.

[100] ¶600. *See also* Mayer, Brown, Rowe & Maw LLP, "Advance Notice of Proposed Rulemaking—Risk-Based Capital Guidelines" (September 8, 2003), available at www.mayerbrownrowe.com

capital and the bank must hold against any retained interest— arising from such transactions. [101] As the balance in a revolving securitization in which the value of the underlying collateral varies (in the case of credit card receivables, for example, as charges are made to the cards and some percentage of the cards' balance is paid off), investors in the securitization must be adequately protected against such variance. For example, in a revolving credit card securitization in which $100 million of underlying receivables (with a notional value of $110 million, i.e., 10% overcollateralization) have been securitized and sold to outside investors, the originating bank would have to hold capital against only $100 million. If instead the bank had securitized all $110 million and retained a $10 million tranche (i.e., rather than treating it as overcollateralization), then such bank would be required to hold capital against the entire $110 million.

The two key distinctions regarding the capital requirements for revolving securitizations with amortization provisions are (i) early amortization versus standard amortization, and (ii) for early amortization, whether such amortization is "controlled" or "non-controlled."[102] The first distinction is important because early amortization events may result in capital inadequacy; in contrast, capital coverage for standard amortization can be provided for *ex ante.* Early amortization is triggered when the trust or SPV fails to generate sufficient income to cover expenses; when this happens, principal is no longer used to purchase new receivables, but rather is used to repay investors. The second distinction is important because securitizations with uncontrolled early amortization are subject to higher credit conversion factors (see below) and consequently higher capital requirements. Calculation of the amount of additional capital that must be held in a revolving securitization requires determination of the applicable credit conversion factor ("CCF"). In order to do this, a bank must first determine its three-month

[101] ¶550 requires originating banks to hold capital against all or a portion of the investors' interest when (a) it sells exposures into a structure that contains an early amortization feature, and (b) the exposures sold are of a revolving nature. Exceptions to this general rule are found in ¶553; they include (a) replenishment structures in which the underlying exposures do not revolve and the early amortization ends the ability of the bank to add new exposures, and (b) transactions of revolving assets with early amortization features that mimic term structures (i.e., where the risk on the underlying facilities does not return to the originating bank. Note that the discrepancy in treatment between originating and investing banks with regard to this type of securitization structure was hotly contested by industry participants and is discussed in greater detail in part VI(c) below.

[102] ¶510 lists the eligibility criteria for "controlled" amortizations.

average excess spread level. Second, it must compare this level with (1) the excess spread level at which early amortization is triggered, and (2) the point at which the bank is required to capture excess spread as economically required by the structure.[103] This is known as the excess spread differential ("ESD"). CCFs are based upon a baseline ESD of 450 basis points (4.5%), which is in turn divided into four equal segments.[104] Each of these segments is then subject to different capital treatment according to Table 7.[105]

Table 7: Credit Conversion Factors to Apply for "Controlled" and "Non-controlled" Amortization in Uncommitted Retail Revolving Securitization Transactions

3 Month Average ESD	"Controlled" Early Amortization CCF	"Non-controlled" Early Amortization CCF
450 basis points or more	0%	0%
337.5-450 bps	1%	5%
225-337.5 bps	2%	10%
112.5-225 bps	20%	50%
Less than 112.5 bps	40%	100%

Under the original Basel II proposal, after determining the applicable CCF to apply to a given revolving securitization, the additional capital charge for this interest was calculated by multiplying (a) the notional amount of the investors' interest by (b) the applicable CCF by (c) the risk weight appropriate for the underlying exposure type as if the underlying exposures had not been securitized.[106] CCFs are also applicable to liquidity facilities under the proposed Basel II regime. They may be summarized as follows:

- Standardized Approach
  - 0%: If the eligible liquidity facility is only available in the event of a general market disruption[107]
  - 20%: Eligible liquidity commitments of one year or less
  - 50%: Eligible liquidity commitments of more than one year
  - 100%: Non-eligible liquidity facilities
- IRB: RBA
  - 50%: Eligible liquidity commitments of one year or less

[103] ¶557 and 558. Note that in transactions which do not require excess spread to be captured, the default capture point is deemed to be 4.5% greater than the excess spread level at which early amortization is triggered.
[104] Note that under current rules in the United States, if a securitization does not employ the concept of excess spread as a determining factor for when such transaction's early amortization is triggered, then a 10% CCF is applied to the outstanding principal balance of the investors' interest at the securitization's inception regardless of what the level of excess spread may actually be.
[105] *See* ¶559 and ¶565.
[106] ¶555.
[107] ¶540.

- 100%: Eligible liquidity commitments of more than one year; Eligible liquidity facility that is unconditionally cancelable and is a senior secured claim; Non-eligible liquidity commitments

- IRB: SFA
  - 20%: Eligible liquidity facility that is only available in the event of a general market disruption[108]; Eligible liquidity facility that is unconditionally cancelable and is a senior secured claim
  - 50%: Eligible liquidity commitments of one year or less
  - 100%: Eligible liquidity commitments of more than one year; Non-eligible liquidity commitments

c. United States Bank Regulators' Advanced Notice of Proposed Rulemaking (ANPR) & Comparison of Basel II and the ANPR Regarding the Treatment of Securitization

In response to Basel II, in August 2003 the four United States bank regulatory agencies (OCC, Federal Reserve, FDIC and OTS) drafted the ANPR for risk-based capital requirements and implementation of the proposed new Basel accord in the United States. The target date for implementation of the Basel II/ANPR regime in the United States is January 1, 2007.[109]

As a threshold issue, one should note that treatment of securitization under Basel II and the ANPR is substantially similar in many respects. For example, the application of the SFA formula and bank-supplied inputs, allocation of deductions from capital other than FMI (i.e., 50% from Tier 1 and 50% for Tier 2)[110], and treatment of eligible liquidity facilities under the ANPR are all consistent with the proposed Basel II.

Nevertheless, there are at least two ways in which the ANPR is narrower in scope than Basel II. First, the ANPR is narrower in scope insofar as it distinguishes between three categories of banks and limits the applicability of the Basel II regime to only certain of those banks. The first category is "core banks", which include those banks with (i) total commercial bank assets of $250 billion or more,[111] or (ii) total on-balance sheet foreign exposure of $10 billion or more.[112] It is currently estimated that there are approximately 10 of these "large, internationally active

[108] ¶601.
[109] Asset-Backed Securitization Rules Issued, 68 Federal Register 56530 (Oct. 1, 2003), available at www.federalreserve.gov/generalinfo/basel2
[110] ¶522 and 523. The one exception to this allocation rule is for FMI, which is deducted 100% from Tier 1.
[111] For consolidated groups, this figure is aggregated at the bank holding company ("BHC") level.
[112] Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord. Federal Register, Vol. 68, No. 149 (August 4, 2003), p. 45900 – 45988.

banks" and that these banks represent more than 95% of US foreign assets. The ANPR is to apply in its entirety to core banks. The second bank category is "opt-in banks," which include those banks that do not qualify as core banks but that voluntarily choose to apply the proposed rules (upon regulatory approval). Like core banks, the ANPR would be fully applicable to them. Finally, the third category is "general banks" and includes all other US banks. These banks—which represent the majority of US banks in terms of number, but not in terms of capital holdings—are not to be subject to the new Basel II regime at all, but rather are to apply the risk-based capital rules currently in place (i.e., Basel I, which—as mentioned above—does not provide specific treatment of securitizations).

The second way in which the ANPR is narrower than Basel II is that ANPR does not provide the Standardized Approach for US banks under any circumstances. Rather, as a result of its bank categorization, the "bifurcated" US approach provides only two options: the SFA (for core and opt-in banks); or the capital rules already in place (for general banks).

In part as a result of the ANPR's narrower scope, one substantive difference between the proposed Basel II and the ANPR is the default rule to be used by core banks and opt-in banks when the SFA is not available. Under the proposed Basel II, if a bank is not able to use the SFA for a particular securitization, then it is to apply the RBA. However, under the ANPR the RBA is not available. Rather, for securitizations which in which the SFA cannot be used by a core bank or an opt-in bank, the ANPR proposed an "Alternative RBA" for originating banks. Under the Alternative RBA, the risk weight for a position depends on the external rating of that position. This difference between the Basel II and ANPR regimes is summarized in Table 8; given the limited situations in which the Alternative RBA results in different capital requirements (i.e., for BB+ to BB- rated transactions), one may question why the United States regulators chose to make this distinction at all.

Table 8: Alternative RBA Risk Weight Comparisons[113]*

Credit Rating	ANPR Alternative RBA Proposal	Basel II Standardized Proposal
AAA to AA-	20%	20%
A+ to A-	50%	50%
BBB+ to BBB-	100%	100%
BB+ to BB-	Deduction	350%
B+ or below	Deduction	Deduction
Unrated	Deduction	Deduction

*Note: The ANPR Alternative RBA column applies only to core banks and opt-in banks in the United States, while the Basel II Standardized column applies to non-US banks subject to the Basel II regime (e.g., EU banks).

In issuing the ANPR US bank regulators noted that they were open to considering both modifications to the current approaches as well as fundamentally different approaches, if there were found to be significant competitive effects between Basel II as proposed by the Basel Committee and the ANPR regimes. Notwithstanding such modifications, however, the US regulators plan to meet their implementation targets for the ANPR. To this end, they have provided for transition rules for banks that are subject to the ANPR. These rules include the following:

- Required capital must be calculated under both the new approach and the general approach currently in effect for one year before the new approach may be used on a stand-alone basis;
- Once a bank has been authorized to use the new approach on a stand-alone basis, it will be subject to a minimum risk-based capital floor for two years. During the first year the minimum capital floor is 90% of the bank's capital requirements under current rules, and during the second year this capital floor is reduced to 80%.[114]

[113] Mayer, Brown, Rowe & Maw LLP, "Advance Notice of Proposed Rulemaking—Risk-Based Capital Guidelines" (September 8, 2003), available at www.mayerbrownrowe.com

[114] *See* Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord. Federal Register, Vol. 68, No. 149 (August 4, 2003), p. 45900 – 45988. *See also* Mayer, Brown, Rowe & Maw LLP. Advance Notice of Proposed Rulemaking—Risk-Based Capital Guidelines (September 8, 2003), available at www.mayerbrownrowe.com

V. General Critique of Basel II Regarding Asset Securitization

a. Too Conservative

The most commonly mentioned general critique of the original Basel II proposal was that the capital charges for securitization transactions under the RBA were too high for highly rated investments (AAA, AA), and in a few select instances that they were too low for low or unrated investments (BBB and below).[115] The ASF went so far as to claim that the RBA "requires too much capital across all asset types, and at virtually every ratings level."[116] The ESF also noted the related failure to take adequate account of the variety of possible securitization transactions, and the fact that consumers may be negatively affected (via restricted access to capital) by the cumulative punitive effect of overly conservative assumptions.[117]

This outcome was echoed by the House Committee on Financial Services, which noted that access to credit for lower quality borrowers would decrease as well, since banks would not be able to securitize such entities' assets in an economically efficient manner.[118] At an extreme, such conservatism could eliminate the benefits of disintermediation (i.e., securitization), as indicated in Figure 1. In defense of the originally-proposed risk weights, however, an OCC official was quick to highlight that when one says that the proposed Basel II Accord is too conservative, one must remember that "it is all relative to one's starting point and perspective."[119] In other words, while industry participants that are most concerned with profits and the bottom line argue that Basel II is overly conservative, regulators who are most concerned with the safety

[115] *See* in particular comments submitted by Bank of America, MBNA American Bank, Wachovia Corporation, and the American Securitization Forum, Australian Securitisation Forum, The Bond Market Association, European Securitisation Forum, International Association of Credit Portfolio Managers, International Swaps and Derivatives Association, and the Japanese Bankers Association (collectively, the "Securitization Associations"). *See also* Appendix D, reproduced from the American Securitization Forum's comments, which diagrams the actual loss distributions and relationships between LGD and tranche thickness for various securitization transactions. In brief, it shows that in most securitizations the likelihood of losses drops off significantly as (i) the losses become larger and/or (ii) tranche thickness increases.

[116] American Securitization Forum, ANPR: Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord (November 3, 2003), available at http://www.americansecuritization.com

[117] European Securitisation Forum, Basel Accord Executive Briefing Paper, November 20, 2003, available at http://www.europeansecuritisation.com

[118] Comments submitted by Hon. Michael Oxley, US House of Representatives and Chairman of the House Committee on Financial Services, available at http://www.federalreserve.gov/generalinfo/foia/index.cfm?doc_id=R%2D1154

[119] Telephone conversation with Mr. Amrit Sekhon, Risk Expert, Capital Policy Division of the OCC, November 25, 2003.

and soundness of national financial systems are keen to respond that Basel II is, if anything, not stringent enough.

Figure 1: The Economic Distortions of the 1988 Basel Accord and the Potential Economic Distortions of the Proposed Risk Requirements[120]

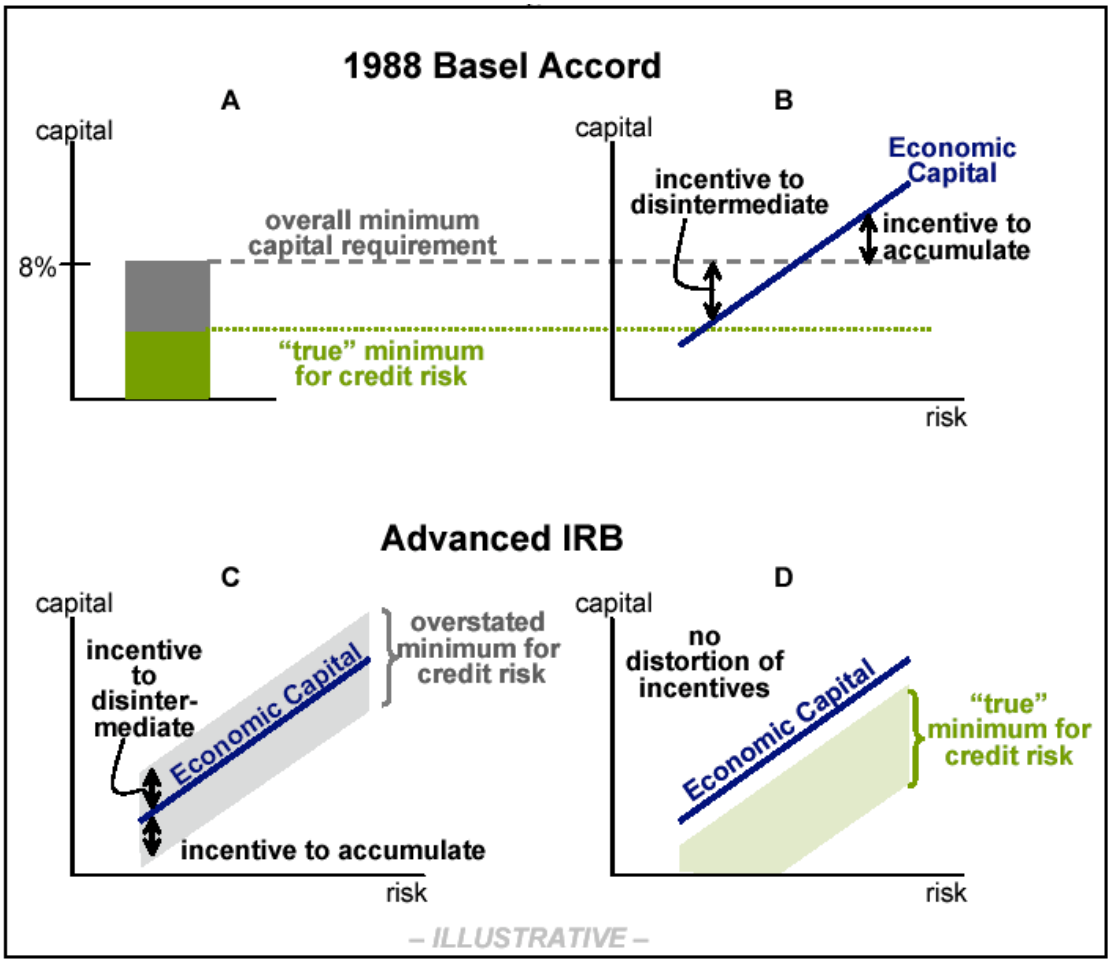

Figure 1 illustrates the economic distortions that resulted under Basel I as well as potential distortions under the Advanced IRB (i.e., SFA) approach. Part (A) reflects the fact that capital requirements under Basel I were a flat 8% of risk-weighted assets, irrespective of the "true" risk of a given loan. Part (B) shows the effect of these constant capital requirements upon situations in which the "true" credit risk was higher or lower than 8%; essentially, banks that were subject

[120] Figure reproduced from ERisk comments to the ANPR, available at: http://federalreserve.gov/SECRS/2003/November/20031105/R-1154/R-1154_6_1.pdf

to Basel I had an incentive to accumulate high-risk loans, while other institutions that were not subject to Basel I had a competitive advantage in the provision of low-risk loans.

Part (C) shows how Basel II attempts to deal with the perverse incentives illustrated above, by creating more risk-sensitive capital requirements. However, to the extent that the capital requirements remain in some cases higher than the actual risk entailed, there will still be distorted incentives for entities subject to Basel II. Part (D) illustrates how these adverse incentives could be removed, i.e. by setting minimal capital requirements at a level marginally less than economic capital. In summary, Figure 1 graphically details the fact that Basel II remedies only part of the credit risk problem, but that additional fine-tuning is required before actual credit risk is effectively assessed.

One of the most "basic" complaints regarding the treatment of credit risk for securitizations under the Basel II regime is the calculation of RBA risk weights. In their comments to the Basel Committee and US banking regulators, industry participants made several alternative recommendations regarding the calculation of these baseline weights. Some advocated a transaction-by-transaction approach and maximum bank flexibility; others advised recalculation of the P&P model[121] but with a revised LGD assumption of 50%[122]; and still others supported separate RBA risk weight tables for each of the five primary asset classes delineated. Not surprisingly, despite the diverging opinions regarding specifics, the critiques of essentially *all* industry experts noted the need for further research and recalibration in general.

In addition to the baseline RBA risk weights, industry comments also highlighted the need for more appropriate CCFs for liquidity positions[123]; the originally-proposed CCFs for liquidity facilities are listed in part IV(b)(vii). This recommendation was based in part on a September 2003 survey by the American Securitization ("ASF") and the law firm of Mayer,

[121] *See supra* note 86 for discussion of the P&P model.
[122] The rationale behind the 50% LGD revision was that is provided a workable LGD for thick, granular positions between 5 and 10% of the overall pool, based on empirical analyses.
[123] *See e.g.,* American Securitization Forum, Capital Treatment of ABCP Program Assets (November 17, 2003), available at http://www.americansecuritization.com

Brown, Rowe & Maw of the 17 banks who were collectively responsible for the issuance of 80% of all outstanding multi-seller ABCP at the time of the survey. The survey found that when the cumulative losses of these ABCP conduits were annualized, the average annual loss of the facilities was 0.0064%; [124] this is equivalent to an AAA exposure. Based on these results, the ASF recommended a reduction of the conversion factor for ABCP liquidity positions from 20% (as originally proposed) to between 5 and 10%.[125]

b. Too Complex, Costly and Inflexible

The complexity and rigidity of the proposed Basel II regime were also noted by many parties.[126] While such complexity and inflexibility were seen to be manifest at various levels, many comments focused on the (i) computational burdens of the SFA and (ii) the need for greater flexibility for banks to use their own internally-generated ratings in certain instances. An additional argument of several US banks (especially mid-range banks with more limited international banking activities) was that the costs of implementation of the Basel II regime were overly burdensome—in other words, that the benefits of enhanced capital requirements would be outweighed by the costs of implementing them.

c. Competitive Effects

The actual and potential competitive effects of the proposed Basel II and the ANPR upon the securitization industry were noted by virtually all major participants. Broadly speaking, the impact of the effective encouragement (or discouragement, as the case may be) of securitization via international capital standards has a significant impact not only upon the costs of bank financing, but also upon the availability of consumer credit, disintermediation, and capital market development as a whole. At a more specific level, with regard to the proposed Basel II and ANPR there are at least three different types of competitive concerns: issues of competitive

[124] Mayer, Brown, Rowe & Maw LLP, "Advance Notice of Proposed Rulemaking—Risk-Based Capital Guidelines" (September 8, 2003), available at www.mayerbrownrowe.com
[125] American Securitization Forum, ANPR: Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord (November 3, 2003), available at http://www.americansecuritization.com
[126] *See* in particular comments submitted by Bank of America, Credit Suisse First Boston, and the Securitization Associations.

equity between banks within the United States and/or within the EU; issues of competitive equity between US and EU banks; and competitive issues regarding the use of securitization by entities that are not subject to international capital requirements at all (e.g., credit card companies). Despite the significant progress that has been made with regard to the treatment of securitization for international capital purposes as a whole, these competitive effects remain.

Banking regulators in the United States have identified at least three competitive issues between US banks.[127] The need for a level playing field among internationally active financial institutions poses both practical and qualitative problems for opt-in banks in particular. First, there are competitive concerns of those banks that do not qualify for (or elect to use) the advanced approach. Second, there may be reputational concerns for "second tier" banks under the bifurcated approach in the United States. And third, there is the question of "possible competitive distortions that might be introduced by differences in regulatory minimums between the advanced approach and the general risk-based rules otherwise applicable for loans and securities with similar risk characteristics to securitizations."[128]

For their part, banks in the EU are subject to potential competitive divides. Within the EU, the goal is to have Basel II and the EU Capital Adequacy Directive ("CAD") take effect at the same time; given the track record of Basel II, however, that is far from certain. At this point, some countries within the EU are divided regarding how much of the Basel II regime should be left open for greater flexibility and ability to update provisions as necessary; for further details on this, see part VIII.

Differences between the US and EU approaches lead to potential issues of competitive equity between US and EU banks as well. Not only does the more limited applicability of the

[127] Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord. Federal Register, Vol. 68, No. 149 (August 4, 2003), p. 45900 – 45988.
[128] Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord. Federal Register, Vol. 68, No. 149 (August 4, 2003), p. 45900 – 45988.

ANPR threaten to disadvantage similarly-situated EU banks,[129] but also the potential for different timelines and implementation scenarios may put some banks at a competitive disadvantage. For example, if QIS studies are undertaken by regulators in different countries at different times and/or under different conditions, it is possible that the resulting impacts upon banks in both the EU and the United States could diverge, through no fault of the banks' own. To date, no workable plan for putting the rules and QIS calibrations within the US and EU on parallel tracks in order to remedy the potential problems has been proposed. In a similar vein, it has been difficult to model how the implementation of Basel II and the ANPR may disadvantage banks relative to non-bank securitization issuers to whom international capital standards are not applicable.

VI. Technical Critique of Basel II and the ANPR Regarding Asset Securitization & The Basel Committee's Response

The most frequent and substantial objections to the proposed Basel II and ANPR documents focused on the complexity of the SFA, the treatment of ABCP conduits and liquidity facilities, the role of originating and investing banks, revolving securitizations with early amortization provisions, and the treatment of unrated positions. Each of these issues is analyzed in turn below, followed by the Basel Committee's response in October 2003[130] and, most importantly, January 2004 ("the January document").[131]

The critiques presented in this part are based on the comments to the originally-proposed Basel II document[132] and the ANPR[133] issued subsequently. These comments came from a

[129] *Ceteris paribus,* given the high costs of implementation of the Basel II regime, EU banks—all of whom are to be subject to Basel II, in contrast to the limited applicability of Basel II to US banks as mandated by the ANPR—will be disadvantaged vis-à-vis their American counterparts. EU banks will be required to expend funds for Basel II implementation, whereas not all American banks will have to do so. In turn, implementation costs will impact banks' bottom line.

[130] In October 2003, the Basel Committee met in Madrid and issued a statement (the "Madrid Compromise") asserting that "one key area of concern is simplifying the treatment of asset securitization, which includes eliminating the Supervisory Approach and replacing it by a less complex approach."[130] Industry reaction to the Madrid Compromise was broadly favorable and set the scene for the Basel Committee's Securitization Group to issue more detailed revisions and requirements, which it did in its "Proposed Changes to Basel II Regarding Asset Securitization" in January 2004.

[131] On January 30, 2004—precisely at the time that this paper was in its formative stage—the Basel Committee issued a seminal document (at least with regard to securitization) entitled "Changes to the Securitization Framework"[131] (the "January document"). *See* The Basel Committee on Banking Supervision, "Changes to the Securitization Framework" (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf

[132] All comments to the CP3 are available online at http://www.bis.org/bcbs/cp3comments.htm

[133] All comments to the ANPR are available online at http://www.federalreserve.gov/generalinfo/foia/index.cfm?doc_id=R%2D1154

variety of sources, both private and public. Note that given the large number of comments submitted and the fact that the substantial majority of the comments made the same or similar recommendations with regard to securitization, footnotes of individual submitters have not been included except in cases of primary authority.[134] All of the responses come from the Basel Committee's January document.

a. SFA

i. Critique: Elimination and/or Simplification of the SFA

Several parties, primarily from private industry, commented on the unnecessary complexity and unworkability of the SFA and promoted the adoption of an exclusive internal bank rating system, which would allow banks with regulatory approval to utilize approved models.[135] To this end, they noted the reasons why an internal ratings-based system is superior to use and attempted to allay the concerns of regulators regarding the verification and validation of such systems.

Few regulators disagree that a system based on internal banking models is superior to uniform, "one size fits all" rules imposed by outside parties. However, the practical problems with such a system derive from the facts that (i) many banks would not be able to devise and implement such a system even if they were allowed to, due to lack of financial resources, computational technology, and requisite input data, and (ii) regulators would nevertheless have difficulty ensuring the soundness of each different model due to informational asymmetry and competitive disadvantage vis-à-vis the banks in this regard. Therefore, the current goal is to forge a middle path between the rudimentary treatment of securitization under Basel I and the hoped-for-someday Basel III, in which the treatment of securitization for capital purposes is entirely

[134] Two examples of primary authority that are cited frequently in this paper are the American Securitization Forum ("ASF"), and the ASF, Australian Securitisation Forum, The Bond Market Association, European Securitisation Forum, International Association of Credit Portfolio Managers, International Swaps and Derivatives Association, and the Japanese Bankers Association (collectively, the "Securitization Associations").

[135] *See* in particular comments submitted by Bank of America, Citigroup, Wachovia Corporation, JP Morgan Chase, and the Securitization Associations. *See also* European Securitisation Forum, Basel Accord Executive Briefing Paper, November 20, 2003, available at http://www.europeansecuritisation.com

based on internal banking models. By providing such a bridge, Basel II—if the drafters get it right—can ensure continuity, consistency, accuracy and safety in this regard.

Given the reality that an internal model-based approach for all banks subject to international capital standards is currently unfeasible, discussions then turn to the next-best outcome. Several parties noted the importance of external rating agency methodology in this regard. The ASF stated, "An internal system that is consistent with rating agency methodology is the perfect *hybrid* of an internal approach and rating agency approach that provides a substantially more reliable and verifiable means of calculating regulatory capital requirements than the proposed SFA. Furthermore, this system which would assign risk weights based on the external rating equivalent of the internal rating will provide consistency between the term markets (where transactions are typically rated) and the markets—particularly the ABCP market (where transactions are not typically rated)."[136]

Commentators also highlighted the ways in which the validation and verification systems of internal bank models currently in use are adequate to inform and protect both regulators and parties to a given securitization transaction. The following facts regarding these systems are worthy of mention:

- Developed over many years
- Built and updated within banks based on constant analysis of data over many years
- Subject to internal review, third party validation, and periodic regulatory review at both the transaction and portfolio levels

Moreover, under the current rules regulators are already able to access and assess the reliability of the inputs that go into the model, the accuracy of the operation and calibration of the model, and the bank's policies regarding the frequency of portfolio testing. Finally, whether a bank's system is consistent with ratings agencies methodology is easily verifiable by internal auditors, third party auditors and regulators. This validation may be done directly (by comparing an internal system's methodology with publicly-available methodologies) or indirectly (by comparing the

[136] American Securitization Forum, ANPR: Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord (November 3, 2003), available at http://www.americansecuritization.com

internal rating assigned to a position with the external rating assigned by a rating agency in the same position or to a similar transaction of the same asset type in the term market).[137]

Noting the practical difficulties of moving towards a uniform internal models regime in the short-term, many commentators recommended the simplification of the SFA. However, unfortunately few suggested actually *how* to simplify it. To begin with, there appear to be at least two specific quantitative changes that could be made to the proposed SFA. First, the minimum capital floor of 56 basis points (as required by the SFA formula and detailed in part IV(b)(iv)(2) above) is believed by many in the industry to be too high. Rather, the drafters of Basel II should be encouraged either (i) to change the floor capital requirement under the SFA from a transaction-based floor to an overall portfolio-based floor, or (ii) to lower the floor outright (several commentators suggested a floor of 25 basis points, approximately half of the current level). Second, the assumption of 100% LGD for calculating dilution risk under the SFA may be inappropriate. Dilution risk is another source of potential risk that is derived from events which are unrelated to the creditworthiness of an issuer which 'dilute'—or result in noncash reductions to the outstanding balance of—a receivable.[138] Examples of events which may trigger dilution risk include credits for returned merchandise (for credit card receivables) or for defective goods (for trade receivables). Quantitative analyses conducted JP Morgan Chase and Standard & Poors and reported by the ASF support this conclusion, indicating that the capital charges for dilution losses is consistently higher than for actual credit losses (176% versus 74% of average risk requirements). This results resulting in an overstatement of capital for dilution risk. To prevent against inaccurate outcomes like this, the 100% LGD assumption could be revised to be delineated by asset class.

One final minor modification to the SFA may be put forth regarding the treatment of FMI. Currently, credit for FMI for capital requirements is given *only* to revolving retail

[137] American Securitization Forum, ANPR: Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord (November 3, 2003), available at http://www.americansecuritization.com

[138] Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001).

exposures under the SFA. Critics argue that not only does such limited applicability not fully reflect the purpose and function of FMI (i.e., excess yield when FMI is greater than ongoing transaction expenses), but also it is inconsistent with the RBA. Rather, to prevent disproportionate penalization credit should be given under the SFA for the existence of FMI to *all* securitization transactions (i.e., not only to revolving retail exposures) that are structured to benefit from CE due to FMI.[139]

ii. Critique: Inappropriate Treatment of Unrated Positions

Under the original Basel II proposal, unrated positions (and the liquidity facilities that support them) were subject to the look-through approach. Under this approach, the risk weight applicable to an unrated liquidity position is the highest risk weight assigned to any of the underlying exposures covered by such position. This assumption (that the highest risk asset is a valid estimate for the risk in the entire portfolio, regardless of the size of the high-risk asset holding) was considered by many in the securitization industry to be overly conservative.[140] Rather, it was argued that the more appropriate measure upon which to base risk weights for unrated liquidity positions is the weighted average of the risk weights of the underlying assets. A weighted average more accurately reflects the true risks in the portfolio. In addition it was argued[141] that regulators should be allowed to maintain a list of eligible rating agencies that specialize in securitization, and that such agencies' private letter ratings should be recognized in the context of unrated liquidity positions. This would serve to facilitate the use of liquidity positions; for as the ASF noted, "[G]iven that the underlying tranche reflects the ultimate risk of a liquidity position, there is no reason not to permit the reliance on such rating if a liquidity position itself is not rated."[142]

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[139] *See, e.g.,* European Securitisation Forum, Basel Accord Executive Briefing Paper, November 20, 2003, available at http://www.europeansecuritisation.com

[140] *See* in particular comments submitted by Bank of America, Credit Suisse First Boston, JP Morgan Chase, MBNA American Bank, and the Securitization Associations.

[141] American Securitization Forum, ANPR: Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord (November 3, 2003), available at http://www.americansecuritization.com

[142] American Securitization Forum, ANPR: Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord (November 3, 2003), available at http://www.americansecuritization.com

iii. Response: Simplified SFA for Unrated Positions

In the January document the Basel Committee proposed simplifications to the SFA for the treatment of all unrated positions, including liquidity facilities and CE for ABCP conduits. The formula for and derivation of the simplified SFA are provided in Appendix C of this paper. Instead of the five bank-supplied inputs required under the originally-proposed Basel II (Kirb, L, T, N, and LGD), under the Simplified SFA the LGD input is eliminated and only the remaining four inputs are required. In other words, the new formula requires a bank to supply information regarding Kirb, the degree of credit enhancement (L), the thickness of the exposure (T), and the effective number of exposures in the securitized pool (N). As a result of eliminating the LGD input, under the January document the capital requirements of two pools with the same Kirb but different exposure-weighted LGDs will be the same, whereas under the original Basel II proposal, these two capital requirements would have been different.

b. ABCP Conduits and Liquidity Facilities

i. Critique: Inappropriate Treatment of ABCP Conduits and Liquidity Facilities

Effective treatment of ABCP conduits and liquidity facilities was viewed by many to be critical to the success of Basel II[143], but inadequately dealt with under the originally-proposed Basel II. In particular, under the original Basel II an external rating was required in order to be eligible to use the RBA . However, many ABCP conduit transactions and other CEs are not externally rated, due to their relatively low risk, infrequent use (i.e., draws upon such funds), and low historical losses. Thus, ABCP conduits and liquidity facilities were left in a difficult position: on one hand, an external ratings requirement would be unduly time consuming and costly; on the other hand, however, ABCP conduits and liquidity facilities are key to securitization transactions' risk management.

[143] Amrit Sekhon, Risk Expert, Capital Policy Division, Office of the Comptroller of the Currency and head of the OCC Securitization Task Force. Telephone conversation on November 25, 2003. *See also* comments submitted by Bank One Corporation, MBNA American Bank, the New York State Banking Department, and the Securitization Associations.

Prior to the Basel Committee's January document, ABCP conduits and liquidity facilities employed the top-down approach described in part IV(b). Under the top-down approach as implemented at that time, banks were required to decompose their expected losses into PD and LGD components, and if PD and LGD could not be determined, then assumptions of 100% LGD and 100% exposure at default ("EAD") were applied. This approach was subject to several shortcomings and practical difficulties in application, among which the following were noted by commentators: while banks do track expected losses, many do not do so in a way that decomposes them into PD and LGD; for banks that do decompose expected losses into PD and LGD, such information is typically subject to confidentiality requirements that bar its disclosure; and finally, if such information were disclosed, such disclosure could significantly diminish the attractiveness of ABCP conduit transactions from the securitizing entity's point of view.[144] Moreover, several commentators noted that the top-down approach runs counter to industry and market performance data, which indicate that ABCP conduit transactions can be structured and monitored successfully without detailed information regarding PD and LGD.

Various responses to the alleged inappropriateness of the top-down approach for ABCP conduits and liquidity facilities were given by industry participants.[145] First, it was urged to establish an IRB approach for banks to determine required capital for liquidity positions and CE positions supporting investment grade ABCP conduit transactions. Not only is a bank's internal system the most reliable method for determining liquidity risk, but also the early adoption of such a system would provide regulators an opportunity to become comfortable with an internal model-based approach on a more limited basis, prior to its adoption at the bank-wide level.

Second, it was argued that credit should be given for structural mechanisms that serve to reduce and/or manage risk in liquidity positions, such as asset quality tests. and funding formula

[144] American Securitization Forum, Interim Capital Treatment of ABCP Program Assets/Permanent Capital Treatment of ABCP Program Assets (November 17, 2003), available at http://www.americansecuritization.com

[145] *See* in particular comments submitted by Bank One Corporation, MBNA American Bank, the b York State Banking Department, and the Securitization Associations. *See also* European Securitisation Forum, Basel Accord Executive Briefing Paper, November 20, 2003, available at http://www.europeansecuritisation.com

adjustment in liquidity positions. These risk mitigating protections were not recognized in the original risk weight tables, despite the fact that they enhance ABCP conduit sponsors' ability to manage ABCP conduit transactions and reduce the exposure risk of such transactions (as compared to similarly rated transactions in the term securitization market).

Third, commentators noted the need to revise some of the criteria for qualification as an "eligible" liquidity facility under ¶538.[146] In particular, critics argued that the restriction under ¶538(e) that prohibits draws on an eligible liquidity facility if a rated security's rating falls below investment grade[147] was inappropriate.[148] Rather, critics highlighted the need to separate the liquidity facility's external rating from any asset quality test applied to such facility. The premise for this argument is the fact that a liquidity position which is subject to an asset quality test is already protected against bad assets (i.e., by the reduction in purchase price for the amount of defaulted receivables being funded by such position), *regardless* of the transaction's rating.

Finally, critics of the original Basel II and ANPR argued that it is inappropriate to treat ABCP conduit sponsors, liquidity providers, CE providers, and ABCP dealers (and placement agents who do not hold another position in the ABCP conduit transaction) as originators, given that in many situations these sponsor entities do not share the same risk profile as the actual originator. This critique is related to broader arguments regarding the inappropriate treatment of originating banks in general, and is taken up in greater detail in part VI(c) below.

ii. Response: Introduction of an Internal Assessment Approach ("IAA") for ABCP Conduit Transactions

In what may be considered the most significant and far-reaching modification under the January document, the Basel Committee proposed the introduction of an Internal Assessment Approach ("IAA") to determine the capital requirements for banks' exposures to ABCP conduits and the relatively low-risk unrated positions that accompany them. By providing at least *some* type of

[146] *See supra* note 101, which contains the text of ¶538.
[147] See ¶538(b) (asset quality tests) and (e) (investment grade threshold).
[148] American Securitization Forum, Interim Capital Treatment of ABCP Program Assets/Permanent Capital Treatment of ABCP Program Assets (November 17, 2003), available at http://www.americansecuritization.com

regulation and guidance regarding ABCP conduit transactions, the Basel Committee has acknowledged both the difficulty of assigning a risk weighting to the different tranches of an ABCP conduit transaction, as well as the validity of some banks' methodologies currently in existence. These acknowledgements may be expected to lead in turn to further research regarding ABCP conduit transactions and capital requirements and to facilitate more appropriate and accurate treatment of these exposures.

According to the January document, the IAA will apply only to ABCP exposures that have an internal rating equivalent of investment-grade or better at the time of inception. Under the IAA, subject to a set of operational criteria (listed in Appendix B) banks will make their own credit assessment for such exposures based on rating agency criteria for the ABCP asset type purchased by the ABCP conduit—in other words, a bank will map their internal risk assessment of an ABCP conduit transaction to external credit rating criteria. The notional amount of the exposure will then be assigned the risk weight corresponding to the external rating equivalent under the RBA (i.e., the alternative approach used for securitization transactions that do have ratings). If the IAA is not available and/or insufficient, then banks are to apply the Simplified SFA (see below) to the ABCP conduit transaction; if the Simplified SFA is not available and/or insufficient, then banks are to use the originally-proposed SFA. Finally, banks' eligibility for the IAA is subject to a "use test"—that is, banks that would like to use the IAA should already be using advanced methodologies for risk management on a broader scale before they are permitted to do so for regulatory capital purposes.

c. Originating Banks Versus Investing Banks

i. Critique: Inappropriate Treatment of Originating Banks and Investing Banks[149]

As discussed in part IV(b)(iv) above, under the originally-proposed IRB approach originating banks and investing banks were subject to different capital requirements in various instances. In

[149] *See* Appendix A for a summary of the treatment of originating banks and investing banks under the originally-proposed Basel II Accord. Note that this issue has been substantially resolved in the Basel Committee's January 2004 document.

general this discrepancy in treatment resulted in higher capital charges for originating banks than for investing banks. For example, an originating banks that retained a portion of the riskiest tranche (of a securitization which it originated) on its own books, it would be subject to higher capital requirements than an investing bank that acquired a portion of the same tranche with the same risk. In addition, originating banks (but not investing banks) were required to deduct all positions—whether externally rated or unrated—that fell below the Kirb threshold.

The disparity of treatment between originating banks and investing banks was viewed by many parties as inappropriate and not in accord with reality.[150] These parties argued that the two types of banks should be treated the same, insofar as both should be able to use an RBA-based risk weight for any rated position that is not a true first loss position. Moreover, the equal treatment proposed should apply regardless of whether the position falls above or below the Kirb threshold (the "Kirb cap", i.e. the Kirb of the underlying pool if such pool had not been securitized). In other words, the risk weight should reflect the quality of the specific exposure rather than the quality of the party who holds it, as there is no difference in the risk associated with a particular position simply because it is retained rather than acquired.

ii. Response: Equal Treatment of Originating Banks and Investing Banks

The critiques of the treatment of originating banks versus investing banks were substantially addressed in the January document. Specifically, Basel II was revised such that all externally rated positions are to be treated under the RBA, regardless of (i) whether the position is held by an originating bank or an investing bank, and (ii) whether the position falls above or below the "Kirb cap" threshold. The Basel Committee stated its acknowledgement that "the underlying rationale which [we] now accept is that the risk weight should reflect the quality of the specific exposure, not the party who holds it."[151]

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[150] *See* in particular comments submitted by Bank of America, Deutsche Bank, MBNA American Bank, New York State Banking Department, and the Securitization Associations.

[151] Changes to the Securitization Framework. Basel Committee on Banking Supervision (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf

d. Credit Enhancement and Other Risk Mitigants

i. Critique: Inappropriate (and/or Absence of) Treatment of Credit Enhancement

The critique of the treatment of CE and other risk mitigating techniques is related to several critiques already mentioned, including the alleged hyper-conservatism and under-inclusivity of the original Basel II and ANPR proposals. In brief, the insufficient credit given to various forms of legitimate CE and structural protections (e.g., unfounded reserve accounts and locked-in excess spread) has been widely noted.[152] This problem is manifest in several ways in the proposed documents, including tranching and liquidity positions. The function of tranching is risk reduction; *ceteris paribus,* senior tranche holders are exposed to less risk relative to holders of less senior tranches. Under the original Basel II, after Kirb is calculated for the underlying portfolio, the different tranches of a given securitization are "layered" in order to determine required capital. However, structural protections are not factored in to this layering process, and this routinely results in overstatement of capital requirements. This is especially true for senior and "thick"[153] tranches. Rather, what commentators recommended are mechanisms that recognize the enhanced sensitivity to risk of highly-rated exposures across-the-board. For example, Basel II drafters could deem that the most *senior* tranche of *any* securitization qualifies for the lowest risk weight (i.e., the left column in Table 6), rather than reserving such classification based solely on thickness.[154]

An additional problem is the inadequacy of the SFA to acknowledge the presence of structural features of liquidity positions that enable an ABCP conduit to manage a given securitization transaction and should theoretically reduce the capital requirements of banks that employ them. Examples of structural features include asset quality tests and contractual

[152] *See* in particular comments submitted by JP Morgan Chase and the Securitization Associations.
[153] "Thickness" is defined in ¶595 as the ratio of (a) the nominal size of the tranche of interest to (b) the notional amount of the exposures in the pool. It differs from the concept of seniority insofar as it focuses more on the size of a given exposure, rather than such exposure's ranking relative to other exposures in the same securitization.
[154] *See e.g.,* Comments to the New Basel Capital Accord submitted by the Securitization Associations, available at http://www.bis.org/bcbs/cp3comments.htm

provisions that limit the conditions under which a liquidity facility may be triggered. Without acknowledgement of such features, perverse incentives exist for banks to structure a given securitization transaction less prudently than would be the case otherwise (i.e., if credit were given to relevant structural enhancements).

ii. Response: Revised Risk Weights for Certain Highly-Rated Exposures

The Basel Committee included a series of revisions addressing risk weights under the Basel II regime. These revisions target, *inter alia,* overly conservative risk weight allocation and the treatment of tranches and senior-subordinated structures. In response to complaints that risk weights were too high across-the-board, the January document proposes to reduce the risk weights on "senior tranches" rated A+ to BBB (inclusive).[155] The proposed new risk weights are listed in Table 9 and result in significantly *lower* (by approximately half) risk weights for this ratings range. In addition, by changing the focus away from tranche thickness to tranche seniority, it is anticipated that the eligibility for preferential risk weights will expand.

For purposes of the January document revisions, a given securitization exposure is a senior tranche "if it is effectively backed or secured by a first claim on the entire amount of the assets in the underlying securitized pool."[156] However, the Basel Committee has specified that this definition does *not* include claims that may be more senior in the payment waterfall[157] in a technical sense, but not in actuality. For example, in traditional securitizations in which several tranches share the same rating, only the most senior one in the waterfall will be treated as the senior tranche; likewise in the context of liquidity facilities, if a liquidity facility is sized to cover all of the outstanding CP in a given transaction, then such liquidity facility may be deemed the

[155] AAA-rated exposures are not included in this range presumably due to the Basel Committee's stated intent to retain a minimum capital floor of 56 basis points (i.e., an AAA tranche with more than 100 separate exposures would have a best-case 7% capital requirement under the January document's provisions).

[156] The Basel Committee on Banking Supervision, "Changes to the Securitization Framework" (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf

[157] *See* Kenneth Morrison, "Glossary of Frequently Used Terms in Asset Securitization," included as an Appendix to Frank Fabozzi, ed. Accessing Capital Markets through Securitization (2001). According to Morrison, a payment waterfall is defined as "the order and amounts in which collections will be applied to various uses (e.g., interest, principal, servicing fees, losses on receivables, and deposits into reserve accounts)…[T]ypically funds are applied monthly, although in some revolving securitizations they may be applied daily." Under the Basel II regime, a swap claim may be an example of a claim that would not be considered a senior tranche.

senior position. However, typically a liquidity facility is not the most senior position in an ABCP program—rather, the underlying CP is. In the latter case, only the CP covered by the liquidity facility would qualify for the lower risk weights, and the applicable risk weights for non-senior liquidity facility positions would be determined according to the IAA.

Table 9 also includes an "Alternative Base Case" under which capital charges for a very limited set of exposures (i.e., A3 exposures) would be somewhat *higher* than under the original Basel II. The aggregate effect of these changes—higher capital charges for some low-rated exposures, and lower capital charges for a select few highly-rated exposures—is in line with the overall results of QIS-3.

Table 9: Alternative RBA Risk Weights Following January 2004 Changes[158]

<table>
<tr><th></th><th colspan="3">CP3 Risk Weights (%)</th><th colspan="3">Alternative Risk Weights (%)</th></tr>
<tr><th>Rating Grade (illustrative)</th><th>Highly granular pools, thick tranches</th><th>Base case</th><th>Non-granular pool</th><th>Senior tranches and eligible senior IAA</th><th>Base case</th><th>Non-granular pool</th></tr>
<tr><td>Aaa</td><td>7</td><td>12</td><td>20</td><td>7</td><td>12</td><td>20</td></tr>
<tr><td>Aa</td><td>10</td><td>15</td><td>25</td><td>8</td><td>15</td><td>25</td></tr>
<tr><td>A1</td><td rowspan="3">20</td><td rowspan="3">35</td><td rowspan="3">35</td><td>10</td><td>18</td><td rowspan="3">35</td></tr>
<tr><td>A2</td><td>12</td><td>20</td></tr>
<tr><td>A3</td><td>20</td><td>35</td></tr>
<tr><td>Baa1</td><td colspan="3">50</td><td>35</td><td colspan="2">50</td></tr>
<tr><td>Baa2</td><td colspan="3">75</td><td>60</td><td colspan="2">75</td></tr>
<tr><td>Baa3</td><td colspan="3">100</td><td colspan="3">100</td></tr>
<tr><td>Ba1</td><td colspan="3">250</td><td colspan="3">250</td></tr>
<tr><td>Ba2</td><td colspan="3">450</td><td colspan="3">450</td></tr>
<tr><td>Ba3</td><td colspan="3">650</td><td colspan="3">650</td></tr>
<tr><td>Below Ba3</td><td colspan="3">Deduction</td><td colspan="3">Deduction</td></tr>
</table>

iii. Response: Modified Top-Down Approach for Calculating Kirb

The Basel Committee also recognized the need to add flexibility to the top-down approach for calculating capital charges in order to facilitate the calculation of Kirb in various contexts. As

[158] Table reproduced from the Basel Committee on Banking Supervision, "Changes to the Securitization Framework" (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf. Note that the figures in boldface indicate the proposed changes to the CP3 risk weights.

discussed above, calculation of Kirb is particularly difficult for banks that are unable to decompose their EL estimates into reliable PD and LGD components. Under the original Basel II proposal, these banks were required to assign an LGD of 100% to these exposures. Although the final rules have not yet been published, the Basel Committee is in the process of developing less restrictive operational criteria for the application of the top-down approach. In particular it seeks to permit banks to rely on their own LGD estimates when calculating Kirb for securitization exposures. The changes ultimately presented are expected to result in lower capital charges for these exposures than would have been the case under the original Basel II proposal.

e. Final Critique: Revolving Credit with Early Amortization Provisions and Credit Conversion Factors ("CCFs")

Most of the critiques of the treatment of revolving credit with early amortization features[159] focused on three contexts within which greater flexibility is needed: the criteria for "controlled" amortizations; the applicability of the proposed rules for early amortization in non-credit-card revolving assets; and the use and calibration of CCFs.

First, many comments heralded Basel II's distinction between treatment of "controlled" and "uncontrolled" amortizations as a good thing. However, some parties found the criteria for "controlled" amortization to be too strict in certain instances and advocated the adoption of more limited and objective, principles-based criteria. The current criteria for originators of securitizations with "controlled" amortization provisions require that (i) there be a pro rata sharing of interest, principal, expenses, losses and recoveries based on the balance of receivables outstanding at the beginning of the month[160], (ii) the amortization period be long enough so that 90% of the total debt outstanding at the beginning of the amortization period is repaid or recognized as in default[161], and (iii) the amortization occurs at a pace no more rapid than straight-

[159] *See* in particular comments submitted by Banks of America, Bank One Corporation, the New York State Banking Department, and the Securitization Associations.
[160] ¶510(b).
[161] ¶510(c).

line amortization.[162] Industry participants argued that requirement (i) is unnecessary inflexible and should be deleted. As the ASF stated, "regulators should not micro-manage," and reliance on (ii) and (iii) is both sufficient for capital adequacy purposes and also allows for greater transactional flexibility.

Second, critics urged greater flexibility with regard to application of the proposed early amortization rules to non-credit-card revolving assets. For while early amortization in revolving credit card securitizations is typically triggered by a reduction in the level of excess spread, in non-credit card revolving securitizations the trigger is often different (e.g., the size of overcollateralization). In the latter case, while the amount of excess spread is important, it is not dispositive, and the trigger should be linked to the amount of overcollateralization instead. In short, the final rules regarding early amortization should be sufficiently flexible to allow for appropriate modification according to context.

Third, commentators promoted greater simplicity and flexibility within the CCF structure (i.e., with a fixed baseline of 450 basis points and four 112.5 bp quadrants). For example, the ASF suggested a downward revision to 400 basis points and four 100bp (1%) quadrants. The alleged benefits of such revisions to the CCF structure are numerous and include broader consistency across the industry, prevention of perverse incentives for banks to establish lower trigger points in order to avoid capital charges for CCFs, enhanced operability for originators and verifiability for regulators.

Finally, some commentators noted that the CCFs for non-controlled early amortization in particular warranted revision. Specifically, while the CCFs for controlled amortization (0%/1%/2%/20%/40% —see Table 7) are considered appropriate, a suggested reduction of non-controlled CCFs from the present range of 0%/5%/10%/50%/100% to 0%/2%/4%/40%/80% (i.e.,

[162] ¶510(d).

twice as large as the CCFs for controlled amortization)[163] would have more accurate and equitable results.

VII. Industry Response and Remaining Issues

Despite the significant progress evidenced in the January document regarding the regulatory capital treatment of securitizations, the Basel Committee has stated that its discussions on the issue "are still on-going and the approaches discussed [in the January document] are still subject to review."[164] Indeed, mere comparison of the amount of time and space devoted here to (a) pre-January 2004 and (b) post-January 2004 events may be indicative of the work that remains to be done. In particular, the Committee is seeking to identify ways to monitor securitization transactions to ensure that the premise of such transactions is the mitigation and transfer of credit risk, and not primarily as a means for banks to evade prudent capital requirements by shifting assets off-balance sheet; it appears that this objective may be facilitated via various means.

The industry response to the January document has been positive so far. As George Miller, managing staff director of the ASF and ESF and deputy general counsel for the Bond Market Association stated, "By any measure… [B]oth in direction and substance, the progress [made in the January document] is quite notable. It shows that the regulatory community is listening and is responding to some of the most significant concerns that securitization market participants have raised…[O]n the basis of what the Committee is now proposing, we have a far more rational and workable regime in its application to securitization transactions."[165] Although some bankers argue that the January document still does not go far enough and some issues remain unresolved, there are indeed few (if any) parties that would claim that the situation today regarding the regulatory capital requirements for securitizations is not far superior than it was six

[163] *See* American Securitization Forum, Interim Capital Treatment of ABCP Program Assets/Permanent Capital Treatment of ABCP Program Assets (November 17, 2003), available at http://www.americansecuritization.com. *See also* comments submitted by MBNA American Bank.
[164] Changes to the Securitization Framework. Basel Committee on Banking Supervision (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf
[165] GRR Press Release: "Bankers hail latest Basel Committee initiatives" (Jan. 21, 2004).

months ago, when the originally-proposed Basel II threatened to put the securitization industry out of business.[166]

Both the Basel Committee and private industry have noted the improved consistency in various contexts brought about by the January document. This consistency is manifest between the SFA and the Ratings Based Approach[167], harmonization of the treatment of originating and investing banks, and the enhanced sensitivity of certain risk weights under the Ratings Based Approach. Nevertheless, uncertainty remains regarding both (a) the changes brought about by, and (b) issues not addressed in the January document. With respect to the former, the following points should be noted:

- The Simplified SFA: Under the Simplified SFA, should a "cap" be assigned to the maximum number of exposures in a pool ("N") in order to address the potential problem of (and perverse incentives for) much lower capital requirements for non-senior positions lying just above Kirb? Or would such a cap create unreasonably high capital charges instead?

- Modified Top-Down Approach**:** As noted above, the operational criteria for allowing banks to rely on their own LGD estimates when applying this approach have yet to be determined.

- Dilution Risk: The Basel Committee has recognized that the same loss cannot be attributed to dilution risk and default risk simultaneously. This recognition prevents double-counting of capital charges; however, it remains to be seen how this will actually be implemented. In a similar manner, the Basel Committee is investigating ways to mitigate the overly conservative capital charges that occur when a 100% LGD is applied in the context of dilution risk.

Factors related to securitization that were not specifically addressed in the January document include risk weights for sub-investment grade tranches (they are now subject to the Simplified SF) and treatment of synthetic securitizations.[168] Finally, the Basel Committee has noted that it does not intend to differentiate risk weights by asset type under the RBA, as was suggested by

[166] *See e.g.,* American Banker Online, Oct. 21, 2003: "Basel May Change Asset-Backed Market in Europe," available at http://www.americanbanker.com and GRR Article, "Basel II Agreement Near on Securitisation Deals," Volume 2, Issue 2 (February 2004), p. 4.

[167] This consistency was brought about primarily by reducing the value of tau employed in the SFA formula (from 1,000 to approximately 75), details of which are provided in the January document. Preliminary studies of the Simplified SF indicate that the risk weights resulting from the new tau value are likely to be generally equivalent to, or somewhat higher than, those generated under the original SFA formula.

[168] Note that this is not necessarily problematic, as (according to one Treasury official) synthetic securitizations were not mentioned specifically because they rely on the substitution approach under the Credit Risk Mechanism ("CRM"), in which the rating of the guarantor substitutes for that of the derivative. *See* Amrit Sekhon, Risk Expert, Capital Policy Division, Office of the Comptroller of the Currency and head of the OCC Securitization Task Force. Telephone conversation on February 26, 2004.

some industry participants. Nor does the Basel Committee intend to modify the 56 basis point (7%) minimum capital floor for AAA transactions, "since subsequent research has provided no persuasive evidence than any different floor is appropriate."[169]

VIII. Anticipated Timeline

Despite the broadly positive responses to the January 2004 document and the fact that its changes resolve (at least on paper) many of the issues that this paper sought to address, the current situation is not moot for at least four reasons. First, the proposed changes have yet to be implemented. Second, there remain several outstanding issues. Third, there has been no formal response by regulators in either the United States or European Union member states, which—judging from past experience—is likely to drive the process moving forward. And finally—potentially most problematic of all—is the discrepancy between the United States and the EU regarding the time frame for review and implementation of the new capital regime. The Basel Committee appears to be intent on signing an accord by mid-2004, which according to a Committee member will be "complete in the sense that it will include all the chapters and rules needed to be a recognizable new capital accord. But [the Committee has] indicated that some work will continue."[170]A significant—but contentious—motive for the ambitious timeline within the EU are the elections to the European Parliament, which are scheduled to take place in June 2004. Moreover, the EU is set to expand from the present 15 members to 25 members in May 2004; thus, the Basel II regime will be applicable to banks in the new member states as well (some of which arguably have less developed financial systems in place). The Basel Committee's original plan was to present Basel II to the European Parliament it its entirety, including both the framework provisions and the technical annexes. However, given that the annexes include risk weight calibrations and other parameters that are currently under review, it is

[169] GRR Press Release: "Basel Regulators Issue Papers on UL, Securitisation and Operational Risk Group Allocation" (Jan. 30, 2004).
[170] GRR Press Release: "Basel Regulators Issue Papers on UL, Securitisation and Operational Risk Group Allocation" (Jan. 30, 2004). However, note that in its own documents the Basel Committee has indicated that "there is no room for further substantive change" to the proposed Basel II accord, and that the Basel Committee shall meet its mid-2004 deadline on time.

unclear whether they will be ready by that time. On one hand, there is "…growing discontent among European Parliament members over their ability to fully scrutinize the proposed directive. There is a clear risk that the legislation will be seriously delayed when the new parliament assembles after this summer's elections."[171] On the other hand, however, some regulators believe that if EU banks support Basel II, then the European Parliament is unlikely to oppose it.

The Basel Committee has identified a target of end-2006 for the Basel II rules to come into force. This will require the passage by the European Parliament of a directive to translate Basel II into a law that affects all banks and investment firms in EU member states; the directive is schedule to be presented before Parliament in late 2005. In the United States, regulators have indicated that the final draft of Basel II planned for the middle of this year will be far less definitive than previously expected. John Hawke, Comptroller of the Currency in the United States, has stated that the United States will not abandon key requirements of US banking supervision "simply to achieve a harmonious international agreement on regulatory capital. Many issues will have to be completed after [the mid-2004] date, and may require significant revisions to the accord before it is implemented." However, Mr. Hawke has also noted that a "doomsday scenario" may ensue if the EU moves forward with implementation while the United States waits, with "financial chaos" resulting from such bifurcation.[172]

In the meantime, parties on both sides of the Atlantic continue to work towards reaching a "securitization solution" acceptable to all. In Europe, the Committee's Securitization Group is working to develop more flexible operational criteria for the calculation of LGD and Kirb. In addition, specialized working groups have been charged to make recommendations on the outstanding issues (including securitization) at the Committee's next meeting in May 2004. Finally, the Committee has stated its intent to evaluate the revised Basel II's calibration prior to implementation. This will likely entail an additional QIS-4 at the pan-European level. The

[171] GRR Article: "Trouble Looms for EU Over Incomplete Accord," Volume 2, Issue 2 (February 2004), p. 1.
[172] John Hawke, Comptroller of the Currency, Presentation to the International Finance Seminar at Harvard Law School (November 17, 2003).

United States, Germany and France have already indicated their intent to conduct independent QIS-4s, and Germany is encouraging all G-10 members to do likewise; it is also possible that the European Parliament could call for a QIS-4 to be undertaken throughout the EU.[173]

For their part, regulators in the United States are engaged in an extensive rule-making procedure to adopt and implement Basel II into the country's domestic capital adequacy regime. This procedure involves wide consultation with the banking industry and is currently scheduled to be completed in 2005. In addition, some members of Congress are insisting that lawmakers should ultimately decide whether the United States signs the Basel II Accord. Regardless of whether or not congressional approval in the United States is required, however, Mr. Hawke has indicated that the Basel Committee is likely to "follow the US lead" regarding the treatment of securitization for international capital requirements purposes.[174]

IX. Conclusions and Recommendations

Without a doubt, significant progress has been made over the past 18 months with regard to the regulatory capital treatment of securitization. The course of negotiations on both sides of the Atlantic has been driven not only by regulators, but also—perhaps most critically—by international banks and other private participants in the securitization industry. While European entities have been relatively active, it appears that parties in the United States—in particular, the ASF and large international US banks—have been the key driving force behind this dialogue and the general course of events.

As evident from the comments submitted to the Basel Committee and banking regulatory agencies in the United States, US banks with international banking activities and various securitization associations appear to have more and superior information regarding how securitization should be treated under the Basel II regime. Indeed, the most detailed and comprehensive comments in this regard were submitted by large US banks, the American

[173] GRR Article: "Trouble Looms for EU Over Incomplete Accord," Volume 2, Issue 2 (February 2004), p. 1.
[174] John Hawke, Comptroller of the Currency, Presentation to the International Finance Seminar at Harvard Law School (November 17, 2003).

Securitization Forum, and the collective group of international securitization forums (led by the ASF).[175] It is posited here that the ASF in fact has been the key driver behind the negotiation and modification process. This conclusion is supported by the facts that numerous other comments (i.e., submitted by banks and other entities) refer frequently to the ASF reports, the Basel Committee's January document distinguishes the critical issues along the same lines as in the ASF's comments, and with a couple of minor exceptions[176] recommendations of the ASF were formally recognized and implemented by the Basel Committee in its January document. This indicates that the EU intends to follow the United States' lead in this regard, and it may be presumed that securitizing entities in other parts of the world will follow suit as well.

In large part the principle critiques highlighted in this paper have been acknowledged and substantially addressed, if not resolved outright, with the publication of the Basel Committee's January document. This document proposes to make several assumptions less conservative than before, it seeks to simplify the capital calculation required for securitization transactions by, among other things, the Simplified SF, and it aims to do so in furtherance of a competitively neutral banking and finance environment. To be sure, each of the proposed general modifications remains subject to different variations of similar critical themes. For example, the debate regarding simplification harks back to one of the earliest and simplest debates regarding financial policy making in general. The question remains, does the international financial community need a more complex system with greater risk sensitivity and enhanced capacity to treat more and different types of scenarios, or a simpler system to facilitate flexibility and to take account of the variety of types of securitization transactions, entities undertaking such deals, and development of the industry over time? Regardless of one's answer to this question, it appears quite clear that explicit and specific language that commits regulators to work towards the eventual recognition of internal credit risk models as industry standards develop is needed (a sort of "Basel III"), as are

[175] In terms of non-US banks, with the exception of Deutsche Bank none of the EU or Japanese banks addressed from a *technical* point of view whether (and how) the treatment of securitization should be modified. Rather, their comments merely noted that the current framework for securitization was "unworkable" as a general matter.
[176] *E.g.* elimination of the 56 basis point minimum capital floor.

more comprehensive and uniform verification and supervision systems for internal models employed in the meantime (a sort of "Basel II _" or "Modernized Basel II"[177]). As part of this process, it may also be advisable to require banks to adopt a written policy setting forth consistent terms upon which such bank determines whether to have a particular securitization position rated or not.

To be sure, the Basel reforms have prompted a plethora of issues that remain both to be treated in the first instance and revised as experience dictates. Topics in the former category include the competitive effects of the new rules between organizations that compete in the international equity market and the effect of US regulators' decision to limit Basel II's applicability. First, what will Basel II affect the competitive advantage of non-bank entities (such as credit card companies) that undertake securitization activities outside the reach of Basel II? Second, given that many "well capitalized" banks in the United States actually hold more capital than is required by Basel I in any event, will implementation of Basel II actually affect the behavior of such banks? And third, how is the United States going to get the EU contingent to accept its application of Basel II only to core and opt-in banks? The view within the EU remains rather hostile, with policy makers feeling that the United States bailed from its obligations to the international financial community.[178] Finally, it remains to be seen how the documents will "fit together" in terms of the general Basel II text and the technical appendices, many of which are not yet in final form.[179]

The latter set of issues includes questioning the wisdom or relying on internal models and private credit rating agencies, the appropriateness of a two-tier system (both between the United States and the EU and within the United States), and the implementation of the new IAA and Simplified SF. First, at a basic level, should the complex models that some banks and private

[177] For discussion of the "Modernized Basel II" concept, *see* Alistair Milne, " 'Basel Lite': recommendations for the European implementation of the new Basel accord" (April 2003), available at http://www.globalriskregulator.com/resources
[178] John Hawke, Comptroller of the Currency, Presentation to the International Finance Seminar at Harvard Law School (November 17, 2003).
[179] Alistair Milne. " 'Basel Lite': recommendations for the European implementation of the new Basel accord" (April 2003), available at http://www.globalriskregulator.com/resources

entities are currently using be trusted? The IRB approach seeks to synthesize the use of these models with the validation and verification needs of regulators, but gaps remain. Second, as noted above, if taken too far a two-tiered system has the potential to wreak havoc upon the entire international financial community; it remains critical to coordinate timelines and provisional applicability to ensure that this does not occur. Third, while all interested parties agree that the changes contained in the January document are a good thing,[180] they may nevertheless also need to be modified over time. Interestingly, an OCC official noted that no sooner was the Simplified SF proposed, than industry participants began to suggest that perhaps the original (i.e., more complex) SF "was not that bad after all"—in other words, the tradeoff for a more simplified approach will be higher capital charges in many instances. Given that financial institutions tend to prioritize the bottom line over all else, it remains to be seen how this tradeoff will play out over time.

The above discussion and conclusions are not to say that the treatment of securitization would not have been modified in the absence of the participation of the ASF and US banks. Rather, it is simply to highlight how the input of these parties shifted the drafters of Basel II to a more workable, accurate, and effective course. And despite the uncertain timeline and other unresolved issues, it appears safe to posit that the objective of regulators in the United States and EU to have "[A]n optimal capital system [that] strikes a balance between the objectives of simplicity and regulatory consistency across banking organizations on the one hand, and the degree of risk sensitivity of the regulation on the other"[181] is now closer at hand than ever before.

[180] *See* Amrit Sekhon, Risk Expert, Capital Policy Division, Office of the Comptroller of the Currency and head of the OCC Securitization Task Force. Telephone conversation on February 26, 2004. Mr. Sekhon stated that he feels "much more comfortable that it is a reasoned approach" but noted that both the IAA and Simplified SF would need additional "tweaking."
[181] Risk-Based Capital Guidelines; Implementation of New Basel Capital Accord. Federal Register, Vol. 68, No. 149 (August 4, 2003), p. 45900 – 45988.

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- Bank of America
- Bank One Corporation
- BNP Paribas
- Canadian Bankers Association
- Citigroup
- Commonwealth Bank Group (Australia)
- Credit Suisse Group
- European Central Bank
- European Banking Federation (FBE)
- Federation Bancaire Francaise
- Financial Services Roundtable
- Fitch Ratings
- Institute of International Finance
- Japanese Bankers Association
- JP Morgan Chase
- KeyCorp
- London Investment Banking Association and British Bankers Association

- Linklaters Business Services
- Loan Market Association
- MBNA America Bank
- Merrill Lynch
- Netherlands Bankers Association
- Norinchukin Bank
- Risk Management Association
- Securitisation Associations (American Securitization Forum, Australian Securitisation Forum, The Bond Market Association, European Securitisation Forum, International Association of Credit Portfolio Managers, International Swaps and Derivatives Association, and the Japanese Bankers Association)
- Standard & Poors
- State Street Bank
- Swiss Bankers Association
- Wachovia Bank
- Westpac (Australia)
- Zentraler Kreditausschuss

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- American Securitization Forum
- Bank of America
- Bank One Corp
- Citigroup
- Credit Suisse Group
- Deutsche Bank Ag
- ERisk
- Federal Advisory Council
- Financial Services Roundtable
- Fleet Boston Financial Corp
- International Swaps and Derivatives & Bond Market Associations
- JP Morgan Chase & Co.
- Key Corp
- Juniper Financial Corp
- MBNA American Bank
- Mellon Financial Corp
- National City Corp
- New York State Banking
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- US Bancorp
- US House of Representatives, Hon. Michael Oxley
- Wachovia Corp

Appendix A: Summary of the Treatment of Investing Banks and Originating Banks Under the Originally-Proposed Basel II Accord[182]

[182] Reproduced from Mayer, Brown, Rowe & Maw LLP, "Advance Notice of Proposed Rulemaking—Risk-Based Capital Guidelines" (September 8, 2003), available at www.mayerbrownrowe.com

Treatment of Investing Banks

1. Deduct from capital any credit-enhancing interest only strips.
2. If an external or inferred rating is available, apply the RBA.
3. If no rating is available and the bank has been approved for the use of the SFA, determine the required capital as described below in clauses 3, 4, and 5 for originating banks.

Treatment of Originating Banks

1. Deduct from Tier 1 capital any increase in capital resulting from the securitization.
2. Deduct from capital any credit-enhancing interest only strips (net of any deductions for any increase in capital).
3. If A-IRB is available for the underlying asset class:
    a. For positions at or below Kirb, deduct from capital.
    b. For positions above Kirb:
        i. If the position is rated or an inferred rating is available, apply the RBA; or
        ii. If no rating is available, apply the SFA.
    c. If Kirb cannot be determined:
        i. If the position is an eligible liquidity facility, apply the look-through approach; or
        ii. Otherwise, deduct the exposure from capital.
4. If A-IRB is not available for the underlying class:
    a. If the position is an eligible liquidity facility, apply the look-through approach;
    b. For originating banks only, apply the Alternative RBA; or
    c. Otherwise, deduct the exposure from capital.
5. If A-IRB is available for the underlying exposures in a securitization, the maximum required capital for any securitization exposure will be capped at the required capital for the underlying exposures had they not been securitized plus any required deductions described in clauses 1 and 2 above.

Appendix B: Draft Operational Requirements for the Internal Assessment Approach (IAA) to Securitization Exposures[183]

I. Operational Requirements for use of the Asset-Backed Commercial Paper Program Internal Assessment Approach ("IAA")

1. An asset-backed commercial paper ("ABCP") program is a program that issues commercial paper with an original maturity of one year or less that is backed by assets or other exposures held in a bankruptcy-remote, special purpose entity. A bank that provides liquidity facilities and/or credit enhancements to an ABCP program may use its internal assessments of its exposures to the program to determine their IRB capital requirements. Such exposures are typically of high quality. A bank's internal assessment process must meet the following operational requirements in order to use internal assessments in determining the IRB capital requirement arising from liquidity facilities, credit enhancements, or other exposures extended to an ABCP program, with the exception of the commercial paper itself. The ABCP must be externally rated for the unrated exposure to qualify for the IAA. These ABCPs themselves would be subject to the Ratings-Based Approach ("RBA"). In addition, banks must adhere to any other applicable supervisory guidance related to ABCP programs.

a. The internal assessment of a liquidity facility or credit enhancement's credit quality must be based on an external credit assessment institution's ("ECAI") criteria for the asset type purchased and must be the equivalent of at least investment grade when initially assigned to an exposure. In addition, the internal assessment must be used in the bank's internal risk management processes, including management information and economic capital systems, and generally must meet all the relevant requirements in order to be eligible for use under the IRB framework.

b. In order for banks to use the IAA, their supervisors must be satisfied (1) that the ECAI meets the ECAI eligibility outlined in the New Basel Capital Accord and (2) with the ECAI rating methodologies used in the process. In addition, banks have the responsibility to demonstrate to the satisfaction of their supervisors how these internal assessments correspond with the ECAI standards used as the framework for use of this internal assessment approach.

   For instance, when calculating the credit enhancement level in the context of the IAA, supervisors may, if warranted, disallow on a full or partial basis any seller-provided recourse guarantees or excess spread, or any other first loss credit enhancements that provide limited protection to the bank.

c. The bank's internal assessment process must identify gradations of risk. Internal assessments must correspond to the external ratings of ECAIs so that supervisors can determine which internal assessment corresponds to each external rating category of the ECAIs.

d. The bank's internal assessment process, particularly the stress factors for determining credit enhancement requirements, must be at least as conservative as

[183] Reproduced from the Basel Committee on Banking Supervision, "Changes to the Securitization Framework" (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf

major ECAIs' published rating criteria for the asset type being purchased by the ABCP program.

- In the case where different ECAIs' benchmark stress factors require different levels of credit enhancement to achieve the same external rating equivalent, the bank must apply the ECAI stress factor that would require the most conservative or highest level of credit protection. For example, if one ECAI required 2.5 to 3.5 times historical losses for an asset type to obtain a single A rating equivalent and another ECAI required 2 to 3 times historical losses, the bank must use the higher range of stress factors in determining the appropriate level of seller-provided credit enhancement.
- A bank cannot utilize an ECAI's rating methodology to derive an internal assessment if the ECAI's process or rating criteria is not publicly available.

e. Internal or external auditors, or an ECAI, must perform regular reviews of the internal assessment process and the validity of the internal assessments of the credit quality of the bank's exposures to an ABCP program.

f. The bank must track the performance of its internal ratings over time to evaluate the performance of the assigned internal assessments and make adjustments, as necessary, to its assessment process when the performance of the exposures routinely diverges from the assigned internal assessments on those exposures.

g. The ABCP program must establish credit and investment guidelines, i.e., underwriting standards, for the ABCP program. In the consideration of an asset purchase, the ABCP program (i.e., the program administrator) should develop an outline of the structure of the purchase transaction. Factors that should be discussed include the type of asset being purchased; type and monetary value of the exposures arising from the provision of liquidity facilities and credit enhancements; loss waterfall; and legal and economic isolation of the transferred assets from the entity selling the assets.

h. A credit analysis of the asset seller's risk profile must be performed and should consider, for example, past and expected future financial performance; current market position; expected future competitiveness; leverage, cash flow, and interest coverage; and debt rating. In addition, a review of the seller's underwriting standards, servicing capabilities, and collection processes should be performed.

i. The ABCP program's underwriting policy must establish minimum asset eligibility criteria that, among other things:

- Excludes the purchase of assets that are significantly past due or defaulted;
- Limits excess concentration to individual obligor or geographic area; and
- Limits the tenor of the assets to be purchased.

j. The ABCP program should have collections processes established that consider the operational capability and credit quality of the servicer. The program should mitigate to the extent possible seller/servicer risk through various methods, such as triggers based on current credit quality that would preclude co-mingling of funds and impose lockbox arrangements that would help ensure the continuity of payments to the ABCP program.

k. The aggregated estimate of loss on an asset pool that the ABCP program is considering purchasing must consider all sources of potential risk, such as credit and dilution risk. If the seller-provided credit enhancement is sized based on only credit-related losses, then a separate reserve should be established for dilution risk, if dilution risk is material for the particular exposure pool. In addition, in sizing the required enhancement level, the program should review several years of historical information, including losses, delinquencies, dilutions, and the turnover rate of the receivables. Furthermore, the ABCP program should evaluate the characteristics of the underlying asset pool, e.g., weighted average credit score, identify any concentrations to an individual obligor or geographic region, and the granularity of the asset pool.

l. The ABCP program must incorporate structural features into the purchase of assets in order to mitigate potential credit deterioration of the underlying portfolio. Such features may include stop-issuance triggers that immediately cease the issuance of commercial paper to the market or wind down triggers.

m. The notional amount of the liquidity facility or credit enhancement must be assigned to the risk weigh in the RBA appropriate to the credit rating equivalent assigned to the sponsoring bank's exposure.

n. If a bank's internal assessment process is no longer considered adequate, the bank's supervisor may preclude the bank from applying the internal assessment approach to its ABCP exposures, both existing and new originated, for determining the appropriate capital treatment until the bank has remedied the deficiencies. In this instance, the bank must revert to the Simplified SF or, if not available, to the fallback option described in CP3.

Description of the Calculation of the Capital Requirement

II. ABCP Program Exposures

1. A bank is able to use its internal assessments of the credit quality of the exposures the bank extends to ABCP programs, i.e., liquidity facilities and credit enhancements, if the bank's internal assessment process meets the operational requirements in section I above. Internal assessments of exposures provided to ABCP programs must be mapped to equivalent external ratings of an ECAI. Those rating equivalents are to be used to determine the appropriate risk weights under the RBA for purposes of assigning the notional amounts of the exposures.

Appendix C: Derivation of the Simplified Supervisory Formula ("Simplified SF")[184]

To incorporate risk sensitivity, the derivation of the Simplified SF relies first on slicing securitization exposures into infinitesimally thin tranches ("ITTs") and then continues to use a basic mathematic tool for simplicity.

First, a unique risk weight is set for each ITT based upon the following equation:

$$Risk\ \ factor(L)\ (\text{=Risk weight for each ITT given } K_{IRB}) = \frac{12.5 \times K_{irb}}{L}$$

This implies that the risk weight for each ITT declines as the credit enhancement level increases or as Kirb decreases. The risk weight can also be considered 'conservative' because it represents the maximum risk weight for an ITT, i.e., it reflects the amount of credit risk inherent in the underlying assets if they had been distributed on a pro rata basis. Otherwise, the risk weight of an ITT should be lower.

Using the *risk factor (L)* along may be unrealistically conservative. For example, a risk weight at the most senior ITT is still equal to 12.5 x Kirb, which represents the average risk weight of underlying assets. However, the most senior ITT will default only if all of the underlying assets default simultaneously with LGD = 100%, which is very unlikely to happen. This outcome becomes even less probable as the number of assets in the underlying pool *(N)* increases.

To reduce the conservatism and make it more realistic, one could introduce a discount factor for each ITT *(= discount factor (L, N)),* which is done below using two parameters, *L* and *N*, that impact the *risk factor (L)*.

$$Discount\ factor(L, N) = \left(\frac{1-L}{1-K_{irb}}\right)^{2\sqrt{N}}$$

In the equation above, *N* represents the effective number of exposures in the underlying pool. (*N* can be conservatively approximated by 1/A, where A is the share of the largest exposure in the pool).

Using this *discount factor (L, N)*, the risk weight of ITT (above Kirb) is:

$$\frac{12.5 \times K_{irb}}{\mathrm{L}} \times\ Discount\ factor(L, N) = \frac{12.5 \times K_{irb}}{\mathrm{L}} \times \left(\frac{1-L}{1-K_{irb}}\right)^{2\sqrt{N}}$$

Then, the risk weight of a tranche [L, L+T] can be approximately derived by averaging the risk weights. For example, calculating the average at the boundaries (i.e., the sum of one extreme and the other extreme) would result in the following: (weighted average of extremes)

[184] Reproduced from the Basel Committee on Banking Supervision, "Changes to the Securitization Framework" (Jan. 30, 2004), available at http://www.bis.org/publ/bcbs105.pdf

$$\frac{1}{2}\left(\frac{12.5\times K_{trb}}{L}\right)\left(\frac{1-L}{1-K_{trb}}\right)^{2\sqrt{N}}+\frac{1}{2}\left(\frac{12.5\times K_{trb}}{L+T}\right)\left(\frac{1-L-T}{1-K_{trb}}\right)^{2\sqrt{N}}$$

Banks could be given the option to make calculations of the risk weights for as many ITTs as they consider appropriate, subject to supervisory approval. If a bank is permitted to rely on multiple reference points, the risk weight function would appear as follows: (inclusion of multiple reference points)

$$\text{Risk Weight} = \frac{1}{I+1} \times \sum_{i=0}^{I} \left(\frac{12.5 \times K_{irb}}{L + T \times \frac{i}{I}} \times \left(\frac{1 - L - T \times \frac{i}{I}}{1 - K_{irb}} \right)^{2\sqrt{N}} \right)$$

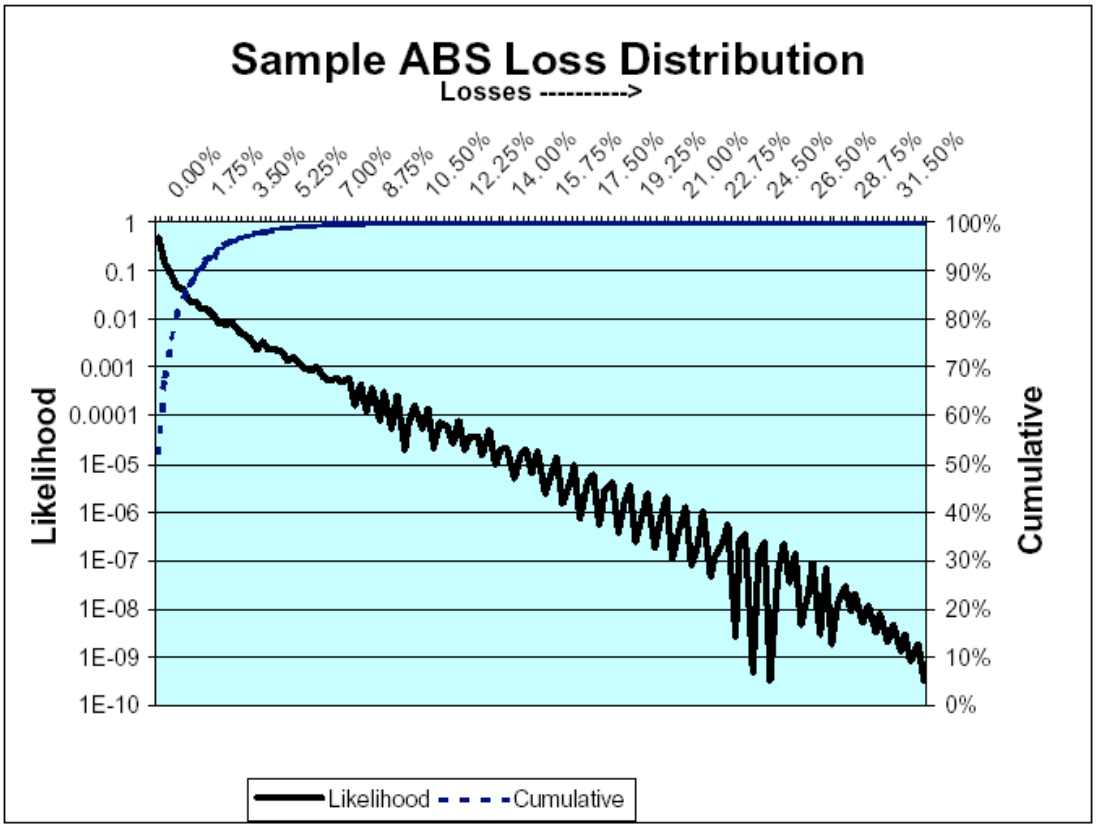
Where I + 1 is the number of reference points ("I" represents the number of subdivisions of the tranche in question and "i" represents the individual reference points), and I and I are integers with I greater than or equal to 1 and i greater than or equal to 0.

The Committee is considering whether N should be subject to a cap on its maximum value. The Committee is concerned that for very large numbers of N, the Simplified SF could generate much lower capital charges than the CP3 version for mezzanine positions lying just above Kirb. At the same time, the Committee would like to avoid creating unreasonably high capital charges. The Committee is evaluating whether this issue is material for actual transactions and whether a cap on the maximum value of N would be the best way to alleviate these concerns.

Appendix D: Actual Loss Distributions and Relationships Between LGD and Tranche Thickness for Various Securitization Transactions[185]

Figure D.1: Actual Loss Distribution for US Auto Loan Transactions

This graph depicts the modeled loss distribution of a representative US auto loan pool. Noting the log scale on the likelihood axis, the likelihood of losses can be seen to drop off dramatically as the losses become larger.



[185] Figures D.1-D.6 are reproduced from the American Securitization Forum's Comments to the ANPR (November 2003), available at http://federalreserve.gov/SECRS/2003/November/20031113/R-1154/R-1154_69_1.pdf

Figure D.2: Relationship Between LGD and Tranche Thickness for Actual US Auto Loan Transaction

This graph is based on the same data as the previous graph and depicts the loss given defaul (LGD) of an "A"-rated tranche created from that portfolio using a "PD" based methodology. This methodology simply specifies that the amount of enhancement should be a given multiple of expected loss. The amount of enhancement in this case was 5%.

Note that the LGD for a thin tranche is some 20 times higher than for a senior (and therefore very thick) tranche. Assuming a 50% LGD for a given PD is only valid for very thin tranches.

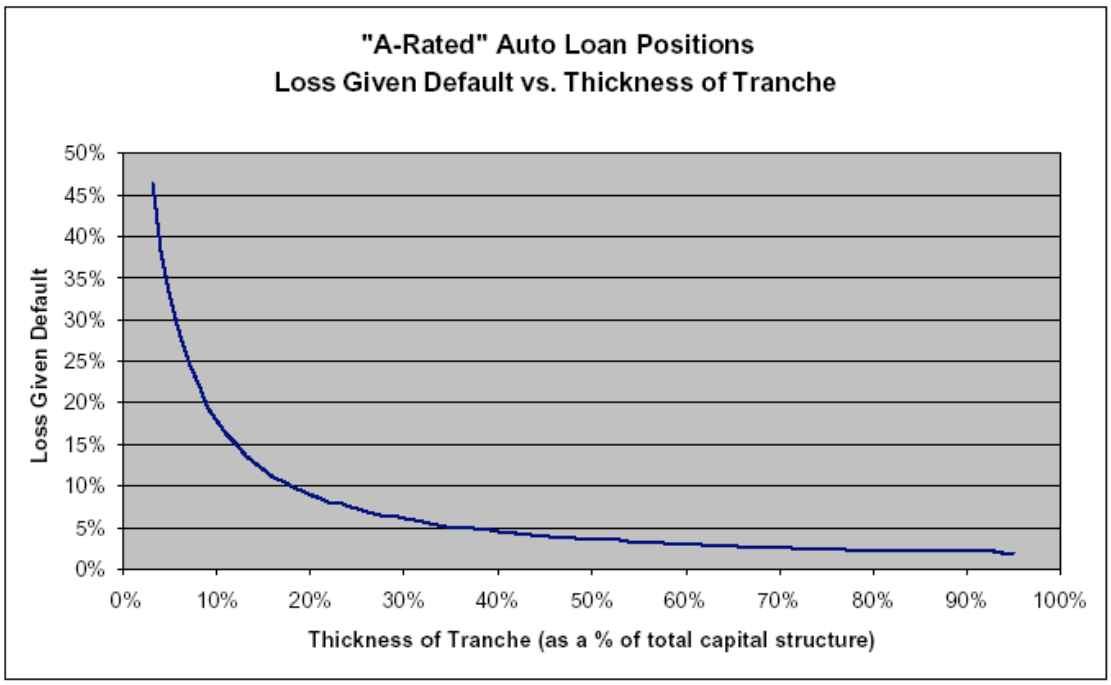


Figure D.3: Actual Projected Loss Distribution for 100-Name Corporate Portfolio (Morgan Stanley Tracers Portfolio)

The following graph depicts the loss distribution for a 100-name corporate portfolio, the industry standard 100-name Tracers portfolio created by Morgan Stanley. As before, we can show that tranches created from this portfolio using a PD-based approach would have the same general characteristics as the retail pools. Thick tranches would have a small fraction of the LGD of thin tranches.

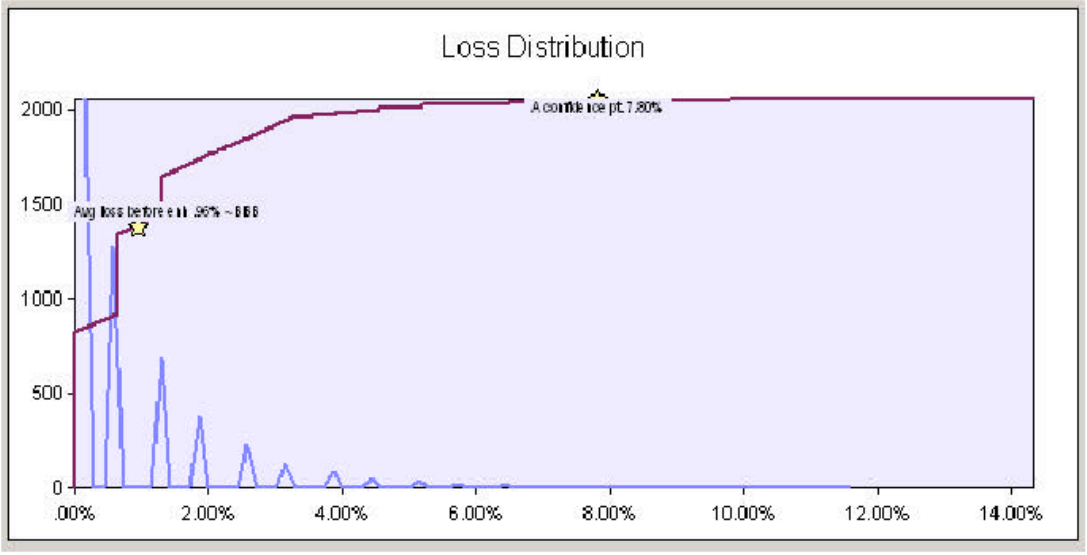


Figure D.4: Relationship Between LGD and Tranche Thickness for Actual 100-Name Corporate Portfolio (Morgan Stanley Tracers Portfolio)

For this analysis, we created three different tranches with PD's of 0.5%, 1.0% and 5.0%. Interestingly, the LGD's for these tranches are related only to their thickness and not to their PD. Again, the thin tranches show 20 times the LGD of the thick senior tranches.