SYNTHETIC SECURITIZATION: USE OF DERIVATIVE TECHNOLOGY FOR CREDIT TRANSFER

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I. INTRODUCTION

Magazines are fond of lists, and none more so than specialist magazines. A particular favorite of specialist magazines is the listing of their core subject matter in a "hit-parade" of success. Legal magazines love to publish yearly lists of the top 100 most profitable firms and, no doubt (although the authors freely admit the subject lies some way beyond their ken) lists of the 500 largest shippers of bulk fertilizer grace the pages of specialist chemical publications. Magazines dealing with the banking industry are no different and regular competitive lists are hardy perennials. However, those who have been reading magazines aimed at the banking community over a number of decades will have noticed a near universal shift in the manner in which these lists of the current "best banks" have been set out.

Twenty or so years ago, although these listings contained much information about the financial institutions that were lucky enough to make it into their pantheon, the fundamental organizing principle was "asset base." In other words, the "greatest banks in the world" were ranked by reference to how much money they had lent. This reflected the view of most banking executives, including the CEOs of most banks, that a bank's success was measured by size.

A quick glance at today's magazines is likely to reveal a dramatic change. The same publications that ranked financial institutions by their sheer bulk now compile the same lists on very different bases. The chief organizing principle of the annual compilations will almost

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always turn on some form of profit measure: it might be a straightforward measure such as an absolute dollar amount or a more subtle measure such as return on capital or profit margins. Balance sheet obesity is no longer "in." Behind this editorial shift lies a fascinating story of transformation in the banking industry over the last two decades which in many ways culminates in the more than $1.5 trillion synthetic securitization market in the United States alone.

This article will briefly deal with the history that led to the merging of securitization technology with derivative technology to create the risk transfer machine that is the synthetic securitization market and the business drivers behind it. It will then seek to describe the most common forms of credit derivatives. The article will then set out the various forms of synthetic securitizations and their advantages and drawbacks, before concluding with a description of a classic synthetic securitization transaction. In an article of this length, one can do little more than flag the major landmarks leaving more detailed analysis for a different forum.

II. THE DEVELOPMENT OF THE SYNTHETIC SECURITIZATION MARKET

A. Banks

To understand the development in banking of the last twenty or so years it is important to keep in mind the simple picture of what is, or as we shall see, increasingly was, a "bank." The term "bank" is used here to refer to a deposit-taking and lending institution, therefore encompassing institutions that may have different legal forms such as savings and loans institutions, mutual savings banks, and building societies, but excluding classical "investment banks." A bank is an entity that is good at locating people and companies that have money they do not presently need, on the one hand and, on the other hand, people and companies that have a need for money they do not presently have. The bank borrows the money from the former (its depositors, lenders, and shareholders) and lends the same money to the latter (its borrowers). It pays the former for the use of their cash and collects money from the latter for the use of the money it has borrowed from the former. The difference between what it is required to pay to the former and that received from the latter, post expenses, represents the bank's profits. This is the classic paradigm of banking where the bank intermediates the capital markets.

A problem with this model is that the bank's borrowers do not invariably pay back their debts. Even the most prudent bank will find that at least a small proportion of its borrowers default. However, those who have lent the bank the money it used to provide loans to these defaulting borrowers still have the right to be repaid. Accordingly, upon the first default by a borrower the bank would find itself incapable of paying back in full the money it owed to its depositor. It would effectively be bankrupt.

This rather obvious problem is resolved by the bank creating a cash reserve that is not, in the legal sense, borrowed from anyone and therefore does not legally need to be repaid. As the bank's borrowers default, this cash reserve is available to repay the depositors whose money was lent to the defaulters. This is done usually by two means. First, the bank will, in the economic sense, "borrow" cash from persons who are willing to agree that, in exchange for a higher fee, they will not be entitled to their money (including their fee) if the bank does not have the cash to pay them. This is share capital and those special lenders are "shareholders." Second, the bank will hold back some of its profits in good years to increase its reserve of funds available to meet defaults by its borrowers. This cash reserve is the bank's "capital."

Although this almost insultingly simple description of a bank may seem unnecessary in an article on the complex subject of synthetic securitization, there is nevertheless value in keeping it in mind so that, when looking at the extremely baroque complexities of this field, one does not lose sight of the underlying simple architecture which informs the whole complex scheme.

B. Securitization

Therefore, returning to our historical sketch, back in the early 1980s, bank regulators became concerned by the state of banks' capital bases. Driven by the belief that "big was beautiful," banks were lending more and more money on the same capital. In particular, they were lending considerable sums to sovereign borrowers with an unhealthy concentration on three sovereigns: Mexico, Argentina and Brazil.

Bank regulation, however, is a national prerogative. This created a dilemma for individual regulators. If they insisted on a higher level of capital for their home banks, these would legitimately complain that, in the globalized lending market, they were being hobbled by their own side. Capital has an economic cost. The more capital a

bank is required to hold against its assets the more expensive it becomes to lend (i.e., the higher the interest rate it needs to charge its borrowers to pay both its own lenders and its capital providers). Since that bank's product therefore becomes more expensive, its customers (i.e., its borrowers) will go to the cheaper price provider: namely the banks in the country whose regulators are less stringent on the amount of capital their local banks require.

Regulators, governments, and informed spectators became concerned that the political desires of governments to assist their local banks would lead, or already was leading, to a competitive lowering of the regulatory capital requirements by every major nation not dissimilar to the competitive currency devaluations that had wrecked world trade in the thirties. No one would be willing to unilaterally raise or even maintain the capital requirements of its own banks, since to do so would be to cut them out of the world markets. Thus, the fear was that bank capital would be allowed to spiral ever downwards until a serious financial crisis threatened the whole world's financial infrastructure. And, in 1982, this is exactly what happened. The sovereign debt crisis led the world regulators to accept that the only way to deal with the issue of bank capital was an international agreement on minimum levels of capital required. Between 1974 and 1983, under the auspices of the Bank for International Settlements headquartered in Basle, the banking regulators of the G7, with many others as observers, worked out an agreement on minimum capital requirements for their home banks. Published in May 1983, the Basle Concordat enshrined a minimum capital requirement of 8 percent of risk-weighted assets.[1] In other words, a bank was now required to have at least eight dollars of capital for every hundred dollars it lent.[2]

The sovereign debt crisis and the Basle accords marked the beginning of a transformation of world banking. From then on, the management of the capital base became one of the key management tasks of major banks. With the erosion of capital generated by the sovereign defaults and the now mandatory requirement of Basle,

1. BASLE COMM. ON BANKING SUPERVISION, PRINCIPLES FOR THE SUPERVISION OF BANKS' FOREIGN ESTABLISHMENTS (1983), *available at* http://www.bis.org/publ/bcbsc312.pdf (last visited Apr. 2, 2002).

2. The agreement is considerably more complex as it provides that each dollar lent is not treated the same way but weighted by perceived riskiness. For example, money lent to OECD sovereigns is weighted at 0%, i.e. does not require any capital to be placed against it. Although originally only a "gentlemen's agreement" among the G7 regulators, most banking regulators around the world voluntarily rallied to the Concordat.

banks had no choice but to find ways to off-load their surplus assets.[3] In addition, the shock to shareholders inflicted by the crisis and the resurgence of a more free-market view of the economy and the role of banks (away from the more traditional statist view of the role of financial institutions that often prevailed outside the United States) led to a much greater focus on return on capital. This left banks with the need to divest assets in order to free up capital to support losses on some of the portfolio. In addition, banks now started to focus on those assets that did not generate profits commensurate with the capital held against them, all in the context of the need to maximize profits and reduce capital requirements.

From this emerged a market based on the transfer of assets: the securitization market, the primary benefit of which is diversifying the risk of purchasing assets. Investors were not as willing to bear the risk of individual assets, but were willing to invest in a pool of assets (with the appropriate protection for the risk). Through securitization, banks packaged up pools of loans and got rid of the risk associated with them by selling them to the capital markets.[4] Since one cannot easily sell loan pools to an ever-changing group of securities holders, this is usually done by selling the loans to a special purpose company that funds the purchase by selling securities to the market. Securitization issues are always without recourse to the banks. If the securitized loans default, this loss is absorbed by the holders of the securitization bonds or loan notes, or to the extent available, the additional assets held in the special purpose company. This way the bank need not reserve any capital for its securitized assets.

Another feature of the securitization market was that since the banking crisis was nearing a global scale, it was not obvious for banks that they could find any other banks willing to take on large quantities of now surplus loans. Therefore, the banking community, while developing an extensive inter-bank loan market from what was previously a miniscule market, had no choice but to turn to the non-bank capital markets. Securitization enabled the banking community to do so.

In this manner, the banking system as a whole was able to focus on tasks that the fragmented capital markets could not perform, such as originating new credits and servicing those credits while removing

3. *See generally* First Boston, *Asset-Backed Securities*, *in* THE 1993 YEAR IN REVIEW (1993).

4. JAMES A. ROSENTHAL & JUAN M. OCAMPO, SECURITIZATION OF CREDIT: INSIDE THE NEW TECHNOLOGY OF FINANCE 3 (1988).

the risks (and capital requirements) attached to them.[5] It began to move away from the paradigmatic form of a "bank" intermediating the financial markets and turned itself into a sort of agent for the capital markets, originating loans "on its behalf" so to speak. In this respect, securitization became a key component of the trend toward the disintermediation of traditional banks, another aspect of which is the way banks purchased and developed in-house investment banks which specialize, inter alia, in managing bond issues for borrowers without themselves lending.[6]

In the United States, securitization started primarily as a means to create liquidity and to manage basis risk for banks who, in a period of inflationary interest rates, found themselves with assets generating 3 to 4 percent (residential mortgages) while having to pay 9 percent and higher on certificates of deposits and savings. By 1986, the mortgage finance market was in full swing, and by 1987 the technique was extended to auto loans, credit card receivables, and mortgage loans. The United Kingdom soon followed with several mortgage-backed transactions in the late 1980s. The banks were able therefore to generate profits by originating the assets and servicing these securitizations, a model that proved very profitable for the banks.

Securitization requires the legal isolation of assets from the fortunes of the originator and the servicer. Common law jurisdictions are more securitization friendly, as they have few (or easy) formalities for asset transfers, they recognize the concept of holding money or assets in trust, and the formalities for asset pledges or security interests are relatively straightforward. This enabled lawyers to structure transactions that gave investors the legal comfort they needed to price the risk of the assets independent of that of the originator. True securitizations, where available, are generally cheaper to the issuer.

In many civil law jurisdictions securitization is slow to develop because of cumbersome formalities for asset transfer. In many countries, the inability to perfect transfers other than by giving formal notice through a bailiff each time a receivable arises, effectively frustrates both the economics and the legal structure of a securitization. Therefore, securitization cannot develop until securitization laws are adopted through the slow grinding of the political wheel.

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5. *See generally* ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, OECD FINANCIAL MARKET TRENDS 37–72 (2001).

6. *See id.*

C. Derivatives

Just as it forced banks to manage their capital proactively, the sovereign debt crisis of 1982 and several subsequent crises, including the emerging market crisis of 1998 and the U.S. saving and loans debacle, stripped away the illusion that international banking was a safe and rather pedestrian activity. It also forced financial institutions to manage much more effectively and nimbly not only credit risk, but also other risks associated with lending.[7] In the global and complex financial world of the late twentieth century, the chief non-credit risks were currency and basis risk. The first reflected the fact that banks' liabilities were not denominated in the same currency as their assets so that a strong devaluation of the asset currency against the liability currency meant that the bank would not be getting enough of the former to pay the latter in full.[8] The second addressed the fact that the interest rate which banks had to pay to their lenders were not always calculated on the same basis as the rate which they received from their borrowers.[9] A U.S. bank may be paying its lenders an interest rate calculated from the Federal Reserve Funds Rate, but be lending the money to a German multinational and receiving a rate calculated as a percentage over the London Interbank Offered Rate (LIBOR). Movements between these two could lead to the bank losing rather than making money from its loan.

Out of this came the derivatives market.[10] A "derivative" is a contract where the payment obligations of the parties are derived

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7. *See* BASLE COMM. ON BANKING SUPERVISION, BASLE CORE PRINCIPLES FOR EFFECTIVE BANKING SUPERVISION 20–23 (1997), *available at* www.bis.org/publ.bcbs20.pdf (last visited Apr. 2, 2002).

8. *See id.*

9. *Id.*

10. The International Financial Risk Institute defines the term "derivative instrument or product" as:

> (1) A contract or convertible security that changes in value in concert with and/or obtains much of its value from price movements in a related or underlying security, future, or other instrument or index. (2) A security or contract, such as an option, forward, future, swap, warrant, or a debt instrument with one or more options, forwards, swaps, or warrants embedded in it or attached to it. The value of the instrument is determined in whole or in part by the price of one or more underlying instruments or markets. Also called Contingent Claim. (3) An instrument created by decomposing the return of a related underlying instrument or index. Examples include Americus Trust and Collateralized Mortgage Obligation (CMO) component instruments. (4) Occasionally limited to zero net supply contracts. This restrictive definition excludes warrants, convertibles and CMO components. (5) In the financial press, any product that loses money.

International Financial Risk Institute, Glossary Section, *at* http://newrisk.ifci.ch/00011123.htm (last visited Mar. 29, 2002).

from another set of assets or liabilities. That other set need not reflect any real assets or liabilities but is a notional amount. For example, a simple interest rate swap requires Party A to pay to Party B interest at LIBOR on a notional amount of $500 million while Party B must pay Party A interest at Fed Funds on a similar notional amount. The swap is a "derivative" since its obligations are derived from the notional $500 million loan. In turn, the notional amount will likely be based on assets and liabilities held by one of the parties; in this case, Party B is the U.S. bank hedging the basis risk on a $500 million loan.

The explosive growth of the derivatives market was seriously hampered at first by the fact that each bank was using its own documentation.[11] This caused two major problems. First, it meant that each time a financial institution wished to enter into swaps with a new counterparty, it had to have its business and legal advisors pour over and negotiate the counterparty's non-standard contract.[12] Second, since all the contracts had slightly different terms, it was difficult for any bank to know whether it had truly hedged its risks.[13] For example, Bank A (acting as a dealer) may have a swap with Bank B swapping Fed Funds for LIBOR on a notional $500 million amount and another with Bank C swapping LIBOR for Fed Funds on the same notional amount. The result should be for Bank A to have returned to its original position before entering into the first swap. However, documentary differences between the two swaps meant that the hedge could easily fail in certain circumstances.[14] This could occur, for example, if an event was a termination event under the first swap but not the second and the damages payable on termination were insufficient to allow Bank A to replace the terminated swap.

This issue was, if not resolved, made considerably less stressful in 1987, with the publication, under the auspices of the International Swaps and Derivatives Association (ISDA), of a standard form master agreement.[15] This has since been followed by both new and updated master agreements and definitions which form the basis of

11. *See generally The Code of Standard Wording Assumptions and Provisions for Swaps, 1985 ed.*, AMERICAN BANKER, June 26, 1985.

12. *Id.*

13. *Id.*

14. *Id.*

15. *See generally* http://www.isda.org (last visited Apr. 17, 2002).

nearly all derivative trades, including those that underpin synthetic securitizations.[16]

D. Credit Derivatives

Having used derivatives to handle non-credit risks and securitizations and the secondary loan market to handle credit risk, in the mid-nineties banks began to use the derivative technology to manage credit risk as well.[17] A "credit derivative" is a contract where one party's obligation to pay is conditioned on the occurrence of a credit event (usually a default) on another, sometimes notional, contract.[18] The simplest credit derivative would be a "credit default swap" where Party A agrees to pay to Party B the principle on a $100 million loan to Company X if Company X defaults. Party B may or may not have lent money to Company X but Party A's obligations are derived from Company X's performance under the $100 million loan. As a means of managing credit risk, the credit derivative products had certain clear advantages over both securitization and secondary loan sales.

First, these latter techniques are often unpopular with borrowers. Many large companies will relate with some bitterness how they borrowed money from local relationship banks they had known for a long time only to find that when they hit a difficult patch and had to renegotiate their lending arrangements they were negotiating with small regional Thai banks or hard-nosed New York "vulture funds" that had purchased their loans in the secondary market and neither understood nor cared about the companies' future.

Second, buyers of securitization notes or secondary market loans were not the traditional asset-based lenders. Therefore, they did not want to take the selling bank's credit risk and required that the underlying loans be sold in a transaction that was a sale or security on the underlying loans. Since, following the sale, the loans no longer belong to the bank, the bank can only continue to service these loans as some form of agent of the new owner. Both the sale and the servicing are document intensive, costly, and in some jurisdictions, diffi-

16. *See* ISDA Master Agreement 1992, *available at* http://www.isda.org/publications/1992masterlc.pdf (last visited Feb. 26, 2002); and 1999 ISDA Credit Derivatives Definitions, *available at* http://www.isda.org/c1html#CD (last visited Apr. 3, 2002).

17. *See* John P. McEvoy & Sunil G. Hirani, *Challenges and Opportunities for the Credit Derivatives Market*, J. LENDING & CREDIT RISK MGMT., Dec. 1, 1999, at 82.

18. *See* David Benton et al., *Credit Derivatives Are Not Insurance Products*, INT'L FIN. L. REV., Nov. 1997, at 29.

cult or even impossible.[19] In other cases, the loan's own documentation prohibits it.

Third, a bank may wish to sell only a part of its exposure to a credit. Partial loan sales however are cumbersome, not always legally possible, and raise complex legal and administrative issues. Conversely, a bank may want to remove its exposure to a particular credit entirely or in a fixed amount. That exposure may be made up of a variety of instruments. The bank may have a couple of bilateral loans with the borrower, a few participations in syndicated loans, some outstanding letters of credit, a trade financing overdraft facility, and some currency swap exposures. Some of these facilities fluctuate with time, in sometimes unpredictable patterns. Through a credit derivative, the bank can "sell" a fixed amount of exposure without having to structure, document, and negotiate separate agreements for each type of instrument.[20] In that sense, credit derivatives are an extraordinarily flexible and versatile way of removing credit risk.

E. Synthetic Securitization

This is where the two strands of our tale meet. Through securitization the banking system as a whole had developed a method by which it could focus on generating assets while at the same time getting these funded by the capital markets—without capital requirements. Through credit derivatives, the banks had crafted a supremely flexible tool to remove (or, if they were the counterparty, acquire) credit risk from their balance sheet.

The drawback of securitization was that it lacked flexibility and was difficult to achieve in some jurisdictions. The drawback of the credit derivative market is that it was an inter-bank market (with minor participation by some extremely sophisticated and usually large financial players, such as certain insurance companies).[21] What was required was the bringing together of these two technologies in order to enable financial institutions to pass their unwanted credit risks on to the capital markets, with all the flexibility associated with credit derivative instruments. This is exactly what synthetic securitization began to achieve in 1998. Its success can be measured by the growth

19. *See generally* Conrad G. Bahlke & Paul N. Watterson, *Credit Derivatives 2000: Legal and Regulatory Update*, FUTURES & DERIVATIVES L. REP., Apr. 2000, at 1 (explaining that these types of transactions were made legally possible in the U.S. after 1999).

20. *Id.*

21. *See generally* McEvoy & Hirani, *supra* note 17.

of this financial product: in 1999, in the U.S. alone, it represented a $1 trillion market; by 2000 it had already grown to $1.5 trillion.[22]

III. CREDIT DERIVATIVE INSTRUMENTS

Being the underlying asset of synthetic securitizations, it is important to produce a basic taxonomy of credit derivative instruments. Of course, the very flexibility that is their attraction also defies any attempt at a complete description of all the possible variations which can exist in the market.

Basically, a credit derivative instrument is a contract whose value (or, in other words, the payment obligation of at least one of the parties) is defined by reference to the performance of one or more third parties, or the performance of one or more specific obligations of a third party, or by the change in the credit quality of one or more third parties.[23]

The third party whose performance is relevant is called the "reference entity." If obligations under the credit derivative depend on the performance of a specific obligation, that obligation is called the "reference obligation."

Since these are credit derivative, the event that triggers or affects one or more parties' obligations is related to some entity's credit. Hence, such a triggering event is called a "credit event." The parties are free to choose whatever events they wish to be credit events. Indeed, the issue of what events exactly will form part of the credit events is usually the most fiercely negotiated part of any credit derivative agreement.

The party who is entitled to a payment if some credit event occurs, is called, for obvious reasons, the "protection buyer." The party who has to make the payment is called, unimaginatively, the "protection seller." Much of the focus today is on whether protection sellers fully understood the risk they were taking when "buying the risk," or whether the credit derivative transferred any risk at all.

This issue is not unique to credit derivatives—since Roman times the expression "caveat emptor" (let the buyer beware) has been an important element in contract law. As the sovereign defaults in the 1980s sharpened the investor focus on true sovereign credit risk, cri-

22. *See Office of the Comptroller of the Currency Bank Derivatives Report, Fourth Quarter 2001*, tbl. at 7, *available at* http://www.occ.treas.gov/ftp/deriv/dq401.pdf (last visited Apr. 4, 2002).

23. *See* Schuyler K. Henderson, *Credit Derivatives*, BUTTERWORTH'S J. INT'L BANKING & FIN. LAW 332, 333 (1998).

ses involving credit derivatives (such as Long Term Capital) serve to expose the risks involved in these highly structured instruments. The market is just beginning to focus on the true risks of these instruments, as for example, if one is unwilling to take the credit risk of Company X, then it may not be appropriate to look to a swap with an entity whose sole asset is stock of Company X as the perfect hedge. Ultimately, no risk is too great if it is adequately priced for the investor and the greater the market for these instruments, the greater the likelihood that the credit derivative will be priced adequately.

The vast majority of credit derivatives are documented under the 1992 ISDA Master Agreement by reference to the 1999 ISDA Credit Derivatives Definitions, which expanded and revised the 1998 Long Form Confirmation published by ISDA.[24]

Broadly, there are four types of credit derivatives: credit default swaps, credit spread products, credit default notes, and total rate of return swaps.

A. Credit Default Swaps

Under a classic credit default swap (CDS), the protection seller agrees with the protection buyer that if a credit event occurs in relation to a reference entity or a reference obligation, the protection seller will make a payment to the protection buyer.[25] In the case of a reference obligation, the amount is often, but not necessarily, equal to the amount due under such obligation. In exchange for this payment, the protection buyer must deliver to the protection seller either (i) an obligation of the reference entity in an amount equal to the amount to be paid by the protection seller (either a loan or a bond), or (ii) an amount of cash equal to the difference in the present market value of the reference obligation (or, in the case of a swap based on a reference entity, a defined obligation of that entity) and an original amount which may be the market value of the obligation at the time the swap was entered into, the face value of the obligation, or some other pre-agreed amount.[26] The first method is called "settlement by physical delivery," while the second is called "cash settlement."

In exchange for providing the protection, the protection seller is paid a premium either upfront or over the life of the CDS.[27]

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24. *See generally* ISDA Master Agreement, and ISDA Credit Derivatives Definitions, *supra* note 16.

25. *See* Henderson, *supra* note 23, at 333–34.

26. *Id*.

27. *Id.*

It is worth noting that, since this is a derivative, there is no reason why the credit protection buyer should have an actual exposure to the reference entity or be the holder of the reference obligations. Clearly though, if the credit derivative is entered into in order to relieve capital requirements, the buyer will have such an exposure or hold the reference obligation.

The following example illustrates this point: Bank B has a $150 million exposure to Company X in the form of two loans. It enters into a credit default swap with Bank A. Under the terms of the swap, Bank B will pay quarterly premiums to Bank A. If Company X is subject to a bankruptcy filing (one of the listed "credit events" under the swap), Bank A must pay Bank B $150 million.[28] Since the swap specifies "physical delivery" once payment is made by Bank A, Bank B must transfer to Bank A one or more loans or bonds of Company X in a face amount of $150 million. Bank B can fulfil its physical delivery obligations by transferring the actual loans it was hedging to Bank A. However, these may not be assignable—hence the need for a credit derivative to hedge them—and so Bank B goes to the market and buys three now distressed bonds of Company X with a face value of $150 million which it transfers to Bank A.

B. Credit Spread Products

The cost of borrowing for any entity will be a mixture reflecting the base cost of "risk-free capital" plus a spread reflecting various factors; the key one being the entity's perceived credit risk.[29] The amount over the risk-free interest rate which reflects the borrower's credit is the "credit spread." Credit spread products require the protection seller to make a payment to the protection buyer if the credit spread of a reference entity (or a reference obligation) changes in a pre-agreed way. Since these products are typically used to remove or diminish risk, payment is usually due when the credit spread widens, thus indicating a perception in the market of a credit deterioration in the reference entity.[30] How the credit spread of a reference entity or reference obligation is extracted from the actual spread is the subject

28. *Id.* at 334–37.

29. Claude Brown, *Legal, Documentation and Regulatory Issues for Credit Derivatives*, *in* CREDIT DERIVATIVES & CREDIT LINKED NOTES: TRADING & MANAGEMENT OF CREDIT & DEFAULT RISK 421, 423–25 (Satyajit Das ed., 1998). Other factors would include the liquidity of the relevant obligation and the quantum of political risk attached to the entity's home jurisdiction.

30. *Id.*

of much documentation, usually involving comparisons with "benchmark" credits and mathematical formulae.[31] Issues such as by whom and how often the credit spread needs to be calculated are also the subject of serious negotiations.

In a classic credit spread product, upon the contracted change in the relevant credit spread, the protection seller must pay the protection buyer a fixed amount (in the case of a reference obligation, usually equal to the face value of the obligation). In exchange, the buyer transfers an obligation of the reference entity, or the reference obligation (if physical settlement is chosen), or pays the seller the current market value of such obligation (if cash settlement is chosen).

C. Credit Linked Note

A credit linked note (CLN) is a debt instrument that seeks to replicate another debt instrument. It can be used when the reference obligation cannot be purchased by a particular investor (for example, due to legal rules in the jurisdiction of the issuer of the reference obligation about who can and cannot hold domestic securities). With this instrument, the protection seller buys the CLN and in exchange receives interest equal to the interest payable under the reference obligation and, at maturity of the reference obligation, receives an amount of principal equal to that paid on the reference obligation.

If a credit event occurs on the reference obligation, the protection seller ceases to be paid but gets the reference obligation or value thereof. Since the CLN seeks to replicate another existing security, credit events under CLNs often include events that are not technically credit events for the reference entity but which, if they occurred, would prevent a holder of the reference entity's debt from receiving payments (e.g., a custodian default, or a settlement system interruption).

In contrast with credit default swaps, CLNs would typically require the protection seller to pay an amount equal to the face value of the reference obligation upfront.

D. Total Rate of Return Swaps

The total rate of return swap (TRORS) has sometimes been described as a synthetic "repo" transaction.[32] Under the TRORS, the protection buyer pays an amount equal to the interest paid on a ref-

31. *Id.*

32. *Id.* at 425–26.

erence obligation to the protection seller. In addition, if the market value of the reference obligation appreciates, the protection buyer pays the increase value of the obligation. In exchange, the protection seller pays a pre-agreed amount reflecting some form of cost of funds (e.g., LIBOR plus a spread). Furthermore, if the market value of the reference obligation declines, the protection seller pays the buyer the amount of the decline.

Payments reflecting the appreciation or depreciation of the market value may take place during the life of the TRORS or may take place only at the maturity of the instrument. If the maturity of the instrument coincides with the maturity of the reference obligation, the protection seller would be expected to pay the face value of the reference obligation while the protection buyer would be expected to pay the seller the actual payment under the reference obligation. To the extent the reference entity does not default, the amounts should net out to zero. If the maturity of the TRORS falls before the maturity of the reference obligation, then one party will pay the other the change in the market value, replicating the circumstance which would have occurred if the protection buyer had sold the reference obligation to the seller at the close of the TRORS and repurchased it at its maturity—hence the synthetic repo tag. With a TRORS however, the protection seller is not required to make a cash payment upfront equal to the then value of the reference obligation.[33]

IV. SYNTHETIC SECURITIZATIONS

There is, as of yet, no firm conceptual architecture for this relatively new market. We will divide the synthetic securitizations into two clear categories however, namely, funded and unfunded. Of the two, the funded securitizations are the ones most closely resembling the traditional securitization product in a synthetic form, while the unfunded are closer to a hybrid between a true securitization and a more straightforward credit derivative.

In the funded synthetic securitizations, the investors will part with money at the outset of the transaction in the same way as they would if they were purchasing bonds. During the life of the transaction they will receive periodic payments. Although these can be described legally as either interest or premiums, depending on the structure, they clearly play the economic role of interest but the higher coupon reflects a premium for the credit derivative. If all goes well

33. *Id*. at 425.

for the investors, their money is returned on the maturity date for the instrument.

In an unfunded synthetic securitization, the investors do not part with money but merely stand ready to advance money if the pre-agreed credit events occur. During the life of the transaction, they will receive a payment for this service. Alternatively, they may receive this payment in full at the outset. In some deals based on total rate of return swaps, the investor may also need to make payments during the life of the deal.

As described, there seems to be little difference between an unfunded synthetic securitization and a straightforward credit derivative. The main difference tends to lie in the fact that, as with a normal securitization, in unfunded synthetic transactions there will be structural attempts made to remove the credit risk of the originator (in this case the protection buyer) from the transaction. For example, in a synthetic transaction based on a credit default swap, the only payment that will need to be made by the protection buyer is the periodic premiums. If the buyer becomes insolvent, the protection buyer would no longer be able to pay the premiums. Since the protection seller is not willing to take the credit risk of the protection buyer, it may require credit support mechanisms to be set up to ensure that insolvency of the protection buyer will not affect its anticipated "profit" for agreeing to take on the credit default risk that is the subject of the swap. Therefore, in a synthetic securitization there may be a provision that if the protection buyer's current short term rating falls below a pre-agreed trigger, the buyer must place an amount equivalent to the net present value of the future premiums into a special account which is secured in favor of the investor. This special account is invested to yield the equivalent of the premiums due under the credit default swap and is then used to pay the investor.

However, there is no doubt that unfunded synthetic securitizations fall short of the traditional securitization product in a number of key ways. First, the originator/protection buyer cannot access the general capital markets through unfunded transactions.[34] The reasons for this are relatively self-evident; to the extent that the originator/protection buyer relies on the investor to make a payment if a credit event occurs, the former needs some degree of comfort that the latter is going to be good for the money. This cannot be achieved with a traded instrument that may change hands at the whim of its

34. *Id.*

present holder. Should the original investor wish to trade the synthetic instrument, how does the originator/protection buyer monitor the sale so that the new investor is not some small bankrupt corporation? In addition, if the unfunded synthetic instruments were similar to traditional securitization bond issues, you would expect a multiplicity of investors owning each issue. Again, it is difficult to see how a practical system could be devised to enable the originator/protection buyer, upon the occurrence of a credit event, to track down each holder of the synthetic instrument and make individual demands for payment.

Finally, many synthetic securitizations are designed to relieve the need for regulatory capital. It is unlikely, to say the least, that any regulator will grant capital relief to a bank for an unfunded synthetic securitization unless that regulator can monitor whether the bank has truly removed the credit risk attached to the relevant reference obligation. This requires the regulator to be able to assess the credit worthiness of the investor or investors. This is practically impossible to achieve with an ever-changing group of capital market investors.

Accordingly, unfunded synthetic securitizations are invariably done between an originator and a known counterparty. There is usually only one investor to these transactions and it cannot "trade" the instrument without the consent of the originator.

V. FUNDED SYNTHETIC SECURITIZATIONS

A. Benefits of Funded Transactions

The area, therefore, where "true securitizations" take place in the synthetic market, is the area of funded securitizations. Here, as stated above, the investors do part with money at the outset of the transaction.

This initial payment by the investors does raise its own issues though. The one fact about securitizations, synthetic or otherwise, is that they must, to the greatest extent possible, remove the credit risk of the originator from the equation. If the initial payment made by the investors were paid immediately to the protection buyer, then its repayment at the maturity of the instrument would depend on that entity's then current solvency. This would contravene the essence of a securitization transaction.

Equally, from the point of view of the protection buyer, the idea behind a funded transaction is that it should remove the reliance by that party on the solvency and willingness to pay of a multiplicity of

ever-changing investors. In other words, in the event of the occurrence of one of the pre-agreed credit events, the originator must know that it can have certain and fairly immediate access to the money due to it under the relevant credit derivative.

This conundrum is solved quite straightforwardly through the use of the most common of securitization creatures: the bankruptcy-remote special purpose vehicle.[35] This vehicle is a traditional limited liability corporation which has bound itself by covenants to the protection buyer and the investors (usually through the medium of their trustee) that, among other things, it will not have any employees, rent or own any premises, borrow or lend any money (other than pursuant to the securitization transaction), or have any other activity or own any subsidiaries. In other words, it is a vehicle whose sole activity is the relevant securitization transaction and which has, consequently, forsaken any activity that could lead it to become insolvent.

It is to this special purpose vehicle (SPV) that the investors give their money and not to the protection buyer. It is in turn this SPV which holds the cash to return it to the investors if no credit event occurs or, alternatively, to the protection buyer if one does. Since the SPV is bankruptcy remote, the risk to both the investors and the protection buyer is reduced to a bare minimum. It is also with the SPV that both the investors and the protection buyer contract, so that it stands as an intermediary between them. In particular, this insulates the investors to a large extent against any delays and difficulties flowing from the possible insolvency of the protection buyer.

On the other side of the coin, since the rights of the protection buyer to be paid in the event of a credit event's occurrence are now cash collateralized, most regulators are willing to grant the protection buyer full capital relief for the reference obligation or the reference entity since the credit risk on the SPV's own payment is deemed to be nil.[36]

B. Structure of Funded Transactions

A classic funded synthetic securitization proceeds as follows: the originator/protection buyer (O) enters into a credit derivative with

35. This is not to say that unfunded transactions do not make use of special purpose vehicles, but merely reflects the fact that in the case of unfunded transactions, their use is less ontologically necessary.

36. This treatment is in conformity with the rules of the Basel Concordat which weighs credits backed by full cash collateral at 0%. *See* BASLE COMM. ON BANKING SUPERVISION, *supra* note 1. In other words, no capital needs to be set aside for cash-backed credits.

the SPV. This may be a credit default swap, a credit spread product, a credit linked note or a total rate of return instrument. Let us assume for these purposes that it is a credit default swap (CDS_{orig}).

The SPV then enters into a mirror credit default swap (CDS_{spv}), on the same terms as the CDS_{orig}, with the investors. To do this it contracts with a trustee that acts in the same capacity as a bond trustee in a more classical bond issue and is therefore the representative of the CDS_{spv} holders.

On entering into the CDS_{spv}, the investors advance to the SPV an amount ($P) equal to the notional principal under the CDS_{spv} (which is, of course, the same amount as under the CDS_{orig}).

The SPV places $P in an account in its name with a bank of suitably high credit quality. The SPV also enters into a security agreement whereby $P is provided as security to both O and the investors for respectively the SPV's obligations under the CDS_{orig} and its obligations under the CDS_{spv}.

Since $P placed in a bank account will not generate much in terms of a return, it is common for the transaction documents to specify that the SPV must invest $P either in highly rated securities or in a repo transaction. In the case of securities, the investments the SPV is allowed to make are clearly specified so as to avoid currency, interest rate or maturity mismatches. In the case of a repo transaction, the repo must be structured in such a way as to remove or minimize the SPV's reliance on the repo counterparty's credit.

During the life of the transaction, O makes payments of premiums to the SPV pursuant to the terms of the CDS_{orig}. The SPV in turn passes on these premiums to the investors under its obligations under the CDS_{spv}.

The interest earned by the SPV on $P is either passed on to O or to the investors depending on the deal that was originally struck.

If O fails to meet its payments of premiums, for example because it goes into bankruptcy proceedings, then the CDS_{orig} terminates, as does the CDS_{spv}. The $P is then returned to the investors, who have the equivalent of an early repayment. This way, the investors are not supposed to be vulnerable to O's insolvency risk.

If a credit event occurs, O makes a claim under the CDS_{orig} and the SPV draws on $P to meet that claim. The SPV in turn has a similar claim under the CDS_{spv}. However, the terms of the CDS_{spv} allow the SPV to draw down on $P to meet the investors' obligation. This way, the SPV, and therefore O, need not concern itself with the then credit standing of the individual investors.

Following the credit event, O then needs to provide to the SPV either a cash amount reflecting the then market value of the reference obligation that triggered the credit event (if the CDS_{orig} is structured as a cash settlement transaction) or deliver to the SPV an equivalent obligation of the reference entity (if the CDS_{orig} is structured as a physical settlement transaction). The SPV will then either hand over the cash to the investors or, if it holds an obligation, manage that obligation in accordance with the wishes of the investors, expressed through their trustee.

If no credit event occurs, or if only a partial credit event occurs, any remaining amount of $P is handed back to the investors at the maturity of the CDS_{spv}. In addition, there is nothing in this structure that prevents the reference entity or reference obligation from being a pool of entities and/or obligations. If the CDS_{orig} is backed by a pool of entities and/or obligations, it then becomes possible to tranche the CDS_{spv} into separate credit default swaps ordered by order of subordination. This reproduces synthetically the traditional tranching by credit risk that one finds in traditional securitization transactions.

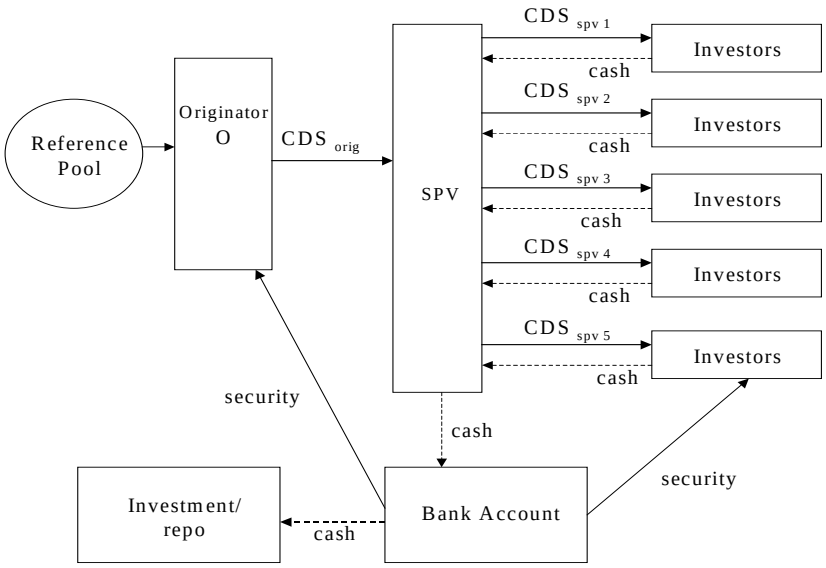
In a tranched synthetic securitization, CDS_{orig} would be backed by, for example, 100 separate reference obligations representing assets in O's banking book for which O seeks capital relief. The SPV would then enter into a series of CDSs with the investors (say, for the sake of this example, five separate CDSs (CDS_{spv1}, CDS_{spv2}, et seq.)).

Everything would be the same as in the paradigmatic case described above, save that the terms of CDS_{spv5} would provide that it would meet all the payments due to credit events on the pool of reference obligations first, until its share of $P had been used up. Only then would the investors in CDS_{spv4} be called upon to meet any further and incremental losses.

It is clear, in this situation, that the investors in CDS_{spv5} will be bearing the first loss on the pool of reference obligations whilst the investors in CDS_{spv1} would only be called upon in the case of a catastrophic meltdown. Accordingly, the investors in CDS_{spv5} would receive commensurately larger premiums under their swap to reflect the increased credit risk.

Usually, these separate credit default swaps will receive different cascading ratings from the rating agencies reflecting the likelihood that the investors will not receive their premiums and principal in full.

DIAGRAM A



VI. CONCLUSION

Through the use of synthetic securitization, the banking community has made one further step on the road to disintermediation. The authors would contend, however, that it is not merely another small incremental step, of which we have seen many since the early days of securitization in the early 1980s, but a giant leap forward. By marrying the flexibility of the credit derivative market and its capacity to preserve intact the basic banking relationship and the securitization market's access to an increasingly large pool of capital market funds, the synthetic securitization market is the second great leap forward in the road to a totally disintermediated financial world.