

Will restricting proprietary trading and stricter derivatives regulation make the US financial system more stable?

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The 1999 Financial Services Modernization Act (popularly known as the Gramm Leach Bliley Act: GLB) repealed the separation between commercial and investment banks that had characterised the New Deal legislation introduced in response to the 1929 stock market crash. The Dodd-Frank Wall Street Reform and Consumer Protection Act, passed into law on July 21 2010 in response to the 2008 collapse of US financial markets only seeks to amend the 1999 Act. There are, however, two major provisions that seek to restore aspects of the New Deal legislation by imposing regulations that, aim to reduce speculation with financial institutions own funds using highly leveraged derivatives. The so-called “Volcker rule” limits the ability to trade as principal in what is known as “proprietary trading” and the Lincoln Amendment or the “push out” rule limits derivatives dealing for regulated, insured banks. A complement to the Lincoln amendment requires that all over the counter derivatives be cleared through official mechanisms and traded on regulated exchanges similar to those used for commodities. A Financial Stability Oversight Council will be responsible for identifying systemically important financial institutions, writing special regulations for these institutions, foreseeing and preventing financial crises, and most importantly implementing these important provisions on proprietary trading and derivatives dealing. However, the specification of these regulations, discussed in the first two sections of this paper, suggest that they will not

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be fully effective in limiting the kinds of speculative activities that characterised the recent crisis. The complementary provisions to require all derivatives trading to be cleared and trades executed in regulated markets is discussed in section 3. The regulation and trading of a specific type of derivative, the credit default swap is discussed in section 4. Section 5 reviews the way these instruments prolonged and extended the crisis into all aspects of global financial markets and suggests that the proposed regulations would not have been sufficient to contain the kinds of CDS trading structures that prevailed in 2006 and 2007 that magnified and extended the negative impact of the subprime crisis.

1. Volcker Rule

Section 619 of the Act calls for limitations on the use of a bank's own capital for proprietary trading, including through participation in hedge or private equity funds, if the bank benefits from federal deposit insurance, or any other explicit or implicit government guarantees.

The protection of depositors' funds by excluding them from being used for the financing of any operations in securities markets, except those provided as a complement to client services, was the fulcrum of the New Deal Glass-Steagall regulations. The intention was to prevent banks from using retail deposit funds, guaranteed by the new federal government deposit insurance fund, from being subject to loss due to speculative trading in securities. Securities market activities were to be limited to noninsured investment banks, forbidden from taking customer deposits, and whose partners used their own capital resources to generate income by underwriting and trading in securities. In the 1980s, most investment bank partnerships incorporated as limited-liability corporations, supplementing their capital through the issue of shares in the equity market. In the recent financial crisis those investment banks that had not become insolvent or merged into other banks, eventually became bank holding companies subject to Federal Reserve regulation.

This marked the end of the correspondence between the kind of investment activity (commercial loans or securities) and the kind of

funding (deposits or own capital) in distinct types of financial institution (commercial or investment banks). The 1999 GLB Act opened the way to the creation of multifunction bank holding companies that were able to take depositors' funds and benefit from FDIC deposit insurance in their bank subsidiaries, and were also free to act in securities markets, for the account of their clients and for their own profit, in capital market subsidiaries.

As a result of the 1999 Act it was no longer possible to separate the use of depositors' funds for securities speculation from the use of shareholders' capital for such activity. Since securities trading can produce losses that exceed shareholders equity, this would jeopardize the ability to repay depositors's funds, and would thus require the Federal Deposit Insurance Corporation (FDIC) to meet the losses created by proprietary trading that exceed the capital of the bank.

The Volcker rule thus seeks to protect the FDIC from having to cover the risks of banks' proprietary trading¹ by forbidding them from engaging in trading in which the bank acts as principal if the bank qualifies for any government support for losses to its depositors, even if such trading is solely financed by the bank's own capital. The intention of the rule is to prevent banks from using any of its deposits or capital funds to take leveraged risks on positions whose value is determined by changes in the price of financial assets, and, in particular, to limit the use of leverage that has been a traditional part of such activities. In general, the leverage that is associated with speculative and arbitrage activities is in noninsured areas such as repo markets and other commercial borrowing, so the rule implicitly seeks to limit the leverage that can be generated by funding proprietary trading in repo markets or in undermargined or non-margined over-the-counter derivatives structures.

However, following in the steps of Glass-Steagall it allows banks to engage in securities market trading that is associated with the provision of

¹ "Proprietary trading" is defined as engaging as a principal for the trading account of a banking organization or supervised nonbank financial company in any transaction to purchase or sell, or otherwise acquire or dispose of any security; derivative; contract of sale of a commodity for future delivery; any option on any such security, derivative, or contract; or other security or financial instrument that the appropriate federal banking agencies, the SEC, and the CFTC (the "Regulators") may determine by rule.

capital market services to clients. This includes providing investment in hedge or equity funds on condition that the bank holds no more than 3 per cent interest. This creates a large grey area in determining when precluded trading activities are required for meeting client requests for services and when they are simply for the bank's own investment activities. For example, a bank providing foreign exchange or interest rate hedging services may find it necessary to warehouse the associated derivatives contracts in order to provide the best execution for clients, and it would be difficult to differentiate such activities from holding such positions for pure proprietary speculation. Some commentators have also suggested that the rule cannot prevent banks from making investments in speculative positions that are not included as part of the bank's trading book.² The difficulties in the interpretation of the Volcker rule would thus seem to stem from an attempt to reintroduce Glass-Steagall exclusion of securities market activities within the GLB Act in which such trading is expressly permitted.

2. Lincoln Amendment

Some of the difficulties in the application of the Volcker rule are dealt with in another of the major areas of regulation in the Act, the so-called Lincoln Amendment or "push out." Section 716 limits the ability of banks to operate and act as "swaps entities," basically dealers in derivative contracts if they receive various forms of "federal assistance," including federal deposit insurance and access to the Fed discount window or any Fed credit facility.³ Since this provision, which is to come

² See "Reuters Breaking Views: A rule that gives as it takes away", *New York Times*, Monday, May 16, 2011, page B2.

³ "Swaps entities" are defined as "any swap dealer, security-based swap dealer, major swap participant, [or] major security-based swap participant." In turn, swap dealers and security-based swap dealers are persons or entities that hold themselves out as swap dealers, make markets in swaps, regularly enter into swaps with counterparties as an ordinary course of business for their own accounts, or engage in any activity causing them to be commonly known in the industry as swap dealers or market makers. However, even if an entity is not classified as a "swap dealer," it may nonetheless be classified as a

into effect in July 2012, would create substantial difficulties for banks in providing derivatives-based services to their clients, or in using such instruments to hedge their own risks via the use of derivative contracts, the “push out” provision allows banks to retain insurance and Federal support if their swap activities are carried out through an affiliate. The insured entities could then directly engage in their own and certain client-based hedging activities without being classified as swap dealers. The affiliates may be created by any depository institution that is part of either a bank holding company or savings-and-loan holding company, on condition that the affiliate complies with sections 23A and 23B of the Federal Reserve Act and any other requirements that the Commodity Futures Trading Commission (CFTC), Securities and Exchange Commission (SEC), and Fed may determine necessary. In effect, this is the equivalent of the section 20 exemption under Glass-Steagall that permitted commercial banks limited securities-market activities.

The activities that can be engaged in by the insured entity itself include acting as principal in swaps with customers in connection with originating loans for those customers; engaging in “de minimis” swaps dealing; entering swap agreements for the purposes of “hedging and other similar risk mitigating activities directly related to the insured depository institution’s activities;” and acting as swaps entities for activities involving rates or reference assets that are permissible for investment by a national bank.

Again, these mirror exemptions had already been approved under Glass-Steagall and did much to undermine its application. Regulations specifying the formal content of these limits and definition are to be formulated by the SEC and CFTC as appropriate.

3. Swaps and futures regulation

“major swap participant” or “major security-based swap participant” subject to the regulation if it maintains “substantial positions” in swaps, or if it possesses outstanding swaps that create substantial counterparty exposure that could have serious adverse effects on the financial stability of the US banking system or financial markets.

The full implementation of the Volcker and Lincoln amendments requires provisions to shift over the counter (OTC) trading in derivatives onto federally mandated clearing mechanisms and regulated markets. Title VII of the Act thus calls for the creation of a comprehensive framework for the regulation, clearing, and exchange trading of OTC derivatives. Now defined as “swap” contracts, federal legislation has always excluded these contracts from similar formal regulations that originated in the initial regulation of futures contracts in 1922. This is due in part to the fact that futures contracts developed in the agricultural sector and thus were subject to commodity futures trading regulation monitored by the CFTC, while other derivatives contracts were primarily financial and therefore under the regulatory rubric of the SEC. Thus, although futures contracts, whether of a financial or commodity nature, could not be legally traded outside of a formally regulated market without a specific exemption, other derivatives were always fully exempt and thus developed in the OTC market. The current regulation thus seeks to apply the exchange and clearing regulations of futures to virtually all standardized swap contracts.

While swaps and futures are both “time” contracts, swaps, unlike futures, were customized to the specific commercial hedging needs of businesses and financial institutions; and financial institutions initially acted as intermediaries bringing together swap counterparties in private bilateral negotiations. Since most of these contracts were negotiated without exchange of principal, risk exposure was limited to marginal changes in the market price of the contracts and prescriptive regulation was not considered necessary. As banks began to take on principal positions as counterparties to client requests, they also accepted risk on the nonperformance of counterparties, but this was also considered minimal. The most popular swaps contracts were interest rate and Forex swaps, which were generated by the breakdown of the Bretton Woods system of fixed exchange rates and have since become an integral part of the hedging in the flexible interest and exchange rates in the international financial system. As they increased in volume, the International Swaps and Derivatives Association provided standardized terms and

documentation, reducing the need for specific conditions and bilateral negotiation.

The definition of swaps in the Act covers most commonly traded OTC derivatives, including options on interest rates, currencies, commodities, securities, indices, and various other financial or economic interests or property; contracts in which payments and deliveries are dependent on the occurrence or nonoccurrence of certain contingencies (e.g. a credit default swap); and swaps on rates and currencies, total return swaps, and various other common swap transactions. Due to the parallel development of commodity-based and financial-based contracts, the Act defines and provides for a common approach to “security-based swaps,” which are generally swap transactions involving a single security or loan or a narrow-based security index, and “commodity swaps,” which deal with agricultural commodities. However, the former will be regulated by the SEC while the latter will be regulated by the CFTC, preserving the historical division of labor between the two agencies.

Another high-volume area of the market that might be considered a prime example of contracts that might benefit from regulated market trading are foreign exchange swaps and forward contracts. These contracts are primarily the domain of banks and are currently exempt from regulatory oversight. They will be subject to regulation under the Act; however, given the major participation of banks in providing client services and the traditional absence of regulation since the breakdown of the Bretton Woods system, the Act provides the Treasury secretary with the power to exclude them from regulation if the contracts negotiated have not been structured to evade the reach of the legislation. The Secretary has granted this exemption for foreign exchange contracts.

As noted above, banks, dealers, and other financial institutions active in the derivatives markets may be classified as “(security) swap dealers” (see footnote 2) and will become subject to registration and record-keeping requirements. Given the prominent role in providing client services, a number of institutions will be exempt from classification as (security) swap dealers: an insured depository institution, to the extent that it offers to enter into a swap with a customer in connection with originating a loan with that customer; an entity that buys or sells swaps

for such person's own account, either individually or in a fiduciary capacity, and not as "part of a regular business"; and an entity that engages in a "de minimis quantity" of swap dealing in connection with transactions with or on behalf of its customers (see above). The major obligation of swap dealers will be the application of minimum capital standards and initial and variation margin requirements for swaps that are not cleared as required by the appropriate prudential regulatory agency or commission.

4. No Exceptions for Credit Default Swaps

The various exemptions relating to proprietary and derivatives trading by deposit-taking banks that benefit from federal government support do not, however, apply to credit default swaps (CDSs) unless they are cleared through the derivatives clearing mechanisms and regulations called for under Title VII of the Act. The financial industry fought hard to limit reforms on the trading of OTC CDSs to the sole requirement that they be cleared, arguing that this would be sufficient to ensure safety. However, as Michael Greenberger (2010) has argued, while formal clearing mechanisms reduce counterparty risks, in addition transparency of pricing and of the trading party identities, prudential and competency regulation of intermediaries, adequate self-regulation by the industry to help regulators, complete record keeping, prohibitions on fraud and manipulation, full disclosure to regulators and counterparties, and competent private enforcement are necessary. This would create a structure similar to stock market rules, regulations, and operating procedures. Exchange trading, strict anti-fraud requirements that are enforced by state and federal governments, and bans on "abusive" CDSs that are designed to cause economic injury (through bankruptcy) were seen to be needed to prevent a repeat of the problems that led up to the crisis.

While legislators have singled out CDS as an important part of regulatory reform, there is mixed opinion about their role in the recent financial crisis. On the one hand, former SEC Chairman Christopher Cox

has stated that “The virtually unregulated over-the-counter market in credit-default swaps has played a significant role in the credit crisis”⁴ while Alan Greenspan once considered them crucial in providing the more efficient distribution of risk that provided improved stability of financial markets.⁵ On the other hand, it has been argued that this very benefit has increased the opacity of financial markets since CDS can be combined in a chain of offsetting, interlinked transactions which make the true bearer of risk impossible to identify. Thus they add to the complexity of the financial system and the difficulties involved in resolving failed financial institutions. For example, many argued that the large CDS portfolio of Lehman Brothers would make its bankruptcy extremely difficult.⁶ But these contracts were settled relatively rapidly and without difficulty.⁷ The same was true of the difficulties facing AIG, which had written guarantees on large amounts of mortgage-linked securities. In this case, the argument was not about the complexity of the interrelated contracts, but about how a failure of AIG to meet its commitments would cause contagion amongst the multitude of its clients.

5. From Total Return Swaps to Credit Default Swaps

Credit default swaps originated as total return swaps (TRS) where the total returns (yield plus or minus capital gain) of a reference asset (or portfolio of assets) is swapped for a reference cash yield, such as a spread over or under LIBOR (see Tavakoli, 1999). There is no sale or exchange of asset. Since the seller of the swap incurs any capital loss the contract provides insurance to the seller against a decline in price due to a deterioration in credit quality or even loss. The traditional TRS was used to provide leveraged balance sheet arbitrage. Banks seeking to reduce reduce their asset holdings to economize on bank capital could engage in a TRS swap with a hedge fund that had difficulty increasing its holdings

⁴ Harrington S.D. (2008).

⁵ Greenspan A. (2002) .

⁶ Fender I., Frankel A. and Gyntelberg J. (2008).

⁷ See: DTCC (2008).

of assets via higher leverage. The impact of the swap would be to shift the risk of the assets off a bank's balance sheet synthetically, so capital need not be held, while the hedge fund increased its risk exposure to the asset without having to increase its funding so it was thus able to increase leverage.

The CDS simplifies the transaction, with the buyer of the swap paying a cash yield against a commitment to indemnify the seller in the case of a defined "credit event," such as default. It differs from a total return swap in that the investor does not take on the price risk of the reference asset, only the default or credit risk. In this form CDS resemble an insurance contract with the buyer paying an insurance premium to the seller who is obliged to pay in the case of the specified insured event. As a result there has been question of whether they should be regulated as insurance contracts rather than financial swaps, but since they often refer to insurance of idiosyncratic events they have remained unregulated as over the counter contracts. Since the contracts are not regulated as insurance it is possible to buy a CDS against an asset without having an actual credit exposure to the asset. These are called "naked" credit default swaps. In general, the size of the insurance premium is interpreted as representing the risk of the occurrence of the specific credit event. Thus if the market believes the risk of default is rising, the sellers of CDS will require higher premia. This has provided another defence of the instruments. It is extremely difficult to sell corporate bonds short since there are no broker securities lending services similar to that for equities. Thus, the ability to buy CDS protection against default provides the possibility for the full expression of expectations of a rise or fall in the price of a fixed interest asset due to changes in credit. Many argue that this is necessary for efficient price discovery since it allows the full expression of both supply (current owners plus short sellers) and demand.

However, this explanation suggests a radical change in what the instruments are supposed to accomplish. One thing is to provide hedge protection against a credit risk, the other is to take a speculative position on the prospective change in the price of the asset. It is the latter role that opens the way to manipulation. For example, it is possible to buy a large position of default protection that drives up the insurance premium and

suggests a decline in credit quality on a company's bonds at the same time as a short position on the company's equity is taken. The decline in perceived credit quality due to the higher CDS premium will lead to questions about the companies viability and a decline in the stock price that allows the short equity position to be closed at a profit. The CDS positions can then be reversed at very low cost. Since the CDS market is over the counter and non-regulated, this sort of manipulation is difficult to detect and provides justification for full reporting and clearing of CDS positions.

A more recent adaptation of the use of CDS for market manipulation was employed by investors who took an early negative position on the subprime mortgage market. It is often said that, had there been more market participants able to express their negative view on the subprime mortgage market, it could not have produced the excesses that created the bubble and crash. However, there is a great deal of evidence that the actions of those with negative views on the market were a major force in extending the boom and in distributing sub prime investment throughout the globe.

The first to notice the unsustainable nature of the market were traders in the mortgage desks of the large investment banks that were producing the collateralised mortgage obligations from subprime Residential Mortgage Backed Securities (RMBS). In November 2005 a Deutsche Bank mortgage market trader ordered a piece of market research that suggested that all that was required for a collapse of the securitised mortgage market was a failure of house prices to continue rising and produced a presentation for clients titled "Shorting home equity mezzanine tranches" that recommended the use of credit default swaps to short the lowest rated tranches of subprime securitisations (Lewis, 2010, p. 81). By the beginning of 2006 Goldman Sachs mortgage traders started to have doubts about the viability of the market and started to build a large short position that after the crash became the obsession of the Senate Committee on investigations (*Levin Senate Committee Report*, Chapter VI.C(4), 398 ff.).

It was not only the producers of these securitised instruments that recognised that they were bound to explode and attempted to protect

themselves from the fallout, there were also professional (and some not so professional) investors, investment advisers and fund managers who identified the risks of securitisation of subprime mortgages and attempted to profit from their insight by selling short what they considered the most overpriced tranches of collateralised mortgage obligations (CMOs) containing them. Michael Lewis in *The Big Short* presents these individuals as prescient heroes who were willing to go against the position of Chairs of the Federal Reserve and mainstream academics and politicians that “this time is different”. In difference from the originators and underwriters of the securitised mortgages, these investors based their assessment of the market’s prospects by doing the due diligence that the underwriters, and in particular credit rating agencies, should have been doing, by analysing the credit risks of the components of all mortgages included in the RMBS that comprised the CMOs.

However, the buy side, the investors, faced a different kind of difficulty in implementing their negative expectations of market performance. Securitised assets such as CMOs are designed to look and behave just like fixed interest obligations, and anyone who has managed a bond portfolio knows the difficulty in shorting the bond market. Unlike the equity market, where there is a well-developed structure for lending equities to short sellers, this is not the case with long-term coupon bonds which tend to be held by institutional investors with long-term obligations such as pension funds and insurance companies and are issued in limited quantities that cannot be easily augmented since it is virtually impossible to replicate the interest rate environment of the original issue.

Thus, short sellers not only faced the difficulty of Keynes’s aphorism “markets can remain irrational a lot longer than you and I can remain solvent,” they also faced the difficulty of finding an appropriate vehicle to allow them to take a short position. Lewis recounts the difficulty investors faced in trying to convince investment banks to write default swaps against particular tranches of CMOs that they thought were overpriced and wanted to short (Lewis, 2010, pp. 47 ff.). It was this search by both the buy side and the sell side that provided the massive expansion of credit default swaps which provided an ideal vehicle for

shorting the mortgage market. However, these short positions had a negative impact on the reported performance of the advisers who put on short positions early, since they showed no returns, only the costs of the CDS positions. For many investment funds it was not a question of staying liquid, but of keeping their investors' capital, and many investors, unhappy with the negative returns in a market in which investors who held long positions in the mortgage markets continued to see extremely high profits, sought to redeem their holdings.

This difficulty was aggravated by the fact that most of the CDS that the banks eventually were willing to sell to these short investors had margin requirements which increased as the mortgage market continued to rise. Further, since these contracts were not actively traded in public markets, the investment banks possessed a virtual monopoly influence over the notional mark to market prices used to calculate maintenance margins. Indeed, Lewis notes the consternation of one manager who was asked by the investment banks who had written the CDS for additional margin when the increasing distress in the market was manifest (Lewis, 2010, pp. 184-5). This manipulation of the prices of what were non-traded securities is confirmed in the *Levin Senate Report* (Chapter VI.C9c) 425).

However, those who were able to maintain their CDS contracts were vindicated with massive profits as the market collapsed in 2007. Lewis's description of these insightful investors does however raise some doubt about their positive impact in imposing rationality by acting to break the expansion of the market bubble. He notes that the success of the contrarian short investors was due to the increasing frequency of default and losses in the market as a whole, and in particular in their counterparties, who were the losers on the contracts. Indeed, if the shorts had been too successful they could have run the risk of bankrupting their counterparties and as unsecured creditors seeing their profits disappear in collapse of the entire financial system. Short sellers were thus extremely interested in government bailouts of the financial system since successfully betting against the collapse of the system produces no gain if the system does indeed collapse. This is one of the reasons for the outcry at the government bailout of AIG when it was realised that the

government funds provided were used to meet the CDS positions of a number of major investment banks who had been speculating against their own CMO originations.

None of the investors who were speculating on a collapse of the market purchased CDS contracts to provide protection against default on mortgage securities that they held in their investment portfolios. They were what are called “naked short” positions held through “naked CDS” positions, insuring themselves against a risk that they did not hold. Thus, those who foresaw the crisis coming not only took the normal sceptical position of selling all the subprime CMOs they owned, or simply not buying them, they took active positions against them. Not by borrowing the CMOs to sell in the market, but by buying CDS contracts on the tranches they thought had the highest chance of failure.

Since CMO tranches are not actively traded, many believe CDS provide a better indication of the market’s assessment of their value. This is basically because there is no active, organized CDS market, since these are idiosyncratic, over the counter, bi-lateral contracts. The semblance of a market to provide risk pricing only emerged after the creation by Markit of ABX.HE, a synthetic tradeable index on a basket of 20 subprime mortgage-backed securities. It provided an instrument that allowed investors to take naked speculative positions on subprime mortgage-backed securities via CDS contracts. It became the benchmark for the performance of subprime RMBS. Through the Markit TABX.HE, targeting tranche indices it became possible to provide investors with the ability to hedge their exposure to specific tranches of varying levels of risk within the portfolio structure.

However, as noted above, if the short positions were put on too early this required the continued payment of insurance premia, and the initial investors who recognised that the subprime mortgage market was an unsustainable Ponzi bubble were faced with negative returns, loss of clients and mispricing of their positions. This led to a search for alternative means of taking a negative position on the subprime mortgage market. One strategy was based on the inverse relation between the interest income and the credit rating on the different tranches of a CMO and the fact that the cost of buying CDS protection followed the same

inverse pattern. Since the CDS premia were generally lower than the interest rate payable on each tranche it was possible to buy a lower-rated tranche of the CMO and short a higher-rated tranche by buying CDS protection at a cheaper rate than the income (and the rate on the CDS) from the lower tranche. This would yield a small positive carry on the trade until the expected collapse of the market when the income from the lower-rated tranche would cease, while the CDS on the higher-rated tranche would increase in value, producing the speculative profit.

This speculative strategy increased the demand for lower-rated tranches and demand for CDS protection on the next higher-rated tranches. Since it was normally easy to place the least risky AAA tranches but more difficult to sell the lowest rated equity tranches, this strategy increased the demand for those tranches and provided an incentive to mortgage originators to increase the supply of exotic payment structures such as option ARMs (adjustable-rate mortgages) to increase the supply of more risky structures.

As the balance of professional opinion amongst proprietary trading desks in large investment banks and hedge funds moved against the performance of the market through 2006 and 2007, the increasing demand for CMOs to short led to an increasing demand for risky mortgages at the same time as brokers were meeting increasing difficulty. Another means of producing them had to be found. This was done through the creation of synthetic CMOs. This transition can be understood by recognizing that the long lower-rated position could be replaced by writing a CDS on the lower-rated tranche. This would generate income because the premium on the lower rated tranche would generally be higher than the premium paid on the purchase of the higher-rated tranche CDS. However, in the case of market deterioration the lower rated tranche would require additional margin and loss of value that would soon offset the rise in value on the long CDS, exposing the speculator to loss in the event of a collapse from which he was expecting to profit. Thus another mechanism had to be found to short the market without being strangled by carrying costs.

The solution was to increase the income from the long position by taking a lower rated credit tranche. The highest income was earned from

the cheapest, highest return, toxic or equity tranche which was unrated. Buyers of the equity tranche of a CMO were even more rare than for the lower rated tranches and, because of the difficulty in selling them, usually had to be held by the underwriter of the CMO (or repackaged into higher power structures, such as a CDO squared). Thus, the speculative buyer of the equity tranche became the de facto sponsor of the structure, giving right to choose, or at the very least a veto right, over the choice of the individual RMBS contained in the CMO. And since the whole point of the exercise was to take a position against the performance of a CMO that was expected to fail, the assets chosen by the speculator were the among the worst performing sub prime loans. This also generated a demand for mortgage brokers to produce risky loans to clients who were likely to default rapidly. These structures became famous in the Senate hearings on Goldman Sachs' role in creating the ABACUS and Timberwolf structures that were created in order to allow hedge fund managers or the bank itself to speculate against them. This is but one example: Deutsche Bank also produced similar structures, as outlined in the Senate Committee Report, as did Merrill Lynch. One hedge fund, Magnetar, excelled at this strategy of speculation against the subprime market and became a major manufacturer of subprime CMOs that were designed to fail. It launched its first fund in May 2006, along with a Deutsche Bank internal fund (Mollenkamp and Ng, 2007).

This strategy can best be understood as a means of solving "Keynes's market irrationality" or the negative carry problem that the investment managers faced in shorting the subprime bubble. As mentioned, the ability to profit from a short position depends on the costs of financing the position, and this crucially depends on timing. The "Magnetar trade" as it came to be called in the financial press, solved both problems by creating a short position with a positive carry and managing the time it would take for the position to pay out by choosing mortgages that would be sure to fail relatively rapidly.⁸

⁸ Smith (2010), Appendix II, gives an ersatz account of how a speculator might go about creating such a structure.

As noted, a CMO is arranged in credit tranches, from those rated investment grade with the lowest credit risk and lowest rate of return, to the residual or first loss equity or trash tranche which has no official rating and has the highest risk and the highest return because it absorbs initial losses from arrears or default. The funding of the short position comes from purchasing the equity tranche of a bespoke synthetic CMO. Since even the worst performing CMOs usually pay out for the first few quarters, a long equity tranche position generates the income that finances the short position. Since Magnetar supplied the funds for the equity tranche of each deal they sponsored they were able to select or to advise the managers of the securitisation on their preference for mortgage pools with high risk, high equity payout, and thus a high probability of rapid payment failure.

The second part of the transaction is to short the lower rated mezzanine or investment grade tranches of the same CMO buying CDS protection on them. This is the upfront cost of the position. The overall cost of the speculative short position is the income from the equity tranche less the premia on the CDS on the higher rated tranches.

The third part of the transaction is to try to keep the cost of the short position as low as possible and to provide a sufficient supply of mezzanine assets to short. One of the ways to do this was to set a high hurdle on the expected return for the equity tranche, which would require a more risky overall structure of the CMO. This is where the CDS again provided an important contribution. The purchase of credit protection produces a stream of premia that are equivalent to the interest payments on a mortgage. A synthetic CMO could thus be created by substituting actual RMBS with CDS written on these same RMBS as the reference assets. The sale of the tranches of a synthetic CMO thus produce what is in effect a supply of CDS coverage that just meets the speculative demand, preventing the demand for the short speculative position from driving up the cost of the insurance.

In addition, the impact of the fact that from 2006 the CMOs were largely synthetic “was tantamount to additional supply on the protection seller side. And we had new entrants, all of whom convinced themselves that they were not at risk in acting as guarantors. The correlation traders

who speculated with the lower-rated tranches matched their exposures. The AAA investors, increasingly investment banks and European banks, were either hedging their positions with insurance companies, primarily the so-called monolines, or convincing themselves that the inventory piling up on their balance sheet was just a temporary problem and would soon be sold.” (Smith, 2010, p. 262).

The speculator could thus bet against higher tranches while shorting the CDOs that they had helped design. Magnetar used the income from the equity tranche to finance its much larger speculative short position on BBB rated subprime bond tranches. As in the other strategies discussed above, the position only provides the expected gains if both the equity and the mezzanine or higher tranches all default at around the same time.

The central role played by credit default swaps in facilitating these structures should be clear. It also should be clear that if they had been regulated as insurance contracts, these strategies would have been illegal. With no regulation of CDS, these structures were completely legal.

Recall that these speculators were not simply acting on their beliefs by selling what they thought were overpriced CMO tranches, or buying CDS coverage for overpriced tranches, they were in fact creating CMOs that were designed to fail so that they could profit from their ensured default. This is quite different from the normal justification for allowing short sellers to take naked positions in order to provide equality between long and short positions. It is also quite different from the original intentions of securitization which was to package unsaleable sub prime paper into a structure that could be sold as investment grade paper to institutional investors.

The Wall Street Journal (Mollenkamp and Ng, 2008) reported that Magnetar’s Constellation CMO issuance could have been in the range of \$30 billion. Exact figures are impossible to determine because Magnetar never took a direct role as a manager or underwriter/issuer of a CMO. Smith (2010) cites industry sources as estimating that Magnetar alone was responsible for “at least 35%, perhaps as much as 60%, of the subprime bonds issued in 2006” (p. 260). As noted, the Levin Senate Committee Report makes it clear that Magnetar was not the only actor in this drama; major investment banks were also active participants as they

used such structures as a method to remove doubtful mortgages from warehouse holdings and other unsold pieces of prior transactions.

The short sellers who had correctly gauged the market were proven to be correct, not because of their analytical ability but because of their perfect foresight due to the fact that they had constructed deals that were due to fail. Most of the securitizations that were issued from 2006 onward, and the mortgage backed securities that entered CMOs written from 2006 onward were designed to default.

Smith also notes that the “synthetic component created demand for subprime loans by a less direct mechanism, by compressing credit spreads. That is a fancy way of saying they lowered interest rates. Credit default swap spreads and cash bond spreads are linked via arbitrage. If credit default swap spreads tighten, that is tantamount to having the price of the credit default insurance drop. The protection writers (guarantors) receive less, and the protection buyers pay less. When that happens, spreads on the related bonds drop, which lowers the cost of borrowing.” (ibid., pp. 261-2)

In the aftermath of the crisis it has become common to consider those who recognised and predicted the instability inherent in the sub prime mortgage boom as heroes. Their short positions have been considered as a means of increasing stability by offsetting the excessive optimism that produced the real estate bubble. However, many distorted the market in order to profit from short positions and were in fact one of the major causes of the persistence of the bubble and its spread to financial institutions around the world. The action to increase the production of synthetic CMOs to facilitate their mezzanine short trades acted to reduce credit default swap costs as well as subprime bond spreads, lowering rates for subprime borrowers and prolonging the issue of toxic mortgages. The use of credit default swaps in these speculative structures increased the exposure to subprime ARM mortgages and increased the eventual losses to much higher levels and to many more players than had CDS securitisations been prohibited.

And the parties on the other side of this trade were in large measure the capital markets players, such as investment banks and European banks, who held AAA CDO inventory, and insurers of various sorts.

These institutions were all highly levered and therefore fragile. All suffered or will suffer terminal losses; the survivors owe their existence to massive taxpayer bailouts, central bank subsidies, and regulatory forbearance.

Thus even after most mortgage brokers had stopped originating doubtful, fraudulent sub prime mortgages, investment banks continued to create and market CMOs that were designed by short investors to fail, and these certain to fail investments were sold to European banks, investment funds and even local authorities who believed that they were buying investment grade AAA assets. In this case, short investors were not only expressing a negative opinion on the prospects of mortgage backed instruments, they were increasing the supply of instruments that were guaranteed to fail and prolonged the purchase of these instruments for about two years after there were extreme doubts about the value of existing assets.

It seems clear that the short sellers did little to curtail the irrational exuberance of the market and indeed did much to extend it, even providing for the creation of impaired mortgage assets, even after originators had stopped issuing them to real borrowers, through the use of synthetic securitisations. This raises the question of whether such activity would have been curtailed by the clearing and trading of CDS contracts in organised institutions. It seems clear that it would have made little difference to the strategies that were employed since the opacity occurred due to the influence of the short speculator on the choices of the reference assets made by the manager of the securitisation. Whether or not the CDS that made up the corpus of the structure was traded transparently or not would have made little difference. However, the ability to write naked CDS was crucial to these structures. If naked CDS had been illegal, the synthetic CMOs that caused much of the trouble could not have existed.

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