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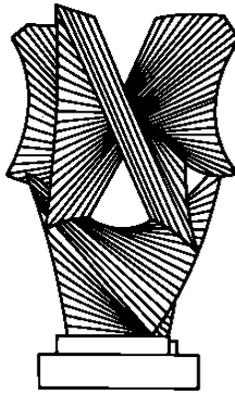
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Credit Derivatives Are Not “Insurance”

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Credit Derivatives Are Not “Insurance”

*M. Todd Henderson**

Introduction

The collapse of the housing bubble and the resulting credit crunch has caused untold harm to the economy and the lives of millions by destroying trillions of dollars in global wealth. The search for causes and remedies has begun in earnest, and chief among these is the largely unregulated credit derivatives market. Regulation of one form or another is the proposed solution in many quarters, and one of the prominent proposals is insurance regulation. At the very least, the analogy between credit derivatives and insurance is often made, and this faulty comparison may lead regulators astray, regardless of the mode of regulation ultimately chosen. This Essay explores the suitability of insurance regulation to the credit derivatives market, concluding that it is a bad fit along many dimensions. Regulation of some sort may indeed be needed to remedy some fairly obvious market failures,¹ but insurance regulation and regulators have little if any role to play in any new regulatory regime.

The most basic form of credit derivative, known as a “credit default swap” (CDS), is simply a contract through which a lender can protect against the risk of default by paying premiums to a third party who agrees to make the lender whole in the event of default by the underlying borrower. The superficial similarity to typical insurance products, like property or life insurance, has caused some politicians and pundits to argue that credit derivatives are a form of insurance and should be regulated as such.² The former director of the Commodities

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¹ One market failure was the lack of a centralized clearinghouse to manage and reduce counterparty risk in credit derivative transactions. The Federal Reserve and Treasury are encouraging exchanges, like the Chicago Mercantile Exchange, to handle these transactions. See “USA Exchanges: Geithner Pushes for Derivatives Shake-Up,” available at <http://www.finreg21.com/news/usa-exchanges-geithner-pushes-derivatives-shake-up>.

² As shown *supra*, numerous politicians and observers have made the linkage. It has also crept casually into numerous media accounts. For example, in an account of the AIG catastrophe in the *New Republic*, the author calls credit derivatives insurance: “Between March, when Greenberg left AIG, and the end of 2005, Cassano’s division issued more than \$40 billion in credit-default swaps (essentially insurance) for portfolios of securities backed by subprime mortgages. This was more than half of all the insurance of this type the company had on its books.” Noam Scheiber, “A new theory of the AIG catastrophe,” *THE NEW REPUBLIC*, Apr. 15, 2009. Legal scholars believe this too. See Robert F. Schwartz, *Risk Distribution in the Capital Markets: Credit Default Swaps, Insurance and a Theory of Demarcation*, 12 *FORDHAM J. CORP. & FIN. L.* 167, 181 (2007) (arguing that certain credit derivative contracts have “general form and function reflect many basic insurance arrangements.”); William K. Sjoström, Jr., “The AIG Bailout,” Working Paper, Mar. 5, 2009 (“A CDS certainly appears to fall within this definition

Futures Trading Commission (CFTC), which regulates most derivative products, declared: “A credit default swap . . . is an insurance contract, but [the industry has] been very careful not to call it that because if it were insurance, it would be regulated.”³ New York State went even further. On September 22, 2008, Governor David Patterson announced plans to regulate credit derivatives as insurance under the auspices of the state’s insurance department.⁴ New York State Insurance Commissioner Eric Dinallo then testified before a House Committee investigating credit derivatives: “the insurance regulator for New York is a relevant authority on credit default swaps,” because “[w]e believe . . . [they are] insurance.”⁵ Although New York has delayed its regulatory plans pending a federal review of credit derivative regulation,⁶ the question of whether credit derivatives are insurance remains an open and much bandied about one that needs to be analyzed.

This Essay argues that it makes little or no sense to regulate credit derivatives as or like “insurance,” regardless of whether they are used as insurance, that is, to reduce risk for one party. The instinct to call credit derivatives “insurance” is sensible enough—the lender buying credit protection looks much like an insured and the party selling credit protection looks much like

given that the protection seller contractually agrees to compensate the protection buyer following the occurrence of a credit event.”), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1346552.

³ Interview of Dr. Michael Greenberger with Steve Kroft on “60 Minutes,” Oct. 5, 2008, Transcript available at http://www.cbsnews.com/stories/2008/10/05/60minutes/main4502454_page1.shtml. Dr. Greenberger argued that the industry was able to avoid regulation by simply using the word “swap” instead of “insurance” to describe the transaction. *See id.* (“So they use a magic substitute word called a ‘swap,’ which by federal law is deregulated.”). Swaps were specifically excluded from regulation by the CFTC by the Commodities Futures Modernization Act of 2000.

It is true that a typical CDS transaction does not involve a “swap” in the same way that an interest rate swap does. In the latter case, two parties agree to swap risks: the holder of a fixed-rate note agrees to swap that income stream with the holder of a variable-rate note. But while the term swap is not technically accurate, it is difficult to imagine that insurance or other regulators would be fooled by the label.

⁴ New York State Press Release: “Governor Patterson Announces Plan to Limit Harm to Markets from Credit Derivatives,” available at www.ins.state.ny.us/press/2008/p0809224.pdf. *See also* Danny Hakim, “New York State to Regulate Credit Default Swaps,” NY TIMES, Sept. 22, 2008, available at <http://www.nytimes.com/2008/09/23/business/23swap.html?ref=business> (“The governor said the state’s insurance department would begin regulating credit-default swaps as insurance products in cases where the buyer of the swap also owns the underlying bond it is meant to back.”).

⁵ Testimony of Eric Dinallo, New York State Insurance Commissioner, before the House Agriculture Committee, Nov. 23, 2008, available at <http://agriculture.house.gov/testimony/110/h91120/Dinallo.pdf>.

⁶ *See id.* (“Based on the developments reported on by the President’s Working Group, it is clear they are committed to comprehensive and effective federal oversight of credit default swaps. . . . Accordingly, New York will delay indefinitely our plan to regulate part of this market.”). It is clear from Dinallo’s testimony that New York is using the threat of insurance regulation as a weapon to encourage more comprehensive federal regulation.

an insurer, at least where the protection seller is in privity with holders of notes of indebtedness.⁷ The analogy is obvious: in a plain-vanilla CDS, the bank making an original loan pays a premium to a third party that in turn agrees to make the bank whole in the event of a future liability, that is, a default on the underlying loan or bond. This transaction resembles a typical insurance contract, where the insured pays a premium to a third party (an insurance company) in return for a promise to make the insured whole in the event of a loss.

But observing that something resembles or provides insurance against loss is not enough to warrant regulating it as “insurance.” Many contracts that are not called insurance or regulated as insurance imbed some component of insurance or risk sharing. For instance, when a farmer enters into a contract that allows the farmer to sell wheat at a fixed price in the future—a forward contract called a put option—the farmer is in effect insuring against a drop in the price of wheat. On the other side of this transaction, there may be a baker who enters into a forward contract that allows the baker to insure against an increase in the price of wheat. Both parties are buying price insurance from each other, likely with a middleman, known as a market maker, standing between and reducing the counterparty risk in the transaction. But these contracts, and all similar hedging contracts entered into by regular consumers and sophisticated financial entities, are not regulated as insurance contracts.⁸ The point can be made more bluntly: it would be fanciful to argue that every contract in which a party could be said to reducing its risk and another party was willing to take on some of that risk is or should be called insurance. If this were the case, state insurance regulators would be involved in regulating hedge funds, commodities, options, swaps, and countless other contracts entered into by consumers and firms. In fact, every contract assigns, shares, and apportions some sort of risk. No one seriously advocates this scope for insurance regulation. Simply providing some risk sharing is not enough to be regulated by state insurance commissioners.

The reason insurance regulation does not extend to every contract that involves some element of insuring risk has to do with the purpose of insurance regulation, as opposed to other types of regulation. There are broadly two justifications for a special law of insurance: first, the peculiar governance problems associated with insurance firms; and second, worries about unsophisticated consumers being duped by complicated and essential products. This Essay will show that neither of these justifications obtains or makes sense for the regulation of credit derivatives.

⁷ New York State has proposed regulating only these credit derivatives – about one-fifth of the total market – because the argument that the parties are engaged in an insurance transaction is more difficult in cases where they are simply wagering on the default without an actual interest in the underlying debt instrument. *See id.*

⁸ Option contracts generally trade on exchanges, like the Chicago Mercantile Exchange, and as such are regulated by the Commodities Futures Trading Commission (CFTC).

Governance problems arise because insurance companies have an inverted production cycle and do not generally have concentrated creditors like non-insurance firms. This means that two crucial constraints on the potential misinvestment of resources are missing: the feedback to the firm provided by product and other markets is missing given the fact that the insurance company produces its product (that is, payment of claims) many years after the consumers pay for it; and when things go badly for the insurance company, there is no concentrated interest to keep the firm from adopting an excessively risky strategy (from the perspective of creditors (that is, policy holders)).

Insurance law is designed to prevent the risk that insurers competing for policyholders, but unconstrained by normal forces, will charge too little for their products. This happens because of the continuous nature of insurance company inflows and outflows, coupled with a delinkage between the time of pricing a risk and the time of paying out the loss from the risk. In other words, insurance can look a bit like a Ponzi scheme, where new creditors of the firm are paying off the liabilities to old creditors. And, just as in a Ponzi scheme, when things go badly for the firm (that is, when actuarial estimates of liability turn out to be wrong), there is a natural tendency to offer new investors an attractive return to increase cash flows to pay for higher-than-estimated outflows.

The second part of the governance problem—the lack of concentrated creditors—exacerbates this problem, since there is no sophisticated entity with bargaining power that can keep the firm from adopting a shareholder-friendly, go-to-Vegas strategy in the event liability estimates were erroneous. Without these governance constraints, initial misestimates and mistakes can fester and lead to large losses. This Essay shows how the counterparties in credit derivative contracts do not have this continuous investment problem or these governance problems, unless, of course, they are insurance companies, and how insurance regulation would be futile in any event.

Consumer problems arise because the consumers of insurance company products (and as such creditors of the insurance company) are average individuals without the expertise or sophisticated judgment to assess what they are buying in insurance products. The consumer-centric element of insurance regulation consists of three commonly recited justifications: to make sure insurers don't charge too much; to regulate the substance and terms of policies; and to regulate service and coverage issues. This basis for regulation is, to be sure, driven by a rather dim view of the philosophy of caveat emptor, the wisdom and skill of the average consumer, and the power of a small number of informed individuals to set market prices for others. This Essay does not take on the soundness of these consumer issues for insurance products, but simply compares their rationale with what is known about the participants in credit derivative contracts. Unlike the average consumer of insurance, the average participant in

credit derivative markets is large, sophisticated, and capable of bearing losses. There is simply no basis for transferring the paternalistic impulses of insurance to this market.

This Essay shows that neither the governance problem nor the consumer abuse problem obtain in significant ways in the context of the credit derivatives market. Section I introduces the basics of credit derivatives. Section II presents the argument for regulating credit derivatives as insurance based on the rough analogy describe above. Section III then shows why the simple fact that credit derivatives sometimes result in risk sharing or transfer does not justify bringing these contracts and the parties to them within the ambit of insurance law. Section IV concludes by briefly sketching out what a sensible regulation of credit derivatives might look like, contrasting this with the approach of insurance regulation.

I. A PRIMER ON CREDIT DERIVATIVES

Credit derivatives exist in many forms and flavors, but the essence is simple: it may be more efficient for different entities to handle the various aspects of lending. A typical loan has many parts, including: origination, servicing, monitoring, and funding or risk bearing. In a world without risk-sharing mechanisms, all of these are contained within one entity, that is, a bank. The bank has the relationships (origination), scale in the back office (servicing), experience (monitoring), and cash from depositors (funding). But the bank might not want to do all these things. It might want to become an arranger rather than a lender. One reason is because federal regulations designed to protect depositors require the bank to hold cash on hand to offset risk in loans.⁹

Another reason is that other potential lenders may be shut out of the corporate lending market, say because they do not have relationships with borrowers, but would provide a cheaper source of funding or be more efficient holders of particular aspects of corporate borrowing risk. Smaller regional banks and insurance companies come to mind here.

A final reason is that the bank may not be the most efficient monitor of firm conduct. The bank has experience with monitoring in general and (likely) with the specific borrower, but these advantages come with costs too. The relationships that led to the loan may corrupt the monitoring function—a sort of monitor capture by the borrower. Fees earned by banks for workouts and new loans may also distort incentives. So too might the fact that the workout group for a loan may be comprised of only a few individuals, who are subject to biases and shortcomings that a larger, market-based monitoring mechanism might be able

⁹ Capital reserves required by the Basel Accords are non-productive, and therefore reduce a bank's return.

to overcome. In short, there are many reasons why banks might prefer to decouple the bundle of loan features, but cannot without financial contracts that allow default risk to be shared. Credit derivatives, although much maligned as result of current events, can help investors of various sorts allocate the lending market to its most efficient participants.

There are many variations of credit derivatives, but to answer the threshold question of whether credit derivatives in general can be considered “insurance” it makes sense to consider the two most generic version: the credit default swap (CDS) and the collateralized debt obligation (CDO).

A. Credit Default Swaps

A CDS is a contract in which credit risk (that is, the expected losses arising from defaults) is transferred from one party to another. A bank makes a loan to a borrower. There is some risk that the borrower will default on the loan, causing losses to the bank.¹⁰ Naturally, the bank wants to minimize these losses. The bank can do this through *ex ante* selection (that is, due diligence during the underwriting process), through ongoing monitoring of the borrower, and through effective *ex post* workout procedures. The bank can also contact with a third party to make the bank whole in the event the borrower defaults.

Consider a simple example: Bank holds on its balance sheet a \$100 note for a loan made to Borrower. Bank may want to shift some of the risk that Borrower will not repay the loan, say because of costly federal capital adequacy requirements that require Bank to hold some percentage of the loan’s outstanding balance in cash reserves.¹¹ For a period of (normally) five years, Investor, who wants to hold risk of Borrower, agrees to make Bank whole in the event of default, thus assuming the risk of *default*,¹² in return for a stream of periodic payments from Bank. Voilà, the risk of the loan to Borrower has been swapped from Bank to Investor. The premium paid by the Bank is expressed as a risk spread in basis points, say 100 basis points or 1 percent. For a \$100 loan, this would mean the bank would make quarterly payments of \$0.25 to buy protection on the note. (The spread, which expresses the risk of default during the five-year term of protection, varies over time, allowing information about the quality of the debtor to be revealed and allowing investors unrelated to the loan contract to

¹⁰ The default risk is only one of many risks embedded in a loan. Lenders (and borrowers) face interest rate risks, volatility risk, currency risks, and so on. The significance of credit derivatives (CDSs) is the ability to unpack and isolate credit risk, and allowed it to be transferred to others who may be more efficient holders of it.

¹¹ In general, US banks are subjected to the capital adequacy requirements of the so-called Basel Accords, implemented by the Bank of International Settlements. See <http://www.bis.org/publ/bcbs04a.htm>.

¹² Default risk is only one of many types of risk. Others include: interest rate risk, counterparty risk, currency risk, and so on.

speculate on changing credit quality for profit.) In the event of “default,”¹³ Bank delivers the underlying credit instrument, in this case the loan, to Investor, and Investor makes a payment to Bank that puts Bank in the position it would have been in if Borrower had not defaulted.

These contracts constitute the primary market for credit derivatives since the parties to the transaction interact with the underlying debt instrument: the lender writes and initially holds the instrument, while the counterparty ends up holding the instrument in the event of default, and, in any event, one of the two parties to the contract will hold the underlying at the termination of the CDS contract. The participants in this market are large commercial banks, as risk sellers, and insurance companies, hedge funds, pension funds, mutual funds, and a mix of investment banks, commercial banks, and smaller regional banks, as risk buyers.¹⁴ In this way, CDS contracts resemble other risk-sharing arrangements, like the syndication of credit or the sale of loans by banks. Most large loans are shared between a lead lender and other banks with which it contracts to share the risk of default, and there is a large and robust market for the sale of all or parts of loans to other banks. (Although risk sharing contracts, these are not considered or regulated as insurance.)

Returning to the example above, Bank will want to reduce the \$100 risk by getting other investors to participate, both to reduce its own risk and also to comply with capital adequacy rules. Bank could sell the loan, but this might mean giving up its relationship with Borrower, something neither party might want.¹⁵ Shifting the risk using a CDS preserves this relationship—in fact, Borrower may not even know the risk has been shifted—while also allowing conservative investors, like insurance companies and pension funds, to participate in the credit market.¹⁶ A small regional bank in Germany, an insurance company in Indonesia, and a pension fund in California are thus able to achieve desired risk-return investments in new ways.

The risk is not just swapped between two parties. In a typical CDS contract, the risk can be swapped many times, so that there are numerous parties in the risk-sharing chain. For instance, A, a manufacturing firm may borrow from

¹³ As described below, *supra* ____, the issue of when a credit derivative contract triggers payment is a complicated and tricky issue.

¹⁴ See United States General Accounting Office, Report to Congressional Requestors, Credit Derivatives: Confirmation Backlogs Increased Dealers’ Operational Risk, But Were Successfully Addressed After Joint Regulatory Action (2007), 6 n. 8, available at <http://www.gao.gov/new.items/d07716.pdf> (“The top five end-users of credit derivatives are banks and broker-dealers (44 percent), hedge funds (32 percent), insurers (17 percent), pension funds (4 percent), and mutual funds (3 percent).”).

¹⁵ Borrower might not want Bank to sell the loan, since this may signal something bad about Borrower. The positive signal derived from having Bank be a creditor and monitor of Borrower may be quite valuable, and for this reason, loan agreements often include no-sale clauses.

¹⁶ Conservatism here may derive internally, that is, from managers and shareholders, or from regulation.

B, a commercial bank. B, not wanting to hold the risk, may pay a premium to C, a dealer in CDS contracts, in return from a promise to be made whole if A defaults. (C, like all protection sellers, will be required to post some collateral with B to ensure payment on this obligation.) Since C is a dealer, it will look for a buyer willing to provide the ultimate risk-bearing function. D, an insurance company, agrees to make C whole in the event of a default by A in return for premium payments by C. Then E, a different commercial bank, wants exposure to A's credit risk, so it may agree to make D whole in the event of a default by A, in return for the payment of premiums by D. And on and on and on. There is no limit on the number of links in the risk-sharing chain, and, in practice, credit risk is often transferred dozens of times after its original creation. A typical credit derivative contract had hundreds of investors selling protection for hundreds of lenders and even more underlying borrowers. In the mortgage securitization market, for example, one of the problems in collapse of US house prices was figuring out who actually held the risk of mortgage default so that workouts or foreclosures could happen efficiently.¹⁷

As discussed below, although C, D, E, and parties on down the chain could be said to be providing risk-sharing contracts in this example, it would be a dramatic expansion of the concept of insurance regulation to call them insurance companies. These entities might be individuals, banks, hedge funds, university endowments, or any other pool of investment money looking for return. In addition, the kind of insurance they are providing is not dissimilar from the insurance provided by nearly every contract that involves risk sharing (that is, every contract), and therefore raises irresolvable line drawing problems. The closest entity to an insurance company is, C the original CDS dealer. But, as discussed below, these are brokers who are regulated by numerous securities and banking laws, and subject to the oversight of numerous federal regulators.

CDS contracts do have characteristics similar to typical insurance contracts. Specifically, risk sharing and information asymmetries inevitably give rise to problems of moral hazard and adverse selection. Bank knows more about default risk of Borrower than the counterparties, and therefore the latter may be unwilling to sell protection on the notes Bank brings to the market, since the counterparties may believe these are the debtors most likely to default. Another problem is that the existence of credit protection may make Bank less diligent in its monitoring role, thereby increasing the risk of default as a result of the risk-sharing contract. In theory and practice, there are steps that can be taken to mitigate these risks. Bank can hold back a portion of the risk of default, perhaps the first-loss position, thereby giving it incentives to monitor. This is analogous to a deductible in insurance contracts, and it can address both the moral hazard and

¹⁷ See, e.g., Mike McIntire, "Tracking Loans Through a Firm That Holds Millions," NY TIMES, Apr. 23, 2009, available at <http://www.nytimes.com/2009/04/24/business/24mers.html>.

adverse selection problem. (As it turns out, however, the nature of the securitization process made these first-loss tranches more valuable, on a risk-adjusted basis, than their price, while more senior tranches were less valuable.) These problems and the steps taken to mitigate them are discussed below.

There is also a rich secondary market in which the risk of default of a particular borrower (known as a “reference entity”) is traded among parties that have no contact with or affiliation with either the borrower or the lender. For instance, auto parts maker Delphi had \$2 billion in bonds outstanding at the time it declared bankruptcy, but there were over \$25 billion in credit derivative bets outstanding on whether or not Delphi would default on those bonds.¹⁸ The term “bet” is chosen deliberately, since these contracts are nothing more than wagers on whether Delphi would default. (As a side note, we do not regulate these bets as gambling for the same reason that the secondary market in stocks, that is, the New York Stock Exchange, is not regulated as gambling, even though it is. The reason is that the gambling is socially useful.) This large ratio of secondary to primary market is common across companies used as reference entities. After all, there is nothing (other than perhaps gambling law) that prevents two parties from writing a contract that replicates the payoffs from the payment or default of any debt instrument entered into anywhere. These contracts are called “synthetic,” since they do not involve any physical obligations to deliver on the underlying debt instrument.

The proposals to date to regulate credit derivatives have focused entirely on the primary market, specifically disclaiming any authority over the secondary market. As discussed below, this has something to do with what insurance experts call “insurable interest,” which is a requirement that the party allegedly doing the insuring has to pay only when party that is allegedly insured actually suffers a harm unrelated to the insurance contract. But once regulators limit control over one part of the market, the fungibility of financial products will allow investors to move to other unregulated products that give them the same mix of risk and return. This is discussed further below.

B. Collateralized Debt Obligations

The other type of basic credit derivative is a collateralized debt obligation (CDO). A CDO is, at its core, the same as a CDS contract.¹⁹ As in a CDS contract, the parties to a CDO contract are shifting the risk of an underlying debt

¹⁸ The Ballooning Credit Derivatives Market: Easing Risk or Making It Worse?
Published: November 02, 2005 in Knowledge@Wharton, available at
<http://knowledge.wharton.upenn.edu/article.cfm?articleid=1303>.

¹⁹ In the nomenclature, if the underlying is a bond, the instrument is called a CDO, while if it is a loan, it is called a CLO.

instrument from lender to investor, but instead of doing so for a corporate loan or bond issuance from a single borrower they do so for a series of loans or bonds from many borrowers. In this way, some portfolio theory-based diversification is achieved, since the risk for any investor of any one buyer defaulting is absorbed by gains on other debtors that do not default.

Here is a cartoon of how the basic, plain-vanilla CDO is formed. A CDO manager, usually an investor specializing in these products from a large investment house like Goldman Sachs, forms a special purpose vehicle (SPV), basically a stand-alone, bankruptcy-remote firm, and then chooses loans or bonds or mortgages from many borrowers to put into the SPV. The SPV then sells interests in the cash flows it will generate from these debt contracts to numerous investors. The SPV generates cash from the instruments it holds as the borrowers pay back the debts. This cash is then distributed to the investors according to the terms of their investment. So far, the SPV creating the CDO looks like any firm selling a service or product. The SPV raises money from investors, uses this money to invest in assets (in this case, debt instruments), manages the assets, and then distributes the profits it earns to the investors.

SPVs investing in credit derivatives have two somewhat unique features that enable them to be attractive risk-sharing mechanisms: tranching and securitization. The concepts are quite simple.

In a normal debt investment, a group of investors share a vertical slice of the expected payouts from a debtor. Three investors funding a \$100 loan to a firm each bear exactly the same risk if the borrower defaults—as the recovery on the loan falls from \$100 to, say, \$80, each investor suffers a 20 percent loss. In a securitized debt investment, by contrast, the same three investors can slice the risk horizontally, instead of vertically, allowing them to assign different payouts, called “tranches,” based on the amount of recovery. For example, the investments could be structured such that the first investor bears the first \$10 in losses, the second the next \$10, and the third investor the remaining \$70. In that case, if the \$100 loan falls in value to \$80, the first two investors would suffer complete losses, while the third investor would suffer none (although its risk would increase, since any additional diminution in value would impair its position). This approach can dramatically reduce the probability of default for a particular tranche, and thus make even risky debt investment attractive for conservative investors. For example, the third investor reduces the riskiness of its investment by investing in the second type of vehicle. Insurance companies, which traditionally invest in only relatively safe instruments, used this approach to expand the types of investment they made.

The sharing and recategorization of risk can be enhanced by pooling together many risks through a process called securitization. This can be seen through a simple example. Consider two banks loaning to two companies in

different and uncorrelated industries. The loans both pay \$100 in the good state of the world and \$0 in the bad state of the world, with a probability of default of 10 percent. If the banks take vertical positions, the expected value of the loans for each bank is \$90. Each faces the identical risks.

If instead, the cash flows from the two loans are pooled and tranced in a CDO, the 10 percent risk of default can be reduced for one of the investors. If one of the banks bears the first \$100 in losses and the second loses only if both borrowers default (and assuming the defaults are not correlated), the risk of default for the senior bank falls from 10 percent to 1 percent.²⁰ The expected value for the two banks is thus \$90 for the junior bank and \$99 for the senior bank. The process can be extended indefinitely, with each additional risk added to the pool further reducing the risk up the tranching scheme. For instance, adding a third investor and a third uncorrelated loan to the pool reduces the risk for most senior bank, which suffers only if all three firms fail, to 0.1 percent.²¹

Even when considering the role of tranching and securitization, the structure of a CDO is roughly the same as any firm in any business—they are nothing new under the Sun. Tranching is just a fancy way of saying that the SPV replicates the priority of liquidation claims created by bankruptcy law and contract for other firms. When a firm liquidates, equity interests lose first, and because of the absolute priority rule in bankruptcy, more junior interests, like unsecured creditors, lose only after equity interests are wiped out. This is true whether the firm is a donut maker or SPV holding debt instruments in a CDO structure. In addition, as discussed below, the shareholders investing in a traditional firm are selling insurance to the firm’s debt holders, managers, and other stakeholders in the same way that the protection sellers are for the original bank in a credit derivative contract. Equity provides a downside cushion, since no payments are legally due equity holders, and thus provides risk sharing on favorable terms for holders of fixed claims on a firm’s balance sheet.

Unlike regular firms, however, SPVs holding credit derivatives generally have only a single investment period. Whereas an insurance company is constantly adding new policy holders, SPVs are typically formed, buy debt instruments, raise money to fund the risk of these instruments, and then make payouts according to the terms of the credit derivative contracts. As mentioned above and discussed more fully below, this distinction is a crucial factor in the appropriateness of insurance regulation.

²⁰ The loss for the senior bank is the probability of firm one defaulting (10 percent) times the probability of firm two defaulting (10 percent).

²¹ Correlation of risks is obviously the key assumption in the creation of a CDO. If the risks in the three-bond case are perfectly correlated (that is, the failure of one firm means all three firms will fail), then the probability of loss for all three investors is the same 10 percent, and there are thus no credit reduction benefits from securitization.

Before moving to the merits of the arguments for and against regulating credit derivatives as insurance, it is important to point out a few other features of credit derivative markets. First, the CDO market is at least two times larger than the CDS market. At the height of these markets in 2007, the single-name CDS market (that is, an entity selling protection to a bank for a loan to a single company) had a notional value of about \$20 trillion, while the total credit derivatives market was about \$60 trillion in notional value.²² This means that the CDO market, which makes up the rest of the market, was about \$40 trillion, or twice as big as the single-name CDS market.

Second, there are numerous index products and more complicated CDO products (such as the CDO²) that allow individual investors to buy exposure to a portfolio of credit derivative investments. For instance, in the single-name CDS world, there are several indexes, like the Dow Jones “Investment Grade CDX” and the “High Yield CDX,” that consist of over 100 borrowing firms of different credit quality. Investors can buy securities that track these indices in the same way they can invest in the S&P 500 or Wilshire 5000 equity indices. (As discussed below, investments in these indices are no more providing insurance to the underlying participants in the borrowing transaction than a regular firm selling equity, since both provide mechanisms of risk sharing.) Moreover, firms or investors seeking exposure to these credit default risks often hold a portfolio of risks or an index product for a few months or less, rolling the investments on a fairly constant basis to meet the investors’ or firms’ balance sheet needs.²³ As such, the investors in credit derivative indexes are not generally exposed to the possibility of actually having to pay for any losses on the original debt, but rather are susceptible to the change in the price of the indexed securities depending on the changing nature of the credit quality of the underlying borrower.

A CDO² (and more exotic credit derivative products) basically achieves the same result for portfolio products. A CDO² is simply a two-pool portfolio of tranching and securitized loans in which investors face exposure to both pools. If the credit risks are not perfectly correlated, this structure allows investors to lower their overall risk to something less than they would have from investing in both pools separately. These products also allow investors to invest in funds of CDO products, in which the exposure becomes more and more attenuated from any individual underlying borrower and starts to look more like generic risk exposure to the debt markets or even the market in general. As the case of CDS indexes, the investors in these products can now be thought of as merely

²² See <http://zerohedge.blogspot.com/2009/02/some-more-facts-about-how-cds-market.html>.

²³ Interview with executive at insurance company responsible for credit derivative transactions, on March 21, 2009.

identifying a unique risk-return investment as opposed to making bets about the credit quality of individual borrowers or pools of borrowers.

II. THE ARGUMENT FOR REGULATING CREDIT DERIVATIVES AS INSURANCE

At first blush, the similarity between property (or other) insurance and credit derivative contracts makes the call for insurance regulation of the latter seem reasonable. But a better case than that must be made, because deeming something “insurance” brings with it a special set of laws and rules administered by state insurance departments. This would mean significant increases in the cost of using credit derivatives, and, on the margin, less use of them. This might be fine, but we need to believe that insurance regulation brings us something worth the price. The benefits of the regulation, therefore, must be well calibrated to the particular risks involved, lest otherwise socially beneficial transactions be deterred. This Part fleshes out the analogy between insurance and credit derivatives, while the next section shows how this analysis is highly misleading by looking behind the analogy to the purposes and justifications for calling something “insurance.”

The standard definition of “insurance” is an “agreement in which one party (the insurer), in exchange for consideration provide by the other party (the insured), assumes the other party’s risk and distributes it across a group of similarly situated persons, each of whose risk has been assumed in a similar transaction.”²⁴ There are two parts of this definition—(1) risk transfer; and (2) risk pooling. The insurer assumes not only the risk of loss, but distributes the risk across many other similarly situated individuals or entities, so as to reduce unpredictable events into a more predictable cash flow stream. In technical jargon, insurance companies try to pool risk by attracting a sufficiently large number of diverse policyholders such that the law of large numbers will reduce the aggregate variance of claims.

The credit derivative contracts discussed above have many characteristics that seem to fit well within the scope of at least the first part of this definition. As in a typical insurance contract, a CDS contract involves a party with an asset (the loan)²⁵ with a risk of loss (default by the borrower), paying a reoccurring premium to a counterparty, which in turn agrees to make the first party whole the event there is a loss. To analogize, just as a homeowner that pays a monthly premium to an insurance carrier in return for a promise to make the homeowner

²⁴ ROBERT H. JERRY, II & DOUGLAS R. RICHMOND, UNDERSTANDING INSURANCE LAW 14 (___). The New Oxford American Dictionary defines “insurance” is “a practice or arrangement by which a company . . . provides a guarantee of compensation for specified loss . . . in return for payment of a premium.” This definition misses a key component of insurance – the pooling of risk.

²⁵ The underlying credit instrument need not be a loan, but could be any debt instrument, such as a mortgage, bond, note, or any other form of indebtedness.

whole in the event of a loss related to the home, so too does the lender pay a monthly premium to a third party in return for a promise to make the bank whole in the event of a loss related to the loan. If this analogy holds, the lender is the “insured” and the counterparty is the “insurer.” And, the insurance law of the fifty states would then regulate the insurer and the content of contracts it enters into with insureds.

Building on the apparent similarity between typical insurance contracts (regulated by state insurance agencies) and credit derivatives, New York State recently proposed deeming credit derivatives as “insurance.” The chief state regulator, Eric Dinallo, offered the rationale during testimony before a congressional committee: “With [plain-vanilla CDS contracts], if the issuer of a bond defaults, then the owner of the bond has suffered a loss and the [CDS] provides some recovery for that loss.”²⁶ Dinallo limited the reach of the proposed regulations of credit derivatives, however, by asserting the state’s jurisdiction covered only cases where the credit derivative contract is between an original lender and a third-party investor, that is, single-name CDS contracts in which an individual or entity sells protection to an originating bank.²⁷ These are so-called “covered” transactions (as opposed to “naked” ones), since there is privity between the insured and the underlying debt instrument. The reason for this limited scope for insurance regulation is based on a generally accepted argument that the party being insured have an “insurable interest” in the underlying amount at risk under the contract. In other words, a contract is “insurance” only if the insuring party pays when the insured party actually suffers a harm unrelated to the insurance contract.

This concept can be illustrated by comparing the primary and secondary credit derivative markets. Where a bank issues a loan and then buys credit protection on that loan that pays off if the loan defaults, the argument is that the buyer of credit protection has an insurable interest in the loan, and the protection acts as insurance against this loss. In the secondary market, by contrast, two parties unrelated to the issuance of the loan (and without the knowledge of the bank making the loan, the borrower taking out the loan, and any parties contracting with either of them), bet on whether or not the borrower will repay the loan. According to the conventional wisdom of insurance regulation, this bet is not insurance. The reason for this concession is that otherwise “insurance”

²⁶ Testimony of Eric Dinallo, New York State Insurance Commissioner, before the House Agriculture Committee, Nov. 23, 2008, available at <http://agriculture.house.gov/testimony/110/h91120/Dinallo.pdf>.

²⁷ *Id.* (“We believe that the first type of swap, let’s call it the covered swap, is insurance. The essence of an insurance contract is that the buyer has to have a material interest in the asset or obligation that is the subject of the contract. That means the buyer owns property or a security and can suffer a loss from damage to or the loss of value of that property. With insurance, the buyer only has a claim after actually suffering a loss.”).

would include far too much and things far beyond the ken, expertise, or conceivable reach of state insurance regulators.

The concession is manifest in the findings of insurance regulators. For instance, in 2000 after Congress exempted “swaps” and other derivatives from certain regulation,²⁸ the New York Insurance Department was asked whether credit derivatives were in fact insurance, which would be subject to state regulation. The question it was asked by federal regulators was: “Does a credit default swap transaction, wherein the seller will make payment to the buyer upon the happening of a negative credit event and such payment is not dependent upon the buyer having suffered a loss, constitute a contract of insurance under the insurance law?”²⁹ This question is aimed at the secondary market, and was answered in the negative for reasons of a lack of privity with the loss on the part of the entities engaging in the derivative transaction. In his testimony before the House, Commissioner Dinallo distinguished this prior finding of the New York State Insurance Commission that credit derivatives were not insurance, by pointing out that the question asked was focused only on non-privity cases or “naked” credit derivatives.³⁰ From this, Dinallo concluded that a different result could obtain in the privity case (that is, CDS contracts), since the protection seller was insuring a real loss outside of the context of the contract. The analogy described above was thus sufficient for him to conclude that, with privity and a real potential loss, credit derivatives of the plain-vanilla CDS variety are insurance products.

The argument is not preposterous on its face. Insurance is about risk sharing, and in that sense credit derivatives, which are fundamentally risk-sharing contracts, are akin to insurance. But, as shown below, the fact that credit derivative contracts are providing an insuring or risk-hedging function does not mean that it is sensible or efficient to regulate them as insurance. There are lots of contracts in which one party is effectively offering insurance as part of the deal, and yet none of these are regulated by state insurance commissioners. The reason is the underlying policy justifications for having a separate body of insurance law do not reach these contracts, and thus applying that law would raise the costs of the contracts without any likely benefit. Another reason is that the second part of the definition of insurance—risk pooling—is absent in many of these transactions, as it is in most CDS contracts. In fact, if there is any risk pooling by protection

²⁸ See Commodity Futures Modernization Act of 2000 or CFMA (H.R. 5660 and S. 3283; see also Gramm-Leach-Bliley Act (GLBA), also known as the Financial Services Modernization Act of 1999, Pub.L. 106-102, 113 Stat. 1338, enacted November 12, 1999.

²⁹ Testimony of Eric Dinallo, New York State Insurance Commissioner, before the House Agriculture Committee, Nov. 23, 2008, available at <http://agriculture.house.gov/testimony/110/h91120/Dinallo.pdf>.

³⁰ “So at the same time, in 2000, the New York Insurance Department was asked a very carefully crafted question. “See *id.*”

sellers (the alleged insurers), it occurs in CDO contracts or secondary-market CDSs, exactly the place where New York claims its regulatory reach does not extend. These arguments are made in the next Part.

A few other features shared by insurance and credit derivatives provide some support for the analogy to insurance. The first similarity between insurance and credit derivatives is the incomplete nature of the risk transfer. The insured (either the homeowner or the lender) swaps the risk of loss with respect to the underlying asset (either the home or the loan) for the risk that the insurer will not be able to make the insured whole. This latter risk is called “counterparty risk,” and it is a central justification for insurance regulation. An individual who takes out an automobile insurance policy is swapping the risk of loss from an auto accident for the risk of loss that the insurance company will not be around to pay the claim. Capital adequacy rules, investment restrictions, and other aspects of insurance regulation exist to decrease this counterparty risk. Although CDSs and other credit derivatives share this similar feature, as discussed below, this alone does not justify regulating them as insurance as there are many other ways of reducing the counterparty risk problem that do not involve the full panoply of insurance regulations.

The second similarity between insurance and credit derivatives is the presence of moral hazard. Whenever risk is transferred, there is the possibility of misbehavior on the part of the transferor or the transferee. If the transferor (that is, the bank) has an obligation to prevent the loss from occurring, say by monitoring the conduct of the borrower, the transfer of risk reduces the incentive to do this on the margin. In addition to shirking, protection buyers may act deliberately to force the debtor into bankruptcy, say by withholding lending that would otherwise be efficient or by invoking covenants outside the normal usage in the industry. These examples of destroying value to simply collect on a CDS contract can obtain in both the primary and secondary markets—nothing prevents the holder of synthetic protection, say a hedge fund, from taking steps to harm the borrower in order to collect on its bet. Although plausible, this facial similarity does not justify treating credit derivatives as insurance. As discussed below, this argument proves too much. Numerous opportunities exist for similar moral hazard problems outside of the insurance context, there already exist mechanisms (both market and from industry trade groups) to ameliorate any moral hazard, and there is nothing about insurance law that makes it a good fit for further reducing these potential harms, if they are substantial.

An additional argument for regulating credit derivatives as insurance is the absence of any existing regulation by other federal or state agencies, especially of certain players in the market, like hedge funds and other private pools of money. Many experts and pundits blame the lack of regulation of the credit derivatives market as contributing to the credit crisis. The argument goes

like this: credit derivatives are not traded on an exchange, but rather through individualized contracts, known as the over-the-counter market, and the lack of regulation, either directly or indirectly through regulation of the exchanges on which securities trade, allowed private parties to externalize systemic risk costs onto society. The lack of regulation thus generated an inefficient number or type of these transactions from a social welfare standpoint.

There may be something to the premise of this argument, that is, that the lack of regulation exacerbated the risk that private parties would act in ways that would be privately optimal but increase the risk of a global financial meltdown. The premise is debatable, but even if it is true, this Essay shows that insurance regulation is not the only way in which these systemic costs can be internalized by firms. Most obviously, direct regulation of the credit derivatives market by existing federal departments responsible for derivatives and markets, such as requiring derivatives to be traded on an exchange, is possible under current law.

In fact, it seems from the public statements of New York officials that the purpose of the characterization of credit derivatives as insurance is intended to stoke federal regulators to act, more than a firm belief that credit derivatives are insurance. After all, if they are insurance, then there should in fact be no need for or call for federal regulation. In testimony before Congress and other public comments, New York State’s insurance officials “stopped short of endorsing comprehensive state-level regulation of this privately negotiated market” and agreed to delay its plan to regulate credit derivatives based on the indication that federal regulators are “committed to comprehensive and effective federal oversight of credit default swaps.”³¹ The fact that Commissioner Dinallo’s testimony outlined a propose regulatory agenda for federal agencies also supports the threat-of-regulation-as-leverage claim.³²

A final argument for state-based insurance regulation is the fact that numerous insurance companies were involved in the credit derivatives markets as buyers and sellers of protection, as well as acting as brokers and speculators in secondary markets. According to one estimate, insurance companies represented about 20 percent of end users of credit derivatives.³³ For instance, insurance

³¹ Testimony of Eric Dinallo, New York State Insurance Commissioner, before the House Agriculture Committee, Nov. 23, 2008, available at <http://agriculture.house.gov/testimony/110/h91120/Dinallo.pdf>.

³² Dinallo testified that “Effective regulation of credit default swaps should include the following provisions: All sellers must maintain adequate capital and post sufficient trading margins to minimize counterparty risk; A guaranty fund should be created that ensures that a failure of one seller will not create a cascade of failures in the market; There must be clear and inclusive dispute resolution mechanisms; To ensure transparency and permit monitoring, comprehensive market data should be collected and made available to regulatory authorities; The market must have comprehensive regulatory oversight, and regulation cannot be voluntary.”

³³ See United States General Accounting Office, Report to Congressional Requestors, *Credit Derivatives: Confirmation Backlogs Increased Dealers’ Operational Risk, But Were Successfully Addressed After Joint Regulatory Action* (2007), 6 n. 8, available at

giant AIG, invested heavily in credit derivatives of various kinds—its portfolio of CDSs reached \$526 billion at its height.³⁴ And it is widely viewed that the losses on these credit derivatives—over \$30 billion in 2007 and 2008 alone—were the cause of the failure of AIG and the need for the massive government bailout.³⁵ The logic of regulation would thus be that these products were misused by insurance companies, among others, and this justifies regulating them as insurance. President Obama seemed to endorse this view when he described the situation as follows: "You've got a company, AIG, which used to be just a regular old insurance company. Then they decided--some smart person decided--let's put a hedge fund on top of the insurance company and let's sell these derivative products to banks all around the world."³⁶

As discussed below, this argument proves too much, as many other entities, like banks, hedge funds, pension funds, and so on, used credit derivatives too, often disastrously but just as often fantastically, and therefore there is nothing special about the end users that justifies treating them as insurance. If anything, the fact that some insurance companies were harmed by them justifies different regulation on insurance companies.

III. THE ARGUMENT AGAINST REGULATING CREDIT DERIVATIVES AS INSURANCE

This Part presents several conceptual and practical reasons why credit derivatives should not be regulated as insurance products or why sellers of credit protection should not be regulated as insurance companies. Notwithstanding the surficial appeal of the analogy between insurance contracts and credit derivative contracts, the policy justifications for special rules regulating insurance carriers and contracts do not obtain in the credit derivative context. Examining the rationale for insurance law and the important differences with credit derivatives will show this.

The two primary reasons for having a separate body of insurance law are the particular governance problems associated with insurance companies and the fact that insureds are typically unsophisticated individuals for whom insurance is

<http://www.gao.gov/new.items/d07716.pdf> ("The top five end-users of credit derivatives are banks and broker-dealers (44 percent), hedge funds (32 percent), insurers (17 percent), pension funds (4 percent), and mutual funds (3 percent).").

³⁴ William K. Sjostrom, Jr., "The AIG Bailout," Working Paper, Mar. 5, 2009 ("A CDS certainly appears to fall within this definition given that the protection seller contractually agrees to compensate the protection buyer following the occurrence of a credit event."), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1346552.

³⁵ *Id.*

³⁶ See "Transcript: President Barack Obama on 'The Tonight Show with Jay Leno,'" NY TIMES, Mar. 19, 2009, available at <http://www.nytimes.com/2009/03/20/us/politics/20obama.text.html>.

essential and may difficult to obtain in the event of certain individual characteristics. (These two justifications correspond with the two major features of insurance law—the regulation of insurance company investments and the regulation of sales to individuals.) Neither of these reasons justifies applying insurance law to credit derivatives.

Before addressing these reasons for insurance law, this Part addresses the reasons why policy arguments are needed in the first place. The primary reason insurance contracts are treated differently than other contracts (and “insurance law” is a separate body of law) is not because of their nature as “insurance” but rather because they are issued by insurance companies. This conclusion is evident from numerous problems that would arise in extending the reach of insurance regulation to all contracts providing some kind of insurance.

A. Providing Insurance Is Not Enough

1. Line-Drawing Problems

It could not be enough for a contract that insures against risk to be regulated as insurance or to bring the seller of that insurance within the ambit of (state-based) insurance regulation. *Every* contract has a degree of insurance embedded in it, and options and derivatives of all sorts, which are not considered insurance or regulated as such, are mostly about insuring or hedging against risk. If insurance law covered all contracts that are partially or completely about insurance, the line drawing problems about what is insurance would likely broaden the scope of insurance law to cover vastly more than it currently does. The result would be to add regulatory costs and uncertainty to a vast swath of the economy, with little or no expected benefit.

Consider a simple options contract, known as a forward contract: Farmer agrees to sell wheat in six months at a given price (a put option) and Baker agrees to buy wheat in six months at a given price (a call option). Both Farmer and Baker are purchasing price insurance from each other—insurance against a price rise (for Baker) and against a price drop (for Farmer)—by locking in a set price in advance. The contract is not regulated as insurance, and neither Farmer nor Baker are currently regulated as insurance companies, even though each may be providing insurance to the other. There are several reasons for this result. Both parties are presumably somewhat sophisticated, since they went in search of derivative hedging tools, or are intermediated by market professionals. These gatekeepers compete in competitive markets and are regulated by other laws and exchange-based rules to ensure fidelity to their clients’ interests and a suitability between client needs and products sold to them. In addition, the derivative contracts are likely made either on a competitive derivatives exchange or as the

result of arms'-length negotiation.³⁷

There are innumerable contracts that provide the same type of insurance as a forward contract does and that are not regulated as insurance. Any hedging contract has an element of insurance. For instance, an investor who is long a particular security, commodity, or investment might want to reduce the risk of the position by entering into another investment or contract with a third party that moves the other way. The third party might be thought of as providing some insurance for the investor, but this is not how the contract is thought of or regulated. As discussed below, contracts like these have many purposes, and trying to sort contracts along this dimension is likely to be costly and highly imperfect, especially if done in ex post litigation, where litigant opportunism and hindsight bias will be problematic, or by regulators, who will face inevitable public choice problems in their definitional exercises.

One can imagine trying to sort between these two categories of contracts by inquiring into the minds of the contracting parties to see whether the contract was about insurance or something else. As noted above, this would require the mind of the parties to every contract to be examined to determine whether they are providing or seeking "insurance." Regulators would need to know whether the investor was entering into the contract for insurance or hedging purposes. This is not generally the inquiry regulators make, perhaps because the question of knowledge is malleable and costly to enforce, especially given imperfect courts and a costly litigation system. Another dividing line could be the intent of the investor, but this too is an unhelpful and costly line to draw. It may be significantly overinclusive, and it is susceptible to similar proof problems as knowledge. There may be mixed motives for all investments—return, hedging, speculation, and so on—that will be difficult to unpack accurately and without being subject to ex post bias, power grabs by regulators, and rent seeking by stakeholders of the firms in question.

Rather, some contracts tend to be primarily about insurance, while others have multiple functions, some of which might be about risk sharing. The former might fall within the ambit of insurance regulation, while the latter never do. But where is this line? Consider, for instance, equity investments in run-of-the-mill firms. As discussed above, any equity investment in any firm could be thought of as insurance in the same way that credit derivatives are. After all, when a firm issues equity interests to investors, it is entering into a risk-sharing contract (on

³⁷ Nor is the result different if a third party sells the insurance to Farmer or Baker. For instance, a individual unconnected with the farming or baking business may believe that wheat prices will rise/fall in six months based on predictions about weather, changes in supply or demand, or other factors. This individual can enter into a forward contract with Farmer or Baker either directly or through an options exchange, such as the Chicago Mercantile Exchange. These exchanges are populated with relatively sophisticated parties and are covered by alternative regulatory regimes, including licensing requirements for brokers and dealers.

behalf of managers, creditors, and other stakeholders) with these investors. Equity holders, unlike debt holders, have no fixed claim on a firm’s assets, and therefore provide a source of funding that is less sensitive to downturns in performance than debt. A firm that has more equity on its balance sheet is, all else being equal, less risky than a firm that has less. So we could recharacterize a firm’s decision to issue equity (to lower its debt to equity ratio) as buying insurance (against a downturn in the firm’s affairs) and the investors buying the equity as selling insurance to the firm. Of course, no one thinks of equity in this way. But equity is as much about insurance as credit derivatives are.

One reason securities are not regulated as insurance is the fact that equity investments are regulated by a separate body of law—securities law—specifically designed to address the policy challenges of issuing and investing in securities. When Congress passed the securities laws in the 1930s, it could have simply called equity investments insurance and delegated regulation to state insurance law under the same theories as those calling for this treatment of credit derivatives. But this would have been a reach—although arguably insurance, equity securities are sufficiently different along numerous dimensions to justify a separate body of regulatory law.

Another reason equity might not be regulated as insurance is because of the particular characteristics of the contracts in question. As noted above, typical credit derivative contracts look like typical insurance contracts: one party makes periodic payments to another in return for a make-whole promise in the event of a future occurrence. This similarity is only a superficial one, however, since there are many other aspects of credit derivative contracts that are quite different. For instance, payments may not turn on actual losses, there may be no pooling of risk, the make-whole promise may be purely synthetic, and so on. In addition, it is hard to imagine regulatory treatment turning solely on the question of whether risk-sharing payments are made on a periodic basis (as in insurance contracts) or a lump sum basis (as in equity investments, forward contracts, and so on). This would elevate form over substance in an arbitrary way not anticipated by the parties, and would provide an easy roadmap to avoiding any regulation.

Finally, few if any investor making an equity investment think they are providing insurance. Rather, the investment is made for a whole host of reasons, including pure investment, speculation, hedging, and so forth. Credit derivatives are used for these multiple reasons too, and this cuts strongly against trying to narrowly pigeonhole them as insurance.

2. Credit Derivatives Are Not Just about Reducing Risk

Another problem with regulating credit derivatives as insurance is that they are not just (or, even, primarily) used for “insurance” purposes. As noted

above, a common use, but only about one-fifth of the current market, is the buying and selling of credit protection on loans, bonds, and other sources of indebtedness. It is doubtful that this use fits squarely within the regulatory definition of insurance or that insurance regulation would be beneficial to these markets, but importantly for definitional purposes swapping credit risk is only one of the many uses of these financial products.

Credit derivatives can be used to hedge risks independent of and unrelated to the original loan or bond being used as a reference entity. For example, a hedge fund that wants to reduce its exposure on, say, Russian wheat futures, may find a corporate bond risk whose risk offsets its commodity position favorably, and thus enter into a contract with a third party, who might be hedging Texas oil prices, who is willing to pay in the event the bond defaults. This transaction has nothing to do with the underlying bonds, since it only uses them as a reference for calculating a stream of payments. The transaction is akin to two individuals in China betting on whether I will crash my car. Neither of them is insuring me, but rather they are simply using the probability of me crashing my car (and the amount of damage that will result) as a reference for assigning risk among them. (The original debtor in credit derivative contracts is called a “reference entity,” a description that well captures this concept.) These bets are not considered insurance, because there is no privity with party suffering a loss (that is, the lenders in the case of a default by the borrower on the bond or me in the case I crash my car) and furthermore no proof required that an actual loss be suffered. Even if these bets were considered insurance, it would be impossible to regulate all of them in this way. Detecting them would be difficult and costly, and, even if possible, would simply direct the parties into transactions of similar risk-return combinations but other designs. In other words, if regulators deem one class of credit derivatives “insurance,” and thereby impose increased regulatory costs on that class, and deem another class of credit derivative contracts as “not insurance,” parties will naturally structure their transactions as the not-insurance kind. More on this later.

Credit derivatives are also used for speculation about credit risk. Investors can use credit derivative contracts to speculate on the default probability of a particular borrower. In general, there are no insurance contracts like this. Participants in insurance markets do not wager on whether an individual’s probability of dying or crashing a car is rising or falling on a daily basis, as they do with firm risk in credit derivative markets. Insurance is based on probabilities at the macro level and across large numbers based on actuarial science, and, when it is based on individuals characteristics, it is done only at the point of origination and not for speculation purposes. But this is exactly what is done with credit derivative contracts. For example, an investor who believes that General Electric’s credit quality is likely to worsen over the next few years can buy

protection against default by GE on its debt. If the credit quality does deteriorate, the cost of protection will rise, and the investor will earn a profit. Similarly, if an investor believes that GE’s credit quality is likely to improve, it can sell protection against default by GE. If the credit quality does improve, the cost of protection will fall, and the investor will earn a profit. Before credit derivatives this kind of speculation was extremely difficult, as it is practically impossible to short bonds or loans. The credit derivative market thus allows for information about debt quality to be processed in a market, perhaps with large gains to capital allocation efficiency. Like the hedging examples above, these transactions are not insurance in any meaningful sense. Nothing about the speculation contract requires that it be held for any period of time. An investor can buy or sell protection and hold it for an hour, a day, a year, or five years (the typical maximum length), depending on the profit that can be made from buying or selling at a particular time. The contract does nothing more than offer an opportunity to buy or sell later at a higher or lower price. In this way, credit derivatives can be, and are largely, about investment, not insurance.³⁸ In fact, they resemble secondary market transactions in equities, since they involve market-based trades about the fundamental value of a third party unrelated to the transaction in question.

A final (non-insurance) use of credit derivatives is arbitrage, of either the pure or regulatory variety. Pure arbitrage possibilities arise when there is temporary mispricing in markets that allows investors to engage in paired transactions that earn sure profits, and thus eliminate the mispricing. Mispricing in debt securities might arise because the primary and secondary markets are traded on different markets: a firm’s bonds might be trading on a bond market, while protection on those bonds might be trading on over-the-counter markets that are not perfectly correlated with the public bond markets. This difference might generate opportunities for an investor to buy/sell the underlying security in one market, while simultaneously buying/selling protection on it in the over-the-counter market using a credit derivative in a way that allows it to earn a return that is independent of the credit risk of the borrower. This kind of arbitrage opportunity has no insurance-like characteristics, and it is potentially quite useful in accurately pricing credit risk by removing temporary market inefficiencies. Participants in credit derivative markets, at hedge funds, insurance companies, and other large financial entities, describe this as a major driver of their transactions in credit derivative markets.³⁹

The other type of arbitrage—regulatory arbitrage—is related to insurance,

³⁸ Life insurance could be used for investment in a way, but this is not its primary purpose or the way it is typically used. Moreover, state insurance regulators are not really concerned about regulating investment decisions by sophisticated parties.

³⁹ Interview with executive at insurance company responsible for credit derivative transactions, on March 21, 2009.

since it is one of the main reasons insurance companies are involved in the credit derivatives markets. But the lesson here runs counter to any regulatory story—in fact, it is a product of regulation itself.

Regulatory arbitrage works like this. Banks are often the most efficient originators of loans, since they have relationships with lenders and the back office to underwrite and process loans, but they are not always the most efficient holders of the loans because of regulations that make holding risk more costly for them and regulations that make investing in credit risk difficult for insurance companies and other risk-sensitive investors. In other words, smaller banks, individual investors, insurance companies, pension funds, university endowments, foreign governments, and a whole host of other investors would like to participate in corporate debt markets, but cannot do so in the absence of financial instruments that allow large commercial banks to sell the risk, especially in ways, like securitization discussed above, that recharacterize the risk in ways that make individual investments in it appear less risky. If insurance companies, pension funds, or endowments can only invest in corporate debt rated AAA, banks, who are required to hold cash reserves on corporate debt rated below AAA will find a way of repackaging the debt so that some of the sub-AAA debt can become AAA debt—this is the securitization and tranching process described above.

The first set of regulations—capital adequacy rules in the Basel banking accords—require banks to hold a certain amount of cash in reserve for each dollar lent out. In short, banks have to hold cash other investors do not, which makes them inefficient holders of risk. The reason for this rule is because banks have average individuals as creditors through deposit taking, and given the moral hazard problems created by federal deposit insurance, banks would otherwise engage in socially inefficient risk taking. This cash, historically about 8 percent of the total value at risk, is not productive from the standpoint of the bank's investors, so it would be more efficient for them to loan out the money, earn the fees on the origination, and then offload the risk, in whole or part, to other investors so that more of the bank's cash can be put to use for its shareholders.

The reason insurance companies were involved heavily in these markets, primarily as protection sellers to banks that had originated loans, is because state law insurance regulations limiting the kinds of investments that insurance companies can make. For instance, insurance companies are often restricted to investing in credits rated AAA by credit rating agencies. These credit rating agencies were in turn paid by the managers of credit derivative SPVs to rate the risks of investments in those SPVs, often to get a slice of them to be rated AAA to attract the monies held by insurance companies. As such, insurance companies became one of the largest investors in credit derivatives. For example, AIG (through its financial products business) invested nearly \$400 billion in

providing various European financial institutions with “regulatory capital relief” through credit derivatives.

Credit derivatives help complete these markets by allowing the bank to offload the risk to investors who can more efficiently bear it, while still having the ability to earn fees from origination. A bank that makes a loan with a customer can now package the credit risk of that loan in a new entity, which then uses securitization to create risk slices that will be attractive to new classes of investors, and then sells off interests in the new entity. To be sure, the original bank could be thought of as buying insurance, since it is offloading to or sharing risk with others. But that description of the activity is a cartoon representation of the transaction. The bank is really engaging in regulatory arbitrage, but this redefinition is only superficial. The important point is that looking at what the bank is doing is only part of the story about whether regulation makes sense.

In addition, as discussed above, those buying interests in the bank’s credit risk are no different than investors in any firm. A CDO is just a business plan in which the proceeds from hundreds of credit risks from various lenders are pooled together to generate a series of cash flows. The firm (or SPV) holding the interests in these future cash flows is not conceptually different from a firm that sells anything else, be it iPods, consulting services, or what have you, and then sells interests in the cash flows these sales generate. When a firm raises money from shareholders, it is buying insurance in the same way the bank that offloads some risk through a credit derivative contract. Although equity holders are not liable to make the seller of the risk whole in the event of some specific default, the equity investors are providing the firm with an opportunity to reduce its risk. Equity, like insurance, provides a cushion against a downturn. Of course, no one thinks of regulating securities as insurance despite the similarity along this dimension.

There are at least two important differences between these two types of risk-sharing mechanisms. First, on average the sellers of equity to regular firms are much less sophisticated than the sellers of risk protection to lenders. This, of course, cuts the other way from regulating credit derivatives as insurance. Second, the structure of the standard insurance contract (and the typical credit derivative contract) is different than the shareholder contract. Whereas in a credit derivative or insurance contract the party assuming the risk receives periodic payments in return for a promise to make the party selling the risk whole, in the shareholder contract, the sequence of payments is reversed: the party assuming the risk of default pays the money up front, while agreeing to receive future cash flows in the form of dividends, capital appreciation, or liquidation value in some time in the future. This alternative structure has important implications, which are discussed below, but it does not necessarily undermine the attempted analogy to insurance. After all, if insurance is defined as a contract in which risk is moved from one party to the other, the structure and

terms of the contract are, all else being equal, irrelevant to whether risk is in fact being swapped.

The lesson to be learned from this use, which is also only superficially similar to classic insurance, is that any regulation of insurance company participation in credit derivative markets should focus on how insurance companies invest in credit derivatives. This is especially true since insurance companies are only a small fraction of the entire market in credit derivatives.

3. The Pooling Mismatch

Another reason insurance regulation is a bad fit for credit derivatives is that there is a conceptual difference in the function of insurance and that of credit derivatives. The premise of insurance is risk pooling. Insurance companies try to spread or pool risk by attracting a sufficiently large number of diverse policyholders such that the law of large numbers will reduce the aggregate variance of claims. In this way, the total amount of risk can be shared by many and thus reducing its impact on any individual in the pool. Counterparties to derivative contracts do not usually do this.

In a single-name CDS contract, there are only two parties, so there is no pooling of risk. When a hedge fund sells protection to bank, it does not act like an insurance company that sells protection to an individual property owner. While the insurance company puts together a diversified portfolio of property owners to generate an actuarially predictable stream of liabilities, the hedge fund does not do this. Hedge funds may try to offset the risk of a particular CDS with other assets and liabilities in their portfolio, but they do not pool risk by writing protection on hundreds or thousands of firms based on predictions about default risk and correlation of risks. Or, to be more precise, they do not always and necessarily do this. These counterparties may be hedging risks and trying to reduce their overall risk exposure, but they are not doing so by pooling a lot of independent risks. Accordingly the insurance component of the transaction looks more like simple hedging, which is not regulated as insurance.

The lack of pooling is conceptual difference, but it may have a practical consequence. Insurance regulation requires insurance companies to hold significant capital reserves in part because if one insurance company fails, a lot of beneficiaries will lose. (Importantly, many of these beneficiaries will be average and unsophisticated citizens who are unable to bear the losses. This is the consumer protection angle of insurance regulation discussed below.) The same problem does not exist for credit derivatives generally, unless a single entity, like AIG or Countrywide, made a lot of credit derivative bets (that do not cancel or net out the risk of the sum) and the bets made are so large that it threatens the entity and its policy holders or depositors. Note, however, that in the rare cases in

which this did or is likely to happen, the independent regulation of the insurance company or bank making the bets exists to ensure that the risks taken by the entity are not excessive. In other words, if the problem is that an insurance company, like AIG, took on excessive risks in credit derivative contracts, then the rules about what investments insurance companies can make should be reformed.

In more complicated credit derivative transactions, such as CDOs, there are multiple parties, and arguably more risk pooling. As discussed above, in a CDO, a new firm, an SPV, is created to sell protection to multiple lending banks, and numerous investors own shares in the SPV. In this case, the analogy to insurance pooling is more apt. One could view the multiple lending banks whose notes are pooled together in the SPV as the policyholders, while the SPV and its investors are the “insurance company.” While this analogy has more superficial appeal than the case of plain-vanilla CDSs, as discussed below, the policy arguments for insurance-like regulation do not obtain. So even in the case where there is risk pooling—a necessary conceptual component of insurance—there is no policy justification for insurance regulation. This is discussed below.

Even insurance commissioners admit that CDOs are not insurance for this reason.⁴⁰ There is a deep irony here. There is generally no risk pooling—an essential component of “insurance”—in CDS contracts, but these are the contracts that state insurance regulators and pundits consider insurance. In contrast, there is at least some risk pooling in more complex CDO contracts, but there is often no insurable interest in these transactions, so insurance regulators disavow any regulatory oversight of them. The reason for the line drawn by insurance regulators has to do with experience and thus expertise. Insurance regulators are used to dealing with entities that pool risk, are responsible for ensuring an adequate income stream to pay for future liabilities, and are contracting with every-day consumers who rely on the insurance company to make them whole in the event of large personal losses. This experience is not obviously transferable to a market in which none of these things exist or are the key regulatory questions. This is explored in greater detail below.

4. Limits on the Reach of Regulation

The artificial distinction drawn by regulators between plain-vanilla CDS and more complicated credit derivative contracts points out a bigger problem with any attempt to regulate credit derivatives using an insurance framework. If (insurance) regulation is limited to cases where there is an insurable interest, the contract is not one of simple hedging, arbitrage, or speculation, and there is risk

⁴⁰ See *infra* note ___ and surrounding text.

pooling, then this class of cases is like an empty set. If the set of regulated cases is limited, as regulators assert, to cases in which there is privity, there is no risk pooling. And, if the set of cases is limited to where there is risk pooling, there is no privity, and thus the significant line-drawing problems discussed above arise.

More importantly from a welfare and efficiency perspective, however, is that any regulation of one part of the market that does not cover the entire market will simply redirect market activity to the unregulated market. Regulation means additional costs, and investors will try to avoid these costs if they can do so while achieving the same returns. The fact that credit derivative contracts are simply ways of creating a specific risk-return profile means that the same risk-return profile can be achieved in numerous ways that fall outside of any product (as opposed to institution-based) regulation. For example, if new insurance regulations cover only plain-vanilla CDS contracts, as proposed, investors can replicate the returns they would have achieved with a single-name, real-interest CDS by using a synthetic credit derivative contract that is, by the regulators admission, unregulated. In a synthetic CDS contract, the parties do not actually interact with the borrower or lender and do not use the underlying debt instrument as anything more than a probability machine that determines future payoffs between the parties. There is simply no difference between a real and a synthetic CDS contract from the standpoint of these investors, and increased cost on the former will simply mean more of the latter. This fact poses a significant problem for regulators, since there are literally an infinite number of potential contracts and contract forms that can be used by investors to share and transfer credit risk.

Once one form of credit derivative is regulated, other forms will sprout up that will match exactly the same risk-return profile but that will be unregulated for one reason or another. As discussed below, a more sensible regulatory approach is to identify investors who are likely to make bad investment decisions on average for one reason or another, and ban them from particular forms of investment, require them to receive special disclosures or protections, or other paternalistic regulation. Lack of sophistication, for instance, provides a central justification for securities regulation, while market failures that may arise out of governance concerns provides the justification for insurance regulation. Both of these, however, are focused largely on the impact on particular investors, as opposed to the nature of the products being sold.

There is a case where synthetic derivative contracts may be used to reduce real risk, and therefore more insurance like. If the original lending bank enters into a synthetic contract to hedge its risk, it is the same as if the bank enters into a standard credit derivative contract with a protection seller, since the bank is reducing its risk of loss on the default of the original debt. The bank in both cases is seeking regulatory relief from its capital adequacy requirements. But although

this type of contract resembles a case where there is an insurable interest more closely, the party on the other side, that is the one betting that the borrower will repay the loan, may not know that it is providing insurance of a sort, and even if it did, it would still make more sense to regulate this contract as a matter of banking law. After all, the bank is engaging in regulatory arbitrage, which may be normatively good or bad from the perspective of banking policy. Banks hedging risk reduces the probability that they will default, and thus jeopardize the claims of depositors. On the other hand, it is possible that some banks used credit derivative contracts not to hedge risks but to increase profits by repackaging loans, moving them off of the bank’s balance sheet, receiving regulatory relief, and then bringing the risk back onto the bank’s balance sheet through mechanisms that were not transparent to regulators. Again, these issues are largely about banking law—that is, capital adequacy requirements, rules about relief from these requirements, banking oversight, compensation of bank executives, and so on.

5. Moral Hazard Problems and Solutions

One argument in favor of insurance regulation for credit derivatives is based on the fact that both insurance and credit derivative contracts are subject to moral hazard concerns. But the mere existence of moral hazard problems does not justify insurance regulation per se. Moral hazard arises in many contracts and situations that are not deemed insurance. In addition, there are alternative ways of reducing moral hazard short of full insurance regulation. For instance, regulation by other agencies or leaving the problems to be worked out by the parties acting collectively through trade associations. As it turns out, contractual innovation and self-regulatory norms are already being deployed by the International Swap Dealers Association (ISDA) to remedy some of the moral hazard problems inherent in credit derivative markets. As discussed below, there remain some market failures, but none of them are especially redressable by insurance regulation alone.

Moral hazard problems arise whenever any risk is intermediated. Just as one is less likely to take care while driving if one has good insurance (especially with a low deductible), so too is a bank less likely to do the efficient level of due diligence or otherwise monitor a borrower if it is going to sell the risk to someone else (and not retain a first-loss position). In equilibrium, investors in the borrowers’ credit risk have an incentive to price this potential shirking, and therefore the arrangers of the SPV would have an incentive to choose the credit risks to put in it wisely, lest they be required to offer greater returns to investors. In a frictionless world, in other words, the amount of due diligence would be priced by the market. The credit crunch revealed significant mispricing in credit

markets, but nothing that calls this equilibrium solution into doubt. With learning from the recent collapse, it is likely that this discipline will return to the market.

Even if it does not, there is not much that insurance regulation is likely to add to solve the problem. No regulators or private actors were aware of the mispricing problem, despite the fact that there were numerous regulators, including insurance regulators (AIG is an insurance company after all!), monitoring these markets closely, and despite the fact that investors were betting billions of dollars of their own money on these instruments. To simply declare that more regulation, and in particular more insurance regulation, is needed, is to simply declare the debate over.

Another type of moral hazard is the potential that the parties to credit derivative contracts might act in ways that destroy social value but increase the private value to the party. For instance, a buyer of protection, like a bank, might have incentives to force a borrower to default on a debt in order to collect on the credit derivative contract, even if it is not otherwise efficient for it to do so. This problem arises only because there may be technical defaults that would otherwise not lead to bankruptcy but that bank could insist upon enforcing covenants against them now that its downside is limited by its purchase of protection. (The analogy to insurance here is that the buyer of insurance might willingly destroy an otherwise valuable asset to collect on an insurance premium in cases in which the asset has value but this value is less than the value of the insurance policy.) While this is possible, there are at least three things that limit its practical effect.

The first of these is the fact that private contracts take this problem into account, without the need for regulatory mandate. This is not to say that there are not market failures, but simply that this particular problem is not unknown or unremedied in credit derivative markets. As in insurance, where the problem exists too, buyers of protection voluntarily reduce the risk they will shirk because of the moral hazard problem by agreeing to bear some of the first losses that may arise from a default by the original borrower. In insurance, this is called a deductible, and the theory is that it reduces on the margin the incentive of the insured to engage in socially destructive behavior. Credit derivative contracts try to reduce this conduct too—the buyers of credit derivative protection routinely hold the first-loss position so as to signal to sellers of protection that the bank buying protection has some skin in the game and will not engage in this kind of destructive behavior. A deductible, being less than 100 percent of the risk, however, can never fully offset this risk, so there remains some moral hazard problem. Part of this can be priced by the market, but industry norms can try to reduce it too. This is the next solution.

The second way moral hazard is reduced is through the fact that self-regulatory bodies, like the ISDA, are already aware of this possibility and are

structuring industry norms and boilerplate contracts to mitigate these potential problems. The moral hazard issue arose for the first time in the case of credit derivative contracts written on the financial services and insurance firm Conseco. Credit derivative contracts at that time required a payment from the seller to the buyer of protection in the event that the underlying reference entity—in this case, Conseco—suffered a “credit event,” which included a restructuring of the reference entity’s bank loans. In 2000, Conseco’s credit quality deteriorated and began to suffer liquidity problems, so it went to its borrowers in search of a restructuring agreement. The lenders agreed, including an extension of maturity, increased interest rates, and new covenants. The restructuring triggered payment under the existing credit derivative contracts.

This fact created a serious moral hazard problem. The original lenders to Conseco, who had purchased protection against a credit event, were the ones who got to decide whether to restructure Conseco’s debt, and thus whether a restructuring event transpired.⁴¹ The lenders could trigger payment simply by agreeing to extend the maturity of the loan or make other trivial changes to the loan that would cost them little (and would be readily agreed to by the borrower) and yet trigger potentially large payments from the sellers of protection. In fact, the situation under the then-prevailing boilerplate terms was much worse than that. Under the ISDA’s 1999 version of the boilerplate terms (called the “Definitions”), the buyers of protection could deliver any debt instrument of the same kind as that on which the lender or other party bought protection. Since Conseco had a number of outstanding debt instruments of varying maturity, the bank triggering a restructuring credit event could choose the cheapest of these outstanding debt instruments, thereby making large profits on its self-triggering claim. Specifically, Conseco had short-term bonds that were trading at about 90 percent of face value, while its long-term bonds were trading at about 60 percent of face value. This meant the original lender could declare default, and then buy long-term bonds at 60 cents to settle out its much more expensive short-term bonds. This exposed the sellers of protection to large losses. The same result obtained in the restructuring of Xerox Corporation in 2002.⁴²

There were two reactions to the moral hazard issues raised by the Conseco and Xerox cases, both private. The market price of credit derivative contracts quickly adjusted to account for the increased risk of contracts including restructuring events as credit events. The contracts “including restructuring as a credit event was 10 to 20 [basis points per year] higher than for credit default

⁴¹ SATYAJIT DAS, *CREDIT DERIVATIVES: CDOs AND STRUCTURED CREDIT PRODUCTS* 101-103 (3rd ed. 2005).

⁴² See Viktor Hjort, “The Xerox Debt Restructuring – A Moral Hazard Issue?” Morgan Stanley, Fixed Income Research (July 19, 2002).

swaps without the restructuring credit event.”⁴³

The other reaction was a modification of the boilerplate credit default swap documentation by ISDA. One possibility was that ISDA could simply eliminate restructuring as a credit event, but this was foreclosed by a decision of the Federal Reserve that protection from the risk of restructuring was essential to the transfer of credit risk essential to receiving regulatory relief under the Basel accords.⁴⁴ ISDA therefore issued a “Restructuring Supplement” that provided restructuring would not be a credit event in cases where there were fewer than four holders of the debt in question or where less than a super-majority of unaffiliated holders approved the restructuring.⁴⁵ In addition, the amendments to the boilerplate tried to reduce the potential arbitrage inherent in delivery options for debts with different maturities by requiring any settlement of credit derivative contracts to be made with debt contracts within 30 months of the restructured facility. Further changes to the boilerplate were made in 2003 to address market developments.⁴⁶ The idea with these changes was to reduce the moral hazard problems by contract.

The third non-regulatory way moral hazard is reduced is the presence of countervailing interests on the other side of the transaction that generate behaviors that may cancel out any possibility of abuse. Just as the buyer of protection has incentives to act in a socially inefficient way by destroying value to cash in on a credit-derivative contract, the seller of protection has incentives to act in exactly the opposite way. More specifically, if the original lender that bought protection refuses to make a loan that would increase the value of the debtor in order to cash in on a credit protection contract, the hedge fund that sold protection has the incentive to make the loan so not to have pay on the contract. These offsetting incentives only work under two conditions: both parties have sufficient access to capital to provide the loans necessary, and there is relatively symmetric incentives to act, otherwise there may be a socially inefficient level of lending (either too much or too little). Even if the other party to the transaction does not act to deliberately counteract the action, it will be well positioned to detect it and report any misconduct to the market (to impose reputational penalties) or the government (to impose civil or perhaps criminal penalties). (As a side note, insofar as antitrust-based uncertainties preclude collective action on the part of numerous sellers of protection, these rules should be rethought in this light.)

⁴³ DAS, STRUCTURED CREDIT PRODUCTS, at 103.

⁴⁴ See William Rhode, “Fed Says No To Credit Restructuring,” *Derivatives Strategy* 6 (Dec. 2000).

⁴⁵ See Restructuring Supplement to the 1999 ISDA Credit Derivatives Definitions, ISDA (2001); see also, Donald A. Bendernagel & Oussama Nasr, “Legal Documentation and the Restructuring Debate,” *Credit Derivatives Issues and Opportunities* 21-26 (2001).

⁴⁶ DAS, STRUCTURED CREDIT PRODUCTS, at 105.

The more generic version of this moral hazard concern is the risk of sabotage. Individuals and entities that are not insurance companies (meaning: not regulated by insurance law) are not permitted to write certain insurance contracts, say, on an individual’s life, out of concern that one of the parties will try to sabotage the contract. Or, to look at another way, where there is no symmetry or where the attack and defense would simply result in an arm’s race of dead weight costs, the risk created by insurance contracts outweighs any gains. This is especially true when the value of the asset that is the subject of the contract is particularly valuable or difficult to value.

Although this logic might make sense for individuals and contracts like life insurance, the risk of sabotage is overstated in the world of credit derivatives. First, in this \$60 trillion industry, there has never been a reported case of one party to a contract acted to deliberately sabotage an underlying borrower in order to cash in on a credit derivative contract. Second, the gains from sabotage are as great or greater in equity markets, currency markets, and a whole host of other markets where third parties are able to make large bets on economic outcomes. For instance, a malicious investor could take a large short position in Firm X, and then destroy an asset of Firm X, say by not loaning it money, blowing it up, spreading rumors about it, or any number of activities. This risk is real, but it is uncommon because other laws (for example, criminal law, tort law, and securities laws banning market manipulation) and norms restrain individuals from making socially destructive (but privately beneficial) decisions. Although market participants, observers, and regulators should always keep a look out for the possibility of sabotage, since reporting it to the market and prosecutors is likely to provide sufficient deterrence.

* * *

As this section has showed, regulators are likely to find it very difficult to draw sensible lines or regulate financial products in a coherent and efficient manner under the rubric of insurance regulation. This means that regulation might more sensibly focus on investors instead of investments. Insurance law is based less on regulating insurance than on regulating insurance companies. In other words, we do not regulate insurance companies because they sell insurance, but rather regulate insurance contracts because they are sold by insurance companies. The right question to ask is not whether credit derivatives are “insurance,” but rather if they are sold or issued by “insurance companies.” This, of course, begs the question of what should count as an insurance company.

The next Part tries to answer this question by looking at the policy reasons for having a separate body of insurance law to regulate insurance companies. The policy reasons are uniquely applicable to insurance companies, not all firms that participate in credit derivative markets, and thus there is no good policy reason

for applying insurance regulation.

B. The Policy Reasons for Insurance Law Do Not Obtain

Given the problems of defining what “insurance” is, it must be the case that the scope of insurance law is either quite arbitrary or based on other considerations. In fact, insurance regulation exists not to regulate insurance contracts per se, but rather to regulate contracts issued by insurance companies. For sophisticated or semi-sophisticate parties, the insurance companies are the problem, not the insurance.⁴⁷ Insurance companies are regulated differently than companies producing other products because of the unique governance problems associated with their production cycle and unique governance structure. Let us consider these in turn.

1. Inverted Production Cycle

The first unique feature of insurance companies is the fact that they sell their products long before they are delivered to customers. This means the normal production cycle is inverted. The typical (that is, non-insurance) firm produces products and then sells them in return for cash. Payment and delivery are linked closely in time and there is an immediate feedback from customers. Insurance companies, however, have a much different production cycle that causes unique governance problems. An insurance company’s customers are policyholders, who pay (in the form of premium payments) in advance for products (payments on claims) that come many years later, if at all.⁴⁸ This is important because the discipline on how cash can be spent that comes with having to sell valuable products or services in the market is missing or attenuated. Payments are made based on promises alone, and there is thus the risk that the cash reverses given in advance to the insurance company will be squandered on risky investments, and thus unavailable to pay off claims when they come due. This is the Ponzi-scheme problem discussed above. When there is continuous solicitation of investment by outsiders and a mismatched payment scheme (current investments pay liabilities of previous investors), there is a risk that managers will engage in too much risk when the liabilities that arise are greater than predicted. In these bad states of the world, insurance company managers have incentives to attract more capital on irrational terms to pay current liabilities owed to prior investors.

The inverted production cycle of insurance companies has another

⁴⁷ There is another justification for insurance regulation that has to do with the consumer-facing nature of some insurance contracts. This is discussed below.

⁴⁸ The payout for life insurance policies may obviously be decades away.

problem where there are competitive markets for insurance services. In an unregulated market, insurance companies are bound to compete heavily on price, and this may lead to under reserves such that future liabilities will not be covered by sufficient assets. There are two parts of this claim, so it is worth unpacking it.

First, competition among insurance companies is likely to focus mostly, and perhaps excessively, on price. This is because the quality of the products insurance companies are selling (the other thing on which they compete) is identical or unobservable. The repayment of losses less the deductible is the same regardless of the insurer. There is some risk that the insurer will fail and be unable to repay the liabilities, but this is something that is, by its very nature, unobservable by the insureds. Reputation and longevity may be correlated with this risk, but these factors coupled with the governance problems noted above may simply lead to more risky investment choices by the insurer in the next period. Another unobservable component of potential competition is service quality—that is, the timeliness of payments, the cost of the claims process, the quality of customer service, and so on. Like the risk of default, these will be unobservable by the insureds in the period when they make their investment decision, since they happen only many years later and after premiums have already been collected. For these reasons, price is likely the primary way in which insurance companies would compete in an unregulated market.

Second, price competition for insurance products is different from price competition for non-insurance products, and, if unregulated, may lead to pricing at below marginal cost. Non-insurance firms have no incentive to price below marginal cost, since every sale would then lose the firm money. Insurance companies, however, have inverted production cycles, which means the costs of the product being sold are felt long after the cash is collected by the firm for the sale. This means myopic managers, hubristic managers, over-confident managers, or desperate managers may charge too little for new insurance premiums. Insurance involves lots of long-range forecasting and the potential for costs, which are realized only after sales, to be much higher than expected. Absent the immediate feedback loop of typical production cycles, the possibility of competition leading to destructive price wars is greater than for normal firms.

It is true that credit derivative contracts are somewhat based on future results and forecasting problems may arise. But this is concern is ameliorated by several factors. Credit derivative contracts are generally much shorter term than insurance contracts, lasting a maximum of five years, and very often held for much shorter than that. So although make-whole payments under the contract may occur in the future, the potential for error is reduced by the fact that forecasting need be made over a much shorter period. The risk is also priced much more frequently, since payments made by protection buyers are due quarterly. For most credit derivative contracts, the prices of buying and selling

production are adjusted quarterly depending on the financial condition of the underlying borrower, and this generates the kind of frequent pricing data that is common in regular product markets. Even where it is not, the continuous pricing of the same debt in the market allows holders of risk to engage in pairwise transactions that allow them to rebalance their portfolio on short time horizons. In addition, the parties on both sides are highly sophisticated financial institutions (and their investors), and it is unlikely that any outsider, like a regulator, could do a better job at estimating the future cash flows from particular debt instruments so as to improve pricing.

The pricing problem for insurance companies is exacerbated by the weak governance structure described below, which may encourage overly risky actions when policy payouts exceed expectations. In short, the managers of an insurance firm that charges too little, for whatever reason, and finds itself unable to meet claims as they come due, may be less constrained by creditors in the kind of response it will take. The managers may simply try to sell more policies to pay off existing claims from other policyholders with the hope of someday righting the ship. This potential that arises from price competition may turn an insurance company into a sort of Ponzi scheme.

This super risk preference situation is unlikely to arise in the case of non-insurance firms because of the discipline of product markets and because of the discipline of creditors when times are bad. For credit derivative firms (that is, SPVs holding the rights to the cash flows from various debt instruments), the probability of this arising is even lower. This is because investment by the SPV managers happens before any investment is made by shareholders in the SPV. A pot of cash is created and then sold, with an implicit promise that no more assets will be added that that particular pot. The possibility of super risk preferring managers is thus extremely unlikely.

2. Weak Governance Structure

The second unique feature of insurance companies is the weak corporate governance structure that is inherent in the insurance company model. Non-insurance firms are generally funded by a large number of diffuse shareholders and a small number of concentrated creditors, typically banks or other lenders. In this governance model, the shareholders are the residual claimants of firm value, and in good times it is in their interest that the managers operate the firm.⁴⁹ The diffuse nature of the holdings of equity, coupled with the business judgment rule, mean firms have a lot of slack in the risk they take during good times. When things turn for the worse, however, the interests of the shareholders are set aside

⁴⁹ Assuming, of course, the managers aren't acting in their own interest.

and the concentrated interests of banks and other lenders take over the decision-making process.⁵⁰ Loan covenants are enforced, contracts are rewritten by the lenders, managers are replaced, and a restructuring of the firm is undertaken. The reason creditors take effective control long before bankruptcy is because in the absence of these control rights, shareholders (and their agents, the managers) would have incentives to act ever more risky as the value of shares drops. Consolidated creditors can help preserve going concern value and reduce dangerous risk taking in near final periods. (It is, of course, irrelevant whether this concentration of creditors takes place when debt is issued (when times are good) or when it is consolidated (when times are bad), since concentration is less likely in insurance companies in either case because the creditors of the firm are its policy holders.)

Unlike non-insurance firms (but like banks), insurance firms are structured with both weak equity holders and weak creditors. Insurance firms (and banks) have shareholders that are indistinguishable from other firms, but their creditors are as diffuse and disinterested as their shareholders. An insurance company’s creditors are its policyholders. Their large number makes coordination difficult, either for monitoring or action, and information costly and very unlikely to be obtained. In addition, policy holders are not investors (like many shareholders are), and therefore likely to be unaware of and unsophisticated about matters of corporate governance and finance. And unlike diffuse creditors of non-insurance firms (e.g., bondholders), the claims of policyholders cannot be and are not consolidated or concentrated in periods of distress. This means an increased threat of excessively risky decision making in bad times because the insurance company’s creditors are diffuse instead of concentrated. Both in insurance and banking, where depositors are substituted for policy holders, this suggests the need for a prudential regulator to effectively consolidate the diffuse policyholders into a bank-like consolidated creditor to deal with the insurance company in bad times.

This governance problem is not present consistently, if ever, in credit derivative transactions. To see this, consider the simplest case of a plain-vanilla CDS. Remembering the analogy with insurance set forth above, the bank that lent the money to the borrower is the insured, and thus analogous to the policyholder in an insurance contract. In a single-name CDS contract, there is no pooling and therefore no diffusion of interest among the alleged insurer’s “policy holders.” In addition, banks that buy credit protection are nothing like individuals that buy auto or life insurance policies. Banks are sophisticated, repeat players, represented by counsel, capable of processing information about the riskiness of their counterparty, and have tremendous bargaining power.

⁵⁰ See, e.g., Douglas G. Baird and Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 UNIV. PENN. L. REV. 1209 (2006).

It is possible for a protection seller to write many CDS contracts, and thus put any individual buyer of credit protection into the position of holding a small claim against the firm, say insurance company or hedge fund. Although this would not change the nature of the protection buyer and the ability of it to fend for itself, it does raise potential concerns about the management of the protection seller. But this just then puts the inquiry about governance back at that level, and tied to the nature of the seller of protection. If the protection seller has a weak governance model, like that of a bank or an insurance company, then it may be susceptible to this problem, but if it is an entity with strong governance in bad times, then the concern about too much risk on the part of managers (on behalf of shareholders) is much lower. Hedge funds, for instance, must return to the market frequently for capital (that is, they do not have capital lock in) and are funded by extremely sophisticated investors. They are decidedly not subject to this concern. In short, insurance companies, with weak governance, should be subject to regulation to avoid the social inefficiency that might arise from their governance structure, while non-insurance companies, with strong governance, are less worrisome.

The same result obtains even when we consider a more complicated credit derivative contract. The parties buying protection that have their default risk pooled into a CDO structure are large financial entities with much greater sophistication and risk-bearing ability than individuals buying typical insurance products. The risk that the sellers of protection will “pull a fast one” on them is much lower given this sophistication. In addition, the investors in the SPV holding the default risk (the analogous insurance company) are likewise large financial entities capable of making risk assessments, demanding and processing information, pricing risk, and wielding their bargaining power in the event a bad future state arises.

Moreover, the nature of the typical CDO structure is effectively a one-time game, in which credit risks are pooled and the cash flows sold off to investors. The sponsor and manager of the SPV does not continue to sell protection based on a pool of funds provided by investors (as in an insurance company), but rather makes the investments first (by choosing risks to pool), then goes to the market to sell cash flow rights to investors. This means that managers of the SPV do not really do much or can do much in terms of risk alteration of the SPV once it has raised money from investors. The future course of the SPV is set, and the payouts are what they are. No future investments are made, no additional investors are brought in, and there can be no change in strategy for the firm. Therefore, there is less chance for abuse in the event the SPV payouts are less than expected. Governance quality is largely irrelevant in this model firm.

Applying this governance model to the insurance company model, it is as if the insurance company wrote all of its policies before raising money in the

market. In that case, investors would worry less about the governance of the insurance company, since its job would simply be to process claims from the policies it had written—it would not take on new policies (and a new source of cash) on terms likely to be unfavorable to existing investors. There would still be some governance risk, however, since the decisions on what policies to pay out on, how much to compensate executives, and other firm costs still have to be made. In some of these, managerial interests may be aligned with those of investors, while in others they may diverge. Importantly, however, this residual governance risk is not present in the CDO case, since all of these decisions are made before the investment in the firm (for example, management fees) or are automated (for example, the amount of payouts). In short, any governance problems simply do not obtain in the typical structure of credit derivative contracts.

3. Consumer Protection

The third policy reason for a separate body of insurance law is the need for strong consumer protection. While the concern with the inverted-production-cycle and governance problems was basically insurance firms not charging insureds enough, the consumer protection concern is that insurance firms will charge too much. As mentioned above, the concern is based on the following syllogism: insurance is a critical product for most individuals; individuals are not sophisticated about insurance products or contracts; and therefore insurance companies will take advantage of customers by overcharging them. Accordingly, (the bulk of) state insurance law regulates the substance and terms of insurance policies (to make them simpler to understand and compare across firms), as well as regulating service and coverage issues (to make sure insurance firms do not back away from promises to pay). In other words, insurance is sometimes regulated as a specialty consumer product in which informational and bargaining power asymmetries are sufficiently large that social losses may be generated from an unregulated market.

The credit derivatives market described above has none of these characteristics or concerns. The parties to credit derivative transactions are all large financial institutions or other sophisticated investors with access to information, the ability to understand and process the information, bargaining power, and the ability to bear losses. This is in sharp contrast with insurance contracts entered into by average consumers, who have none of these attributes. It may be sensible for insurance regulators to try to reduce informational and bargaining power asymmetries between insurance companies and consumers, to provide oversight of claims management and customer service, to provide standardized contract terms that allow comparison shopping, and to even

regulate rates, but these policies are unnecessary where the buyers and sellers of “insurance” are large financial institutions. In fact, if anything, the sellers of protection (the alleged insurance companies) may often be less sophisticated than the buyers of protection (the alleged insureds). For example, a small hedge fund run by a few investors may enter into a contract to sell protection to a large commercial bank. In this case, it is not at all clear where insurance-law-like consumer protection duties should run. After all, existing law will treat both the hedge fund and the bank as not needing the protection of the securities laws or other regulations.

In addition, as discussed above, standard-setting groups, like the International Swap Dealers Association, are already doing much of the work for credit derivative markets that insurance regulators do to protect average consumers. ISDA provides, among other things, standard form contracts (which innovate to respond to changes in the market), dispute resolution mechanisms and guidance, information, educational services, and so on.

C. Insurance Law Doesn't Work Well and Won't Uniquely Add Much

A final argument against treating credit derivative contracts as insurance is a practical one having to do with the value that insurance regulation, as currently constituted, might add to the market. In short, insurance law and its generation and enforcement regime is generally considered to be inefficient and in need of dramatic reforms, and is therefore not the most appropriate locus of authority for a regulation of a new financial innovation that spans numerous types of institutions and serves innumerable purposes, most of which have nothing to do with insuring against risk as it is commonly understood.

1. Jurisdictional Issues

As discussed above, insurance regulation is state based, meaning there are at least fifty different regulators and models of regulation. The state-based model is largely premised on the consumer-protection function of insurance regulation, since it is the state police power to protect citizens from abuse that justifies a local approach. While the merits of this model are debatable when it comes to providing efficient insurance services for health care or automobile risk, the global nature of modern financial markets makes the local argument much more difficult to make for credit derivatives. Do citizens of New Jersey need different protection in credit derivative markets than citizens of New York? In fact, insurance companies seemed to exploit this regulatory fracture by dividing up their businesses into discrete components that were regulated piecemeal by various state regulators. Given the ease of capital flows, the ability of firms to

incorporate anywhere around the globe, and the fact that even transactions in the Cayman Islands can impact investors around the world, the idea of insurance regulators in a particular state controlling the global market seems fanciful. New York regulators, for instance, had authority over less than 10 percent of AIG’s operations, because of the corporate structure of AIG.⁵¹ As a result, one of world’s biggest insurers was, under the current system, able to be largely below the radar screen of its primary insurance regulators. Applying this dysfunctional model, and again, one based primarily on consumer issues, which are the least applicable to this market, to new financial products makes little sense.

The choice of regulator, be it a question of a particular entity or a general jurisdictional choice (like federal or state), is based on regulatory expertise, incentives, and the expected consequences of the regulatory model on the ability to minimize the decision costs and error costs of regulation. State-based regulation might make sense if jurisdictional competition is likely to lead to the efficient regulation (that is, the race-to-the-top theory of state-based corporate law). But this is not the basis for state-based insurance law. State insurance law is not based solely on the state of incorporation of the insurance company, but rather the locus of policy holders. In any event, this model will probably not work for a market like credit derivatives. Financial markets are generally regulated by federal agencies (or perhaps in the future by international ones) because financial products are sold in a global market, and any state-based regime could be avoided by simply opting into offshore regulatory regimes. If the goal of regulation is to encourage credit derivatives to be traded on exchanges as opposed to in over-the-counter markets, as argued below, having a single regulator to choose from is crucial to creating commodifiable products. If credit derivative-holding SPVs could opt into one set of regulations through choice, this might provide some federalism-esque benefits, but this is not the way insurance law operates.

Another factor influencing the choice of regulator is expertise. Here too, there is nothing about state insurance regulators that seems special or unique. State insurance regulators are used to dealing with insurance companies and insurance contracts, which, as described above, deal with issues of risk pooling, governance problems, consumer-facing contract issues, and the like. None of these obtain in credit derivative markets. Insurance commissioners are also generally concerned with counterparty risk—a real concern in credit derivative markets—but this is something bank regulators (like the FDIC, Federal Reserve, and Treasury), derivative regulators (like the CFTC), and securities regulators (like the SEC) are also especially concerned with. In addition, these latter regulators do not have the state overlap problem described above.

⁵¹ See This American Life Episode Transcript Program #382, “The Watchmen,” available at http://www.thislife.org/extras/radio/382_transcript.pdf.

2. Substantive Law

Deeming credit derivatives to be “insurance” (or credit protection sellers “insurance companies”) would, under current law, have several consequences, none of which is likely to improve the efficiency of credit derivative markets.

i. Licensing

First, entities could not sell protection unless the seller was a licensed insurance company. All fifty states require a state-issued license before a firm may issue an insurance policy.⁵² Such a pre-screening requirement might make some sense as part of trading on a credit derivatives exchange, say by requiring those buying or selling on the exchange to meet certain criteria, like margin requirements. But certifications based on other factors unrelated to the exchange’s risk of default would add costs without any offsetting benefits, and would merely open up the possibility that regulators could extract rents from firms wanting to participate in these markets. As discussed below in the context of capital requirements, the licensing scheme for insurance companies is doable in part because there are only a handful of firms providing insurance in each state. In contrast, there are literally tens of thousands of investment funds that have sold or could sell credit protection in credit derivative markets, and this would make any licensing scheme prohibitive or meaningless for state regulators. It would also impose potentially large costs on funds who do not sell protection as a normal part of their investment strategy, but might find it efficient and sensible to do so in limited cases. Regulatory costs would therefore deter these funds from participating in the market, without any proof that the funds have imposed any costs on others.

ii. Duties

Second, the buyer and seller of protection would be subject to a duty to act with the utmost good faith, that is, something beyond the “morals of the marketplace.” This might make some sense for markets in which buyers and sellers are of widely differing sophistication, have access to different information, and have different bargaining power, but it makes much less sense when the parties on both sides of a transaction are similar giant financial institutions. In fact, the trend in the market is for large investors to opt out of these kinds of

⁵² See, for example N.Y. Ins. L. § 1102(a) “Insurer’s license required; issuance. (a) No person, firm, association, corporation or joint-stock company shall do an insurance business in this state unless authorized by a license in force pursuant to the provisions of this chapter, or exempted by the provisions of this chapter from such requirement.”

disclosure requirements and the like using waivers known as “Big Boy” letters. To impose fiduciary duties or other litigation-generating obligations on parties without the potential for opt out will increase uncertainty and costs without any obvious benefit from ex post judicial determinations of what were and were not good deals.

iii. Capital reserves

Third, protection sellers would be required to maintain a certain amount of capital based on the risk inherent in its “insurance-based” business.⁵³ For instance, state insurance regulation requires every insurer to maintain certain specified amounts of capital on hand to reduce counterparty risk and to submit its risk-based capital levels to regulators on an annual basis.⁵⁴ The amounts of capital required vary by jurisdiction and entity, depending on the riskiness of the insurance company.⁵⁵

In the abstract, capital reserves are unobjectionable, since they are about reducing counterparty risk, and therefore about increasing the number of socially beneficial transactions. After all, these requirements are a common element of banking law and other areas where counterparty risk and the problem of runs and systemic risk are present. The question is then how much capital should be required, what is the best way to reduce counterparty risk, and which regulator has the incentive to figure these things out. There are several reasons why insurance regulators are not obviously the best candidate to fulfill this mission, and why the solution of requiring credit derivatives to be exchange-traded is a more elegant solution, albeit one fraught with problems too.

There are several problems with insurance regulators imposing this requirement on the credit derivative markets. For one, the number of entities and individuals writing protection on indebtedness is enormous, making any pre-screening regulation extremely costly. For example, there are over 15,000 hedge funds in the United States alone, each of which could be a participant in these markets.⁵⁶ The magnitude and complexity of the job of simply tracking each of

⁵³ See, for example, N.Y. Ins. L. §§ 1322 and 1324.

⁵⁴ See, for example, N.Y. Ins. L. § 1402 “Minimum capital or minimum surplus to policyholder investments. (a) Before investing its funds in any other investments, every domestic insurer shall invest and maintain an amount equal to the greater of the minimum capital required by law or the minimum surplus to policyholders required to be maintained by law for a domestic stock corporation authorized to transact the same kinds of insurance, only in investments of the types specified in this section which are not in default as to principal or interest.”

⁵⁵ The Model Insurance Act, for instance, provides for three “risk-based capital” levels: (i) mandatory control level risk-based capital (measured at .7 times authorized control level risk-based capital), (ii) regulatory action level risk-based capital (measured at 1.5 times authorized control level risk-based capital), and (iii) company action level risk-based capital (measured at 2.0 times authorized control level risk-based capital).

⁵⁶ See <http://www.thetradenews.com/hedge-funds/prime-brokerage/613>.

these hedge funds—only one type of protection seller—would be beyond the capacity of any existing state regulators. The job would be made even more overwhelming since selling protection is not necessarily a full-time job. Hedge funds and other sellers may hold the default risk for a very short time (a few months or less) and may engage in transactions only periodically or on a one-off basis. Unlike insurance companies that exist to provide risk sharing services, protection sellers are not necessarily in the business of holding debt risk. The fluid nature of market participants would make any licensing or ex-ante regulatory regime incredibly costly and drive many participants out of the market.

In addition, capital requirements did not work well if at all in preventing insurance companies, such as AIG, from investing aggressively and, as it turns out, dangerously in credit derivative markets. The state-based model was manipulated by AIG and others, and this possibility could only be expected to be worse if every credit derivative protection seller becomes a ward of insurance regulators. In other words, the job of regulation would get much more difficult without any obvious way of increasing the capabilities of regulators. This point is made even more clear by reiterating the point made above about how insurance regulators are not experts in financial markets in which most protection sellers participate. If insurance companies can avoid insurance regulation, it is very likely that hedge funds and other sophisticated and fast-moving private money funds will be able to do so too.

Moreover, capital adequacy requirements imposed by regulators (as opposed to margin requirements required by exchanges) generated the incentive for regulatory arbitrage described above. Firms subjected to these requirements had incentives to hold higher quality debt risk, which received lower capital charges, and to move debt risk off of their balance sheets and into bankruptcy-remote SPVs. Although this type of arbitrage is likely inevitable at some level, the current regulatory model for insurance proved ineffectual at preventing arbitrage that imposed systemic risk externalities on society.

Finally, insurance regulators are not experts about the amount, type, and structuring of capital requirements to reduce counterparty risk in non-insurance financial transactions. It is arguable that insurance regulators, representing the state, have incentives to determine the amount of social cost from the failure of an insurance company, since many of the social harms that would result would be paid for by a state-funded social safety net or would otherwise result in state-based harms. But the failure of a hedge fund or foreign bank or other protection seller may generate no social losses, because gains from bets on one side cancel out losses from bets on the other side, or are ones that are not clearly within the purview or concern of state regulators. Systemic risk is something not felt completely or even directly by one state, and therefore a collective action problem

may generate insufficient incentives to get the regulation to the efficient level.

It is important to note that, as proposed below, trading credit derivatives on an exchange would likely require some financial assurances akin to capital adequacy requirements on market participants, through margin requirements, and on the exchange, which would be the ultimate bearer of counterparty risk. For the reasons discussed below, the concerns here are much less than through regulatory capital reserve requirements. For one, exchanges, which act as a centralized counterparty, bear the entire risk of loss if a trading party defaults, and therefore have the best incentives in terms of setting up rules to ensure that traders are likely to pay for their losses.

iv. Disclosure

Fourth, being an insurance company would trigger a detailed disclosure requirement of any insurance business to state regulators. The state-based requirements track roughly those of firms with publicly traded securities. Audited reports of the insurance company’s financial and accounting situation must be made quarterly and annually.⁵⁷ These include disclosure of routine data, like the firm’s balance sheet, income statement, and statement of cash flows, as well as more detailed information than generally required by securities laws, like a list of every asset owned by the firm, every asset acquired or sold during the relevant period, a report of all derivative transactions, and so on.

Although disclosure of the assets and risks of hedge funds and other private wealth pools may indeed be a socially valuable regulation, there is no obvious reason why this should be tied to a regulatory apparatus that is about only a very small part of what a hedge fund may be doing or may have done. As noted above, there are potentially tens of thousands of separate legal entities participating in credit derivative markets at any time, and requiring each of them to make disclosures to insurance regulators upon engaging in such activity is highly problematic.

As a basic principle, disclosure regulation should be implemented and monitored by regulators that cover the primary activity of the regulated entity. It is for this reason that the SEC is the agency responsible for the disclosure by firms issuing securities and by brokers and dealers that buy and sell securities, and the reason that insurance regulators are responsible for the disclosure by insurance firms. To require an investment fund to make disclosures to insurance regulators solely because it engaged in a credit derivative transaction will impose potentially large costs on funds based on potentially a single or small number of transactions. If the disclosure rules are tied instead to how often a fund trades or

⁵⁷ See, for example, N.Y. Ins. L. § 307(a) (requirement for filing an annual financial statement) and § 308 (requirement for filing a quarterly financial statement).

how many trades it makes in these markets, the funds will inevitably try to avoid these costs by making the decisions on whether to sell protection based in part on the arbitrary triggers. For example, if 10 incidents of protection selling trigger a disclosure obligation, we shouldn't be surprised to see funds selling protection 9 times.

If the reason for insurance-based disclosure rules is because of the lack of disclosure to other regulators—hedge funds have little or no disclosure obligations under the securities laws—this is not an argument for disclosure to insurance regulators, it is an argument for a securities law disclosure regime. The regulator that can best calibrate what kinds of disclosure are cost justified, what form disclosures should be made in, and what to do with the disclosed information, if anything, is the regulator that should require and monitor disclosure. For one, it is not clear what insurance regulators would do with the disclosures, especially if the bulk or almost all of it is about activities that are unquestionably not insurance.

v. Contract regulation

Fifth, state law generally requires insurance companies to submit insurance contracts, known as “policies,” to state regulators for pre-approval before any policies can be sold using the contract. For example, in New York, contracts for life, accident, and health insurance are subject to prior regulatory approval.⁵⁸ This requirement would layer possible fifty different state law requirements on top of existing private contracting in the over-the-counter credit derivative markets. There are several problems with such a requirement.

Most obviously, as noted above, there is already a quasi-regulator, the ISDA, that provides industry-wide boilerplate contracts for credit derivative transactions. As the Consec and Xerox examples above illustrate, ISDA is already incorporating best practices into these standard contracts, as well as modifying terms that cause problems regulators would be concerned about, such as manipulation, externalities, and contractual unfairness that may have arisen from any bargaining power asymmetries, mistakes, or the like. As such, contract regulation is likely redundant, and would in any event be replacing a highly knowledgeable set of regulators with one without any experience with credit derivatives.

Paternalistic contract regulation to protect one party or the other is also unnecessary because of the sophistication of the parties to these contracts. There is no obvious systematic bias in favor of one party or the other in these contracts, and the typical arguments that may justify contract form and substance

⁵⁸ Under New York law, life, accident and health and annuity policy forms are subject to prior regulatory approval. Compare N.Y. Ins. L. § 1102(a) with § 1108(a).

regulation—for example, information or bargaining power asymmetries—do not obtain or point always in one direction.

A final point has to do with the fact that the parties to credit derivative contracts are not tied to physical locations in the way that insureds are, and therefore any state-based regime will inevitably invite avoidance through incorporation choice or choice of law provisions. This may be viewed as normatively good or bad (the old race to the top versus race to the bottom debate), but even where it might be thought of as generating efficient contract forms that private parties would choose in any event, it would take us simply to the current ISDA model. After all, if there were a more efficient set of contracts that could be written—that is, the one that parties freely choosing would choose anyway—it would exist or will exist under the current quasi-regulatory regime.

vi. Price control

Finally, states impose substantive restrictions on the prices that can be charged by insurance companies. Regulation of prices varies widely by state and by the type of insurance, but a few common themes are apparent. There are generally three types of regulation: pre-approval, “file and use,” and “use and file,” with the strictness of the regulation decreasing accordingly. For example, New York law requires prices for workers’ compensation and automobile insurance to be approved in advance by regulators, while rates for property and casualty insurance are subject only to a pre-issuance filing policy.⁵⁹ The general regulatory touchstone is that rates shall not be too high, too low, discriminatory, or anticompetitive.⁶⁰

Whatever sense price regulation makes for contracts written by insurance companies, it makes much less sense for credit derivative products. Price regulation of insurance contracts is premised on the pooling of large numbers of individuals and on the governance problems described above. In contrast, credit derivative prices are based on the idiosyncratic risk associated with particular firms. This is something that is difficult to price in the abstract or to know when prices are too high, too low, discriminatory, or the like. In addition, because the price of risk is traded in markets, the idea of using regulators, especially ones without any expertise or experience in this area, to set prices is nonsensical.

There is one area where the pricing of credit derivatives was erroneous. As shown in recent research, price models used ubiquitously by buyers, sellers, credit rating agencies, and other participants in the markets systematically

⁵⁹ Compare N.Y. Ins. L. § 2305(b), § 2310(a), § 2344 and 11 N.Y.C.R.R. pt. 161, § 2303, and § 3231(d).

⁶⁰ *Id.*

mispriced various tranches of risk.⁶¹ It turns out that highly rated tranches were underpriced, meaning they were riskier than buyers and sellers thought, and unrated tranches were underpriced, meaning they were less risky than thought.⁶² Importantly, however, no one was aware of this problem, even though everyone had strong incentives to be so. In addition, this kind of error is now known, and parties to these contracts do not need regulators to tell them about it. Other pricing issues might arise in the future, but market participants have incentives to figure these out. The problem was not that the market for setting prices was biased in one way or the other, but rather simply a mistake in assumptions. Regulators are not well positioned to remedy these kinds of problems absent a crystal ball that no one believes they have.

Moreover, if various states are competing with each other to offer market participants pricing regulations that fit their needs, the jurisdictional choice point made above will obtain—contracts will migrate to those states that offer the pricing rules that the parties would have come to anyway.

IV. AN ALTERNATIVE TO INSURANCE REGULATION

It is understandable why people mistakenly analogize credit derivatives to insurance: insurance is about risk sharing and diversification, and this is what credit derivatives are about too. Insurance companies were also big players in credit derivative markets. But other contracts are about these things as well, and there were many other types of entities that participated in these markets. In addition, credit derivatives are about many other things than risk sharing. In fact, as shown above, credit derivatives may have started as a risk-sharing or risk-transferring mechanism, but their primary use was and is speculation, hedging, and other non-insurance-like functions. Moreover, even where the insurance analogy is most apt, it does not follow that the current insurance regulatory regime is the best available for credit derivatives, assuming additional regulation is needed.

There may be a case for more regulation, premised on the failure of the market to adequately address counterparty risk issues, but insurance law has little to add. A simple rule requiring derivative contracts to be traded on an exchange in most cases will do most of the work required.

As noted above, a credit derivative does not eliminate risk for the original bearer of it, but simply trades default risk for counterparty risk. In other words, the risk in a loan that the borrower will not repay is traded for the risk that the

⁶¹ See, for example, Joshua D. Coval, et al. "Economic Catastrophe Bonds," 99 Am. Econ. Rev. 628 (2009) (showing how AAA-rated tranches contained very little to no idiosyncratic risk, but large and underappreciated amounts of systematic risk).

⁶² See *id.*

seller of default protection will not pay in the event the borrower does not. This counterparty risk was bigger than anyone thought; firms no one thought would fail, like AIG, failed by taking on too much risk. This led to a cascade of failures of brokers, like Lehman Brothers, and other intermediaries, which in turn led to huge collateral calls and a general constriction of credit flows. Quite simply, the mispricing of and realization of counterparty risk caused the credit crunch.⁶³

Fortunately there is a somewhat simple solution to reducing counterparty risk—an exchange. Using a centralized exchange, like the Chicago Mercantile Exchange, eliminates the counterparty risk, replacing it with the risk of default of the exchange. If A and B have a contract that exposes A to a net of \$100 in risk to B, this risk can be eliminated if A and B both trade through a centralized clearinghouse or exchange. A will now have a \$100 liability to the clearinghouse, while B will have a \$100 credit with the same. If A defaults on its ability to pay B, B can still be paid by the clearinghouse. As long as the clearinghouse is solvent, the counterparty risk for B is eliminated.

The risk-reducing qualities of an exchange can be seen more clearly when the number of trading parties increases. Consider the case where A is owed \$100 by B, B is owed \$90 by C, and C is owed \$80 by A. In this case, A has a net risk exposure of \$180 to B and C, since if they both default, A is owed \$100 from B and owes \$80 to C. If these three liabilities are managed through an exchange, however, A’s risk exposure to B and C is reduced to zero. In this scenario, A is owed \$20 from the exchange, and B and C each owe the exchange \$10. Thus, A’s risk to B and C has been eliminated, and the netting of liabilities has reduced the magnitude of the overall amounts owed to much more manageable sums. So long as the exchange can ensure, say through margin requirements, that B and C can make good on their \$10 (about 10% of the total bets), the market stays together.

It is for this reason that the clearinghouse model is used for other derivative markets, like commodities markets, futures markets, and currency markets. Of course, the clearinghouse must be solvent and for this it needs sufficient scale of operations and the ability to impose rules on trading parties that help reduce the risk that they will not be able to make due on their contracts. This last point is precisely about the locus of regulatory authority—who knows better how to regulate the leverage or other characteristics of market participants? Since the clearinghouse, typically a for-profit enterprise, stands to lose personally and dramatically in the event of a failure, it has arguably better incentives along this dimension than government regulators, who are not betting their own money and who, perversely and ironically, may see increased funding from any failures.

⁶³ See JOHN B. TAYLOR, *GETTING OFF TRACK* (2009) (showing how the credit crunch was not caused by a liquidity shortage but by an increase in counterparty risk).

Given these benefits, the question is why the exchange did not arise as a natural part of the market. One answer might be that an exchange has some elements of a public good, since it reduces the potential for systemic risk by decreasing the likelihood of a credit crunch from the failure of a single firm, and public goods are chronically under supplied by the market. But the story here is more complicated, because the analysis above suggests that it is in each individual firm's interest to reduce risk in this way. Moreover, the collective action problems that typically cause the market to under supply public goods do not obtain in this context, since there were only about eight major intermediary market makers, and they were all located in New York City.

There must be, therefore, some benefit to writing contracts off exchange that exceeded any benefits from counterparty risk reduction, at least in expectation before the actual counterparty risks, like the failure of AIG, were known. One possibility is that the brokerage houses arranging over-the-counter credit default contracts are able to earn higher profits for writing specialized contracts than they could for simply dealing in standardized contracts, as typically required for exchange-traded contracts. There is less pricing transparency in over-the-counter contracts, since they are written for a specific buyer and seller in a one-off fashion, and there is also more work that arguably goes into writing these contracts. And, private firms do not bear the full costs of the over-the-counter system, since bankruptcy law limits the downside risk to any investor to what they invested. Under this view, brokerage firms are able to capture the private benefits of idiosyncratic, over-the-counter contracts, while externalizing the risks of systemic meltdown of the entire system.

In this way, the government's initial efforts to encourage the trading of credit derivatives on an exchange is a sensible reform. Firms have resisted this to date,⁶⁴ because nothing has changed the private incentives with respect to systemic risk—in fact, the rash of bailouts of private firms have arguably exacerbated the problem. In addition, there are multiple competing exchanges, including the CME and ICE exchanges, and academics have shown that exchanges need a great amount of scale to be able to adequately reduce counterparty risk.⁶⁵ The government may be rightfully worried about choosing one exchange as the preferred or exclusive exchange, but the need for scale may force some collective choice to be made.

⁶⁴ See, for example, Jacob Bunge, "NY Fed examines slow progress in CDS clearing," WALL ST. J. MARKETWATCH, Apr. 1, 2009, available at <http://www.marketwatch.com/story/ny-fed-examines-slow-progress-cds>.

⁶⁵ See Darrell Duffie and Haoxiang Zhu, "Does a Central Clearing Counterparty Reduce Counterparty Risk?," Stanford Graduate School of Business; National Bureau of Economic Research (NBER) Working Paper, (May 4, 2009) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1348343 (showing how reductions in counterparty risk is highly correlated with scale and the ability to net with other derivative contracts).cr

As noted above, the virtue of the exchange model is that it bakes into a private-ordering system many of the laudable aspects of the insurance law regime. Specifically, capital requirements, disclosure, pricing transparency, and general oversight of risk are all functions that exchanges provide, since exchanges are on the hook for losses arising from the failure of any of the market participants. Moreover, insofar as there are multiple exchanges competing to act as a clearinghouse, there will be competition in law making, which will increase the chances of efficient rules being created. In the private model, there is also less chance of regulatory capture or a public choice distortion, because rival exchanges can always arise to offer market participants alternatives. This assumes, however, that entry is relatively unrestricted, something that is not necessarily true in a world where scale is so important and perhaps difficult to achieve quickly. Insofar as this is true, some oversight of the exchange(s) may be required to simply ensure that they are not subject to these shortcomings. A first guess at a sensible regulator of the exchange(s) would be one of the existing regulatory bodies that deals with exchanges (e.g., the SEC or CFTC) or the regulators that deal with banks and systemic risk (e.g., the Federal Reserve or the Treasury Department).

V. CONCLUSION

This Essay has shown that the simple argument that some credit derivatives help banks and other providers of debt share risk with other investors is not sufficient for credit derivative contracts in general to be deemed “insurance.” We have a separate body of insurance law not because the underlying contracts are insurance, but rather because typical insurance contracts are sold by insurance companies. It has also shown that the policy justifications for regulation of insurance companies—an inverted production cycle, weak corporate governance in bad times, and unsophisticated insureds—do not obtain in the context of credit derivative markets or apply to parties to credit derivative contracts. Finally, it has shown how an exchange for credit derivative contracts can provide most if not all of the substantive regulation insurance regulators can provide, at lower cost and in a more efficient manner. There remain problems with the exchange solution, including issues of scale and bilateral netting, that remain to be solved, but this is a subject for another day.

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