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Credit Derivatives Market Design, Creating Fairness and Sustainability

Janis Sarra¹

Introduction

Now that the first wave of the financial crisis has been resolved through the coordinated efforts of regulators and banks, it is important to address some of the systematic weaknesses of the current financial system. One such weakness is the inappropriate incentive effects of the market for credit derivatives, and in particular, for credit default swaps. As a risk management tool, credit derivatives were originally an effective means of diversifying lending risk. Credit derivatives have worked to cover exposures where there have been credit events of the underlying reference entities.

However, as products proliferated in number and complexity, they have caused some negative consequences, increasing risk of losses for less sophisticated investors, creating excessive exposures for banks and other entities, and creating negative incentives in respect of financially distressed companies. In part, the risks arose because of the expansion to markets involving asset-backed commercial paper, residential mortgages, and other products where some of the underlying assets had been inappropriately valued or rated and thus risk mispriced. In part, these risks arose when derivatives became part of the “originate and distribute” model of lending; and in part, they arose from the speculative market for these products, which has shifted derivatives to some extent from their original risk diversification purposes.

To date, the global market for derivatives has operated largely without regulatory oversight; yet it is increasingly evident that deficiencies in the market contributed, at least in part, to the liquidity crisis in the financial sector, resulting in massive injection of public funds in numerous jurisdictions. As structural adjustments are being made to ensure long term financial stability, the credit derivative market needs timely, targeted, and effective adjustment, with a measure of regulatory oversight.

Credit default swaps (CDS), by far the most common form of credit derivative, are illustrative. There are two critical points at which intervention is required. The first is at the purchase and sale stage, where there is a serious lack of transparency regarding both material adverse risks associated with the reference entity and material risk in respect of the protection seller’s ability to settle the CDS if a credit event occurs. There is also a lack of due diligence and disclosure by those who are recommending CDS products to less sophisticated purchasers. Second, at the point of settlement and restructuring proceedings, there is a threat to current public policy goals of rehabilitating financially distressed businesses where they are viable, given structural and incentive effects for derivatives that are both physically and cash settled. The disconnection between economic interest and legal interest runs contrary to fundamental insolvency law principles adopted by numerous jurisdictions. In this respect, there needs to be a balancing of public law principles, those advancing the goals of insolvency law and those advancing the effective operation of capital markets. At times they align, at others, they are in sharp disaccord.

¹ Dr. Janis Sarra, Faculty of Law, University of British Columbia, Vancouver Canada, October 2008. My sincere thank you to George Triantis, Edward Waitzer, Michael Mainelli, Ronald B. Davis, Eric Talley, Sam Robbins and Cynthia Williams for their thoughtful comments on the draft.

This brief article addresses these two issues, offering ten recommendations for immediate action. More fundamentally, there needs to be public debate regarding the “casino” aspect of the current market for credit derivatives.

Credit Derivatives, Distinguishing Risk Management Tool from Speculative Market

Credit derivatives are financial instruments that allow parties to manage credit exposure. There are numerous kinds of credit derivatives, such as credit default swaps, collateralized debt obligations (CDO), full and index trades, and credit-linked notes. Credit derivatives are classified as either single or multi-name (basket) products. Single name credit derivatives are targeted on the credit worthiness of a single reference entity. Multi-name products hedge the risk of clustered defaults in a portfolio.² A credit derivative can be a privately negotiated agreement that explicitly shifts credit risk from one party to the other; or it can be collateralized and housed within a special purpose vehicle that resells debt contracts in various tranches at differing prices, quality and risk. CDO can be cash flow based, whereby the vehicle issues its own financial instruments to finance purchase of debts of different corporate entities, ensuring a fixed flow of loan repayments that are used to pay investors in the various tranches; or CDO can be synthetic, whereby the entity does not directly purchase debts but rather, enters into credit default swaps with a third party, creating synthetic exposure to the debt of a number of corporate entities.³

The most common credit derivative, a credit default swap (CDS), is a credit derivative contract in which one party, the “protection buyer”, pays a sum of money periodically to the “protection seller”, usually referable to the amount of protection provided by the contract. The protection seller’s obligation to pay arises on the occurrence of a credit event, most frequently, the reference entity’s failure to pay, bankruptcy, or restructuring. The reference entity is not a party to the credit default swap. The protection buyer that is a creditor of the reference entity hedges the risk of default by that entity, and takes on the risk of default by the protection seller. The protection seller acquires the default risk of the reference entity. Unlike insurance, the amount of compensation that can be claimed under a credit derivative is not related to the actual losses suffered by the protection buyer.⁴ Credit derivatives do not require either the protection seller or protection buyer to actually hold an interest in the referenced asset; therefore the protection purchased by the protection buyer can be more than, less than, or completely unconnected to its underlying exposure to the reference entity.

Credit derivatives emerged in the early 1990s as a tool for banks to manage their credit risk in respect of entities that they had directly invested in through their lending activities, diversifying their risk on loan default. In this respect, credit derivatives were initially effective in cushioning the commercial banks’ losses in notable cases such as Enron and Parmalat. The market grew in less than two decades to an estimated USD 62 trillion in CDS alone at the end of 2007. During this period, three significant changes occurred in the market.

First, the original objective of banks managing risk of direct investment under lending portfolios was overtaken by a speculative market for buying and selling derivatives in multiples of the value of the underlying reference assets or entities, resulting in a significant trading market involving a greater number of market participants.

² Elizabeth Murphy, Janis Sarra and Michael Creber, “Credit Derivatives in Canadian Insolvency Proceedings, ‘The Devil will be in the Details’”, in *Annual Review of Insolvency Law, 2006* (Toronto: Carswell) at 187-234.

³ International Swaps and Derivatives Association (ISDA), 2006, <https://www.isdadocs.org/index.html>.

⁴ The protection buyer need not suffer an actual loss to be eligible for compensation if a credit event occurs.

Second, global credit derivatives exposures by ratings shifted downward. In 2002, 36% of all credit derivatives globally were rated at AA or AAA, whereas only 8% were rated as below investment grade. Just four years later, in 2006, only 17% of credit derivatives globally were rated at AA or AAA, whereas 31% were now rated as below investment grade.⁵ Counterparty risk was heavily concentrated among the top 20 global banks and broker dealers, including Bear Sterns, Lehman Brothers, AIG, Merrill Lynch and Royal Bank of Scotland.⁶

Third, the banks' market share declined as hedge funds increasingly took a greater share of both the buy side and sell side of the market. In 2000, banks accounted 81% of the buy side and 63% of the sell side of market share, that number dropping to 59% and 44% respectively by 2006. Hedge funds went from 3% of the market on the buy side in 2000 to 28% market share in 2006. As a seller, their market share grew from 5% to 32% market share in the same period.⁷ Those derivatives were then hedged in further credit derivatives in multiples of the value of the originating reference entities. The hedge funds were a major driver of change in the market. The reasons for move down the credit curve included tight spreads; as margins squeezed at the upper end of the credit curve, to maintain returns, investors shifted to more speculative investment grades and unrated exposures.

Together, these changes altered the credit derivatives market significantly, without any jurisdiction seriously assessing the public policy implications. Market participants now have varying reasons for involvement in the credit derivatives market, often on both the buy and sell side. Protection buyers may use credit derivatives to manage portfolio uncertainties, including to hedge over concentrations in loan portfolios, free up economic or regulatory capital, and avoid sales of bond holdings. Protection sellers may be in the market to increase exposure to sectors, diversify investment portfolios, enhance relative value of trades, exploit yield alternatives, and provide capital arbitrage.⁸ As a risk management tool, CDS could continue to be effective, with some adjustment to the market. As a speculative market product, there needs to be a more fundamental regulatory shift, given the social and economic harm they can cause.

While the appeal of CDS is ostensibly that they can be tailored to the individual contract, the reality is that most are now off-the-shelf standardized products with industry wide standard terms developed by the International Swaps and Derivatives Association (ISDA), with tuning primarily in respect of the reference entity and only a few business terms.⁹ Most credit derivative transactions, including most CDS, are not funded, but may be subject to margin and collateral arrangements depending on the counterparty. The ISDA standard form CDS is silent on obligations of the protection buyer regarding its knowledge of material adverse information in regard to the reference entity.

Although there is some jurisdictional lack of clarity, derivatives have been found to be covered by financial services or securities legislation where they trade in public markets in some jurisdictions, but had been often viewed by regulators as part of the exempt market, assuming sophistication of parties. Other jurisdictions, such as the US and its Securities and Exchange Commission, do not have any regulatory control over CDS or other swaps.¹⁰ In the absence of regulatory oversight, courts have generally looked to the wording of the derivative contract or industry standards, creating considerable incentives for parties to dispute the meaning of contract terms when a credit event occurs.¹¹

⁵ Fitch Ratings, discussed in Murphy, Sarra and Creber, *supra*, note 2.

⁶ *Ibid.*

⁷ British Bankers Association, *Credit Derivatives Report*, 2006.

⁸ Murphy, Sarra and Creber, *supra*, note 2.

⁹ Such terms are, of course, critically important.

¹⁰ Except under anti-fraud powers where they are considered securities. SEC Chair Christopher Cox, presentation to the US Senate Banking Committee, 23 September 2008; *Securities Exchange Act 1934*, 15 U.S.C. 78.

¹¹ For a discussion, see Murphy, Sarra and Creber, *supra*, note 2.

Hedge funds and other derivatives traders have engaged in market trading that speculated heavily on the reference entity's risk. The reselling of that risk, in tranches that moved progressively down the rating scale, to purchasers with little or no information of the underlying risk of the derivative, created a serious disconnect between the value of the reference entity and its assets and the derivatives written on them. There is asymmetry of information between the knowledge of risk of the originating lender and the credit risk transferred to subsequent investors because there is no obligation to disclose material adverse risk on either the buy or sell side of protection.

Many outstanding derivative contracts can aggregate five to ten times the amount of creditor claims.¹² For example, the insolvency of Delphi in the US revealed that there was USD 25 billion in outstanding credit derivatives on USD 2 billion of Delphi bonds. While the liquidity of the products assisted in hedging risk in a number of instances, the CDS evolved from being a risk management tool to a primarily credit trading tool and the volume of CDS trades began to outpace the outstanding bond issuance of that credit. Hence CDS outstanding were greater by multiples than the volume of bonds. Where there was a requirement for physical settlement on occurrence of a credit event, protection buyers would have to go to the open market to source bonds.¹³ When the financial markets began to seriously deteriorate, the CDS exposures of counterparties began to become clear, creating a major crisis in the ability of protection sellers to ensure coverage. One immediate cause of the AIG Insurance liquidity crisis, for example, was a requirement that its financial products subsidiary post additional cash collateral on its outstanding CDS obligations due to its over-exposure.¹⁴ At the point of the US government bailout, AIG had outstanding more than USD 446 billion of CDS liabilities.

Equally significant, protection buyers are relying on the financial viability of the protection seller so that their claims can be met at the point of a credit event in respect of the reference entity, yet there is no disclosure required by the protection seller of its capacity to settle the derivatives if the specified credit event occurs. In this respect, credit derivatives differ from other bilateral contracts where the credit worthiness of a counterparty is typically dealt with through negotiated credit controls, including collateral requirements, covenants, representations and warranties, and the oversight of a credit officer. In order to facilitate their liquidity, many such terms are not negotiated in CDS and there is a lack of oversight. The ISDA has observed that swaps and related OTC derivatives combine characteristics of loans with those of traded capital market instruments; the swap transaction creates a credit relationship between the counterparties, the terms of which are documented just as the terms of a traditional loan, but unlike a loan, swaps are traded in the market and renegotiation of credit terms for each transaction would be costly in a system of repeated interaction between counterparties, creating a drag on trading activity.¹⁵ Consequently, the ISDA Master Agreement contains the 'non-economic' terms such as representations and warranties, events of default, and termination events, leaving counterparties to negotiate only the 'economic' terms such as rate or price, notional amount, and collateral.¹⁶

While standardization of terms in derivatives can reduce transaction costs and create a more liquid market for derivatives, the standardized terms have been developed by industry participants, arguably with their own interests in mind. Proprietary and confidentiality agreements mean that there is little public exposure to, or debate regarding, the risks and benefits associated with the terms. Standards developed solely through the participation of a

¹² Murphy, Sarra and Creber, *supra*, note 2.

¹³ ISDA, *supra*, note 3. Professor Michael Mainelli has observed that "slicing and dicing tranches" led to abnormal bucket distributions and greater sensitivity to rating changes, email correspondence with the author, 10 October 2008.

¹⁴ AIG Insurance was required to begin to book billions of dollars of losses as the risk exposure on CDS sold by it rose in price with the deteriorating credit position of the reference entities.

¹⁵ ISDA, *supra*, note 3.

¹⁶ The ISDA Master Agreement also includes provisions that facilitate payment netting and close-out netting.

small number of industry participants can lead to further information asymmetries, collective action problems for end-purchasers of derivatives, and arguably, risk of self-dealing conduct by those setting the standards. To date, the judiciary in Canada and elsewhere have simply deferred unquestioningly to industry set standards because of the lack of counterparties with the information, skill or resources to argue that the standards may not always be the appropriate measure of parties' agreed upon risk.

Credit derivatives also pose challenges for regulatory oversight in some jurisdictions such as the European Union (EU), where insider trading prohibitions are considerably robust.¹⁷ The EU Joint Market Practices Forum has published recommendations for the handling of material non-public information by credit market participants, including recommending that prohibitions on insider dealing should apply to dealings in any credit derivative whose value depends on a publicly-traded security.¹⁸ The Forum sought to maintain compliance with the principles of the EU's Market Abuse Directive, suggesting that lenders that hedge credit risk by purchasing CDS referencing their borrowers may possess material non-public information and may be found subject to a duty of trust and confidence owed to their borrower.¹⁹ As with other financial services markets, failure to disclose material adverse risk can affect the credibility of the derivatives market, and arguably, the creation of standards to require such disclosure in the credit derivative market would assist in preventing some aspects of the current financial instability.

Arguably, there are two significant aspects of the credit derivatives market that require immediate attention. The first is how to address the principal-agency problems generated by the disconnection between legal interest and economic interest. The second is how to address the recent shift in externalities associated with credit derivatives.

Principal-Agency Issue

There are significant agency issues that have arisen with respect to credit derivatives. First, there are inappropriate incentives created by the use of CDS in multiple values of the original debt. Traditionally, a creditor's interest in a debtor company was to receive return of its capital plus interest and fees, often premised on encouraging an ongoing credit relationship with the business enterprise. The introduction of CDS in some instances has created a misalignment between the creditor's and debtor's interests. A creditor can lend an amount to a debtor company and then purchase CDS many times the value of the underlying reference asset or entity. Thus the creditor has an incentive to have the debtor company fail, triggering a credit event in which the value to the creditor from settlement of the CDS is greater than repayment of the loan. If the creditor is a senior lender, it may be able to precipitate the credit event. Some of the previous willingness by lenders to not enforce covenants for a limited period in order to allow a debtor time to devise a business plan may be less likely now that the lender is not only fully hedged, but over hedged.²⁰

Second, there are agency issues between tranches of creditors under originate and distribute lending. Securitization of debt through CDOs and other derivatives creates incentives for the

¹⁷ Joint Market Practices Forum, *Statement of Principles and Recommendations regarding the Handling of Material Non-Public Information by Credit Market Participants*, European Supplement, 2005. Henry Hu and Bernard Black, "Debt, Equity and Hybrid Decoupling: Governance and Systemic Risk Implications", forthcoming 2008 *European Financial Management* 17 at 1 briefly discuss insider trading and cross-market manipulations, citing Acharya and Johnson, 2007 in respect of evidence of insider trading in debt derivatives.

¹⁸ Joint Market Practices Forum, *ibid.*

¹⁹ *Ibid.*

²⁰ Hu and Black, *supra*, note 17. They call this over-hedging of debt "negative economic ownership". They observe that there can also be "hybrid" decoupling, whereby investors short their shares, buying protection with credit default swaps or use a long equity position to hedge a short debt position, *ibid.* at 2, at 19.

originating lender not to be duly diligent in its lending decisions, as it can offload the risk to the purchasers of various tranches of the debt.²¹ Under this model, there are few incentives for the originating lender to exact protective covenants or undertake monitor on an ongoing basis, given that risk of default is borne by other parties. Over multiple similar transactions, these disincentives can cause a market crisis. For derivatives markets to function effectively, the incentives of originators should be better aligned with those of end purchasers. A third agency issue is with respect to incentives in insolvency restructuring proceedings, discussed below.

These incentives shift credit decisions away from the merits of a company's business plan and create risks for less senior creditors. One option to address the issue would be to require that a proportion of the exposure be left on the originating lender's balance sheet or that a seasoning period be required before the debt can be sold. Such requirements could address some of the immediate agency issues associated with the speculative market.

There is another agency aspect of the credit derivatives market, in particular, in respect of synthetic derivatives, which needs to be addressed. There have been problems with the credit ratings associated with such products, an issue that deserves considerably more attention than possible here. In brief, however, there are at least two potential explanations. The first is that credit rating agencies developed inadequate valuation methods to assess these products, valuing the debt in various tranches higher than the cost of the underlying asset, making them attractive to sellers, but creating new counterparty risks, or that the agencies accepted the methodology developed by investment banks structuring CDOs without separate assessment. The other explanation is the "regulatory license" explanation offered by Professor Partnoy, specifically, that credit rating agencies serve as gate-openers rather than gatekeepers by virtue of their privileged status under US banking and securities regulation, whereby rating agencies actively promote synthetic derivatives in a conflict of interest situation as their fees come from those that they are rating, and those entities have no real choice of rating agency, given the closed market created by regulators.²² Partnoy suggests that in turn, there has been no incentive to properly value the products, and parties have paid substantial fees for highly dubious ratings. Professor Mainelli would resolve that problem by requiring indemnification by parties promoting products, using liability risk as the motivating factor in enhancing market transparency.²³ Since credit rating agencies are paid by the banks or other entities issuing derivatives, either they should be required to disclose the fees they are receiving for the ratings, including any additional consulting fees from the same entity, or there should be a prohibition on payment for ratings.²⁴ On a more fundamental basis, there is a public policy question as to whether credit ratings are the appropriate vehicle to control risk. Credit rating agency incentives must be aligned more closely with those of derivatives purchasers as investors.²⁵

²¹ The subprime mortgage lending in the US and consequent crisis is an example of this agency problem.

²² Frank Partnoy, "How and Why Credit Rating Agencies are Not Like Other Gatekeepers", May 2006, <http://ssrn.com/abstract=900257>. See also M. Zelmer, "Reforming the Credit-Rating Process," *Financial System Review* 51 (Ottawa: Bank of Canada, December 2007).

²³ Michael Mainelli, "Standards Markets? The Free Market Response to Regulation", 16 October 2006, <http://www.gresham.ac.uk/event.asp?EventId=513&PageId=108>

²⁴ Michael Mainelli, "Assessing Credit Rating Agencies: Quis Aestimato Ipsos Aestimatores?", *Balance Sheet*, The Michael Mainelli Column, Volume 11, Number 3, pages 55-58, MCB University Press (August 2003); <http://www.zyen.com/Knowledge/Articles/Balance%20Sheet%200803.pdf>.

²⁵ Mainelli, *supra*, note 23, would encourage an open standard available to all market participants, with standards markets that would use innovative regulation to achieve multiple societal goals and allow competition for certification, in turn encouraging rational interpretation of the standard, control of costs, and enhanced quality through reputational risk and competition. He suggests that a single regulator or self regulatory agency could have oversight over accreditation of such certifying entities as the quality control mechanism.

Shifting Externalities

Historically, there were positive externalities associated with commercial bank lending.²⁶ Banks assisted in correcting governance problems of firms, such as managerial slack, through their monitoring activities, given their superior access to information under loan covenants, and through direct intervention with corporate officers or exiting the relationship, signalling to other creditors that there were problems with the debtor company.²⁷ Stakeholders benefited from the bank's governance role in this respect. A fundamental assumption underlying this theory of interactive corporate governance, developed by Professors Triantis and Daniels, was that all stakeholders shared the goal of firm-value maximization.²⁸ The positive externality for corporate stakeholders was that they could be confident that the bank was engaged in a measure of monitoring and oversight of the firm's solvency, an important benefit for trade suppliers, employees and others that did not have the bargaining power to extract disclosure and default control rights. To the extent that the bank's monitoring deterred debtor misconduct or shirking, it reduced the risk on all the firm's debt.²⁹ For companies that relied increasingly on the public debt markets, while the indenture trustee often had limited responsibility to monitor compliance, issuers frequently were required to back their commercial paper with lines of credit from banks, with the banks serving a similar governance role.³⁰

Hence, the screening and monitoring activities of a lender produced externalities that benefited numerous stakeholders with an interest in the corporation, through the bank's decision to lend, which signalled to potential and existing stakeholders the quality of the borrower; through the imposition of fixed obligations under the loan agreement that prevented managerial slack; through security rights that constrained the ability of managers to liquidate non-cash assets or unilaterally sell more debt; and through loan covenants and monitoring of specified prohibited types of behaviour.³¹ Triantis and Daniels called this feature "interdependent screening" to describe externalities that flow not only among creditors, but also from lenders to shareholders, employees and other stakeholders.³²

The exponential growth in use of credit derivatives has shifted the externalities in a way that may contribute to market destabilization. First, the disconnection between economic interest and residual control rights can create new incentives, in that originating lenders may be less willing to expend the time and resources to undertake due diligence in undertaking credit arrangements, as risk is laid off through derivatives under the originate and distribute model. Hence the signalling to the market that occurred with the decision to lend is no longer reliable as a measure of the firm's value. Second, in the purchase and sale of credit derivatives, parties have frequently given up the negotiation of terms and conditions, including monitoring, restrictive covenants and default control rights, because they know that they will offset their own risk through other structured financial products. Hence that prior positive externality maybe lost as senior creditors no longer undertake monitoring and strategic intervention. When the firm begins to slide into financial distress, corporate stakeholders no longer share a common goal of maximizing firm value and constraining managerial slack because the originating lender

²⁶ Externalities occur when an economic activity causes an external benefit or cost to third party stakeholders that were not directly involved in the transaction.

²⁷ George C. Triantis and Ronald Daniels. "The Role of Debt in Interactive Corporate Governance" (1995) *University of California Law Review* 83, 1073-1113.

²⁸ *Ibid.* at 1081.

²⁹ *Ibid.*

³⁰ *Ibid.* at 1084, 1088-1089.

³¹ *Ibid.* at 1079.

³² Triantis and Daniels observe that a "bank's choice between exit and voice is based on a self-interested evaluation of the relative net benefits from each option. A bank that exits enjoys the benefit of a more certain recovery of its investment. However, it bears transaction and regulatory costs of exit, incurs search and transaction costs in entering into new lending arrangements, and may forgo the opportunity to finance a revitalized borrower in the future. In addition, bank management may be reluctant to abandon a sunk investment, even if a prospective cost-benefit calculation favors exit." *Ibid.* at 1084.

has hedged its risk through its derivatives, and multiple subsequent counterparties have done the same. Stakeholders that could previously rely on the governance role of banks can no longer do so; yet given the diverse nature of their interests, information asymmetries and collective action problems, they are unlikely to be able to fill this governance gap.

This shift in how parties purchase and sell debt may not be significant for a single swap transaction, but multiplied many times through complex derivative transactions and multiple swaps, previous positive externalities are lost and new negative externalities are created, creating more systemic risks across the market. The move to standardize derivatives contracts, while arguably efficient in terms of controlling transaction costs, may exacerbate this risk through the reduction or elimination of debt governance covenants. Moreover, the signalling that occurred through exit or other creditor reactions to the debtor's decisions is diminished because banks and other significant lenders may be fully hedged. Yet that fact is not transparent to other stakeholders, who may still look for such signalling. Given the global nature of credit derivatives, the externalities may create systemic problems that require more broad based intervention than merely improving disclosure.

There may be additional externalities. Hu and Black have observed that when credit derivatives impede the normal negotiations between creditors and debtors in that borrowers can less easily renegotiate terms and conditions with lenders, there is heavier reliance on liquidity and the ability to refinance.³³ Spread across the economy, the freezing of such relationships may increase systemic financial risk as it increases the economy's exposure to liquidity shocks.³⁴

What targeted intervention in the credit derivatives market might look like is difficult to discern. Imposition of some sort of fiduciary obligation on either one or both counterparties presents formidable challenges in determining what the scope of such an obligation would entail and how it would be enforced, particularly when end purchasers are widely dispersed and face serious collective action problems. If one restricts the supply of derivatives products, the products will simply relocate to other jurisdictions, given their high degree of mobility. Increased transparency is one necessary measure; however, enhancing disclosure alone does not ensure that purchasers can properly interpret the information, nor does it assist in offering remedies for misconduct.

One possible way to compensate for potential negative externalities is to set a price for participation in the market. For example, one could tax credit derivatives on a per transaction basis.³⁵ A small amount on each transaction could be placed in a central trust fund in the domestic jurisdiction in which the credit derivative is being purchased. That fund would be available to counterparties that had been unfairly harmed by failure to disclose or other misconduct by market participants, or could be restricted to payments during financial crises. Not unlike deposit insurance funds or pension guarantee funds, the fund would be available, to some specified cap, to cushion such losses. The fund could possibly be empowered to then impose risk-based levies on the counterparties causing the losses, in an attempt to partially recover where the counterparty was solvent. On insolvency, such a claim by the fund would be eligible for debt to equity conversion along with other creditors' claims. Such a strategy would spread the cost of misconduct across parties most actively buying and selling CDS and other derivatives, would allow cost recovery against specific counterparties in some cases, and would diminish the risk of unfair losses to end purchasers.

There are two further public policy issues that need consideration, but which are beyond the scope of this discussion. The first is how mark-to-market accounting has influenced and been influenced by the credit derivatives market and whether or not it should be adjusted to account

³³ *Ibid.*

³⁴ Hu and Black, *supra*, note 17 at 2.

³⁵ The author thanks Eric Talley, Professor of Law at Berkeley and Visiting Lecturer, Harvard Law School for suggesting a tax.

for current financial uncertainty.³⁶ Mark-to-market accounting requires that asset price shocks be reflected on balance sheets, creating their own shocks and raising the question of whether market prices appropriately reflect economic value or whether this approach fosters greater uncertainty for investors.³⁷ Second, there should be public policy discussion as to whether any regulatory intervention should distinguish between sophisticated and less sophisticated derivatives market participants. Arguably, more sophisticated purchasers can price risk in future derivatives agreements or bargain particular governance and monitoring controls. If so, perhaps regulation needs to focus on ensuring that risk moves to those parties that have the capacity for such risk bearing, protecting the more vulnerable market participants.

Some ideas for addressing problems in the credit derivatives market are innovative and far reaching, requiring broad-based public discussion that allows for measured and effective change to be developed, which can be generally endorsed by multiple jurisdictions. Some changes require regulatory intervention, others not; hence public policy discussion is required to assist in making those determinations. In the interim, some initial steps could be taken to enhance the fairness of the credit derivatives market, in turn increasing the sustainability of financial markets, while dampening the negative speculative aspects of the market. While these steps alone would not have prevented the market meltdown, they could have mitigated the degree of harm to end purchasers. Aspects of the derivatives market resemble a securities market more than a traditional loan relationship, and disclosure reduces information asymmetries and risks associated with the inability to negotiate covenants and other protections. A few initial changes could facilitate the appropriate analysis and pricing of risk. As a general principle, regulation should be principles-based and outcomes focused, intervening where the market itself has failed to adequately produce standards of fairness, transparency or sustainability. There needs to be space to develop alternate standards or approaches where there is a problem identified in the market, and the current structure does not allow for full consideration of the public policy implications of changes made by the industry.

Recommendations for point of purchase and sale:

1. Information asymmetries in the OTC market must be reduced through disclosure requirements that are targeted, and measured against potential outcomes. The underlying principle is that there must be sufficient disclosure of material information to allow market participants to make informed choices about credit derivative investment.
 - i. Protection buyers could be required to disclose, at the time of purchase, any material adverse risk in the reference entity that they are aware of or ought reasonably to be aware of, in order that protection sellers can appropriately price the contract. Materiality in this respect could be based on a standard of whether the facts in respect of the adverse risk reasonably would be expected to have a significant effect on the protection seller's valuation or pricing of the derivative.
 - ii. Protection sellers could be required to disclose any material adverse risk to their financial health at the time of the sale and/or renewal of a derivative contract, and

³⁶ Under current mark-to-market, some long term investors face pressure to sell their CDS because of short term funding requirements. The opacity of structured financial products has made them harder to value, thus negatively affecting secondary market liquidity. See J. Sarra, "Restructuring of the Asset-Backed Commercial Paper Market in Canada", *Annual Review of Insolvency Law, 2008* (forthcoming, Toronto: Thomson Reuters, 2009). Essentially, by reflecting market moves, fair value accounting increases the volatility of reported earnings. Arguably, officers' incentives to realize mark-to-market losses are also influenced by the extent to which their investors will reward or negatively sanction them for how they value downside risk.

³⁷ The Financial Stability Forum is examining accounting and valuation procedures for financial derivative instruments that are difficult to price in times of market stress. Current accounting rules do not allow valuation to be expressed as a range of potential outcomes, yet allowing such disclosure could offer greater information to market participants; <http://www.fsforum.org>.

could have an ongoing disclosure requirement regarding material adverse change to their ability to settle the derivative at the point of a credit event occurring.

- iii. Publicly traded companies could be required to disclose the effect of credit derivatives on their risk exposure, including how their credit risk has affected valuation of derivative liabilities and any resulting gain or loss included in earnings statements, and any known information on how counterparty credit risk may have affected their valuation of, or ability to collect on, derivative assets. While some jurisdictions may now require such disclosure as part of their financial services requirements, it should be more broadly and consistently available.

The outcome sought by this recommendation is to reduce the potential for unnecessary and unfair financial loss for market participants through greater transparency regarding material risk. It would require plain and timely disclosure of such information to retail and other purchasers as an investor protection measure. In essence, it is a principle or standard, with the mechanics of how that disclosure is to occur left to market participants to develop.

2. Financial institutions and other parties that create new tranches of derivatives must disclose underlying material risks to the derivatives to counterparties. Counterparties and retail investors purchasing derivatives should have enforceable remedies for the failure of these entities and individuals to disclose material adverse risks at the point of sale of the derivatives. Materiality could be based on a standard of whether the facts in respect of the adverse risk reasonably would be expected to have a significant effect on the potential counterparty or retail investor's valuation or pricing of the derivative.

The outcome sought is to ensure that a standard of greater transparency is applicable to new products as they develop, allowing for market innovation while trying both to ensure that there is sufficient information in the market to assess and price risk, and ensure that those making the products available are providing a type of indemnification in respect of the product in terms of assurances that the material adverse risks are known by the counterparties at the time of sale.

3. Credit rating and other entities that recommend investment in derivatives should meet a due diligence standard in examining and disclosing material adverse risk in the derivative products being sold in the public market.
 - i. Credit rating agencies should be required to disclose all fees associated with a rating, as well as consulting and other fees received from the bank or other entity selling the derivatives.
 - ii. There should be effective remedies for purchasers and other market participants from failure of those individuals and entities recommending or rating derivatives to meet due diligence and disclosure obligations.

The outcome sought is to create appropriate incentives for credit rating agencies and others that recommend investment in credit derivatives to undertake diligent examination and assessment of products, including ascertaining and disclosing material risk, and to reduce their conflicts of interest.

4. Any central exchange and/or counterparty clearing facility that is being created needs to be subject to regulatory oversight, and work towards standardized transparent trading procedures, consistent standards of conduct and disclosure, and transparency in the valuing

and settlement of derivatives. The purpose of an exchange or clearing facility would be to manage systemic risks to the derivatives market.³⁸

- i. Credit derivatives documentation should be made public, either through a common database of trading information, a central registry or public disclosure vehicle similar to SEDAR in Canada or exchange disclosure requirements in UK and elsewhere.
- ii. There should be public reporting of credit default swaps, including trading and position reporting by OTC dealers and credit default swap clearing data.
- iii. There should be consideration of a requirement that a portion of exposure be left on the originating lender's balance sheet or that the debt require seasoning for a period of time before it can be repackaged and resold.
- iv. Best practices standards must be developed for OTC derivatives through collaboration between regulators and market participants, including in respect of counterparty credit risk management, oversight, liquidity management and netting.

The outcome sought is to reduce counterparty risk, increase transparency in the market, and move towards creation of shared definitions of derivatives terms and shared standards and overarching principles, given the global nature of the market. The development of standards could be state or market driven, although there are risks inherent in both strategies, and a hybrid of the two may be most effective. The market is able to more quickly adapt standards and measurement of risk to new product developments, but solely industry-dominated standard setting failed recently to adequately assess risk, and in the future may create somewhat self-serving standards given the closed nature of the industry. Current initiatives by industry participants could be enhanced by participation of regulatory authorities and investor protection or other NGOs, in order to ensure public interest concerns are included in the development of standards.

5. Regulators should consider requiring public disclosure of "no economic interest at risk" derivatives and prohibiting actions by these derivatives holders that lead to default events, in order to address the moral hazard issues of financial products imperilling the real economy.

The outcome sought by this recommendation is to reduce incentives for those holding derivatives products to engage in actions that precipitate credit events where they have no economic interest at risk. Many insurance statutes require the insured have at least a factual expectation of loss if the object of the insurance suffers pecuniary damage, loss or destruction; and the factual expectation requires a lawful or substantial economic interest in the preservation of the insured property. The same approach should be considered for credit derivatives in terms of requiring that a creditor that has hedged its claims through a derivative discloses the real quantum and nature of its remaining economic interest, if any, before it has decision or control rights in proceedings involving the reference entity.

Financial Distress of the Reference Entity and Implications for Restructuring

Globally, in the past decade, jurisdictions have been moving their insolvency law systems towards rehabilitation of financially distressed companies, adopting restructuring regimes that allow for the development of viable business plans that maximize enterprise value, preserve economic activity and save jobs. The premise is that there is frequently value lost when

³⁸ Not unlike futures exchanges, standard portfolios could be defined through pools of various types of assets and derivatives contracts could then be defined relative to such portfolios and traded on the exchange, creating one measure of investor protection.

businesses are liquidated prematurely. All insolvency systems are premised on the notion that creditors with claims should be the ultimate decision makers as to whether a financially troubled company restructures, as they are the parties with the real economic interest in the entity. Hence most restructuring law facilitates negotiations between debtor companies and their creditors with a view to maximizing firm value. A number of jurisdictions also place considerable value on the public interest associated with restructuring debtor companies, with the concomitant benefits to suppliers, employees and other stakeholders and to economic activity more generally. However, the existence of credit derivatives may perversely affect the motivation and behaviour of stakeholders of a financially distressed entity, and may cause greater complexity and uncertainty in a restructuring proceeding, as the real economic interests of claimants are not transparent.

Commercial banks as operating lenders traditionally had a strong role in monitoring the financial status of debtor companies, particularly in the period leading up to insolvency. However, their hedging of risk through derivatives has reduced the incentive to engage in oversight and monitoring, notwithstanding that they are best placed through loan covenants, access to information and in-house resources to engage in that monitoring. While arguably that managing of risk freed up capital for other market participants seeking to borrow, the previous reliance that creditors and other market participants often had on banks to engage in such monitoring and the resultant signalling of a firm's financial health, have diminished considerably. Given the weaker covenants under which some debtor companies have financed their operations in recent years because operating lenders were hedging risk through derivatives rather than rigorous covenants, creditors may be unable to assert control over a debtor until there has been a significant deterioration in its financial position, leading to deferred liquidation or restructuring and consequent lower recovery to creditors. It may no longer be feasible for the bank or other traditional operating lender to take a lead in restructuring negotiations, given that they have little or no remaining economic interest due to their credit default swaps.

On insolvency, one moral hazard is that a creditor that has material holdings of credit derivatives may have economic interests that potentially encourage it to cause a default to occur so that there is a credit event.³⁹ There are many factors that can affect the motivation and behaviour of stakeholders in an insolvency restructuring, given their economic interests; yet the creditor that has hedged its risk through a credit derivative is arguably in a different position in the restructuring proceeding, as there is a lack of transparency in respect of whether in fact there are economic interests at risk. This observation is not to suggest that credit derivatives drive behaviour in all cases; rather, it is a growing phenomenon with the move to cash settlements and growth of the market.

Under physical settlement of a CDS, the single institution from which a debtor company borrowed and believed it had a relationship results now in multiplicity of intermediaries and counterparties as CDS settle. The insolvent company may not even appreciate before commencing a restructuring proceeding that it is a reference entity. Cascading swaps means multiple rapid changes to who holds the claim, making it difficult for a debtor company to establish who has a claim. It can suddenly be dealing with literally hundreds of new claimants. Given settlement time lags where the protection seller with each physical settlement becomes the party at the restructuring bargaining table, the company's ability to devise a viable business plan can be hindered, particularly problematic if there is urgency in devising a plan because of a liquidity crisis or the need to maintain customer goodwill. Physical settlement of multiple CDS has the potential to cause a revolving door effect, making it hard for the company to build consensus and garner requisite support of creditors for a going forward viable business restructuring plan.

³⁹ This observation is not to lose sight of the fact that in a cash settlement, the protection buyer still has whatever it paid for the protection "at risk" in the insolvency proceeding.

A number of jurisdictions have granted exemptions for derivatives from stays under insolvency laws because of the important public policy goal of global financial stability. However, the continued trading of derivatives in cases where settlement is based on the debtor's insolvency or filing of restructuring proceedings can cause further financial instability of the market in the name of preserving liquidity and makes restructuring increasingly difficult for particular debtors. In this respect, there is a tension between two broader public policy goals. On the one hand, Basel II capital rules require the ability to terminate, net and realize on collateral in order to allow institutions to take offsetting transactions into account for capital purposes.⁴⁰ If parties cannot close out, they face exposure on their off-setting trades, which can cause greater financial problems in the market. On the other hand, the move towards rehabilitation in insolvency laws globally is driven by the recognition that liquidation can often leave value on the table that would have meant greater realizations for subordinated secured creditors, unsecured creditors and employees, as well as positive ripple effects in the local economy that can be realized by preservation of economic activity in the community. Both are important public policy goals and both require consideration in devising a going forward structure of the market.

Many restructurings are substantially negotiated before any formal proceedings are taken, the UK being one such jurisdiction where this practice occurs. Yet creditors who may be obliged to assign their claims to protection sellers may not be able to bind their claims to an agreed restructuring plan, removing a valuable public policy tool to preserve economic activity.

Cash settlement of CDS poses different kinds of challenges for restructuring. Unlike insurance, no title to the claim passes and there is no right of subrogation. With cash settlement, the protection buyer that is a creditor of the insolvent company continues to be the party with the legal claim, although at a reduced or eliminated financial exposure.⁴¹ The debtor and other creditors have no notice or knowledge of the reduced exposure. If the creditor is fully hedged, there will be little incentive to engage in constructive negotiations for a restructuring plan. This level of disengagement may be problematic for the restructuring. While in some cases, there can be an active market for derivatives during a restructuring where credit derivatives holders are also direct creditors and take an active and constructive role in workout negotiations, the converse can also occur. The financial institution with which the debtor company has had an operating lending relationship may be less interested in advancing further credit in form of post commencement or exit financing if it has no ongoing financial interest in the debtor. The creditor may actually have over-coverage and thus a negative economic interest, materially benefitting if the restructuring fails. Yet parties to the restructuring currently have no information on the economic interest held by those parties hedged through a credit derivative.

Accordingly, a debtor company may find the creditor that is hedged under a CDS adamant in its refusal to agree to amendments to its credit arrangement such as a payment change or deferral and changes to covenants that would otherwise trigger a default or obligation acceleration. In addition, protection buying creditors will be unlikely to consent to the extension of the maturity date beyond the protection period unless a credit event has already occurred or the extension itself qualifies as a credit event.⁴² These motivations may complicate the efforts of distressed companies to negotiate arrangements with their creditors at the early stages of distress in an attempt to restructure outside of formal insolvency proceedings. Moreover, a claims trader creditor may be seen as having a new, speculative and short term interest in the debtor. Having acquired its position when the debtor company is already in financial difficulty, it is often

⁴⁰ Basel Committee on Banking Supervision, *International Convergence of Capital Measurement and Capital Standards: a Revised Framework*, June 2004, <http://www.bis.org/publ/bcbs107.htm> (Basel II).

⁴¹ Where there are cash settled credit default swaps, on occurrence of a credit event, the CDS may be settled by determining the value of the underlying debt instrument through an ISDA-run or similar auction, whereby the protection seller pays the protection buyer for its estimated loss based on the value established in the auction or where a value can be determined based on post credit event bids for the debt product.

⁴² In order that they can realize on the value of the CDS.

hedging against the speculative outcome of restructuring process. Such a creditor, perhaps holding a deciding vote, has little interest in the long term viability of the company.

Moreover, the normative justification for carving out derivatives from stays under restructuring proceedings is unclear, given the shift from their risk management function to speculative product. It creates a statutory preference for particular creditors over the claims of traditional secured creditors, employees, trade suppliers, and tort claimants. Considering the general insolvency law goals of transparency, timeliness, and certainty, such exclusion must be revisited. As the bailouts of recent weeks have illustrated, there is a broader public interest in how the global derivatives market is to operate effectively, and adjustments to the system must be made after public policy discussion among stakeholders broader than industry participants. Interests affected are beyond capital markets participants, and regulation is needed to ensure that there is transparency in the nature of economic exposure and underlying risk. There should be a public policy debate on whether there is a need to design new principles to account for the separation of economic and legal interest in context of insolvency proceedings.

These observations are not to suggest that the market has failed to address some of its flaws itself. CDS protocols and index auctions have helpfully assisted in facilitating cash settlements. The purpose of such protocols is to offer market participants an efficient way to settle credit derivative transactions referencing.⁴³ For example, when Collins & Aikman filed for bankruptcy in 2005, there were concerns that there were not enough deliverable bonds to settle all the existing index-related contracts. To address this issue, the ISDA published the first protocols to amend the existing contracts for index-related trades to cash settlement from physical settlement on a multi-lateral basis, rather than through counterparty to counterparty negotiations, and to participate in an auction to determine the cash-settlement price of the defaulted bonds.⁴⁴ With the CDS outstanding greater by multiples than the volume of bonds issued, the bonds would have to be bought and sold numerous times in the market to settle the CDS, which would have created pressure to source bonds, raising the price of the bonds higher than the likely recovery value. Hence, the market developed credit event auctions, first to facilitate cash settlement and more recently, to allow for physical settlement on net open positions.⁴⁵

The protocol mechanism facilitates industry-wide net settlement of CDS referencing an insolvent entity. The recent Lehman Brothers Holdings' auction illustrated that the market can price the value of CDS and allow cash settlement for counterparties to CDS trades. The auction set a price and resulted in protection sellers paying 91 cents on the dollar to protection buyers.⁴⁶ More than 350 organizations adhered to the 2008 Lehman CDS Protocol, which provided a settlement procedure for approximately USD 6 billion of net CDS exposures.⁴⁷

While these innovations are important, they address only one aspect of the settlement process. There continues to be a lack of transparency as to who is bearing the ultimate costs of the deficiencies in value when all the CDS settlements are completed. The dealer firms tend to have less net exposure as they frequently buy protection to offset the risk of the protection they have sold. The same may not be the case for end purchasers. The Financial Services Authority in the UK has reported that "there is a risk that the greater complexity facing creditors could, in the immediate aftermath of a credit event on a heavily traded security or multiple concurrent defaults, lead to disorderly markets for related securities".⁴⁸ Any move towards central clearing facilities requires a rethinking of how such trading and settlement becomes more transparent to parties, so that they can properly assess and price their risk. Moreover, protocols do not resolve the issue of strategic behaviour where there is no longer economic interest in a debtor company.

⁴³ ISDA Protocols, *supra*, note 3.

⁴⁴ Nomura, CDS Recovery Basis, ISDA, 2006.

⁴⁵ ISDA Auction Process, 2008, <http://www.isda.org>.

⁴⁶ *Ibid.*

⁴⁷ ISDA 2008 Lehman CDS Protocol, *ibid.*

⁴⁸ FSA, *Financial Risk Outlook 2008*, http://www.fsa.gov.uk/pubs/plan/financial_risk_outlook_2008.pdf at 52-53.

Not all issues canvassed above require regulatory intervention; resolution of some issues could be contractual. Credit derivatives going forward may involve negotiation of new covenants regarding disclosure or insolvency control rights in light of recent market problems. If protection sellers, who bear the risk of default, want a voice in insolvency restructuring proceedings, presumably they can contract for acquisition of such rights on a credit event through agreeing to physical settlement in the CDS. However, such contractual protection may not be possible once the derivative is resold. In those cases, do cash settled protection sellers have any interest in a restructuring proceeding such that they should be recognized in any way by the court? Such recognition, if it could be established, poses another set of challenging issues for timely and fair insolvency restructuring proceedings and requires further public policy debate.⁴⁹

Some jurisdictions have statutorily created unsecured creditors' committees, where representative creditors have a role in the negotiations for an insolvency workout, paid out of the insolvency estate, and such committees often have strong normative sway with the court.⁵⁰ In some jurisdictions, courts recognize *ad hoc* committees of creditors for similar purposes. In thinking about the disconnection between economic interest and legal claim, it may be that the price for participation on such committees should be that such creditors are required to disclose the extent to which their economic risk has been hedged, with the court given authority to refuse to let the creditor participate where there is little or no economic interest.

Recommendations at the point of settlement and insolvency restructuring proceedings:

1. There should be mandatory disclosure during a restructuring proceeding of the real economic risks at stake, including disclosure of the amount of debt that has been hedged by creditors that seek to exercise their voting or oversight rights in a restructuring proceeding. Lack of transparency now means that the debtor company and other creditors are not aware of who is bearing the real economic risk of firm failure, inhibiting the potential for a viable business restructuring plan.
 - i. The court should be granted authority to determine the scope and timing of disclosure, including making determinations in respect of confidentiality, limiting access only to parties in the proceeding, and determining any exceptions, such as for *de minimus* holdings.

The outcome sought is greater transparency in respect of the economic interests at risk with the company's insolvency, with the court having authority to limit required disclosure where circumstances merit.

2. The court's consideration of any restructuring plan should take account of economic interests at stake. This weighing of interest could be accomplished in two different ways:
 - i. Voting on a restructuring plan could be premised on the real economic interests in the firm's insolvency. Currently, our voting system globally is based on provable claims. However, the growth of credit derivatives means that the voting power of financial institutions that have partial or full credit default swap coverage may be disproportionately large compared with the amount of economic risk, skewing voting outcomes and harming the potential for restructuring of an economically viable company. This alternative would require some recognition of the rights of cash settled swap holders, who are now the residual risk holders.

⁴⁹ For example, if it could be established that there was some sort of interest in the proceedings, there would remain collective action problems in many cases, and thus there is a question of whether a representative agent, not unlike an indenture trustee, could represent the collective interests of cash settlement protection sellers.

⁵⁰ See for example, Rule 2019, US *Bankruptcy Code*.

- ii. Alternatively, legal voting rights could be unaffected, but the court could be granted authority to weigh actual economic interests when considering parties' positions and exercise of voting rights. In Canada, this exercise is a balancing of prejudice and equities in the proceedings. In civil law jurisdictions, some codification of both the authority and the criteria would have to be enacted.

The outcome sought is to ensure that those parties with real economic interests in the company's insolvency are given the greatest voice in the restructuring proceeding.

3. Amend insolvency restructuring legislation to include credit derivatives associated with creditor claims against the debtor company within the mandatory stay of proceedings, except with leave of the court on the basis of unfair prejudice, the standard currently used in many jurisdictions for other creditors to be exempted from the stay. The court could then exercise oversight of the clearing process in a measured way that assists with the risk management aspects of the products and slows the speculative market.

The outcome sought is to allow credit derivatives to continue to settle where they are not adversely affecting the workout process, but stayed where the court is persuaded that it would prevent inappropriate conduct or would preserve going concern value pending negotiations for a restructuring plan.

4. Create timely claims bar dates, so that for CDS with physical settlement, the debtor need only bargain with parties as of that date, and not face a continually revolving door of CDS settlements that make the negotiating parties a moving target. While some jurisdictions have established such dates in proceedings, there is currently no widespread established practice or rule in this regard.

The outcome sought is consistency across different jurisdictions in terms of creating clarity and finality in the claims process.

5. Create a central clearing facility for multiple credit derivatives, with regulatory oversight and transparency. The facility itself could be privately operated, but financial services regulators should have oversight of disclosure and settlement standards.

The outcome sought is a timely, efficient and fair mechanism to settle derivatives at the point of insolvency.

These recommendations are first steps towards creation of a fair and sustainable credit derivatives market. Their implementation would pave the way for more extensive debate regarding reform of the market, so that it advances the broad public policy goals of many jurisdictions of effective, fair and sustainable capital markets.