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**Market formation and Governance in International Financial Markets  
The case of OTC derivatives**

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## **Abstract**

How are markets developed and governed? The paper reviews four perspectives on the formation and development of markets and market governance – the political perspective (Fligstein), the network perspective (White), the framing perspective (Callon) and the soft law/expert power perspective (Slaughter). It then utilizes these perspectives in order to understand the development of the market for over-the counter derivatives. It finds that this market was stabilised and governed through the operation of all of these features – power, networks, framing and expert power. The International Swaps and Dealers Association (ISDA) to which all market participants belong has played a central role in this process. It has created a Master Agreement that is the common basis to all OTC derivative contracts across the world and seeks to overcome potentially problematic areas such as netting and collateral. It brings together all market participants and uses their expertise within its committees to develop new rules. However, the paper shows that ISDA as a private international association cannot sustain governance by itself. It has to influence national governments in order to ensure that its Master Agreement is enforceable even though the agreement favours ISDA members above other actors. This has the potential for political controversy though mainly governments deal with it as an issue of technical expertise. At the public, international level, the central bankers forum in Basle are also concerned with the oversight of the sector and have issued a number of warnings about potential sources of instability arising from the derivatives market. The paper illustrates that the market formation process is highly complex and that the governance of the market is multi-levelled and precarious. The research raises questions about how other complex markets are being created and how their governance structures are determined

## **Introduction**

How are markets governed? In recent years, social scientists have been much more interested in understanding how markets are constructed and sustained. Contributions from the ‘new economic sociology (Dobbin 2004; Fligstein 2001; Guillen et al. 2002) and developments arising from actor network theory (such as Callon 1998; MacKenzie 2006; MacKenzie et al. 2007) have brought a new attention to how markets form and are governed. Alongside this, commentators have pointed to the decline of the hierarchical control of markets through state regulation and the growing significance of self-governance through market participants and knowledge experts (Djelic and Sahlin-Andersson 2006; Slaughter 2004). This paper draws on these debates in order to understand how a particular type of market is governed. In particular it emphasizes the multi-level and multi-actor nature of governance and the consequences of this for market development and market stability. In doing so it contributes to the broader discussion on the nature of markets and their governance in the current period.

The object of analysis in the paper is the market for what are termed Over-the-counter (hereafter OTC) derivatives. This market is a particularly useful site for examining changing processes of market governance for a number of reasons. Firstly, it is a relatively new market, growing rapidly over the last decade from small beginnings in the 1980s. It is therefore still possible to reconstruct what were perceived as barriers to creating markets in financial derivatives and to identify how these were overcome and with what consequences for different social actors. Secondly, this is a large and growing

part of the financial markets. In December 2005, notional amounts of \$285 trillion were involved in OTC derivatives contracts according to the Bank for International Settlements. Although this overstates the significance of OTC derivatives in the global economy by focusing on the total value of assets in the contracts rather than just the gross market values of the derivative contracts themselves (\$9 trillion in December 2005), it is nevertheless clear that financial derivatives are of growing importance. This is reflected in the third point that the market has been increasing rapidly, growing by almost 50% between December 2003 and December 2004. Fourthly, this is an international market where deals are traded across national boundaries between financial actors and other corporate bodies that are themselves often multinational in nature. In this situation, there cannot be simply a reliance on a single national legal framework defined by geographical location to provide the basis for contracts or remedies for failures. Fifthly this is a highly innovative and rapidly changing market. Financial institutions gain competitive edge by developing new sorts of derivatives, pricing them in new ways and hedging risk in new ways.

How is it possible to create sufficient stability and predictability in these markets that actors are willing to engage in such large, complex, innovative and uncertain deals? The paper explores these issues in the following ways. Firstly, the paper examines the recent interest in the social construction of markets and in particular the way in which financial markets have emerged and are constructed. Secondly, the paper provides a brief account of the emergence of financial derivatives and the nature of the market for derivatives, particularly the distinction between regulated exchanges and the over-the counter (OTC)

markets which are the main concern of this paper. It also describes how the research was conducted. The third empirical section of the paper consists mainly of a study of the International Swaps and Derivatives Association (ISDA) and its role in constructing a governance system for this area of the market both from the perspective of developing and communicating a shared understanding and contractual framework to the market and in terms of ensuring that this is legally enforceable in different national jurisdictions. The fourth section of the paper focuses briefly on the broader debate concerning the stability of the global financial system and the effect of the growth of OTC derivatives on this. In particular how have public authorities (states and their central bankers) engaged in collective action (through, for example, the Bank for International Settlements amongst others) to identify and ameliorate risks emerging from the growth of derivatives where it is private actors that mostly set the terms for this market? The concluding section of the paper summarises the contribution of this analysis to the emergence of markets in an era when technical expertise, private rule making and international dealings make for a more multi-level and multi-actor form of governance than was previously the case.

### **The social construction of markets**

Fligstein and Dauer have recently distinguished three broad approaches to the study of markets in the emerging new economic sociology (Fligstein and Dauer forthcoming). The first which describes Fligstein's own work can be labelled as the markets as politics approach. The focus here is on how different actors through engagement in politics and the exercise of power compete to shape the rules which govern markets (Fligstein 2001; Fligstein and Stone Sweet 2002). The second approach sees markets as structures of

network relationships. In this perspective (e.g.. Burt 1992; Leifer and White 1987), the focus is on mapping interactions within the market and identifying segments, structural holes and status positions. High status brings rewards and power but the ability to jump over structural holes and connect new networks of market participants together is also a valuable resource, generating new possibilities. The third more recent perspective is to identify markets as mechanisms (even machines) of calculation. This approach has developed out of actor network analysis and is now generally known as ‘social studies of finance’, echoing the ‘social studies of science’ approaches that developed out of actor network theory. In this approach the focus is on understanding how market objects are created through what Callon (1998) identifies as an act of framing. In order to be available for selling on the market, an object or service must be bounded and limited; it must identify itself with certain characteristics that are transferred over the market and it must be freed from any loose or more social or moral obligations that might, in certain circumstances, cling to it. The market must then have a set of calculative practices and calculative machines which enable prices to be set that are legitimate, predictable and sustainable; where there are overflows which do not fit into the frame, actions are taken to identify, monitor and control these overflows in order to fit them back into the frame (see also Buena, Hardie and MacKenzie 2006; Callon and Muniesa 2005; MacKenzie 2006; MacKenzie, Muniesa and Siu 2007).

These approaches are highly suggestive and relevant to the study undertaken here. As will be shown, ISDA is engaged in a game of power, seeking to bend national legal systems to its own purposes. Part of the way it does that is through engaging its members

and the experts that support them in a decentralised but connected network that allows this game of power to be conducted in different ways depending on the particular context concerned. Finally, a central part of this is to continually construct the frame in which derivatives are defined and shaped through its array of committees and amendments to the Master Agreement.

These approaches to market formation are complemented by studies from political science about the changing nature of regulation in global financial markets and the shift away from state direction (government) towards more diffused forms of authority, often private and located in industry and professional associations, described broadly as ‘self-regulation’ and ‘soft law’. In so far as public authority is engaged, it is increasingly seen as beyond individual states and increasingly based on cooperation between networks of central bankers and concerned mainly with the stability of the global financial system rather than issues of detail about how markets are evolving. These changes reflect the broader argument that what is emerging is what Slaughter (2004) labels ‘the new world order’ where the central importance of epistemic communities and policy networks of professionals in particular fields constructing their own modes and modalities of governance is the focus (Haas 1992; Keck and Sikkink 1999). The emphasis on ‘soft law’ involves the creation of standards by associations, experts and professional bodies to which firms voluntarily adhere in order to protect and enhance their legitimacy (see e.g. the cases in Djelic and Sahin-Andersson 2006, e.g. Morth 2006; also Brunsson, Jacobsson et al. 2000; Abbott and Snidal 2000; Quack 2007). These processes are increasingly international in scope working through and in tandem with international

institutions such as the EU, the WTO, the Basle accords (on capital adequacy requirements for banks) as well as through their own linkages in international firms (lawyers, accountants, bankers etc.) and in international professional associations. They aim to facilitate and expand markets and subordinate the application of ‘political’ forms of regulation to the development of the free market system (see e.g. the cases in Dezalay and Garth 2002).

The purpose of this paper is to examine how these changes have been accomplished in one particular part of the financial market (that of over-the counter derivatives) and with what effects. How has the development of this market been governed? Drawing on the theoretical discussions of this section, it will examine;

- How have political interests and power been involved in the creation of the market?
- How have network characteristics contributed to the stabilisation of the rules of the market?
- How have derivatives been framed as products by market participants?
- Do these changes fit the model of decentralised and expert governance?

### **Financial derivatives**

The basic idea of a derivative is that it ‘derives’ its value from another asset such as currencies, bonds and equities. In market situations, the value of these assets is likely to move up and down with varying degrees of volatility. The first function of derivatives is to protect actors against this volatility – to allow them to transfer this particular risk to other actors who are, for whatever reason, more willing to bear it. Derivatives come in

four main sorts; forwards, futures, options and swaps. Forwards are contracts in which one party undertakes to buy and the other party to sell, a set quantity of an asset of a particular type at a set price at a given future time. If the contract is standardized and traded on an organized exchange, it is referred to as a Future. An Option is a contract in which the purchaser gains the right, but is not obliged to buy (call) or to sell (put) an asset at a given price (the strike price or exercise price) on, or up to, a given future date (the expiration). The seller (or writer) of the option is obliged to fulfil his/her part of the contract if so demanded. A swap is a contract to exchange two income streams, for example fixed-rate and floating-rate interest on the same notional principal sum.

Derivatives are traded in two sorts of markets. The earliest sort of derivatives markets beginning in the 1960s were based on exchanges in particular physical locations such as the Chicago Mercantile Exchange (CME) and the Chicago Board of Trade (CBOT). Exchanges have fixed ranges of products and fixed units of size, as well as fixed length of contracts. These markets were notorious for vigorous 'open-pit' trading in which traders wearing brightly coloured jackets for identification purposes literally rubbed shoulders with their competitors as they noisily bid for business (MacKenzie 2006; Zaloom 2006). Most exchanges are now becoming electronically based and pit trading is in decline.

In addition to these markets, however, exist what are termed the OTC markets that are the focus of this paper. Over-the-counter (OTC) derivatives now involve much higher sums than do traded exchanges. In December 2005, the amount outstanding on all organized

exchanges (both futures and options contracts) was around \$58 trillion dollars. In OTC markets, the sum was \$248 trillion – over four and a half times as big. Contrary to the organized exchanges, options on the OTC market were initially structured on a one-off basis for particular clients. This customising allows the client much more leeway in determining exactly how they want to structure their option – including timing and size as well as in terms of linking different sorts of derivatives together into synthetic securities such as swaps. In the OTC market, deals were struck on a bilateral basis usually over the telephone in the first instance. Prices were not transparent but negotiated *ad hominen* on a one-off basis depending on market conditions, the nature of the client, the overall exposure of the institution to the particular client and the calculative technology and strategic intent of the deal maker. Purchasers contact the main market makers seeking prices for the products which they require. In recent years, there has been some effort to roll out electronic trading platforms that can increase the transparency of prices and the speed of deal-making as well as keep a trace of all deals done and ensure they are properly settled (Dodd 2002). However, trading on electronic platforms remains limited because of the complexity of the products and the need to tailor them to the specific credit worthiness of the client, thus negating the possibility of automated, anonymous trading systems (Smith 2005). On the other hand, the lack of a proper electronic ‘paper’ trail for derivatives has led to concerns amongst central bankers and the Bank for International Settlements (BIS 1998; 2007).

How is this market governed? In order to answer this question, research for this paper has been undertaken in a variety of ways. In particular, there now exists a large amount of

information available in the public domain. Firstly, the International Swaps and Derivatives Association (ISDA) has an extensive website which reveals a large amount of information relevant to the question. Two sorts of information are particularly useful from the ISDA. The first consists of its structure, modes of operation and membership. This enables the researcher to identify both the key areas of concern for the ISDA and the key actors in these processes. The second part of the website concerns the detailed discussion of the Master Agreement and questions of its applicability in different national contexts. ISDA representatives have also answered specific questions relating to this research. Secondly, there is now a substantial amount of analysis and statistics made available through the Bank for International Settlements. These date back to the first major BIS report on 'Macroeconomic and Monetary Policy Issues raised by the Growth of Derivatives Markets' (BIS 1994; generally referred to as the Hannoun report, after its chair, Herve Hannoun from the Banque de France). Statistical data is also supplied regularly by BIS. The third source consists of reports in the specialist financial press that have examined the growth of derivatives products and associated with this the publication of various analyses by private financial consultancies and others. The fourth source consists of commentaries published by lawyers and law firms associated with derivatives markets (especially Flanagan 2001 and Werlen and Flanagan 2002 and statements published by the London-based law firm Allen & Overy, one of the high prestige 'magic circle' law firms associated with the City of London: Allen & Overy has a particularly strong relationship with ISDA, including at the current time a shared building). These sources provide a rich variety of perspectives and data on how this market has grown.

## **Market Governance in OTC trading**

OTC derivatives are traded internationally. They occur in a variety of currencies and they link actors in a variety of national jurisdictions. How is this market governed? What gives actors the certainty that they can engage in these complex international, high-value transactions without unexpected losses? What gives them the confidence that the obligations and rights arising from contracts are common across firms and across national boundaries?

The key to creating this governance system has been the development of a private industry based association (known as ISDA). According to Flanagan (2001) ISDA emerged from discussions in New York in the early 1980s led by Salomon Brothers bank. Salomons brought together 10 other institutions that were beginning to sell OTC derivatives (particularly swaps) on a regular basis. Salomons were concerned about the uncertainties regarding contracts and documentation standards that existed. This group then employed the high status US law firm of Cravaths to advise them on how to proceed (Allen & Overy from London also soon joined these discussions). Over the period of a year, ISDA was formed (known initially as the International Swaps Dealers Association before changing its name later to the International Swaps and Derivatives Association). In 1985, ISDA issued what it termed a Code which set out definitions that were shared by all participants. ISDA documents from this point onwards have become crucial means whereby the nature of derivatives as products has been framed in Callon's terms (Callon 1998). As new sorts of derivatives have been established, ISDA has become the arena in which market participants have discussed any issues arising from this process of framing.

Following on from this, ISDA documents have been modified to establish this frame and then ISDA itself has been one of the means whereby knowledge of and expertise in the new products has been disseminated across the market. In the early days of ISDA what was known as ‘the battle of the forms’ (i.e. the competition between different firms to have their own way of doing things – their own forms - legitimated as acceptable). culminated in the beginnings of this general commitment to collective solutions.

ISDA established its central position in a number of ways. An important aspect was that ISDA grew internationally. ISDA set up an office in London in the early 1990s and this became important for ensuring that as these markets developed outside New York, new collective associations were not developed but that rather ISDA was reinforced. At the same time ISDA offices also opened in Tokyo and Singapore, and later offices in Washington DC and Brussels to ensure a presence in key regulatory locations. International banks and their subsidiaries were therefore always close to ISDA in geographical terms for advice and communication.

ISDA was able to expand its membership rapidly from 80 primary members at the end of the 1980s to over 200 in 2001 and 224 in 2007 so that all significant participants in the derivatives markets were associated with it. In order to do this it created different categories of membership allowing organizations with different levels of expertise and centrality to the markets to choose the sort of involvement with ISDA that was appropriate to its own business. The Primary member category consists of those financial institutions that engage in swaps and derivatives work; it is in effect a list of the largest

global financial institutions plus a handful of the very largest industrial companies which have highly developed financial sections, e.g. oil industry firms such as BP. It is from this category that the main leadership of ISDA comes. ISDA also has Associate Members (276 in 2007 up from 100 in 2001) and Subscriber members (289 in 2007 up from around 100 in 2001). Associate Members are predominantly law firms engaged in derivatives business, together with the largest accounting companies and some specialist financial firms. This group is concerned to know ISDA rules and engage in advising clients and others on these rules and how they might change. Finally, Subscriber Members are primarily organizations that engage in buying derivatives. They consist of smaller scale financial institutions, hedge funds, government bodies responsible for debt and liabilities, together with the Treasury function of some large industrial companies (e.g. Toyota, Volvo, Renault). As the market has developed, 'ISDA has drawn in anybody who has anything other than a minimal interest in the market and how it functions' (ISDA Respondent, March 2007).

Membership of ISDA brings with it the right to participate in the rule making and communication activities of the organization. From the mid 1980s, a professional staff was developed to run ISDA on a daily basis. Leaving aside the creation of the Master Agreement which is discussed later, there are two major forms of activity which are coordinated through the professional staff but draw in the membership more widely.

The first of these is the committee work of ISDA. There are two types of committees in ISDA. The first type is based on regional interests and in 2007 there are 5 of these

concerned with Asia-Pacific, Canada, Central and Eastern Europe, Japan and Latin America. The second type concerns a vast range of issues that impact on derivatives – Accounting, Collateral (with 3 sub-groups), Credit Derivatives Market Practice, Derivative Users Committee, Documentation, Energy, Commodities and Developing Products Committee, Equity Derivatives, Operations (with 5 working groups), Regulatory (which lists 22 formal responses made by this ISDA committee to European regulatory issues and 11 responses to US regulatory issues), Risk Management, Tax (with 5 working groups), and Trading Practice (4 main issues currently under review). Big committees have co-chairs from different locations (in the case of Regulation, one each from Europe, Japan and the US) and may be serviced by members of the permanent staff from both New York and London. Committees meet according to their own preferred schedule; virtual meetings particularly amongst the most important members are of growing importance. Membership of committees is open to those interested in the topic. In these ways, ISDA pulls together a network of global expertise on particular issues. These actors are highly informed about recent developments and problems which may be emerging in the market. On this basis, ISDA and its representatives are able to engage with governments and regulators on a highly authoritative basis, playing a major role in framing the market and in dealing with what Callon (1998) describes as ‘overflows’, i.e. controversial situations which do not exist the initial frame.

ISDA also has a very important role as a communication channel to both its membership and to others beyond that who have an interest in derivatives. It is concerned to ensure that its framing of derivatives and any changes arising from new products or dealing with

overflows are understood and made clear to market participants. In order to do this it engages in many meetings each year to which members are invited. It has a big annual meeting each year (in 2006 in Singapore) It supplements this by a large number of meetings on specific topics in Europe, Australasia and the Americas. These meetings range in scope from introductions on the Fundamentals of Derivatives to Documentation seminars to workshops on the ISDA Master Agreement. ISDA is active in making sure that as new geographical areas (most obviously China) begin to develop derivatives markets or new sectors look for more involvement with derivatives, they learn how the system works through ISDA and they join ISDA.

Thus ISDA is the private body through which the different, competitive actors in the market come together to create and maintain common standards. In this way, some predictability and certainty is brought into a potentially very complex set of relationships. What is equally important to note, however, is that this is continually evolving. ISDA's committees are not ways of constraining its members but ways of opening up new areas of agreement that can push forward new types of products. In its efforts to legalise, to clear the regulatory decks and to resolve the operational problems, ISDA is very much a market making organization, encouraging innovation and the development of new products and services. These are characteristics that cannot be undertaken inside public, legislative frameworks which invariably are about constraint and control. In this sense, the new form of governance does facilitate market expansion and market transformation in ways that could not previously have happened. As well as the shift towards expert governance, this illustrates the centrality of the framing process and keeping this up to

date in order to facilitate innovation and growth in the market. It also reveals the importance of maintaining strong network linkages amongst the participants in the market. What is less clear thus far is the political nature of this market building exercise. This is revealed more clearly in the following section examining the ISDA Master Agreement.

### **ISDA's Master Agreement**

The power of ISDA is particularly revealed in what is known as its Master Agreement. Following the 'battle of the forms' and the Code referred to earlier, there remained a strong feeling amongst some ISDA members that more was required. For a number of years therefore, intensive discussions occurred amongst ISDA members about how to develop more standard forms of documentation and definition. This culminated in the publication in 1992 of the Master Agreement, which set out in detail the ongoing legal and credit relationships between the parties and defined how each transaction the parties entered into would be governed. In 2002, an updated version was produced. The great bulk of OTC contracts are made using the ISDA Master Agreements (mainly still the 1992 version). It is important to note that this agreement is private. It is not in itself inscribed in any national legal system. It is an agreement amongst ISDA members that facilitates their business by creating a common contractual form. The problem is, however, that the Master agreement was not simply free-floating, unconnected in any way with sanctions and hard law at the national and the international levels. There are two particular areas in derivatives contracts which have become of central importance in this respect. These areas are known as 'netting agreements' and 'collateral agreements'

and they reveal the interdependence of soft ‘transnational’ private agreements with hard national legal systems. They also reveal the political and distributional significance of the ISDA Master Agreement.

### **Netting agreements**

Netting refers to the process whereby all the debts and credits between two actors in the market are aggregated (netted) to produce one single settlement figure – it is as if all debts and obligations cancel one another out until a single figure is left. If netting is allowed it has an impact on actions taken when one of the counterparties goes bankrupt. It means that the creditor is not left with a mass of unresolved transactions but rather one settlement figure. This is particularly important for financial institutions not just because it places them in a privileged position in any potential bankruptcy case but also because on a day-to-day basis it reduces the capital which it has to set aside to cover the requirements of the Basle capital adequacy rules. Therefore, acceptance of netting provisions is highly beneficial to firms in the OTC derivatives market and the ISDA is keen to ensure that netting is legitimate in derivatives transactions.

Prior to the agreement on netting, dealers operated what they termed a walk-away clause. If one party went bankrupt, the other party simply walked away from the transaction. Central bankers saw this as untidy and unhelpful for systemic order. They wished for a full netting out of all transactions to see where the holes lay. Central bankers reinforced this by their capital adequacy rules which were designed to restrict the ability of banks to take on risks by forcing them to lay aside capital in order to meet downside

contingencies. Banks argued that it was important to take account of what they were owed not just what they had risked. This could be done by netting out derivatives contracts and producing one figure of the sums at risk. This would be the figure that would be used to assess the capital adequacy of the bank. Netting therefore became an increasingly important requirement for those engaged in derivatives trades. Was netting legal?

Although most US and UK banks were confident that netting fitted the tradition of their own legal system, the answers to these questions were not entirely certain particularly where one of the contracting parties was based in a non US or UK jurisdiction. Although the number of examples of bankruptcy that involve derivatives trading have been relatively small (most obviously Barings, Long-Term Capital Management and Enron), nevertheless, it has been seen of importance to the market to solve this. Riles, for example, states that ‘in Japan as in the United Kingdom and many other countries, the Bankruptcy Code, written long before the advent of derivatives, is silent on the question of netting’ (Riles 2000: 19-20). In this case, however, silence is not ‘golden’;

“The reason for the uncertainty as to the enforceability of close-out netting provisions, it should be noted, is that the effect of a Netting Law (or of a judicial interpretation of existing bankruptcy law to the same effect) is to subordinate general creditors’ rights in cases of bankruptcy to the rights of counterparties to swap agreements’ (ibid 23).

The problem for the firm where there is no netting is that if its counterparty goes bankrupt, the initiating firm is going to have to wait in line with all the other creditors according to the laws and regulations of the particular context in which the counterparty

was registered. To agree to netting for derivatives contracts is therefore in effect a form of privileging for actors in the OTC derivatives financial markets by quickly and simply resolving their total exposure. In this sense, netting, although seemingly a technical and abstruse matter for market participants, is actually a political issue since it goes against the underlying principles of most bankruptcy laws. Werlen and Flanagan, lawyers from Allen and Overy, the ISDA's advisers, state that 'there is an inherent tension between netting and the provisions of many jurisdictions' insolvency regimes...as a result it is important for parties to master agreements ..to be certain that their netting agreement will be enforceable in jurisdictions in which an insolvency of a party might occur' (Werlen and Flanagan 2002: 157).

Over the years, the ISDA has sought to resolve this in a number of ways. Firstly it has drawn up with its lawyers what is described on its website as a Model Netting Law. This model is offered to national legislators as a means of ensuring that Netting is legitimated in the formal legal code of a country. Secondly it has lobbied governments strongly to incorporate this legal provision.

"Ensuring the enforceability of the netting provisions of the ISDA Master Agreement has been, and remains, a key initiative, because of its importance in reducing the credit risk arising from the business. The Association's work in this area has resulted in a series of laws being passed in various countries that ensure legal certainty in those nations."

(<http://www.isda.org/> - accessed 25 May, 2006)

This is a complex task. This is not because the ISDA lacks power; as one might expect its host of contacts with major law firms, investment bankers and regulators make it a

central node in the law-making process (e.g. as described in Quack 2007). Huault and Rainelli describe one of their respondents, a banker in a large multinational financial institutions as saying that “At a global level the ISDA has colossal power, they pay lawyers worldwide, all the profession joins and they lobby the regulators’ (Huault and Rainelli 2006: 14). The problem arises from a combination of the endogeneity of law-making, (i.e. the need to frame new legislation in terms consonant with existing expectations of law) and the inevitable potential politicisation of law.

The nature of bankruptcy law in different countries is complex and can become politically charged as a conflict between different sorts of creditors, between debtors and creditors, between national and international rules (see e.g. Carruthers and Halliday 1998; Halliday and Carruthers 2007; Riles 2000; 2005). Whilst Netting legislation passed fairly simply into US law, this was not the case with Japan where as Riles shows, it became an object of contestation between different ministries and different legal traditions (Riles 2000). ISDA prefers to do this through legislation and has been very effective in achieving it in many of countries – around 50 jurisdictions. Only rarely does legislation get delayed as is the case currently with discussions on netting in Russia. Netting is obviously quite a complex problem to understand. In general, changes to Netting are treated as being a technical issue of concern only to the market participants themselves and the regulators. Such changes may be slipped through the legislature in clauses or appendices to a Finance Bill and rarely generate any heat amongst political representatives. Their impact on distributional outcomes in bankruptcy proceedings or on the ability of banks to meet their obligations in times of financial collapse is generally not

highlighted. The issue has relatively low political saliency and although it has definite distributional consequences, it rarely becomes an object of public debate. This is very much in line with how expert power can be utilised to change things on the basis of technical rationality without any recourse to the political implications of doing so.

Even so, the power of ISDA should not be overestimated. Even where the law has changed, given its impact across other areas, there may be uncertainty about how any actual cases might work out in practice. For this reason and because many jurisdictions make no explicit mention of netting in their law (which given the recent growth of the market is not surprising), ISDA also has to prompt the law into action.

“Banks must not only have a netting agreement in place, but must also obtain a legal opinion stating that netting agreements will be upheld in all relevant jurisdictions.”  
(Werlen and Flanagan 2002: 157)

ISDA has therefore been active in commissioning legal opinions from high status firms and lawyers in different countries about whether netting is legal. In some jurisdictions, a positive statement that netting will work is required; in others this is less necessary. However, such opinions are a further important source of confidence in the market and a source of evidence in relation to dealing with banking regulators. Thus netting opinions can be used by banks to justify certain calculations regarding the amount of capital that needs to be allocated to cover the risk on transactions.

Netting illustrates that ISDA cannot sustain a contract purely on the basis of private soft law. In order for the system to operate in the way which the ISDA and its members want,

national public law needs to be taken into account. Even though ISDA has high levels of resources to promote its case and support its arguments, it has to work through the existing national systems. These systems can be changed overtly but this may lead to political problems. However, the system can also be re-interpreted and read in new ways by legal experts so as to make netting appear lawful (see for example, Riles' discussion of Japan where she describes ISDA's attempts to achieve a definitive legal statement in the light of competition and disagreement between the two leading Japanese legal commentators on financial markets: Riles 2000). Private legal opinions avoid entirely the public realm where political problems may emerge even though this is very rare with such a complex and seemingly technical issue is concerned but ultimately specific legal authority in legislation is the preferred option for ISDA.

### **Collateral**

The second major issue of concern is that of collateral. Netting rules are only part of the answer to the issue of the bankruptcy of a counterparty. Another mechanism is the deposit of collateral by one of the parties. Derivatives markets, by definition, work on principles of leverage and margins. What is being purchased is a right or an option to buy in the future. Thus a financial actor can purchase a right to buy for a fraction of the cost of the final transaction – what is called 'on the margin'. This clearly creates a further risk. Will the purchaser have sufficient funds to close out the contract? This can be particularly difficult in times of wide financial crisis as prices fall across a range of products rather than just one, pushing firms into difficult situations. Increasingly derivatives markets have moved towards a system of collateral in order to reduce the risk of such a collapse.

Collateral is also, like netting, a way of ensuring that capital adequacy rules do not constrain the bank's activity. Collateral weighs against capital adequacy requirements increasing the funds available for contracting. ISDA states that 'Collateralization works to provide an asset of value that is to the side of the primary transaction; in the event of default on the primary transaction, the collateral receiver has recourse to the collateral asset and can thus indirectly make good any loss suffered' (ISDA 2005: 7).

In organized exchanges, the principle of collateral is already well established. Exchanges operate a Clearing system so that in effect, all contracts are between the Clearing system and a member of the exchange. Thus if two parties make a transaction, they in effect place the Exchange Clearing house in the middle, depositing their margin and collateral there. Contracts are closed out through the Clearing system rather than bilaterally. This system is enforceable as a condition of membership thus providing security to members in terms of collateral and its management. On top of this, exchanges have operated for some time a system of 'mark to market' with regard to collateral. The value of the collateral posted may change as markets move so what was once worth 25% of the total contract may now be worth 20% or 30%. What 'mark to market' means is that the collateral is revalued (usually on a daily basis) and additions or subtractions to the account in the Clearing system are made on the basis of these recalculations. Thus the risk element remains the same rather than widening or narrowing as the market moves. The Exchange may make a 'margin call' requiring one of the participants to put more into the account to cover market changes. 'Mark to market' is not just a complex financial and organizational feature of derivatives trading. Again, it can also make a

difference to the capital adequacy requirements of a bank and to its profitability. Nevertheless it is an important reassurance to market participants that counterparties can meet their obligations.

How can this work in the OTC market? There is clearly no single authority that can act to provide 'neutral' oversight of the market and/or margin deposits. Nor can there be a single clearing system in this global world of transactions in the way there can in physically bounded exchanges. So what mechanisms have emerged and how are they governed?

The first point is that collateral arrangements (marked to market) have indeed become established in the OTC derivatives markets. In a survey conducted by the ISDA in 2006, 'respondents reported that approximately 59% of their derivative transactions are secured by collateral agreements and 63% of mark-to-market credit exposure is covered by collateral. These results continue a trend of increasing coverage during the past several years. The 2003 Survey, for example, reported coverage of 30% of trades and 29% of exposure...Large firms are the most active users of collateral' (ISDA 2006:2). The largest form of collateral is cash, particularly US\$ and Euros (about 75%); government securities are the next most important form of collateral. Collateral is most frequently deposited with the counterparty to the trade though occasionally it will be held by a neutral third party custodian (though this is affected by the law under which the contract is written – a point to be discussed later). As with the organized exchanges, collateral for OTC derivatives is 'marked to market', altering on a daily basis. ISDA states that 'some

firms are now managing collateral asset pools approaching US\$100 billion in size [and]...the total amount of collateral assets reported in 2004....exceeded US\$1 trillion for the first time ever' (ISDA 2005: 69).

The use of collateral is, of course, potentially risky. What rules govern the usage of the collateral by the receiving party? As with netting, the ISDA has been concerned to have national legal recognition of the collateral rules. Werlen and Flanagan state that 'there is a risk that a court may not allow an agreement for the outright transfer of collateral to take effect in accordance with its terms and this again raises uncertainties which the ISDA wishes to avoid' (Werlen and Flanagan 2002: 157). Again, therefore, its model Netting Act provides a legal framework for collateral and it has also commissioned legal opinions to confirm its case. The private, soft law model of the ISDA Master Agreement requires national law of some sort to solve one of its key problems. It needs to be assured that the delivery of collateral between parties will be recognised as legal in local jurisdictions.

The first step in this process is for the parties to apply a 'choice of law' clause to the contract; in other words, the participants to a contract state in that contract which law will apply to the handling of the collateral. Whilst 'choice of law' recognizes that territoriality is no longer the determinant of the applicable law, it nevertheless returns to national jurisdiction ultimately where endogenous developments shape the limits of how collateral can be organized in OTC derivatives markets. There are two basic models of collateral. They are called the 'security interest' approach and the 'title transfer approach'. Under a

security interest model, ‘the collateral provider generally continues to own the securities and/or cash, subject to the right of the receiver to sell the securities and/or take the cash if the collateral receiver defaults’ whilst ‘under title transfer, the collateral receiver owns the collateral, without restriction, and the collateral provider, if it performs in full, is only entitled to the return of fungible securities and/or repayment of cash in the same security’ (ISDA 2005: 38). Title transfer in effect gives the receiver free rein of what to do with the collateral over the period of its existence whilst the security interest model is much more restrictive. The ISDA identifies 4 basic types of national law which can be applied to collateral dealings. These are;

- The New York Annex: which adopts a security interest approach
- The English deed, also reflecting the security interest approach
- The English Annex – a title transfer approach
- The Japanese Annex; Japanese law recognises both approaches and under the Japanese Annex, participants choose which approach .

In choosing one of these annexes, participants to a contract define the legal basis of the collateral and provide themselves with a form of redress should anything go wrong. This can only be achieved by appealing to national systems of law and enforcement.

ISDA has sought legal opinions to see whether these arrangements are locally enforceable; in other words, could a counterparty based in one country renege on its choice of law clause if it was in its economic interests to do so? ISDA’s findings were that legal jurisdictions (in the 34 states it surveyed) either allowed the security interest model or the title transfer approach. In other words, there could be no escape from the

commitment in the original contract. It did however note that there were a few countries (Norway, South Africa and Taiwan) where there was a small risk that a title transfer collateral could have been changed by the courts to a security interest approach if there was a legal challenge. As with Netting, legal opinions leave room for doubt but in general, the ISDA felt the Annexes were enforceable.

ISDA requires a firm foundation for collateral if the risks from trading are to be somewhat mitigated. On its own as a private rule making body it cannot achieve this. It has therefore sought legal backing for collateralization and has found that in certain national traditions of lawmaking and dispute resolution. Drawing out the implications of these national traditions it has evolved legal justifications for particular models of collateralization. It has gone further to test legal opinion across the most significant jurisdictions for derivatives seeking to assess whether these justifications are protection against the idiosyncrasies of local law. By publishing legal opinions from prestigious lawyers that support its argument, it has succeeded in building a de facto, if not yet de jure, system in which collateral exchange can be effectively achieved. Again it has used its access to lawyers and legislators as well as the expertise of its members to achieve this. The result is not government by bureaucratic rationality but a form of dispersed governance in which private law and public law are linked together.

### **The Global Financial system and derivatives**

Beyond national impediments to ISDA, there are also international issues concerned mainly with the financial market uncertainty that can be created by derivatives. For these

reasons, derivatives trading is overseen by The Committee on the Global Financial System which is a central bank forum within the Bank for International Settlements. This committee has a role in the monitoring and examination of broad issues relating to financial markets and systems with a view to elaborating appropriate policy recommendations to support the central banks in the fulfilment of their responsibilities for monetary and financial stability. Trading in derivatives is a central part of this oversight. In a speech to the Federal Reserve Bank of Chicago in 2005, Alan Greenspan, still at that Chair of the US Federal Reserve system, noted a number of potential threats to the wider financial system that came out of the growth of derivatives, especially in the OTC market. One risk related to the concentration occurring in certain derivatives market that could lead to wider failure if one player in the market was severely damaged. The example of Long Term Capital Management which collapsed in 1998 leaving large numbers of derivatives contracts hanging and thereby threatening the stability of the global system remains of concern to central bankers (see Dunbar 2001; Lowenstein 2001; MacKenzie 2003). The two other risks related to 'the use of credit derivatives to transfer risk outside the banking system and about the growing role of hedge funds in bearing risk in derivative markets' (Greenspan 2005). These concerns reflect a recognition amongst central bankers that derivative markets and the actors in them need to be monitored.

Similarly, regulators have begun to get together to gain oversight of derivatives meetings. The main regulators in the US and the UK (SEC, CFTC and SIB-now the FSA) got together in 2003 to 'identify ways in which they can cooperate in their respective regulatory approaches to OTC derivatives business'. They committed themselves to

promote appropriate netting devices in the context of regulatory capital standards that ‘encourage incentives for good risk management’ (<http://www.cftc.gov/oiaotcderovs> – accessed 23 May 2006). The 2007 Report from BIS on Clearing and Settlement Arrangements raised a number of other problems with how the system was operating. One problem has been the large backlogs of unsigned master agreements, i.e. where verbal deals have been made but the paperwork had not followed until some weeks later, and the consequent risks that arose from this delay (BIS 2007). Other problems that have arisen derive from the increasing presence of hedge funds as speculators in the derivatives markets. Hedge funds increasingly use particular financial institutions in a prime brokerage capacity across a variety of their activities including now between the hedge fund itself and executing dealers. The legal position and the financial consequences of this for the prime brokers is not clear and may result in risk positions being taken without adequate backing. Secondly, hedge funds have effectively begun to establish a market in selling on derivatives. This is what is known as novation where a contract between two original counterparties is replaced because one party (usually a hedge fund) steps out of the deal and this side of the contract is transferred to a third party. The BIS report focuses on the continued need to develop common standards and systems of clearing. A central element in this concerns the development of electronic trading systems as discussed earlier. Such systems impose an audit trail and have the advantage of transparency in terms of prices but progress towards this is halting. Some financial institutions have set them up for their own clients rather than opening them out to the market in general and as yet there is no agreement on this.

## **Conclusions**

What has been described reveals the way in which this particular market has emerged. The study shows that issues of power, networks and framing have been important in these developments. From the perspective of power and politics in the formation of a market, ISDA is a powerful association which represents the largest financial institutions and their clients engaged in the derivatives market. These actors are concerned to develop a context where the market for derivatives is orderly and legal, but open to innovation and change. As well as the lobbying power which it can exercise alongside its individual members, ISDA uses its own expert power and that of the law firms which it employs in different parts of the world in order to achieve this. It pressurises governments to establish a legislative basis for derivatives trading along the lines of the ISDA Master Agreement and the Model Netting Act. Further it is concerned that this should be put in place even if it is at the expense of other actors in the system, as most obviously in terms of bankruptcy rules and regulations and the use of netting procedures. Other concerns about derivatives such as their proximity to gambling, their contribution to speculation and financial instability, their centrality to increasing levels of inequality and reward between top earners in the financial sector and the rest of the population, are swept aside as irrelevant to the basic technical problem of how to ensure that the market works properly for its participants. The agenda is set and potentially discomfoting debates placed at the margins of public discourse.

From the framing perspective developed by Callon (1998) ISDA frames derivatives contracts in ways which ensure that there is something which can be bought and sold

over the counter. ISDA also deals with overflow issues, ensuring that new products or uncertainties are identified, classified and framed. It engages in these processes on a continuous basis in an attempt to avoid potentially damaging externalities.

Finally, drawing on White and others, ISDA works to create the market through its activity as a network, pulling the latest information in from its members, the market participants, collating and framing the information and then communicating it to its members via committees, publications, seminars and conferences across the globe.

In this respect, the market formation process and the development of governance mechanisms is the outcome of power and politics, networks and processes of framing. The study also reveals that financial markets increasingly rely on experts, soft law and voluntary self-regulation to develop. However, it is also important to remember that this process rests in a number of important respects on traditional models of law and government as well as on emerging international bodies such as those bringing together central bankers. Governance in this market is multi-levelled. It is both public and private, national and international. These different levels have become intertwined. This comes about through the way in which ISDA and its agents seek to enrol the traditional forces of law and government in areas where voluntary self-regulation is weak or has effects that are potentially detrimental to the development of the market. Thus netting and collateral are central but they can only work in the way which ISDA requires if national law does not contradict them and if international bodies of central bankers continue to support this system. Therefore governance in this market cannot be understood as a totally private

process; it requires the enrolment of national legal systems and international bodies as supports. These supports always retain an element of conditionality as broad financial collapse invariably evokes some sort of political reaction at the national and the international level. Developments in the financial markets in the summer of 2007 associated with the collapse of US sub-prime mortgages have been connected with the derivatives markets and through them to the collapse and potential collapse of a number of banks. This has turned the public spotlight onto these processes and stirred up a wide sense of outrage at these markets but so long as central bankers seem able to stabilize the system and national politicians are unwilling to act, it appears unlikely that this will be sufficient to counteract the existing forces in the market.

In conclusion, this paper argues that there are new forms of governance emerging in order to build these markets. These forms of governance are multi-faceted and multi-levelled, bringing public and private, national and international together. Private actors as well as building their own systems of rules engage in this role of reshaping national jurisdictions. Here, however the heavy hand of history weighs on them. Legal traditions limit to varying degrees what can be achieved in formal systems of law but possibilities arise of getting round this through harnessing legal opinions and implementing 'choice of law' clauses that choose 'friendly' jurisdictions. Government is not dropped from the equation; it is in a precarious balance with forces of private governance. This precariousness is reflected in conflicts between different actors, different legal arenas and different interests. Governance and government go together and the interesting question is how the balance between the two is played out in different arenas. Further research can

consider whether this particular model of market formation and governance is common across the financial sector or indeed in other sectors. One expectation would be that the more 'political' and public market formation issues are, the more likely the state is to play a direct role (as is the case for retail financial services such as pensions and mortgages in most countries). Similarly the more diversity of interest there is amongst market participants, the more difficult it may be to form a single associational voice as was achieved with ISDA (where the large financial institutions and lawyers shared an interest in making the market work even if they were going to be competitors afterwards). The more diverse the voices of market participants, the more likely they will seek to enrol support beyond their immediate circle, thus potentially creating a broader public arena for debate about governance. Overall it is to be expected that there will be a variety of forms of governance, though it can be expected that emergent systems will be multi-levelled and populated by a variety of public and private actors.

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