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*Transparency in the Age of Self-Regulation: The Case of OTC Derivatives Markets*

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Financial markets have been consistently growing more complex thanks to their increasingly transnational character and the plethora of new instruments offered by advances in technology and financial innovation. While traditionally one of the least regulated areas of political economy, recent developments in financial markets have meant that supervisors have a lot of catching up to do and that the climate is effectively one of self-regulation. The over-the-counter (OTC) derivatives market is one such case.

Derivatives have attracted much attention over the past decade. They became at once useful instruments for risk management and opaque products vilified after some high profile losses. They are hence a most interesting case study for the topic at hand, transparency, as they present a blurred distinction between hedging and speculating and, through the leverage that they generate, can claim dramatic consequences.

This paper will start with a preliminary discussion of transparency: what it is and how it relates to international political economy in general and finance in particular. It will then go on to establish that in OTC derivatives markets, transparency amounts to voluntary disclosure by the industry and explain what makes these financial tools effectively unregulated. This implies that the industry has over the years decided what quantitative and qualitative information it wishes to make public. This has not been an ad hoc process but rather a focused effort to create meaningful standards for disclosure and preempt official regulatory and legislative initiatives.

The paper will proceed to demonstrate that transparency in the form of disclosure cannot be seen as reliable. In the first place, the information that is made available is limited as no institution would willingly reveal too much about its positions and risk-management techniques. It is also the case that the interpretation of disclosed items is difficult as the

credibility of the models that produce them is different in times of crisis and depends on those who operate them.

What are the implications of this pattern? Inadequate transparency threatens the stability of the system as problems are likely to emerge late and have systemic risk potential. Furthermore, it can lead to moral hazard, amounting to the taxpayer subsidising excessive risk-taking.

Despite the importance of these considerations, the paper will argue that what is seen as inadequate transparency may not necessarily constitute a systemic threat. In a market dominated by a relatively small number of financial institutions, informal disclosure patterns can be substitutes for transparency. Market discipline can also be counted upon to punish the actors that have a dangerous risk appetite. Finally, let us not forget that losses, though spectacular in the pages of newspapers, need to be seen in the context of a \$80 trillion market<sup>1</sup>.

### *Conceptualising transparency*

‘Transparency’ as a concept appears to be a lot less straightforward and clear than its etymology would suggest. One working definition would be to describe as transparent a state of affairs where procedures and processes can be adequately reviewed and assessed by those who have a stake in the system. An analytical application of this notion, however, presents more challenge. In international political economy certain areas have attracted particular attention with respect to transparency. One of them is the domain of public administration and the target of fighting corruption<sup>2</sup>. Another obvious area where transparency issues have taken a central place is that of international institutions and other transnational organisations, where important decisions are perceived to be taken behind closed doors<sup>3</sup>. In both cases there is an implicit understanding of the benefits of transparency; a more accountable public policy leads to a more efficient (and possibly fairer) allocation of resources whether in the national or international arena. Moreover, both areas have become forums within which the drive towards more transparency can be interpreted as resistance against a neo-liberal paradigm of globalisation<sup>4</sup>.

But what makes transparency a desirable aim in finance? To go one step further, what makes it a public good? Finance is the means through which the real economy operates but also has a role as a direct creator of wealth. The first function is at the heart of what is considered public and hence requires a certain level of stability through adequate supervision and the guarantee of a safety net. The second function, however, leans more towards what we consider a private interest. Institutions are handling money on behalf of mainly private actors who benefit when things go well. So far so good; the problem is that when things go less well it is the state that picks up the pieces, precisely because of the significance of the first function. These considerations mean that the ultimate goal in transparency would have to be a pretty demanding one. Such a level of transparency would work for technical issues such as insider trading or a clear separation of front and back offices; but when considering market activity, to aim so high would be to assume that financial markets are much more simplistic than they really are. In this context, the paper suggests two operational definitions of transparency; (i) perfect information and (ii) a weaker version, comparability.

### ***OTC derivatives markets: the name of the game is self-regulation***

A derivative is “a contract or security whose value is closely related to and to a large extent determined by the value of a related security, commodity, or index”<sup>5</sup>. When over-the-counter (OTC) it is also “a financial transaction that is not made on an organised exchange. Generally the parties must negotiate all the details themselves or agree to use simplifying market conventions”<sup>6</sup>. Derivatives are not new instruments; the idea of hedging against potential risk has taken this form throughout financial market history. The difference today is one that takes to the heart of the globalisation debate. In the first place, it is a question of degree; the volumes in derivatives trading are tremendous. More importantly, however, it is a difference in kind; instruments are becoming increasingly sophisticated and customised and this in an environment of transnationalisation.

These changes are well documented in the international political economy literature. The transnational nature of financial markets has fundamentally changed the role of the state, posing significant constraints on regulation<sup>7</sup>. The state can no longer cope as most financial activities transcend national regulatory and legal boundaries. At the same time, it seems unwilling to reverse the pattern, as that would harm its competitiveness in attracting

investment. Most state authorities are wary of having stringent regulatory requirements for fear of losing business<sup>8</sup>.

Despite these developments, however, transnationalisation has not relieved governments of their regulatory responsibilities. Instead, the challenge has become to promote market efficiency just as authority prerogatives are being shared by a growing number of actors<sup>9</sup>. The focus has shifted from regulation to supervision with emphasis placed on systemic stability, i.e. the prevention of collapse and crises<sup>10</sup>. This has left financial institutions making their own rules, or rather creating their own flexible standards, with the understanding that regulators will be satisfied that they are sound and increasingly, to use the buzzword of the moment, that they will lead to more ‘transparent’ practices.

Private financial institutions have a strong claim to their share of authority: knowledge and technical expertise. Most of the activities of financial institutions involve complex technical knowledge and with the continuous development of new instruments most regulators find it hard to keep up. There is a vast literature on the importance of knowledge, notably the ‘epistemic communities’ approach which looks at a “network of professionals with recognised expertise and competence in a domain and an authoritative claim to policy-relevant knowledge within that issue-area”<sup>11</sup>. This approach is still very useful because it introduces the concept of ‘uncertainty’, which is central to regulatory confusion. Economic ideas are not innocent<sup>12</sup>, however, and this is why professional knowledge works best in the context of a policy forum<sup>13</sup>. As a result, self-regulatory arrangements are quasi-institutionalised in the context of a “system based on associative action involving an elaborate division of labour among firms, self-regulatory organisations, and state agencies”<sup>14</sup>. This goes some way in explaining why in the 1990s, despite the panic over derivatives, no additional regulation was implemented.

The issues outlined above are reflected in the evolution of OTC derivatives markets. Firstly, regulatory authorities have recognised their limits and accepted both more international cooperation in the context of the Bank for International Settlements (BIS) and a more comprehensive and constructive dialogue with the private sector<sup>15</sup>. Secondly, there is an awareness by regulators that stringent supervision can lead investment banks, hedge funds and other financial entities to get out of the domain of their regulation altogether and move to off-shore centres<sup>16</sup>. Regulators admit to it; while they want to avoid a ‘race to the bottom’, they

need to keep the bureaucratic process at a minimum and make sure that they provide enough flexibility<sup>17</sup>. Finally, it is recognised that the industry has a better understanding of the instruments and that in order to enhance innovation in the financial markets, it is important for standards to be adaptable and not set in stone in the form of legislation or even product-specific regulation<sup>18</sup>.

It is also important to note that OTC derivatives are from the outset less regulated than other financial operations; they are off-balance sheet instruments which means that they are not included in traditional auditing procedures<sup>19</sup>. Moreover, they benefit from a more lax regulatory environment than exchange-traded derivatives. The latter fall under specific rules and procedures<sup>20</sup>, are fairly standardised, and present less risk as the exchange's clearing house takes the form of the counterparty (as opposed to another bank).

In this context, what emerged in the regulation of OTC derivatives markets are some high quality efforts by the industry to provide adequate but voluntary standards for trading and disclosure. Disclosure is a key word: in the absence of a more direct hands-on approach by regulatory authorities, disclosure is to guarantee sound practice and effective supervision. The first of these efforts was a study by the Group of Thirty<sup>21</sup>, a private sector organisation bringing together practitioners and public sector officials. The report produced a set of recommendations including one on disclosures:

“Financial statements of dealers and end-users should contain sufficient information about their use of derivatives to provide an understanding of the purposes for which transactions are undertaken, the extent of the transactions, the degree of risk involved, and how the transactions have been accounted for. Pending the adoption of harmonised accounting standards, the following disclosures are recommended:

- Information about management's attitude to financial risks, how instruments are used, and how risks are monitored and controlled.
- Accounting Policies.
- Analysis of positions at the balance sheet date.
- Analysis of the credit risk inherent in those positions.
- For dealers only, additional information about the extent of their activities in financial instruments.<sup>22</sup>”

The group provided model forms to help financial institutions organise their disclosure and impressed market actors and officials alike. The second initiative was more specific and had the immediate aim of preempting regulation. The Derivatives Policy Group (DPG)<sup>23</sup> brought together the six largest investment banks (also the biggest derivatives dealers and users) and stressed enhanced reporting:

The “scope and extent of the information” should include “credit concentration and portfolio credit quality (the top 20 net exposures on a counterparty-by-counterparty basis)”. Moreover, the firms committed to providing “the SEC and CFTC with net revenue data for various derivative product lines or business units”. Overall, the DPG's overall goal was “the development of a series of reports designed to provide the agencies with timely and useful information in order to facilitate the monitoring of risk to individual firms and to the financial system in general.<sup>24</sup>”

This initiative was equally well received and together, the two reports seem to have convinced regulators of their seriousness and to have offset legislation in a very hostile and worried Congress<sup>25</sup>. This was a crucial step in the path to self-regulation; if the industry had not taken up the matter responsibly, others would have stepped in with a less satisfactory solution<sup>26</sup>.

### ***Transparency in practice: official recommendations and actual disclosure***

The climate of self-regulation in the OTC derivatives markets encourages attempts at transparency. Regulators are interested in having access to relevant information but due to constraints on their authority, they are also keen to promote more transparency within the market. They have therefore taken up the disclosure standards put forward by the private sector and have outlined ways to monitor them.

The Bank for International Settlements (BIS) has been instrumental in reviewing practices. It has produced recommendations on both quantitative and qualitative disclosures<sup>27</sup>. The first refer to figures on market and credit risk as well as earnings; the second to risk and management controls and also accounting and valuation methods. The BIS is also examining the implementation of these recommendations in annual surveys<sup>28</sup> of the largest institutions and has reported significant progress in disclosure. Most significantly, however, transparency and disclosure have taken central stage in the current proposals by the BIS on capital adequacy requirements<sup>29</sup>. The framework that was proposed by the Basle Committee on Banking Supervision last year created a Third Pillar which focuses on transparent practices.

The proposals on transparency put emphasis on allowing market participants to have access to relevant information on a bank's capital adequacy (and hence its ability to absorb losses). They also push for improved disclosures on risk management and risk appetite and ask for figures that allow for a comprehensive understanding of an institution's risk which will account for adverse circumstances. This is not 'perfect information' as suggested by one of the definitions put forward earlier in the paper but certainly goes a long way towards a situation in which investors and other market participants are informed and can make educated decisions. The proposals also stress 'comparability' (the second definition of this paper); this means comparability in the disclosures of different institutions but also comparability in the disclosures of an institution over time.

A closer analysis of actual disclosure will show that aiming for ‘perfect information’, albeit in a weaker form, is naive. The instruments and models disclosed contain little specific information. What they do, however, is provide ways to distinguish the better-managed firms or at least those who have the most sophisticated risk-management techniques at their disposal<sup>30</sup>. They thus allow us to compare the relative position of institutions with respect to financial innovation. This function will also increase over time, as initiatives such as the framework currently proposed by the BIS will encourage harmonisation of disclosure.

So how does transparency translate into practice? The short answer is through a few paragraphs and a number of additional figures in institutions’ annual reports. There is generally a short description on the firm’s risk management, pledging management understanding and compliance with internal standards. In addition, the reports include qualitative and quantitative information about different types of risk. It is not the purpose of this paper to review risk management instruments in great technical detail, however, a short overview of developments in this field will be useful in establishing an understanding of the nature of disclosure<sup>31</sup>.

Market risk is the risk that arises from a change in the price of an asset that is correlated with movements in the economy as a whole. Most global institutions have developed models that calculate the risk of their portfolio, generally on a daily basis. These models are primarily value-at-risk (VaR) models, which provide one number that represents the probability of the institution falling below a certain pre-agreed level of losses. VaR models rely on historical data (usually going back from one year to 500 days) and base their credibility on back testing, i.e. the number of exceptions during a certain period of time. VaR models refer to average losses and do not include a worst case estimate. To remedy this, most institutions complement their models with stress testing, statistical models that test risk management when liquidity is low and capabilities are stretched. It should be noted, however, that little information on stress testing is actually disclosed (other than an assertion that the institution does in fact use the approach).

Credit risk is the risk associated with the possibility of the counterparty being unable to fulfill its contract obligations. Institutions are currently working on developing VaR models similar to the ones used for market risk, however, for the moment there is in general reliance on a

bank's internal counterparty ratings. No information is disclosed about who the counterparties are; only the types of standards that are considered when rating them.

Finally, operational risk is the risk that arises from inadequate systems, human error or mismanagement. It is by definition much more difficult to assess and disclosures on the subject tend to be limited to rather descriptive comments. Market participants are nevertheless confident that this too will be quantified in the near future (although there is disagreement about the interpretation of 'near'<sup>32</sup>).

These are most welcome developments; in the words of one market participant, "there is no downside risk in disclosing: the more you describe, the better your clients will know who you are". The same participant added that in today's markets it is all about "integrity, honesty and transparency"<sup>33</sup>. The more accepted view, however, is that 'transparency' is really a US-inspired initiative<sup>34</sup> and that there is a disagreement in the market about its value<sup>35</sup>. The general impression is that transparency helps demystify but that it is rather overrated.

### ***What disclosure does not tell us***

There are several reasons why disclosure as outlined above is not sufficient for 'ambitious transparency'. In the case of the calculation of market risk, one needs to be reminded that VaR is a model and that as such, it comes with its assumptions and limitations. There is the added challenge of collecting all relevant data in institutions that are global and operate in different sectors and various time-zones. Compromises surely take place in order to gain speed and it is a myth that institutions can get the figure at the push of a button<sup>36</sup>. There is some reassurance in that no institution has faced trouble because of erroneous reliance on its VaR model (with the exception of Long-Term-Capital-Management, one could argue, but it is the case that hedge funds were under-supervised at the time). This is, however, no guarantee that no such problems will arise in the future.

VaR models are in a way perfectly suited to current patterns of disclosure as they provide no proprietary information. They tell us nothing about which markets the firm is active in, what its strategy is, or in which direction the firm is positioned. Nor do they really tell us anything about the firm's risk appetite. Potential maximum losses would give us that kind of information but stress testing techniques and results are not properly disclosed; they are also



inconsistent in that institutions design these models themselves and choose what sort of data they wish to feed into them. As a result, there is very little available on how an institution would cope in the event of a serious crisis. The same observations hold for credit risk, in that the models there are going in the same direction. The number disclosed will not reveal who the counterparties are, nor will it provide input on the type of contract or the volume involved.

There is another reason why models are less than reliable and that is that they are only as good as the people who operate them. Auditors are clear about being nervous about reporting on the intentions of directors<sup>37</sup>. Regulators are satisfied that most large institutions employ very able people but they agree that there is no guarantee that no human error will occur<sup>38</sup>. Moreover, there is a growing gap between the expertise of those who devise the models (the ‘rocket scientists’) and those who actually take the responsibility to apply them in the institution’s activities. It is also useful to remember that financial markets are renowned for operating on the basis of ‘herd behaviour’ and that the decision-makers within the institution may choose to ignore the model for the sake of profitability<sup>39</sup>.

### ***So there’s no real transparency... does it matter?***

The absence of relevant transparency is problematic because it is supposed to replace more traditional forms of supervision. In this sense, lack of adequate information can pose a systemic threat. Any institution can fail if it takes risks and behaves unreasonably, however, the consolidation in the market means that it can bring down with it some of its major counterparties. Without transparency, problems will be detected late and the other institutions at risk (as well as the regulators) will be faced with a *fait accompli*.

In this context, lack of transparency matters a great deal because it can lead to moral hazard. Much has been written on this issue, partly as a result of the rescue of Long-Term-Capital-Management (LTCM), a US hedge fund. What is at stake here is that global banks rip the benefits of the use of OTC derivatives yet they fall back on the state in times of problems. Indeed, because of a tradition of providing liquidity support, central banks have found that they are providing a “significant subsidy to the risk management industry”<sup>40</sup> through their safety nets. This is one of the main concerns of the current capital adequacy proposals: by promoting transparency, regulators are no longer the only holders of important information and hence, if they miss something, institutions will not assume that they can continue taking

risks<sup>41</sup>. Furthermore, transparent practices could reduce the belief that some institutions are simply ‘too big to fail’ and could therefore get away with less than responsible risk taking.

For some, increasing systemic risk through lack of adequate transparency means that “tax payers of the world are heavily at risk”<sup>42</sup>. Others don’t worry too much; the Federal Reserve in particular seems to take the stance that thanks to the strength of the US economy, it is in a position to bail-out a large financial institution<sup>43</sup>. In fact, not only does the Federal Reserve feel comfortable about current levels of systemic risk and its ability to cope, but it sent a further signal with the rescue of LTCM: you no longer have to be a bank, you just need to be a big player<sup>44</sup>. Traditionally more conservative central banks are also rather optimistic; in the words of an official at the Nederlandsche Bank, some banks may be ‘too big to fail’ but they are not “too big to shrink”<sup>45</sup>.

### *Or maybe not?*

The optimism of regulators seems to suggest that lack of transparency does not pose a significant threat at the moment. One explanation for this may be that there exist alternative patterns of transparency. An important factor in exploring informal transparency is that there are very few actors in the OTC derivatives markets. Activities are increasingly concentrated among a small cluster of financial institutions that have developed sizeable exposures to each other. This trend is rationalised by the willingness of all banks to have highly rated counterparties. As a result there are about twelve large banks, mainly based in New York which are responsible for the bulk of contracts. A bank’s geographical location is relevant, as Wall Street is a small and tight community with several informal channels of communication. There are flows of information and gossip which allow institutions to know a fair amount about each other’s activities<sup>46</sup>. Banks also know about each other because they are competing for the same clients; this makes them copy respective positions. Finally, there is the issue of ‘revolving doors’, that is the free movement of employees which take with them their expertise but also some proprietary information<sup>47</sup>.

Another important element is market discipline itself. The regulators interviewed were adamant that the best thing that happened to the OTC derivatives markets was the near-failure of Bankers Trust. To see a respected institution in that uncomfortable position probably saved the industry a lot of money<sup>48</sup>. This led to more responsible risk management but also gave

banks the incentive to monitor other banks (especially their major counterparties). There are additional market mechanisms that ensure sound practice, most notably rating agencies. Their role has significantly increased over the years; in the case of the OTC derivatives markets, they generally do the important job of cross-examining managers over the numbers produced by the models they use. Moreover, their role will continue to be central in the future, especially if current capital adequacy proposals are anything to go by<sup>49</sup>.

The market offers numerous other ways to signal the robust health or doubtful standing of an institution. One can learn a lot about a bank by listening to what equity holders and equity analysts have to say. One can also look at the interest rate a bank has to pay on its debt. These measures are not conclusive but they do provide a useful substitute for transparency; in fact, in the case of larger institutions, the market tends to identify the problems first (while regulators might choose to ignore the signs because of political concerns)<sup>50</sup>.

For these reasons, several voices in the private sector argue that requirements for disclosure should be altogether lower for professional or ‘graduated’ dealers who have an assumed level of knowledge<sup>51</sup>. Signs of dissent also exist within the regulatory community as even today, the value of transparency is debated within the Federal Reserve<sup>52</sup>; many believe that extra disclosure would be a source of instability as it would create the impression of a trouble-free system.

One issue that also makes market participants reluctant to put forward much meaningful information about their practices is more peculiar to the United States. Financial reporting can actually put institutions in a situation where they face legal risk. Discussions with auditors tend to support this point<sup>53</sup>.

Finally, a more cynical observation. Despite differences in the types of disclosure favoured by the private and public sectors, no one objects to a state of affairs where there is enough information on the situation in the markets. There are doubts, however, about how far on the road to stability transparency can take us. There have been enough crises in recent years that prove that available information is by no means a sufficient condition for stability. As both the Latin American debt crisis and the Asian crisis demonstrated, participants need to be prepared to look for and at the information and of course, to take the time to interpret it sensibly.

## *Conclusions*

Transparency in the OTC derivatives markets is a particularly ambitious undertaking. In its strongest form – clear markets that provide all relevant information about an institution’s risk profile, philosophy and techniques – it is impossible. In a slightly weaker form – perfect information, i.e. knowledge about a bank’s positions and ability to remain within its policy limits - it is also difficult to achieve. What the paper has demonstrated is that at best, transparency gives investors and other market participants the possibility to compare and contrast institutions. Banking institutions that aim towards a high degree of disclosure will obviously have the incentive to make public information that is positive. This may take them towards an enhanced risk management framework, however, no one reading their annual report will be able to assess that for themselves. The most a VaR figure can tell is that the institution actually uses a VaR model. Even reliance on rating agencies is increasingly more about appearances and comparisons.

In the context of a self-regulatory environment, this may be worrying. The biggest dealers and end-users of OTC derivatives are large financial institutions which are at the core of the world financial system. A failure in any one of them could lead to a chain of failures through the exposures these banks have developed with each other, thus creating systemic risk and inevitably, involving the public sector. Yet regulators are calm and even optimistic. They continue their efforts for increased transparency but essentially start from a background of faith in the market, its mechanisms and its discipline.

What conclusions can be reached from reviewing these practices? First, that it is important to keep things into perspective. There have been losses but relatively to the overall amount of contract trading, they have been fairly limited. They also came about in the early 1990s, when most of the instruments used were new and more likely to lead to experimentation. Moreover, some of the most publicised failures (e.g. Barings) were about exchange-traded derivatives.

One should also understand the context of disclosure. Much of what is made public forms the basis of a bank’s capital adequacy requirements. It seems that despite the turmoil of recent years (which culminated with the Russian default and the collapse of LTCM), banks had enough capital to cover their positions. There is no room for complacency, however. The US economy has now been going strong for nine years running and Chairman Alan Greenspan

commands unprecedented respect but one should always remember that markets go up as well as down and that individuals eventually retire.

Finally, it is important to understand the position of supervisors. This paper documented the reasons behind self-regulation and public officials are indeed constrained by the global nature of the institutions they deal with. By pushing for transparency they might not get exactly what they are looking for. They will, however, have a better chance of promoting private sector responsibility.

## ENDNOTES

<sup>1</sup> The latest count appeared in a Bank for International Settlements press release, “The Global Derivatives Market at End-June 1998”, on 23 December 1998, which put the figure at \$70 trillion. However, in a recent speech Federal Reserve Chairman Alan Greenspan put the figure closer to \$80 trillion; Alan Greenspan, “Financial derivatives and the risks they entail”, speech before the Futures Industry Association, Boca Raton, Florida, 19 March 1999.

<sup>2</sup> For a comprehensive discussion of this aspect of transparency, see Hongying Wang and James N. Rosenau (2000) “Transparency International and Corruption as an Issue of Global Governance”, paper written on behalf of the non-governmental organisation Transparency International.

<sup>3</sup> This drive has been recently illustrated by the so-called ‘Battle of Seattle’ and the demonstrations at Davos in the context of the World Economic Forum. The press in December 1999 and January 2000 gave ample coverage to these events.

<sup>4</sup> It is not the purpose of this paper to explore this aspect of transparency; however, for a starting point of such an analysis, see Christine B.N. Chin and James H. Mittelman (1996) “Conceptualising resistance to globalisation”.

<sup>5</sup> Alfred Steinherr (1998) *The Wild Beast of Derivatives*, Chichester: Wiley, p. 395.

<sup>6</sup> *Ibid.*, p. 401.

<sup>7</sup> For a discussion of how globalisation constraints the state see John Agnew and Stuart Corbridge (1995) *Mastering Space: Hegemony, Territory and International Political Economy*, London: Routledge, Richard O’Brien (1992) *Global Financial Integration: The End of Geography?*, London: Pinter, Susan Strange (1988) *States and Markets*, London: Pinter and Susan Strange (1996) *The Retreat of the State: The Diffusion of Power in the World Economy*, Cambridge: Cambridge University Press.

<sup>8</sup> William W. Bratton, Joseph McCahery, Sol Picciotto, and Colin Scott (1996) “Introduction: Regulatory Competition and Institutional Evolution” in William W. Bratton, Joseph McCahery, Sol Picciotto, and Colin Scott (eds.) *International Regulatory Competition and Coordination, Perspectives on Economic Regulation in Europe and the United States*, Oxford: Clarendon Press, p. 2.

<sup>9</sup> Louis W. Pauly (1997) *Who Elected the Bankers? Surveillance and Control in the World Economy*, Ithaca: Cornell University Press, p. 4.

<sup>10</sup> Richard O’Brien, *The End of Geography?*, p. 101.

<sup>11</sup> Peter M. Haas (1992) “Introduction: Epistemic Communities and International Policy Coordination” in *International Organisation*, Special Issue on Knowledge, Power, and International Policy Coordination, 46 (1), p. 3 and p. 14.

<sup>12</sup> John Kurt Jacobsen (1995) “Much ado about ideas: The cognitive factor in economic policy” in *World Politics*, Vol. 47, p. 288.

<sup>13</sup> Claudio M. Radaelli (1995) “The Role of Knowledge in the Policy Process” in *Journal of European Public Policy*, Vol. 2 (2), pp. 170-1.

<sup>14</sup> William D. Coleman (1994) “Keeping the Shotgun Behind the door, Governing the Securities Industry in Canada, the United Kingdom, and the United States” in J. Rogers Hollingsworth, Philippe c. Schmitter and Wolfgang Streeck (eds.) *Governing Capitalist Economies, Performance and Control of Economic Sectors*, Oxford: Oxford University Press, p. 248.

<sup>15</sup> This point is supported by several interviews with private and public sector officials (especially with respect to US and UK regulators).

<sup>16</sup> Bank for International Settlements (1999) *Comments on the Reports on the International Financial Architecture*, Basel: Bank for International Settlements, pp. 4-5.

<sup>17</sup> Interview with Federal Reserve of New York officials, New York, 22 February 1999.

<sup>18</sup> Interview with official at the Division of Banking Supervision and Regulation of the Federal Reserve Board, Washington, DC, 18 February 1999.

<sup>19</sup> In the United States, the Securities Exchange Commission has put forward proposals which will treat some derivatives like other balance-sheet instruments. The proposals should be implemented in 2001.

<sup>20</sup> See LIFFE (2000) *Rules of the London International Financial Futures and Options Exchange*, London: LIFFE for 100 pages of detailed rules and procedures in the London derivatives exchange.

<sup>21</sup> Group of Thirty – Global Derivatives Study Group (1993), *Derivatives: Practices and Principles*, Washington, DC: Group of Thirty.

<sup>22</sup> Recommendation 20, *ibid.*, p. 21.

<sup>23</sup> Derivatives Policy Group (1995) *A Framework for Voluntary Oversight of the OTC Derivatives Activities of Securities Firm Affiliates to Promote Confidence and Stability in Financial Markets*, Washington, DC: Derivatives Policy Group.

<sup>24</sup> *Ibid.*, pp. 128-9, pp. 140-1.

<sup>25</sup> The influence and impact of these reports can be seen in the vast number of regulatory agency documents that emerged both in the US and by the BIS. These include: Commodity Futures Trading Commission (1993) *OTC*

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*Derivative Markets and Their Regulation*, Washington, DC: CFTC; United States General Accounting Office (1994) *Financial Derivatives – Actions Needed to Protect the Financial System*, Washington, DC: GAO; Basle Committee on Banking Supervision (1994) *Risk Management Guidelines for Derivatives*, Basel: Bank for International Settlements; International Organisation of Securities Commissions – Technical Committee (1994) *Operational and Financial Risk Management Control Mechanisms for Over-The-Counter Derivatives Activities of Regulated Securities Firms*, Montreal: IOSCO.

For an understanding of debates in Congress and of the importance of the reports in demystifying derivatives see Congressional Hearings on H.R. 4503; The Derivatives Safety and Soundness Supervision Act of 1994, 12 July 1994.

<sup>26</sup> David Mullins, Vice Chairman of the Federal Reserve Board, as reported in Steven Lipin (1993) “Banks Try to Avoid Rules on Derivatives” in *The Wall Street Journal*, 22 July.

<sup>27</sup> Bank for International Settlements (1994) *Public Disclosure of Market and Credit Risks by Financial Intermediaries*, Basel: Bank for International Settlements. See also Basle Committee on Banking Supervision and the Technical Committee of IOSCO (1995) *Public Disclosure of the Trading and Derivatives Activities of Banks and Securities Firms*, Basel: Bank for International Settlements and Basle Committee on Banking Supervision (1998) *Enhancing Bank Transparency*, Basel: Bank for International Settlements.

<sup>28</sup> The first survey was published in 1996 – *Survey of Disclosures about Trading and Derivatives Activities of Banks and Securities Firms*.

<sup>29</sup> Basle Committee on Banking Supervision (1999) *A New Capital Adequacy Framework*, Basel: Bank for International Settlements. See also Basle Committee on Banking Supervision (2000) *A New Capital Adequacy Framework: Pillar 3 - Market Discipline*, Basel: Bank for International Settlements.

<sup>30</sup> Goldman Sachs and SBC Warburg Dillon Read (1998) *The Practice of Risk Management*, London: Euromoney, pp. 229-30.

<sup>31</sup> For more detailed information on types of risk and the instruments involved in risk management, see the reports quoted in endnotes 21, 23, 25, 27 and 29. See also Alfred Steinherr, *Derivatives*. Valuable information on the models was also provided by several interviewees, most notably Dr. Alan Cathcart, official at the Traded Risk Department of the Financial Services Authority, London, 27 January 2000.

<sup>32</sup> An interview with Robert E. Moritz of PricewaterhouseCoopers, working for JP Morgan, New York, 14 October 1999, provided some ground to believe that operational risk would be included in a wider VaR model shortly. However, this assertion was met with scepticism at a later interview with Klaas Knot and Ad P. Huijser of the Directorate Supervision of the Nederlandsche Bank, Amsterdam, 4 February 2000. Both officials claim that operational risk models are not even used internally at this stage and that it would take at least 25 years for models to be widely used.

<sup>33</sup> Interview with Carl Adams, Global Risk Management, Merrill Lynch, New York, 12 October 1999.

<sup>34</sup> Interview with Klaas Knot and Ad P. Huijser, op. cit.

<sup>35</sup> Interview with Sir David Walker, Chairman, Morgan Stanley Dean Witter – Europe, London, 6 January 2000.

<sup>36</sup> Interview with Michael Brosnan, Deputy Comptroller in Risk Evaluation, Comptroller of the Currency, Washington, DC, 20 October 1999.

<sup>37</sup> Interview with John Tattersall, Partner at PricewaterhouseCoopers, London, 25 August 1999.

<sup>38</sup> This is common sense but interviews with public officials showed that regulators are nevertheless keen to point it out.

<sup>39</sup> Interview with Alfred Steinherr, Economist at the European Investment Bank, Luxembourg, 12 April 2000.

<sup>40</sup> Alfred Steinherr, *Derivatives*, p. 276.

<sup>41</sup> Interview with Andrew Crockett, General Manager, Bank for International Settlements, Basel, 8 February 2000.

<sup>42</sup> *Financial Times* (1997) 15 July.

<sup>43</sup> Interview with official at the Federal Reserve Board.

<sup>44</sup> Interview with Alfred Steinherr.

<sup>45</sup> Interview with Klaas Knot.

<sup>46</sup> Interview with Michael Brosnan.

<sup>47</sup> Interview with Gregory E. Eller, Project Manager, Division of Banking Supervision and Regulation, Federal Reserve Board, Washington, DC, 20 October 1999.

<sup>48</sup> Interview with Michael Brosnan. This item was also extensively discussed in an interview with Brian Quinn, Chairman, Nomura Bank International, London, 12 January 2000. Mr Quinn was an Executive Director at the Bank of England at the time of Bankers Trust’s problems in 1994.

<sup>49</sup> The proposals for the new capital adequacy framework heavily involve rating agencies.

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<sup>50</sup> Interview with Timothy Wilson, Principal, Morgan Stanley Dean Witter, New York, 14 October 1999.

<sup>51</sup> Interview with Emmanuelle Sebtou, Head of Risk Management, International Swaps and Derivatives Association, London, 5 January 2000.

<sup>52</sup> Interview with Gregory E. Eller.

<sup>53</sup> Interviews with partners at PricewaterhouseCoopers.