# FINANCIAL RISK HEDGING MECHANISMS

## Regulation of Swaps and Derivatives: How, and Why?

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### INTRODUCTION

One of the most dramatic developments in international finance in the 1980s was the growth of the swap and derivatives market, from carefully crafted, heavily negotiated currency exchange agreements in England in the late 1970s to the multi-trillion dollar global trading industry of the 1990s. The primary legal focus in the swap market during the early and middle 1980s was on documentation and enforceability. In the late 1980s, the legal focus expanded to address risks that swaps might constitute regulated instruments under existing regulatory schemes such as those applicable to securities and futures and risks with respect to tax treatment. Recently, the focus has further shifted in two ways. First, many jurisdictions, particularly in Asia and Latin America, have liberalised their domestic monetary systems and it is anticipated that swaps will be permitted in a number of jurisdictions where formerly they were either prohibited or highly restricted. Issues, familiar in other jurisdictions, will arise in each new jurisdiction as to regulation, capacity, tax and enforcement, and authorities will have to address the proper scope of regulating swaps. Second, in many jurisdictions where swaps have already developed into a major industry, calls have emanated from various sources for increased regulation of swaps. I understand this to be the case in Australia.

After briefly describing swaps and the swap market, this paper will analyse, first, the difficulties in dealing with swaps under existing regulatory schemes and the different approaches taken in different jurisdictions. Second, the paper will then set forth certain fundamental reasons for the regulation of financial instruments and analyse swaps in the context of such reasons. It will conclude that regulation of swaps as such is not warranted in most jurisdictions, and that the fundamental problem with respect to swaps is the uncertainty of enforceability under existing regulatory and enforcement systems. Accordingly, the real concerns with respect to swaps can, and indeed should, be met by adjustments to the existing legal and regulatory framework on a case-by-case basis so that swaps are integrated into the relevant domestic financial structure.

### DESCRIPTION OF SWAPS

#### The product

In broad terms, a swap is an exchange of cash flows between two parties, each of which cash flows is, in the eyes of the respective parties, equal to the other at the start of the agreement. Specifically, the Standard swap is an agreement between two parties in which each party agrees to pay the other an amount of interest calculated on a principal amount over several specified periods of time. If the principal amount is the same for both parties, the rate bases of calculation will be different and it is called an interest rate swap. If the principal amounts are expressed in different currencies, it is called a currency swap and, in addition to cross-payment of interest in the different currencies, there is usually an

exchange of the principal amounts at the beginning and end of the swap. Swaps can be for any term agreed between the parties, but tend to be of two to four years duration. Following is a schematic diagram of an interest rate swap and a currency swap.

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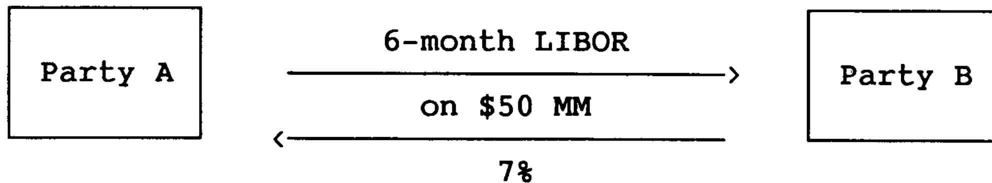
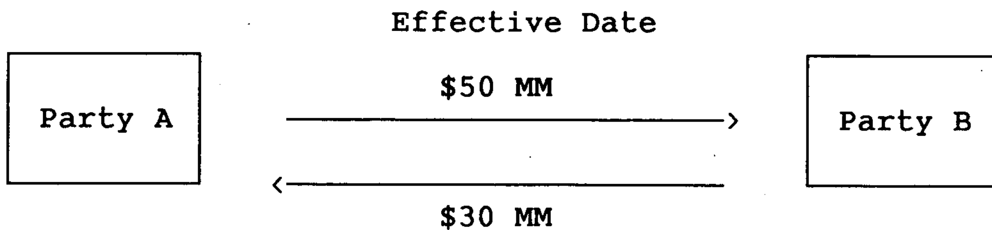
**INTEREST RATE SWAP**



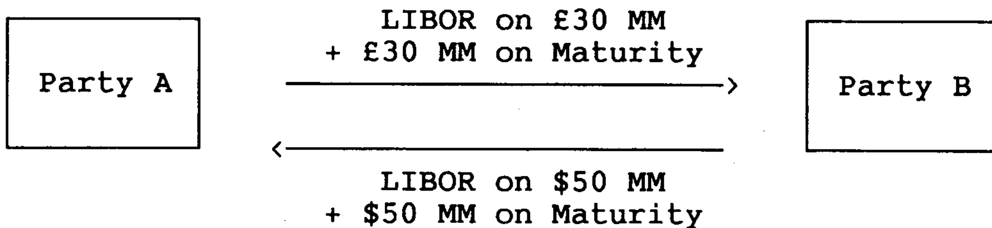

Notional Amount: $50 MM
Payment Dates: Every six months
Term: Three years

**CURRENCY SWAP**

Effective Date




Periodic Payments




Notional Amount: Party A, £30 MM
Party B, $50 MM
Payment Dates: Every six months
Term: Three Years

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There are, of course, many variations on this basic structure. In addition, a plethora of related, so-called derivative, products has developed. These include fully paid transactions such as caps and floors, where one party pays up front to receive from the other cashflows contingent on rate movements in the future, and commodity or equity-indexed transactions utilising swap or fully paid structures.

The only limitations on swap structures are found in the imagination of the parties, their specific needs and applicable law. This capacity for specific tailoring and continuous innovation is one of the great

advantages of the swap and has resulted in increasingly efficient financial markets. On the other hand, virtually any transaction which involves mutual cashflows can be structured in swap terms. The cashflows of a loan, a futures contract, an option or a sale of a commodity or security, a group of commodities or securities or an index on commodities or securities can be replicated through swap structures. The flexibility inherent in the swap structure may make a swap appear similar to a regulated product or amenable to use as a means of evading regulations with respect to another type of product. The protean nature of swaps greatly complicates any effort to categorise or define 'swaps'.

**The market**

Swaps may be used for a variety of purposes, and by a given institution for more than one purpose. For instance, a swap may be used as an integral part of a series of transactions which enable a borrower to acquire funds at a rate more favourable than that otherwise available to it, to manage a party's existing asset and liability structure, to reduce the credit risk to lenders in highly leveraged or project based financings by reducing the borrower's exposure to rate movements which are extraneous to its business, or as a structure for providing an investment package to a potential investor.

Early swaps were usually arranged by financial institutions, which would intermediate by entering into matching but reverse swaps with counterparties (termed 'end-users') which were entering into the swap for one of the above commercial purposes and would typically not know of the other's existence. The financial institution derived fee income for the arrangement and would take a spread in the cashflows for the credit risk it incurred with respect to the end-users. In the mid-1980s, many financial institutions began to view themselves in entering swaps as 'dealers' in swaps, rather than extenders of corporate financial services or credit. Swaps were written against the portfolio of the dealer, rather than a matching swap. The swap market began to take coherent form with the creation of the International Swap Dealers Association, Inc ('ISDA'), an organisation now composed of more than 150 major financial institutions and a number of associate members, each of which may have swap dealing groups in a number of money centres. These dealers form the core of the swap market, and conduct their business on a global basis, both as to the location of their counterparties and their management of the financial risk of the individual swaps. Data from these dealers indicates that in the first half of 1992 alone, swap products with a notional amount of $1.77 trillion were written: $1.32 trillion interest rate swaps; $156 billion currency swaps; and $294 billion derivative products. Another estimate based on data from a broader range of swap market participants is that at the start of 1993 there were swaps with an aggregate notional amount of $7 trillion outstanding.

This market, while large, is almost wholly conducted among large and sophisticated financial and commercial entities. Swaps are treated as a dealing or trading instrument by making, terminating and 'assigning' swaps and quoting swap prices over the phone, often prior to the execution of any formal framework documentation. Despite this superficial appearance of ease of entry and liquidity, swaps are an illiquid instrument. Transfer requires negotiation on price and documentation among three parties as a result of the bilateral nature of a swap and the term credit risk between the parties.

Swap credit risk is a result of, and is contingent on, rate movements since commencement of the swap. Depending on such movements, a party might incur a loss or realise a gain on a default by its counterparty. The amount of this credit risk is certainly not equal to the notional amounts so often bandied about (as I did a minute ago), but it may be significant. In addition, since a party might realise a gain on its counterparty's default, if it is able to net those gains against losses on other swaps with the counterparty, its credit risk is reduced. In a number of jurisdictions, it is unclear whether the ability to net, called 'termination netting', is available under applicable insolvency laws.

Further, the vast number of payments made under swaps results in daily settlement risks. While not as large as the daily risks under foreign exchange contracts, this delivery risk is still substantial. Delivery risk may be reduced between two parties if mutual payments on the same day are netted, with the party obligated to make the larger payment paying only the difference. This type of netting, termed 'payment netting', is not practical in currency swaps, with respect to cross-payments involving different branches of an entity or, often, with respect to different types of derivative products.

The dealer-dominated nature of the swap market has, for purposes of this discussion, two ramifications. First, both credit risk and delivery risk are, due to the dealing nature of the swap market, concentrated among the major dealers. Second, there is a tension within the swap market between the dealer-driven nature of the product and the illiquid credit risk resulting. Concerns have been expressed that swap dealers have not applied the same credit controls to swap transactions as to other credit-based transactions. The aforementioned entry into multiple swaps prior to execution of the agreement is just one example, and it is one of the critical dangers of the swap market. While standardisation of documentation has significantly reduced backlogs in documentation, it has not eliminated them. Further, the existence of standardised documentation, the delays resulting from non-standard documentation, and competitive pressure from other dealers have resulted in many dealers not requiring the same sort of credit controls in their swap agreements as in other credit-based transactions.

**CURRENT REGULATION OF SWAPS**

The legal analysis of mature financial products in established financial markets is relatively straightforward. The pitfalls, although usually of interest, always evolving and sometimes substantial, are generally widely understood. Regulatory issues are publicly identified and market-acceptable procedures will have evolved to comply with the resulting requirements.

The legal analysis of innovative products in either established or emerging financial markets is more difficult. Ten years ago there were substantive regulations expressly applicable to swaps in few, if any, jurisdictions. Swaps thus developed in a largely unregulated environment, principally in London and the United States.

The absence of specific regulation with respect to any innovative product presents certain challenges. This is particularly true with respect to an instrument such as a swap with its inherent flexibility which may result in it appearing similar to another regulated instrument. Governmental authorities may be faced with a limitation on staff and resources which curtails their ability adequately to analyse the instrument and its effects on the markets. Competing agencies may each, with some legal basis, claim jurisdiction in an effort to protect bureaucratic 'turf'. A given department may have jurisdiction over a particular industry towards which it takes a protective attitude, resulting in a narrow approach which may discourage sophisticated analysis and a result which is best for society as a whole. There may be a legitimate concern over reaching an administrative result which, although desirable for the new product, may establish undesirable precedents with respect either to somewhat similar but essentially different instruments or to further anticipated (or feared) refinements of the new product itself. A regulator, or a court applying regulatory laws, may attempt to apply principles developed with respect to other products offered in other contexts or may have difficulty in determining which existing products are relevant by way of precedent.

Finally, the global nature of the swap market complicates a regulatory analysis. It may be necessary for a regulator to consider the level of regulation in other jurisdictions in addressing regulation of swaps in its jurisdiction. If the regulatory burden differs among jurisdictions, business may be driven to those jurisdictions which allow greater freedom and less burdensome regulation. It may be necessary for a dealer to familiarise itself with the laws of many jurisdictions. For instance, a US bank acting through its Tokyo branch must consider applicable laws and regulations of the US and Japan. If it is dealing with the Hong Kong branch of a German bank, certain laws and regulations of those two jurisdictions must be considered, although the first bank may be prepared to rely to a certain extent on the legal determinations made, and perhaps warranted, by the second bank.

All of these factors may result in uncertainty as to capacity, general permissibility, tax treatment and enforcement. Often, the best one can do is to reason by analogy and to follow the course which is supported by the better legal argument after assessing the risks if the negative argument should ultimately prevail. This uncertainty is at a minimum an inhibition on the efficient use of swaps. It may be disastrous. If for some reason swaps are declared illegal in one country, an end-user which entered into a swap to hedge, say, a borrowing or a dealer which hedged through other instruments which remained

lawful and binding could incur substantial losses. A global dealer (many of whose hedging positions might be in jurisdictions where swaps are legal) could incur even more substantial losses. If swaps are determined to be unenforceable against a class of swap user, credit losses could also be substantial.

The primary regulatory 'problem' with respect to swaps to date has thus not been the absence of regulation, but the absence of certainty resulting from the failure to clarify the nature of swaps under existing regulations. Gradually, however, swaps are being allocated their place in the regulatory scheme of many jurisdictions.

**Swaps integrated into regulatory systems**

In only a few jurisdictions are swaps integrated in a comprehensive way in the financial regulatory system. Not surprisingly, this tends to occur in jurisdictions which have substantially overhauled their financial regulatory systems in the last five or six years. One such jurisdiction is the United Kingdom. Under the *Financial Services Act* ('FSA'), the offering of a broad range of instruments (including swaps), termed 'investments', is regulated through limiting the conduct of 'investment' business to authorised persons who are regulated and to certain specified exempted persons. Authorised persons may offer investments to commercial entities or the public, with greater levels of disclosure and care being imposed on offers to the latter. The exemptions include overseas persons who neither advertise nor make unsolicited calls on persons and entities deemed less sophisticated.

As a separate matter, the Bank of England has published the *London Code of Conduct*, which sets out the principles, in some detail, governing the conduct of wholesale market dealings in financial products outside of the recognised investment exchanges, including swaps. While no specific penalties attach to breach of the *London Code*, the Bank of England has stated that it will view such breaches 'most seriously' and they may be 'reflected in their assessment of the fitness and propriety' of the dealing institutions.

While swaps are included within the definition of investments in the FSA and are included as financial products subject to the wholesale dealing requirements of the *London Code of Conduct*, it is important to note that they are not specially regulated in the United Kingdom as instruments in their own right.

**Case-by-case elimination of uncertainty**

Legal uncertainty may be most pronounced in jurisdictions which have product-oriented laws which regulate the market in specific products, such as deposits, insurance, securities, futures or options. I understand that the Australian *Corporations Law* presents some interesting issues with respect to definitions of 'futures contracts' and 'commodity agreements' and the *Insurance Act* is not totally clear that swaps do not constitute 'insurance business'. In the United States, there are separate and largely uncoordinated regulatory schemes for the securities business, the insurance business, the futures and options business and the banking business. If an instrument falls within a defined category, it (or the offeror) is regulated; if it does not, it is not regulated. Offering the instrument without compliance with the regulations may render the instrument unenforceable or subject to rescission. The nature of swaps may result in their falling within the restrictive ambit of regulatory systems applicable to these other financial products. The definitional determination is crucial.

For instance, between 1986 and 1992 there was concern over the uncertainty as to whether swaps constituted 'futures' contracts within the meaning of the US *Commodity Exchange Act*. In fact, the relevant regulatory authority, the Commodity Futures Trading Commission, believed that they did. One result of a court finding a swap to be a futures contract would have been the unenforceability of all swap agreements in the United States. This small but real risk was only eliminated by statute in late 1992 and CFTC regulation in early 1993, which exempted most swaps (notably not including equity swaps) from the more troublesome provisions of the *Commodity Exchange Act*. The definitions surrounding the exemption include restrictions on appropriate swap counterparties, 'eligible swap participants', which are commercial institutions, and high net worth individuals, meeting financial tests. This illustrates a

particular regulatory phenomenon, The power to exempt implies the power to define. The power to define can be taken on an open-ended basis to mean the establishment of lengthy and detailed requirements for exemption. Thus, although not apparently intended and, so far, not so used, the 1992 CEA amendment could result in a form of 'back door' regulation which could be the opening wedge of a more comprehensive form of swap regulation in the United States.

Related, and not totally dissimilar, is paternalistic legislation in many jurisdictions which was not intended to apply to modern financial instruments but may inadvertently apply to swaps. For instance, many jurisdictions, including, as you know, Australia, have gaming or gambling statutes which render unenforceable wagers and bets. Any future agreement where payment is based on the difference between two indices can in many jurisdictions be analysed in gambling terms. The reality of most of these markets, however, which involve substantial financial institutions, is that commercial hedging, investment and dealing activities which fall within an entity's legitimate corporate purposes do not constitute wagers in this sense. A fundamental defect of the gambling laws therefore is that by their terms they typically are not restricted to unsophisticated individuals and can technically apply to hedging transactions between large commercial entities. Residual uncertainty created by these laws undercuts the efficiency of the markets. In the United States with respect to exempted swaps and in the United Kingdom with respect to investments offered by authorised or exempted persons, legislation provides that gambling or gaming laws do not apply. In Hong Kong, legislation was passed following an unfortunate court decision which has removed some of the uncertainty with respect to swaps. In Germany, legislation provides that certain types of transaction, which may include swaps, are exempted from the gambling laws if one of the parties is a 'merchant' (roughly, a large commercial institution). Statutory exclusion of certain instruments from the gambling acts may, however, create an unfortunate presumption with respect to instruments not expressly excluded.

**Regulation of particular institutions**

Certain institutions such as banks, securities houses and insurance companies, which are regarded as central to the markets or because they have been granted a monopoly on certain products, are regulated by specialised regulators who exercise detailed supervisory authority over their activities. Supervision of the activities of the regulated institution would include supervision of swaps which form part of their activities.

**1. Powers**

One form of regulation of these specialised institutions may be a limitation on their power to conduct business beyond the purpose for which they were established. If their powers are limited, their ability to engage in swaps may be restricted and the swaps may be unenforceable against them. For example, the power of US banks to engage in commodity swaps was unclear, since they expressly do not have the power to deal in basic commodities. Regulatory approval was gradually obtained as the market developed. First, the Office of the Comptroller of the Currency approved commodity swaps on a matched basis (ie matching but reverse swaps with two end-users), analysing the risk as the credit risk of the two end-users rather than the underlying commodity. Subsequently, as the regulators grew more comfortable with this product, and with the banks' ability to manage the risk, the OCC and other US banking regulators approved portfolio hedging. As another example, the power of English insurance companies to engage in swaps in England is not entirely clear. The better, and clear majority view, is that they should be allowed to do so as part of their investment activities but may not do so as a dealer. However, residual uncertainty has led some dealers to refrain from entering into swaps with UK insurance companies.

Perhaps the most widely publicised illustration of the capacity problem occurred in England, where local authorities (the UK version of municipalities) were found to lack the capacity to enter into these 'esoteric' (as the court called it) instruments. The court was presented with a choice of imposing £400 million of losses on banks who had dealt with the local authorities or on the taxpayer. The courts chose the former. While the facts in that case were quite narrow and perhaps not directly relevant to a discussion of

regulation, one central element of the reasoning of the decision, that a swap is a separate transaction from the overall transaction of which it might form a part, is regarded as having potentially broad, and disturbing, application.

This question of capacity must be addressed in every situation where a party is subject to a regulatory scheme limiting its powers, be that scheme regulation of banks, securities houses, insurance companies, pension funds, statutory corporations or governmental subdivisions. In the absence of total clarity, the risk might in some cases still be reduced to one which is commercially acceptable. Nonetheless, the risk of swaps being found to be beyond the powers of a large class of swap end-users, such as occurred with the UK local authorities, is one of the real threats faced by swap dealers.

## 2. Prudential controls

Supervision of specialised institutions also includes prudential controls. Such controls may include reporting requirements, general prudential requirements, restrictions on types of investment, maintenance of adequate documentation and operating controls, formal credit approval processes, and limitations on credit exposure to any one person or category of person. Financial regulators in most jurisdictions have integrated swaps into the various supervisory requirements imposed on institutions which they regulate. For instance, banking regulators, as part of their audit procedure, have exerted pressure on their banks to reduce the number of swap transactions which are undocumented, ie where swaps are confirmed prior to execution of the formal master agreement.

In addition to formal supervision, regulators have applied informal pressure to assure prudential operations. Informal pressure from banking regulators has been instrumental in moving the market towards use of 'two-way' payments on termination of a swap agreement as distinguished from the heretofore standard use of what might be called the 'walk-away' approach where a defaulting institution would not receive any net value it had in the swap transactions. The walk-away approach could be viewed as detrimental to the solvency of a major swap dealer.

The most significant banking supervisory effort with respect to swaps has been the inclusion of swap credit risk in capital adequacy requirements. Concern grew among international banking regulators in the mid 1980s as to the global increase in credit risk, particularly relating to off-balance sheet risks, the effects of this risk on particular institutions and the consequent threat to the global banking industry. To force banks to improve their capital position in the context of credit risk, capital adequacy requirements were established. As swaps were part of the perceived credit risk, and as there were concerns that due to the dealing nature of the swap market banks were not adequately addressing credit in their pricing, swaps were integrated into the capital requirement calculations. The calculations, however, were based on the amount of credit risk. Determining that amount is relatively simple with respect to a loan: the amount advanced. But what is it for a swap? We know it is not the notional amount, and we know it is not zero. The formula for translating the contingent risk of swaps into a concrete number for purposes of the requirements was a much debated issue and its resolution illustrates a number of interesting aspects of the regulatory approach.

First, it became apparent early on that, if only one or two central banking authorities imposed capital adequacy requirements on institutions subject to their supervision, those institutions would be at a competitive pricing advantage with respect to institutions not subject to those requirements. Thus the capital adequacy requirements were discussed over a period of years and agreed by the authorities in the leading industrial countries. The need for a relatively uniform global approach delayed the process but resulted in a more effective scheme. In a global industry, domestic concerns must be addressed in light of global competition.

Second, swap market participants, both individually with respect to their primary regulators and collectively through ISDA, spent considerable effort in educating the regulators as to the risks inherent in swaps and did have an impact in that the ultimate credit conversion factors were less stringent than those which had been originally proposed. While industry and the regulators may have diametrically opposed goals, a co-operative approach will achieve a better informed and more rational result.

Third, despite intensive industry lobbying to the contrary, the regulators did not permit regulated institutions to net out liabilities with the same counterparty so that only the net exposure need be accounted for. In effect, the capital adequacy requirements do not presently allow for termination netting. The ostensible reason for this approach is that the laws of most jurisdictions are unclear as to whether or not termination would be permitted on the default (particularly in insolvency) of a party incorporated in those jurisdictions. While this is perhaps true in some jurisdictions, it is highly likely that termination netting would be permitted in many jurisdictions and it is certain that it would be permitted in some jurisdictions (such as the United States, at least with respect to certain types of counterparties such as corporations and banks, where the *Bankruptcy Code* and banking laws were amended expressly to achieve that result). Nonetheless, while indicating that termination netting may be recognised in the near future, the regulators do not allow for termination netting in calculating capital requirements even with respect to counterparties in those jurisdictions. There have been several stated, and perhaps one unstated, reason for this. The two stated reasons are that to permit such netting would be highly complex since it would involve multiple analyses of the governing law of the contract, the jurisdiction of incorporation of a counterparty and the jurisdiction of a branch through which the counterparty might be acting (if different). In addition, there is a sense that if netting were permitted with respect to, say, US counterparties, this would provide them a competitive advantage, a 'non-level playing field'. This argument may not attract much sympathy since, if the purpose of the capital adequacy requirements is to reflect credit exposure and the law is clear that credit exposure is reduced, why should those counterparties not have an advantage? This suggests that an unstated reason may be that, by not recognising termination netting for capital adequacy purposes even where it is legally certain, the regulators in effect are limiting the size of the swap market, perhaps out of concern for the systemic risk discussed below. A form of regulation ostensibly intended to address a particular concern may be used for broader purposes.

**Summary**

To summarise to this point:

(a) Swaps are flexible, innovative and bilateral arrangements, principally between sophisticated commercial entities, which arrangements are difficult to define or categorise on a comprehensive basis but are nonetheless a central feature of international finance;

(b) The swap market is conducted on a global basis;

(c) Swaps create credit risk between the parties, both term credit risk and delivery risk, and are illiquid;

(d) The swap market is dealer-dominated which means that this credit risk is concentrated among a relatively small number of financial institutions;

(e) Swaps are gradually being integrated into existing regulatory schemes, but are still largely unregulated as an instrument per se; and

(f) There have been and still are fundamental questions as to capacity, permissibility and enforcement, and the resulting uncertainty, more than any other factor, poses a threat to the swap market.

**FRAMEWORK FOR APPROACH TO SWAP REGULATION**

Before analysing why and how swaps should be regulated, it may be useful to consider the legitimate purposes of regulation. It should be noted at the outset that what is a legitimate purpose of regulation must be determined in the context of the overall political and ideological framework of the jurisdiction in question. While one government might stringently attempt to manage the economy and another might leave management of the economy to operation of market forces, I will only focus on regulation in the context of a government which generally believes in the free market approach. Within this basic free

market approach, however, a given government may have a bias towards a more managed or less managed economy. Legitimacy of regulation is neutral on such ideological grounds but an analysis of regulation in any particular jurisdiction must be in the context of that jurisdiction's ideological bias.

Whichever overall approach is taken, let us focus on swaps in the context of six purposes of regulation. It should be understood that the list is not exhaustive, and there is substantial overlap among the purposes on the list.

A. protection of the capital raising markets;

B. protection of the less sophisticated person;

C. protection of regulated institutions;

D. protection of access to (price of) sensitive commodities;

E. protection of monetary system; and

F. protection against systemic risk.

It is also worth noting two reasons for regulation which, regardless of the bias of the regulatory scheme of the jurisdiction, would be regarded by most people as improper. The first is what may be termed 'protectionist regulation'. Here, a particular industry may seek to use the regulatory system to prevent competition in a manner unrelated to the legitimate purposes of regulation. Second is what might be called 'regulatory overreach'. This may be based on a bureaucratic mind-set which, as a starting point, believes everything should be regulated: regulation for the sake of regulation.

Having described the product and the market, addressed the difficulties of applying existing regulation to innovative products and tentatively set forth reasons for regulation in general, let us now look at how swaps should, if at all, be regulated.

**A. Protection of capital raising markets**

Most jurisdictions have laws intended to protect the integrity of the investment market and to promote the orderly raising of capital. The thrust of these laws is generally to provide the framework in which the market can freely operate, establishing rules of conduct designed to improve the flow of information and the confidence of participants that the 'game' is fair. These laws are often intended to protect the investing public, usually with less stringent controls with respect to transactions between sophisticated, knowledgeable and substantial institutions.

Swaps are indeed central to the broader financial markets and play an important role in bank financing, securities issuances (both public and private) and other capital raising activities. I am, however, unaware of claims that the operation of the swap market is any way abusive or unfair or distorts the financial markets. Indeed, the existence of swaps has resulted in more efficient markets and better pricing for those seeking finance. Other than the desire to regulate anything that is important for the sake of regulating it, there would appear to be little benefit in regulating swaps for this purpose. Indeed, to the extent that regulation impedes innovation, efficiency of the capital raising markets will be decreased. To the extent regulation of the capital markets is based on preserving the fairness of the market, it should be noted that participants in the swap market by and large are eminently capable of taking care of themselves.

That does not, however, mean that the regulators should ignore swaps. Regulation of the product per se must be distinguished from integration of the product into existing regulatory schemes. Where there is a comprehensive system of financial regulation, as in the United Kingdom, swaps presumably should be included. Where swaps tangentially are relevant to another regulatory scheme, they should be

recognised. For instance, the US Securities and Exchange Commission, which administers the US securities laws, including the requirements for adequate disclosure by issuers of securities, has required public disclosure of certain types of off-balance sheet risks so that investors are able to make an informed decision on the financial status of issuers.

With respect to those potential swap counterparties who the government feels are not capable of taking care of themselves, we can turn to the next issue.

### B. Protection of the less sophisticated person

Many laws are designed to protect the average citizen, the 'little guy'. Such laws may be based on a paternalistic desire by those in power to protect the average citizen from the depredations of what are perceived to be intrinsically greedy and untrustworthy large institutions. They may be designed to protect the average citizen from his own folly. They may be designed to assure the average citizen that he can participate in the financial markets on a fair basis, thereby inducing him to employ his savings for productive purposes (be they bank deposits, stock investments or futures transactions) rather than accumulating his funds under his mattress.

To the extent that a government desires to protect the individual, regulation of swaps may be achieved either through excluding from the swap market those for whom protection is desired or confining swaps with such individuals to institutions which are regulated in their dealings with the public. In the United States, the approach has been to restrict swaps to 'eligible swap participants', commercial entities and high net worth individuals who meet certain financial tests. Those that do not meet such tests, but nonetheless wish to speculate, are enabled to do so on the regulated exchanges subject to the safeguards there provided. In the United Kingdom, protection is achieved through regulation of those authorised to offer or arrange a broad variety of 'investments' (including swaps), with a higher degree of disclosure and fiduciary obligation imposed with respect to investments offered to the retail public than is imposed in the wholesale market.

Further, existing legislation which is designed to protect the individual should be revised to ensure that its scope does not extend to transactions between parties who do not need that protection. Where legislation, such as the gambling laws, may inadvertently apply to swaps, a fundamental goal of those seeking to 'regulate' swaps should be to review and, if necessary, revise these laws to assure that they do not relate to new products which are conducted in a context unrelated to the purpose of those laws.

### C. Regulation of certain types of institutions

Certain institutions may be regulated because of their prominence in the economic system. These typically include banks, insurance companies, securities houses and futures merchants. These controls may be in part designed to protect the small investor, preserve confidence in the investment market and protect the domestic monetary system. Regulation may take several forms.

#### (a) Monopoly of product

Institutions may be grated a monopoly on a product in return for regulation on the conduct of its business, as a means of protecting the investor. For instance, deposit-taking may be limited to banks which are then subject to disclosure and prudential requirements. Securities dealing may be limited to registered broker/dealers, who are subject to requirements as to disclosure to customers and making determinations as to suitability of certain types of investments for customers.

This, however, is only done once it is determined for **other** reasons that the product should be regulated. The Japanese authorities chose to regulate swaps by limiting them to certain entities. In this way, the authorities were able to monitor and control the development of swaps in Japan through control of those entities. Unless the government for another reason wishes to regulate swaps or classes of swap, granting a monopoly on swaps, or a class of swaps, to any one type of institution would seem to serve

no purpose. However, if it was determined to regulate swaps offered to the general public, one approach might be to limit the offering of those swaps to institutions whose solvency and conduct of business was supervised.

**(b) Prudential requirements**

In return for monopoly over a product, controls may be placed on these regulated institutions designed to control their solvency and conduct of business. There is no reason why regulators with responsibility for particular institutions should not impose on the regulated institutions prudential controls similar to the controls imposed with respect to other financial transactions. However, due to the unique nature of swaps, applying those existing controls to swaps requires careful consideration, as illustrated by the process of inclusion of swaps in capital adequacy requirements.

Precluding certain regulated institutions from activities beyond their statutory purpose, such as dealing or speculating in swaps, may also be a concern of the individual regulator. Each industry regulator should determine whether or not the institution which it regulates should be permitted to enter into swaps. If it is determined that the use of swaps is beneficial to the institution, the regulator, to the extent there is doubt as to capacity, should clarify the circumstances under which the institution could enter swaps. If legislation is required to clarify the situation, the regulator should consider initiating and guiding the legislation process. Such clarification may be necessary both to enable the institution to have access to the swap market and to protect the swap market from the potentially serious losses from a finding that the type of counterparty lacked capacity. To accomplish these goals, the required procedures and circumstances should be such that a counterparty is able to make an objective determination as to the lawfulness of the swap with the regulated institution.

**(c) Protection from 'unfair competition'**

Another form of regulation would be the control of competition with regulated institutions on the theory that, in return for the restrictions imposed on the regulated institutions, they must be protected from 'unfair' competition from companies which are not regulated. For instance, a principal reason for the establishment and regulation of the organised futures exchanges may be to provide a safe avenue for speculation (subject only to the accepted dangers inherent in speculation) by participants in certain types of instruments. To allow others to offer the same instrument to those individuals without regulation may be to undercut the viability of the regulated system. In fact, the principal proponents of swap regulation are the organised futures exchanges, representing of course their members. Their argument is that permitting other institutions to offer swaps without the restrictions to which they are subject will drive business off the exchanges and, presumably, them out of business.

However, the implication of regulation of an institution may drift into a protective attitude towards the industry regulated. Before acceding to claims of unfair competition, the issue should be explored in depth. First, there is a substantial argument that swaps are different than futures and serve a different purpose. While swaps are more flexible, futures are more liquid. While a swap **could** be used to replicate the cash flows of a futures contract, both the bilateral arrangements between the parties and the substantive negotiated terms of swaps tend to be quite different from futures. The difficulties faced by the exchanges in the United States in offering swap-like products illustrate that swaps as such may not be amenable to exchange trading. There are further substantial arguments that the existence of the over-the-counter market in swaps and other derivative instruments has led to an increase in the actual amount of business conducted on the exchanges as a result of the hedging requirements of dealers with respect to those instruments.

Thus, claims of 'unfair' competition should be closely analysed both on a conceptual and factual basis. It may be found that there is some legitimacy to the claim. For instance, to the extent that the concern is to protect the fundamental monopoly of the exchanges, one might legitimately exclude from the over-the-counter market the small investor who in fact might be tempted to use swaps as an alternative to a futures contract. Of course, the small investor is then denied the opportunity to hedge long term fluctuating rate risk which he may face (eg on his home mortgage).

**D. Protection of access to (price of) sensitive commodities**

A government may wish to regulate the price of certain commodities, be it farm produce, energy products or securities, which it deems central to the functioning of the economy or expedient for political reasons. It may therefore choose to regulate any instrument which affects the price or marketability of those products. If the government wishes to protect farmers from radical price swings in agricultural products, it may either prohibit speculation in the price of those products or it may establish a regulated market in which such price risk can be managed on what the government perceives to be a fair basis. If it wishes to restrict threats to the stability of prices of traded stocks, it may impose margin limitations on borrowings to purchase stocks.

To the extent that a government's policy is to regulate the price of certain commodities, it may choose to regulate any instrument which provides a speculative outlet with respect to that price. To the extent that a swap does so by use of an index with respect to the underlying, presumably it should be regulated along with other products relating to the price of the underlying. Again, this is not a reason to regulate swaps as such, but it may be a reason to include swaps based on the regulated commodity into the regulatory scheme with respect to that commodity. Before doing so, however, it should be determined that swaps involving the commodity, as a matter of fact, have the potential to disrupt the price which is being managed.

**E. Protection of the monetary system**

Some jurisdictions have regulatory systems, such as exchange controls, to protect the domestic economy or monetary system. The thrust of these laws is to support the integrity of the local currency, to manage local interest rates, to restrict capital outflows and perhaps to protect domestically organised financial institutions from foreign competitors.

Any jurisdiction which has rules regulating financial flows out of the country or currency or interest rate transactions within the country would, of course, include swaps within those controls. There would appear to be, however, no particular reason to single swaps out.

**F. Protection against systemic risk**

Related to protection of the monetary system is the concern over what is referred to as 'systemic risk'. It is this which proponents of regulation of swaps as a product cite as the 'scare' scenario to support their cause, often based on references to the huge notional amounts involved, glossing over the much smaller actual cash flows and credit risk. In the context of swaps, systemic risk is of two types.

**(a) Term credit risk**

First is the risk posed to individual banks through the term credit risk of swaps. The concern would be that the default risk, whether in swaps, inter-bank deposits, foreign exchange transactions, repos and the like was too concentrated. Here, the 'scare' scenario refers to the LDC or property debt crises of the recent past, where concentrated sector risk posed serious credit concerns to many individual banks on a scale sufficient to threaten global financial stability. There are, however, several elements which must be considered in analysing swaps in this context.

As a starting point, to the extent that a swap dealer is a regulated institution, the credit risk of that institution in its swap activities should appropriately be addressed by the relevant regulator, as discussed earlier, as part of the overall supervision of the credit-based activities of the institution.

Second, the concentration of the risk is most significant among the banks themselves. It is, except as noted below, not a risk from an extraneous sector. The problem is one of total exposure of interbank liabilities. This suggests two mitigating factors with respect to swaps: swaps form a noticeable, but not the major, element of interbank risk; and global regulatory efforts to strengthen bank solvency further reduce this risk.

Third, the principal extraneous risk which is germane to derivatives is perhaps not credit risk but the risk of a rapid and extreme fluctuation in rates such that a given institution is exposed through an open position or the failure of its hedge. The banking regulators are addressing this risk in several ways. As part of their supervisory powers, they pay serious attention to the hedging of rate, currency and price risk. In addition, capital adequacy requirements have been in some jurisdictions, and are being in others, revised to account for position risk.

Fourth, is the legal risk of default: the risk that swaps would not be enforceable against a significant class of counterparties or that termination netting would not be allowed. Here, the focus of the regulators should be on adjustment of the domestic legal system, including lobbying for necessary legislative changes, which will reduce the amount of credit risk.

Since systemic risk from interbank exposure is reduced through regulation and supervision of financial institutions, an issue arises as to the status of those swap dealers who are not regulated and not subject to capital adequacy requirements. As noted, in the United Kingdom, all swap dealers must be authorised or exempted, and all swap dealers in the jurisdiction are subject to capital adequacy requirements. In the United States, only bank swap dealers are regulated in their conduct of business and subject to capital adequacy requirements.[1] Does the existence of a few unregulated institutions pose a systemic risk? First, since the market is sophisticated, there is a significant element of self control, as counterparties of the unregulated institutions make credit evaluations of them. Second, since institutions subject to capital adequacy requirements must maintain greater capital with respect to swaps with the unregulated institution, the unregulated institution indirectly bears the cost of the requirements in the effect on the pricing offered to it by regulated counterparties. Third, as noted above, swaps do not form the main element of interbank risk. The exposure of one dealer to another, as a result of swaps, is highly unlikely to approach the level of systemic risk. Worded another way, a separately constituted swap dealer, particularly if it has a reasonably hedged portfolio, if it uses two-way payments on default and if termination netting is enforceable, presents a substantially lower credit risk to the banking system than does a provider of a broad range of financial services. Experience shows that swap losses in those rare situations where swap dealers have defaulted have not been large. Further, swaps were not the cause of the default. In several cases the swap market illustrated its maturity and capacity to deal with the situation by the location of a dealer to take over the defaulting party's whole portfolio and the co-operation of a large number of counterparties in refraining from precipitous action and agreeing the takeover.

**(b) Delivery risk**

Another aspect of credit risk is delivery risk. On any given day, there are billions of dollars of payments being processed through a relatively small number of financial institutions. A large number of these payments represent funds which the recipient requires in order to make a payment due on the same date. This is especially true of dealer-dominated bilateral agreements, such as foreign exchange contracts, swaps and repo transactions. Here, the 'scare' scenario is the default of a major dealer on a given date, such that payments due it on that date perhaps may or may not be paid, depending on the knowledge of the payers, but all payments by it on that date are not made. Suddenly, the intended recipients of those payments do not have funds available to make the payments they owe others and, in a follow-on effect, there is a financial meltdown as non-payments ripple-out through the system.

The principal problems here are the size of the payment flows and the efficiency of existing settlement systems. With respect to the size problem, I have no figures for the percentage daily cash flows constituted by swap payments. My guess is that the percentage is not such as to single swaps and derivatives out, although international banking regulators may indirectly but intentionally be doing so through capital adequacy requirements as discussed earlier.

The fundamental regulatory goal should be the establishment of settlement systems, which could involve multi-lateral netting arrangements, to mitigate the effects of such a default both in terms of actual loss to a given counterparty and the ripple effects on the settlement systems. In some jurisdictions, such multi-

lateral netting schemes might in fact be expressly or arguably prohibited under other regulatory schemes. In addition, relevant laws of a jurisdiction relating to set-off and insolvency may raise questions as to enforceability of such systems. The focus of the regulators should not be necessarily on imposing a new layer of regulation or on limiting the amount of business but on the establishment of settlement, clearing and netting systems, adjustment of the regulatory scheme to the extent such systems might otherwise be prohibited and passage of legislation to clarify the enforceability of such systems.

## CONCLUSION

The term 'regulation' may be interpreted by many to mean a layer of restriction and limitations imposed on the product regulated. In this sense, there seems to be little reason to single swaps and derivatives out for regulation. But the term may have a broader meaning of integrating a product into the domestic legal structure. This can include, where the financial system is comprehensively regulated, corresponding regulation of swaps. But in a broader sense, it also means clarifying the legality and enforceability of the product. In terms of many of the deemed goals of regulation, this clarification is more needed than the imposition of a layer of regulation on the product as a product. The primary focus of the regulators should be first on eliminating the risks posed by uncertainty, which may include lobbying for legislative change.

## FOOTNOTES

1. While US brokers/dealers who enter into swaps are subject to capital adequacy requirements, these requirements do not apply to swaps of affiliates. Swap dealers whose main business is in securities structure their swap dealing operations through subsidiaries of the broker/dealer guaranteed by the parent of the broker/dealer or structured on an over-capitalised basis. The SEC is understood to be reviewing their capital adequacy requirements and whether or not brokers/dealers should be 'urged' to run their swap books through the regulated unit. In addition, several US dealers are affiliates of insurance companies, not subject to insurance regulation or any capital adequacy requirements.