The Law and Regulation of OTC Derivatives: An Anglo-American Comparison and Lessons for Developing Countries

by

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1. Introduction

Based on different underlying assets and instruments, derivatives are traded in the absence of clearing houses and organised markets. Since they are not exchange-traded, derivatives are not widely understood. In Over-the-counter (OTC) markets, counterparty default risk generates a network of interdependencies among market actors, promotes risk volatility and results in systemic risk. The largest bankruptcy in the US, Lehman Brothers Holdings Inc., was the result of derivatives financing.[1] The same OTC financing caused the failure of the Barings Bank in 1990s.[2] Presently, an estimated amount of US$604.6 trillion is outstanding from OTC derivatives contracts,[3] which is roughly more than ten times of the world GDP (US$57.53 trillion). The inherent lack of transparency in OTC markets impairs price discovery and obviates the efficient markets hypothesis, i.e., the OTC derivatives and the risks associated with them may be priced incorrectly.

The aim of this article is to examine the threat of systemic risk posed by speculative OTC derivative financing to financial institutions and the efforts made by the regulators to reduce such risk. A critical and comparative analysis of the Anglo-American approach to regulate OTC derivatives is endeavoured, in order to evaluate how these advanced economies have proven effective in achieving the ultimate objectives of financial stability, certainty and predictability. The Article examines how the financial regulators of these advanced economies have responded to the vociferous public debate about the threats that OTC derivative financing may have on the overall stability of contemporary financial systems. While the threat is the same, there are substantial differences in regulatory approaches and conclusions. The article concludes by showing how OTC derivatives regulations of advanced economies can be applied to emerging financial markets in order to both increase market efficiency and attain financial stability.

In addition to the introduction and conclusion this article is divided into four main parts where each part has its own introduction and conclusions. Chapter 2 begins with an introduction to financial derivatives; the derivatives products (contracts) viz. forwards, swaps and options are introduced and their possible uses, i.e., arbitrage, hedging and speculation are explored. Chapter 3 investigates different types of risks associated with derivatives financing and the legal nature of derivatives contracts and concludes with an analysis of the different regulatory approaches adopted for OTC derivatives.

[1]See online at http://online.wsj.com/article/SB122166095912947875.html?KEYWORDS=Lehman+Brothers+Holdings+Inc

[2]A. S. Bhalla; Collapse of Barings Bank: Case of Market Failure; (Economic and Political Weekly); Vol. 30, No. 13 (Apr. 1, 1995), pp. 658-662

[3] See online at http://www.bis.org/statistics/otcder/dt1920a.pdf

Chapter 4 gives a detailed analysis of and compares the OTC regulation in the United Kingdom (the UK) and the United States of America (the US). The purpose is to identify any similarities and differences in these two regulatory approaches that deal with the identical problem of systemic risk posed by OTC derivatives. Chapter 5 begins with the assessment of potential benefits of OTC derivates. After outlining the potential benefits and also the potential risks of the OTC derivatives for the developing economies, the article gives concrete solutions for the developing economies to regulate their OTC financial markets.

2. An Introduction to Financial Derivatives Contracts

2.1 Derivatives Contracts in General

This chapter describes the nature of a derivative transaction. After exploring the difference between exchange traded and "over the counter" (OTC) derivatives, some important derivatives products like forwards, options and swaps, are evaluated. It also looks at the rationale of derivative financing and the driving force that has lead the financial markets to invent derivatives. In this context, concepts like hedging, speculation and arbitrage, are discussed. It concludes that derivatives financing, whether driven by hedging or speculation, is inherently open to certain kinds of risks.

A derivative is a transaction originating from an underlying instrument and it derives its value from that underlying instrument. Derivatives underlyings include corporate bonds, payment obligations under a loan agreement, shares, commodities, indexes, interest rate, but this list is by no means exhaustive. A derivative contract is purely financial in its nature. In both financial contracts and contracts for real goods and services, the contract requires that the underlying security or good be delivered either immediately or later on an agreed date.[4] This, however, is not the case with a derivative contract. In a financial derivatives contract, the parties at the outset of the contract intend no actual delivery of the underlying instrument or asset. This is the factor that converts an ordinary futures contract into a derivative contract.[5] In a derivative futures contract the delivery is intended to be settled by payment of a single lump sum, or some other special arrangement.[6] The underlyings from which derivatives derive their value are called derivative products.

Derivative contracts can be transacted in one of two ways. First, it can be transacted on an exchange. This is generally referred to as an exchange-traded derivative contract and is subject to the rules governing transactions on the exchange. The clearinghouse of the exchange

[4] Don M. Chance; An Introduction to Options and Futures; (The Pryden Press Chicago 1989), p.3

[5] Cf. Simon James; The Law of Derivatives; (LLP1999), p.3

[6] As we will discuss later the buyer and seller 'closeout' the contract by taking off-setting positions

interposes itself between the buyer and the seller, and acts as a central counterparty of all derivative deals. To protect itself from insolvency, the clearinghouse requires traders to deposit an initial margin. Additional margin calls are also made on the basis of movements in derivative prices. Most of the terms of an exchange-traded derivative are standardized.[7]

Alternatively, derivatives contracts can be entered as 'over the counter' (OTC). An OTC derivative contract is separately negotiated and a tailor-made contract as compared to a standard and readymade exchange-traded derivatives contract and parties can enter into the terms of their own choice, including the maturity date and contract volume. Parties, if they desire, can make an OTC derivatives contract subject to exchange rules. The eminent backdrop for OTC derivatives is the absence of formally organised market (e.g. an exchange for exchange-traded derivatives) and channelled counterparty risk assessment.[8] Since OTC derivatives remain the main focus of discussion in this article, identifying the specialised OTC derivatives products is next on the agenda.

2.2 Derivatives products

2.2.1. Forwards Contracts

As said earlier, a derivative derives its value from an underlying instrument or asset where there is no exhaustive list of such underlyings. The spectrum of these underlyings can, however, be condensed by dividing them according to the nature and form of the transaction involved. These transactions are, in other words, the building blocks of a derivatives contract. The most popular type of derivatives contracts is a forwards contract. Forwards contracts can be either '*financial forwards*' or '*commodity forwards'*, depending on the underlying asset. Principally, a forwards contract is an agreement to deliver in the future at the price agreed upon now. A financial forwards contract, as compared to commodity forwards contracts, calls for the delivery of a security not a commodity at a future date.

A forwards contract is converted into a derivatives contract when it is agreed that the physical delivery of the underlying will not actually take place and that the contract will be concluded by the payment of the sum of money i.e., the difference between the contract price and the market price at the relevant time.[9] At that time, the contract is said to be *closed out,*[10] and the total gain

[7] Cf. Charles Good hart; The Emerging Framework of Financial Regulations; (Central Banking Publications 1998), p.293

[8] Cf. C. Good hart; Op. cit. p.293

[9] S. James; The Law of Derivatives;(LLP1999), p.4

[10] The term signifies the settlement of contract as cash settlement rather than physical settlement and sometimes the contract is closed out by the buyer selling another contract to the seller of the base contract or entering into another equal but opposite contract, with a third party. Cf. Simon James; Op. cit. p.4

or loss of the counterparty is the change in the futures price between the time the original contract was entered into and the time it was closed out.

Forwards contracts, when traded on an exchange are called futures contracts, and are subject to exchange rules and regulations and will also be interposed by a clearinghouse. This removes the counterparty risk from the futures contract. In the absence of a clearinghouse as mandatory counterparty with margin requirements imposed to cushion losses, forwards are highly risky transactions. The process of forwards pricing entails consideration of different costs like storage, commissions and spreads. The prices are calculated on a 'Cash & Carry' basis and are not merely predictions.[11]

The forwards market operates through informal communications among major financial institutions. For example, there is a healthy forwards market for foreign currencies that gives individuals or companies the opportunity to buy or sell foreign currency at a later date at an exchange-rate agreed upon today. The absence of an organised market in forwards also makes them less standardised and, consequently, its extent and volume is not precisely known.

2.2.2. Swaps Contracts

In a swaps contract, two counterparties agree to exchange streams of payments over time on predetermined terms. In fact, the parties exchange less favourable obligations for more favourable obligations. There are two main types of swaps, interest rate swaps and currency swaps. The principle behind a swaps contract is that of comparative advantage. For example, in *interest rate swaps,* a party - due to its higher credit rating than another party - can get loans at lower interest rates as compared to the other party. The parties can enter into a swaps contract and the party with lower credit ratings (Low franchise/ high risk profile) and the party with higher credit ratings (high franchise/ low risk profile) can both benefit.

Swaps are also used for risk management against adverse market movements. Interest rate swaps are the most common example of risk management-oriented swaps contracts. With interest rate swaps, two parties exchange interest payment obligations on debts denominated in the same currency, whereas in a *currency swap* parties exchange interest payment obligations on debts denominated in different currencies. Another difference between interest rate and currency swaps is that in an interest rate swap there is no exchange of payment obligations of the principal amount, while in currency swaps, the principal amounts are also exchanged at

[11] S. James; Op. cit. p.6

maturity at an exchange-rate agreed in advance.[12] Interest rate swaps are generally used in a combination of floating and fixed rate.[13]

Equity swaps are another kind of swaps agreement in which a party exchanges the performance of a share owned by it in an exchange for the performance of another share owned by another party in a different exchange. Parties then pay the difference of appreciation or depreciation in the exchanged shares. In this way parties can enjoy the benefit of the shares in a particular company without buying them and thus avoid buying costs. However, swaps agreements expose a party to credit and currency risks. For this reason financial institutions usually work as intermediaries and efforts continue to be made to standardise swaps contracts.[14]

2.2.3. Options Contracts

An option is the right, without the obligation, to buy or sell a thing at a later date at a price agreed upon today. In return for the extra flexibility an option gives, and unlike forwards and swaps contract, the buyer of an option pays the seller a premium in return for the risk associated with it. An option to buy something is referred to as a '*call*' and an option to sell something is called a '*put*'. In broad terms, many financial arrangements like lines of credit, loan guarantees and insurances are forms of options. Moreover, stocks themselves constitute an option on a firm's assets.[15] Options are symbolically known as European, American, Asian or Bermudan depending upon the nature and time of the exercise of the right created by an options contract.[16]

To control interest rate exposures, borrowers can buy a *put option* for a fee paid to a lender or an investment bank (writer). If the interest rate rises above a particular rate the borrower only pays up to that particular rate and the *writer* pays the excess. This is called a '*cap*'. The borrower may agree that if the rate falls below a particular rate, it will still pay that particular rate. This is known as the '*floor*'. When options are used in a cap and floor combination the arrangement is termed '*collar*'. Obviously, collar costs much less than cap. Beside the counterparty risk, the market risk and legal risks are transparent in options contracts. Another element of risk in the options contracts is that there is no solid economic equation or mathematical formula to calculate the exact price for an option.[17] Most of the options trading occur in organised exchanges.

[12] Denis Petkovic; Derivatives- some fundamental Contracts and Concepts; (International Banking and Financial Law 1996), p.102

[13] S. James; Op. cit. p.6-7

[14] On international level, International Swaps and Derivatives Associations (ISDA)

[15] Don M. Chance, Op. cit. p.3

[16] For detailed view, see Denis Petkovic, Op. cit, p.103

[17] Black-Scholes equation is most popular to calculate the price of a European option but still it does not guarantee the 'right' price.

2.3 Why have derivatives?

2.3.1. Market Volatility

Movements in interest rates, exchange rates, commodities and securities prices are generally called market volatility. Derivatives financing is not only originated from market volatility but it can also create market volatility.[18] Large swings in market volatility in one way or the other is always alarming for regulators since it can cause systemic risks. Systemic risk is the risk where the failure of one or more counterparties causes the failure of other counterparties and ultimately threatens to cause failure to the overall financial system.

The general function of derivatives is to allow individual parties to transform risk arising out of market volatility. When used for risk management, derivatives can effectively reduce the risk associated with the individual user. This, however, as we will see later in this chapter, does not mean that they cannot cause systematic risk.

The aim of derivatives transactions in the early 1990's was to avoid exchange-control regulations.[19] However, the derivatives market today is motivated by a variety of reasons. Derivatives, it has been suggested, are analogous to electricity in many ways since electricity also is simply a powerful tool that can be used for good or bad.[20] Derivatives can amplify risk not only for the individual user but also for the overall financial system when traded for sole speculation. However, derivatives can be traded for arbitrage, hedging and speculation.

2.3.2. The Difference between Arbitrage, Hedging and Speculation

The principle working behind derivatives financing is that of comparative advantage. Arbitragers use a derivative product to benefit from the potential comparative advantage between competing financial markets. Arbitrage can take place in a variety of situations to achieve a variety of objectives. A company may have a comparative advantage in borrowing from another capital market than its native market. A company can borrow from that other market and enter into a currency swap contract to arbitrage between its comparative costs of funding. An arbitrager in this way can simply be a speculator, making profit from market differences, or it can be a hedger lowering its cost of funding due to market abnormalities.[21]

[18] R. Kelly & A. Hudson; Hedging our Future: Regulating the Derivative Market (Fabian Society 1994) Discussion Paper No. 18; p. 2

[19] Alastair Hudson, Op. cit, p.8

[20] Eric Bettelheim, Helen Parry & William Rees, Swaps and Off-exchange Derivatives Trading: Law and Regulation (FT Law and Tax 1996), p.XXXVI

[21] Ibid

Different financial markets have different tax and regulatory requirements and therefore call for different costs on the same transactions. An arbitrager makes profit out of these differences. Sometimes a market does not respond quickly to changes in other related markets and an arbitrager makes profit out of the time period a market allows before it responds to changes in other markets. Strategic use of derivatives can position market participants to acquire assets or cash settlements when such market mismatches arise, rather than waiting for the actual physical market to move.[22] Adverse movements in financial markets remain a major concern for market participants. When hedging, derivatives work as a shield against the risk of adverse market conditions. A US court described hedging, as "safeguarding one's self from loss on a bet or speculation by making compensatory arrangements on the other side."[23] In hedging, the hedger transfers a particular defined risk to the derivatives provider. For instance, for lenders lending on a fixed interest rate, future movements in the interest rate is always a major concern. An adverse movement in the interest rate can result in loss. With the help of a derivatives product (e.g. an interest rate swap agreement) the lender can hedge against the rising interest rate. Derivatives hedging strategies has made it possible for banks to offer fixed-rate house-financing spread upon long periods.[24]

Derivatives allow the user to buy or sell in the future on a price agreed upon today. Obviously, if market volatility goes in favour of the user, he has made a profit. The adverse market volatility will result in loss. The magic of derivatives is that they allow this process without obliging the user to actually purchase the underlying asset or instrument. Participants can simply settle the contract by paying the difference between the agreed price and the actual market price.[25] Speculation in OTC derivatives is attractive since there are no initial margin requirements. Equity swaps, as discussed earlier,[26] are a lowest cost method to explore share markets without incurring regulatory or other costs. Derivatives speculation is, therefore, a cheap and fast manner to magnify the market exposure of the speculator.

It has been argued that derivatives should only be allowed for hedging and not for speculation.[27] Since we are dealing with systemic risk caused by derivatives financing, it is important to analyse the difference between hedging and speculation. Both the hedger and the speculator try to benefit from future changes in a market position. The difference lies in their

[22] A. Hudson; op. cit. p. 12

[23] Whorley V. Patton-Kjose Co. 90 Mont.461, 5 p.2d 210,214

[24] Cf. Eric-Bettelheim Op. cit. p.XXXVIII

[25] Cf. Eric C-Bettelheim; Op. cit. p.XXXVII

[26] See Swaps Contracts at para 1.1.2.2 above. Also Hull, J.C An Introduction to Futures and Options Markets 3rd ed. (Prentice Hall 1998), p.8-9, Alastair Hudson, Op. cit. p.10

[27] R. Kelly & A. Hudson; Op. cit; p. 12

intended objectives. Hedging is a tool for risk management, whereas speculation occurs for the sole purpose of profit-making. For instance, a manufacturing company is hedging risk when it uses a forwards agreement to limit the impact that exchange rate fluctuations might have on an international trade deal. The same company would be speculating if it were to invest heavily in a foreign currency forward agreement solely in the assumption that a certain currency will move sharply in one direction or the other.

In Hazell v. Hammersmith and Fulham LBC[28] Lord Templeman tried to distinguish between hedging and speculation by saying that the key in determining whether a derivatives trade is a hedge or a speculation from the viewpoint of a particular counterparty is the intention of the trader concerned. However, it is uncertain whether the test to determine such intention is subjective that is, dependent upon the declared animus of the participant, or objective that is, derived from all the surrounding indicators of the intention.[29] It has been suggested that since the reason to enter into a trade is insolubly linked to the individual judgement of the trader, the subjective test is more practicable.[30] Two issues arise at this point: firstly, the declared animus of the participants can be misleading because accountancy, tax, capital adequacy and other motives lead the participants to designate them as hedging; and secondly, it is not possible for an outsider to effectively assess the actual objective that a participant intends to achieve.[31] The subjective test is, therefore, not practicable for either the market participant, whose focus is to assess the potential counterparty; or the regulator, whose focus is to gauge the overall structure of the market.

2.4. Should Hedging Be Compulsory?[32]

Hedging strategies are recognised as efficient tools for risk management. Some US courts have held that fiduciaries, like corporate directors and trustees, are under a duty to mitigate risk arsing from exposures to interest and foreign-exchange rates and commodity prices. The Court of Appeals for the 10th Circuit in Hoye v. Meek[33], found that the director of a company had breached its fiduciary duty (His duty of care and loyalty to look out for the best interest of the company) by failing to respond to the increasing exposures of his company, in its Ginnie Mae investments, as the interest rate rose. By maintaining that "ignorance is not a basis for escaping liability", the Court imposed on the director, not only a duty to enquire into the risk exposure

[28] [1992] 2A.C.1, 24B, 31F

[29] Alastair Hudson, Op. cit. p.157

[30] Steven Edwards; Legal Principles of Derivatives ;(J.B.L. 2002)

[31] Cf. C. Good hart; Op. cit; p. 298

[32] Cf. A. Hudson, Op. cit. p.57

[33] 795 F.2d 893 (10 Cir. 1986)

of the company, but also a duty to do something about it. In Brane v. Roth[34] shareholders of a grain cooperative claimed that the directors breeched their fiduciary duties by failing to protect the cooperatives profits through hedging in the grain futures market. The Court agreed and awarded the shareholders over US$ 400,000 in damages. A Washington State Court of Appeals in Baker Boyer National Bank v. Garver[35] found that a trustee breeched its fiduciary duty by failing to hedge a portfolio that was concentrated in tax-exempt bonds. The courts, however, do not observe a distinction between hedging in organised derivatives exchanges and hedging in OTC derivatives market.

2.5 Interim Conclusions

When used for hedging derivatives products are intended to increase predictability of exposures and reduce volatility in anticipated revenues. Hedging strategies, i.e., the numerical equations designed to measure and price volatility and risk in financial markets, can themselves expose financial markets to systemic risk when they fail to produce the intended result.[36]

In the OTC derivatives market, a floating rate borrower company will purchase a derivative instrument to defend itself against the risk of an increasing interest rate. The company will enter into an interest rate swap and borrow at a fixed rate. This amounts to hedging against the risk that the interest rate will rise, the bet being on the performance of the floating-rate indicator compared to fixed-rate indicator. Unfortunately, if the rate does fall, the company will lose the potential gains if it had not entered into a swaps contract. The company will then make another arrangement and purchase another derivative with a third party that will result in profit, if the first one will result in loss. This second transaction will be the reverse and opposite of the first transaction (called *a perfect hedge).*

In case of a perfect hedge, the company will remain in the same position as it was before entering into the market since both transactions have opposite effects and the company is going to lose in one, if it earns in the other. Therefore, it can be concluded that a company has no commercial interest in entering into a perfect hedge, except when hedging the base contract (borrowing on a floating interest rate). Still, the company is exposing itself to the counterparty risk, because the counterparty maybe transacting for sole speculation. It can rightly be said that in each swaps transaction, the risk is transferred to a counterparty, which will in turn hedge its risk with other market participants, thus creating a nexus of contracts interlinking market

[34] 590 N.E.2d 587 (Ind. Ct. App.1992)

[35] 719 p.2d 583 (Wash. Ct. App.1986)

[36] e.g. Metallgesellschaft; see Christopher L. Culp and Merton H. Mille; Hedging, a flow of Commodity deliveries with futures: Lesson from Metallgesellschaft; Derivatives Quarterly (Vol. 1 No. 1 Fall 1994) also, Ruth Kelly and A. Hudson; et. al. Hedging our Future: Regulating the Derivative Market (Fabian Society 1994) Discussion Paper No. 18

participants to each other.[37] Hedging used to insure against risk can provoke a chain of transactions, which are systemically unstable.[38]

The use of derivatives in hedging strategies, therefore, do not eliminate risk, rather the risk is fragmented into smaller amounts, and redistributed among existing participants more willing to bear them.[39] The danger of systemic risk can arise in such a situation by any of three occurrences: the default of a major market player; a large market movement that whips out a trader; or the inability of market participants to match obligations.[40] The detailed analysis of these and other kinds of risks associated with OTC derivatives financing, is made in the next chapter.

3. Associated Risks and Regulatory Approaches for OTC Derivatives Markets

3.1 Introduction

Growth in OTC derivatives in the past few years has been phenomenal. According to the statistical release by the Bank of International Settlements in May 2000, the total estimated notional value of outstanding OTC contracts relating to only major banks and dealers in G10 countries was US$ 88.2 trillion. Where the OTC market has attracted a large number of market participants to hedge their risks arising from market volatilities, it has also attracted sole speculators due to, *inter alia*, low cost investment opportunities. This major shift to unorganised business has raised legal and regulatory issues. Financial innovation has given birth to new complex instruments and has resulted in more complex and less reliable quantitative techniques to measure and price risk. Initially intended and designed to mitigate risk of individual market participants, derivatives have the potential to expose the entire financial market to systemic risk.

First, different kinds of risks associated with derivatives financing, including legal, equity, credit and other associated risks are discussed. We will look at the manner in which the OTC derivatives market might give rise to systemic risk. In other words, regulation of OTC derivatives markets is justified by economic parameters, i.e., when manifest harm or its

[37] e.g. In Hazell v. Hammersmith Fulham; op. cit. Hammersmith Fulham swapped hundreds of times with lots of different institutions

[38] R. Kelly and A. Hudson; op. cit. p. 10

[39] J. Board; Derivatives Regulations; LSE Financial Markets Group Special Paper No. 70

[40] R. Kelly and A. Hudson; op. cit. p. 10

potential is present, expressed in terms of externalities imposed on other market participants or in terms of market failure.[41]

Second, an introduction to regulating the OTC derivatives market is given along with a discussion on the legal nature of derivatives contracts and the legal area to which derivative instruments fit into. The discussion also includes some of the regulatory tools available to regulators in fighting the risks associated with OTC derivatives, and surveys different regulatory approaches adopted by the regulators of the OTC derivatives market.

The purpose of this part is not to introduce new semantic distinctions into the regulatory debate, but to highlight the existing discussions at all levels,- from institutional to academic - focusing on why it is we regulate the OTC derivative market and how can we do so effectively.

3.2. Risks Associated with Derivatives Contracts

3.2.1. Generally on Risks

Knowledge of probable risk on an investment over a given time is the most desired piece of information in the business world. The exact equation of revenues and costs is the only means to forecast the required margin. In economic terms, revenues and costs are divided into fixed and variable terms. Adequate measurements and exact pricing of the economic risk such as whether commodity prices, interest rates or exchange rates will rise or fall, are the prime concerns for market participants. Derivatives are commonly used to remove economic risks, and transfer them on other market participants who are more willing to accept them. It might be argued that there is no difference between profit making (speculation) and risk management in economic terms since both result in an increase in anticipated revenues. It is, however, suggested that risk management is an endeavour to mitigate risk arising from speculation and is different from speculation because speculation does not result in profit in all circumstances.[42] Risk management tools are effective means to alleviate risk posed to individual market participants arising out of speculative profit making business activity. This is why some US courts have held that a fiduciary is under a duty to hedge risks effectively.[43]

The use of derivatives is not limited to risk management only and it also includes speculation itself. Derivatives, whether used to hedge risks or for speculation are not immune to certain risks like all other business activities. Following are some of the risks arising out of derivative financing.

[41] C. Goodhart; The Emerging Framework of Financial Regulation; (CBP 1998), p.291

[42] As discussed earlier, (Para.1.3) a perfect hedge may in all circumstances, give the desired result.

[43] See supra Para. 1.2.1.3.2.

3.2.2. Legal and Operational Risks

In essence derivatives are rights or obligations to receive or pay sums of money according to the movement in the underlying indicator.[44] Since a derivative agreement consists of rights or obligations; entering into a derivative transaction raises legal questions, whether these rights or obligations are validly created in law and whether or not they achieve (in legal terms) what they were intended to achieve or whether these rights or obligations are enforceable under the law without undue delay and undue cost.[45]

A derivative transaction can be unenforceable because of insufficient documentation, incapacity of a counterparty (*ultra vires*), uncertain legality or unenforceability due to bankruptcy or insolvency.[46] Another legal risk arises out of the recharacterisation of a derivative transaction; i.e. a court re-characterises the transaction. This kind of legal risk is particularly relevant in the case of the English Law Credit Support Annex within which an outright transfer might be viewed as a security interest, taking the form of the transaction into account, and therefore void due to want of registration. English academics have accepted that it is almost impossible to avoid the recharacterisation risk for even the best-drafted transaction or statute must use words, and words inevitably engender some uncertainty.[47] Legal risk and its ancillaries are dealt in with in detail in the later part of this chapter while dealing with the legal nature of derivatives.

There are many other kinds of risks associated with derivatives that cannot be measured and predicted by plain calculations. Precisely these risks may arise when systems and managerial understanding does not keep pace with market and business opportunities.[48] Due to the in-quantifiable nature of such risk, it is very difficult to protect against it. Market participants hit by such operational risks have systemic externalities, when their exposures are relatively high. Barings Bank can be one of the examples, where a market participant fell prey to operational risk due to the same person working in both back and front offices. Operational risks project other kinds of risks and can induce systemic melt down.

3.2.3. Liquidity Risk

Liquidity is the status or condition of a business in terms of its ability to convert assets into cash.[49] Liquidity risk arises when cash flows of a business are insufficient to cover is payment obligations. Liquidity risk is divided into two types: market liquidity risk and funding liquidity

[44] R. Kelly and A. Hudson; op. cit. p.12

[45] For analysis of legal risk see Trust and Harris; (BJIBFL 1997); p.291

[46] Global derivatives of group of Thirty; Derivatives: Practice and Principles; p.51

[47] S. James; The Law of Derivatives; (LLP 1999); p. 15

[48] Speech given by Clifford Smout published in C. Goodhart; op. cit. p. 331

[49] Blacks Law Dictionary; (sixth edition); (West Publishing Co. US); p. 931

risk.[50] '*Market liquidity risk*' is the risk that a large transaction in a particular instrument could have an adverse impact on its market price. It, therefore, depends upon the market condition of the product/instrument, the size of the position (contract size) and also the creditworthiness of the counterparty.[51] The risk that sudden volatility may make it difficult for a market participant to hedge or unwind a losing position including a derivative position is another related market liquidity risk. *'Funding liquidity risk'* is the risk that mismatches in the cash flow and payment obligations of a business may result in contractual non-performance. Liquidity funding plans and additional internal funding reserves to avoid such cash-flow mismatches are traditional responses to mitigating funding liquidity risk.

In an illiquid derivative market dealers will try to either cover their uncovered OTC positions by taking off-setting positions in an exchange traded instrument or by synarticleing such a position through "dynamic hedging", a process which often mandates either the sale of the underlying, when its price falls or its purchase when its price rises.[52] These mandated transactions could trigger a large number of purchase or sale orders into an already illiquid market for the underlying security.[53] As the International Capital Markets Report[54] suggests "the resulting illiquidity may (at the time of crisis) even violate the assumptions underlying the models used to construct these portfolios at precisely the time when the hedges are mostly needed."[55]

To avoid intervention of credit departments due to full utilisation of credit lines by banks and other financial institutions, dealers use collateral and/or margin requirements, which require a counterparty to transfer collateral to a bank or financial institution when its exposure to that counterparty crosses a certain limit.[56] The collateral is retransferred to the counterparty if the market moves the other way and the parties can continue to deal despite their credit lines are full.[57] This arrangement, however, gives rise to three liquidity issues:[58]

a. If the limit to call additional collateral depends upon the credit-worthiness of the counterparty being calculated by rating system, the lower-rated illiquid counterparty might be asked to transfer additional collateral at the nick of the time it starves for it

[50] Basle Committee on Banking Supervision; Recommendations for Public Disclosure of Trading and Derivative Activities of Banks and Securities firms; (October 1999)

[51] Edward Sunderland; Derivatives-Risky business; Journal of International Banking Law 2001); p. 58

[52] R. Kelly and A. Hudson; op. cit. p. 11

[53] ibid

[54] Part 1-Exchange Rate Management and International Capital Flows; IMF; (August 1993)

[55] Also quoted by R. Kelly and A. Hudson op. cit. p. 11

[56] Edward Sunderland; op. cit. p. 59

[57] ibid

[58] ibid

itself. This will result in loss of more liquidity and ultimately in default by such counterparty.

b. A counterparty may use the collateral received from another counterparty to create a reverse hedge. In this arrangement such counterparty might be required to transfer the collateral to a third counterparty under the reverse hedge even before it receives it from its first counterparty due to difference in limits, which result in calling for the collateral. This may result in liquidity problems for that counterparty.
c. If, in the commodities market, a counterparty has hedged its future revenues under a collar (combination of put and call option: see Para. 1.1.2.3 supra) arrangement, such counterparty might face loss of liquidity as the purchaser of the put option exercises its put when the commodity price falls unpredictably. Liquidity loss might also arise in case of a sudden and unexpected rise in the commodity price where the purchaser of "call" exercises its right to call.

The illustrations above make it clear how some risk mitigating techniques adversely affect it and may result in liquidity risk. Loss of liquidity results in the inability to receive payments by counterparties, which adds to systemic risk.[59]

3.2.4. Credit Risk

As said earlier, a derivative transaction is typically an obligation to pay or receive sums of money at a certain future date. The financial market yields participants with different franchise sizes and different credit-ratings. Since one or the other counterparty is under an obligation, each party in a derivative transaction is concerned with the credit rating of its counterpart. A credit rating simply reflects the ability and past performance of a business or a person in paying debts.[60] The probability that the counterparty might default in its payment obligations is called credit risk. In its report, Principles for the Management of Credit Risks, the Basle Committee described *credit risk* as "the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with the agreed terms."

While credit rating agencies are performing a very good job in assessing the credit worthiness of market participants, individual counterparties usually conduct private investigations before entering into a derivative transaction. The balance sheet, obviously, is the first thing to be enquired into. Because of the fact that certain exposures, especially in OTC derivatives markets, are kept off the balance sheet, balance sheet enquiries are not conclusive evidence of credit worthiness. Since payment obligations in a derivatives transaction arise at a future date, the transaction maturity date, the lack of an upfront cash commitment by the parties may also obscure the eventual monetary significance of the obligations of the parties.

[59] A. Hudson; Swaps, Restitutions and Trusts; (Sweet and Maxwell 1999); p. 66

[60] Blacks Law Dictionary (6Th edition) op. cit. p. 369

Market participants, especially those with high franchise and more sophisticated management (e.g. banks and major financial institutions) have generated their own internal risk control systems to ascertain their *value at risk* (VAR) in the ordinary lending market from the very start of the transaction. VAR indicates the expected loss from an adverse market movement with a specified probability over a particular period of time. As compared to the ordinary lending market, it is far more difficult to give an accurate VAR in the derivative field due to the continually fluctuating value of the instrument.

Though, more sophisticated methods to calculate VAR (e.g. J. P. Morgans' "Riskmatrix" methodology) are now available, these do not help the regulators due to the risk-sensitive nature of required regulatory capital under capital adequacy frameworks. Higher risk attracts higher capital to be set aside to cushion that risk. Internal VAR calculations are, therefore, unreliable and can be biased in favour of the entity. It is equally difficult to rely on the marking-to-market methods of derivatives value fluctuations. *Marking-to-market* means the calculation of VAR on a derivative instrument on a continual/daily basis. There is, however, no marking-to-market model, which convincingly explains the kind of relationship between the scope and degree of marking-to-market on the one hand, and the degree of systemic stability on the other.[61] There are two types of credit risks: market risk and settlement risk.

Market risk is the kind of credit risk, which, arises out of the market volatility. VAR models are actually intended to calculate and ascertain specifically the market risk. Market risk is a double-edged sword, i.e., even if the market moves in favour of the participant, ultimately it moves against the counterparty and adds to counterparty risk. An unexpected flash of market volatility, therefore, increases the overall market risk regardless of the way it moves.[62]

Settlement risk, as opposed to market risk, is a kind of credit risk that arises out of the default of the counterparty. This default can be the result of many incidents, i.e., a counterparty in an exchange rate swaps contract, may default because it could not access the necessary currency to be paid under the contract; because it failed to instruct properly how to pay (*operational failure*) or even by the introduction of exchange rate controls by the country whose currency was to be paid (*country risk*).[63]

Settlement payments in foreign exchange contracts, swaps and repurchase agreements (also known as a Repo that allow a borrower to use a financial security as collateral for a cash loan at a fixed rate of interest) are usually made by a small number of financial institutions. A large amount of the settlement payments represent funds, which the recipient needs in order to fulfil its own payment obligations due on the same date. If, on the settlement date, a major market player (financial institution) defaults, a situation may arise where many related counterparties

[61] Christian de Boissieu; Derivatives Market and Systemic Risk: Some Reflections; in C. Goodhart; op. cit. p. 334

[62] Cf. E. Sunderland; op. cit. p. 58

[63] Cf. ibid

are unable to make payments due to non-receipt from the defaulting financial institution(s). This follow-on effect goes on and on to other connected counterparties and non-payment ripple out through the system.[64] Different schemes of netting like payment netting which occurs during the life of the transaction and close-out netting which occurs on the happening of some other event,[65] have been introduced to cope with the settlement risk. Netting has its own legal and regulatory issues and is not unanimously allowed under the insolvency laws in all jurisdictions.

3.3. The Legal Nature of Derivatives Contracts

3.3.1. Derivatives from a Legal Standpoint

Derivatives are not conveniently confined to a particular area of law and their study requires knowledge of contract, company, commercial property, insurance and corporate insolvency law.[66] In the broadest legal sense, derivatives are rights or obligations to receive or pay sums of money according to the movement in the underlying indicator.[67] There is no exhaustive list of derivative underlyings. Some important underlyings include currencies, interest rates, equities, commodities, treasury bills and bonds.[68] Some commentators have suggested that derivatives agreements create personal relationships between parties and hence should be regulated under the law of contract.[69] Others argue that the term derivative is descriptive of a large number of choices in action and therefore should be categorised as specific items of property and consequently be regulated by property institutions.[70]

In derivatives business practice, however, the generic term "derivatives" has no meaning without specific mention of the particular derivatives product like options, futures, forwards or swaps. Though, the derivation of value is their common feature, every derivative product has its own specific features and create distinct legal rights and obligations. Furthermore, there are different licensing and other regulatory requirements for each product in different jurisdictions. This mandates the proper identification and separate analysis of each derivative product.[71]

[64] Cf. Schuyler K. Henderson; Regulation of Swaps and Derivatives: How and Why? (Journal of International Banking Law 1993); p. 357

[65] Cf. A. Hudson; The Law of Financial Derivatives; op. cit. p. 293

[66] Steven Edwards; Legal Principles of Derivatives; (JBL 2002); p. 1

[67] R. Kelly and A. Hudson; op. cit. p.12

[68] A. Giles; The Regulation Governing Derivatives; An International Guide; (International Financial Law Review Special Supplement 1992); p. 4

[69] Henry T.C. Hu; Misunderstanding Derivatives: The Causes of Informational Failure and the Promise of Regulatory Instrumentalism; (Yale Law Journal 1993); p. 102

[70] A. Hudson; Money as Property in Financial Transactions; (JIBL 1999); p. 170

[71] Tony Ciro; The Regulation and Market Organisation of Financial Derivatives: An Australian prospective: Part 1; (JIBL 2002); p. 93

Derivative contracts are arguably a series of executory contracts, as payment obligations usually remain to be performed on both sides.[72] Trading is ordinarily conducted by telephone in the OTC derivatives market and the oral/informal contract is binding on the parties, provided it fulfils the essential criteria for the creation of a contract.[73] If, however, parties use tape recording as evidence of the contract the recording party must notify the other party that the telephone call is being taped.[74]

The International Swaps and Derivatives Association (ISDA) has contributed a great deal in standardising the OTC Derivatives contracts.[75] In our present legal scrutiny of derivatives products, we will also discuss some of the ISDA Master Agreement approaches.

3.3.2. The Legal Nature of Swaps Contracts

Woolf L. J in Hazell v. Hammersmith Fulham[76] described an interest rate swap in the following terms:

> "An interest rate swap is an agreement between two parties by which each agrees to pay the other on a specified date or dates an amount calculated by reference to the interest which would have occurred over a given period on the same notional principle sum assuming different rates of interest each payable in each case. For example, one rate maybe fixed at 10 percent and the other rate maybe equivalent to the six months London Inter-Bank Offered Rate (LIBOR). If the LIBOR rate over the period of swap is higher than the 10 percent than the party agreeing to receive 'interest' in accordance with LIBOR will receive more than the party entitled to receive the 10 percent. Normally neither party will in fact pay the sums which it has agreed to pay over the period of the swap but instead will make a settlement on a 'net payment basis' under which the party owing the greater amount on any day simply pays the difference between the two amounts."

The definition was approved by Lord Templeman on appeal to the House of Lords.[77] This definition raises a number of classification issues,[78] i.e., are swaps to be classified as a series of executory contract considered as one single agreement made up of a matrix of obligations? (Executory contract theory) Or are all the swaps simply reciprocal payments constructed in from of mutual debts? (Mutual debt theory) *Executory contract theory* (also called the single agreement

[72] Philip R. Wood; Title Finance, Derivatives, Securitization, Set-off, and Netting; (1995); Para. 10-10

[73] Cf. S. James; op. cit. p. 175

[74] Ventouris v. Mountain, The Italia Express; (No. 2) [1992] 2 Lloyds' Rep. 281

[75] See ISDA; Master Agreement 1992

[76] [1990] 2 Q.B. 697 at 739

[77] Hazell v. Hammersmith and Fulham LBC [1991] 1 All E. R. 545 at 550

[78] A. Hudson; The Law of Financial Derivatives; (Sweet and Maxwell 2nd edition 1998); p. 65

approach) is proposed by the ISDA Master Agreement,[79] and primarily based upon the single payment method under payment netting. The approach suggests that it makes no difference how many contracts have been entered by the parties since the payment in the end is set-off against each contract and is netted to only one payment. Therefore, all the contracts should be treated as one single agreement.

The single agreement approach has been criticised on the basis of the different economic functions intended to be served by each swaps contract, and because they may have been entered on different dates with different counterparties and have different termination dates.[80] The criticism was approved by Evans L. J, in Kleinwort Benson v. Birmingham CC,[81] where the hedging agreements were said to be "separate and independent contracts."However, they were not governed by an ISDA Master Agreement. The single agreement approach under the ISDA Master Agreement was motivated by the need to avoid cherry-picking, that is, the power of an insolvency practitioner to disclaim unprofitable contracts under section 178 (3)(a) of the Insolvency Act of 1986, whilst affirming contracts that are beneficial to the insolvent party.[82] Rejection of the Single Agreement Approach by the courts would enable cherry-picking of derivatives contracts.[83]

The mutual obligations theory views each swap payment as a distinct contractual debt obligation.[84] Each and every payment made pursuant to a swap agreement is made independently and hence has no nexus with other payments.[85] Though affirmed by *Kleinwort Benson* this theory is not supported by market participants. It has been suggested that the parties would continue to trade in derivatives in pursuit of profit notwithstanding any defective legal foundation of the Single Agreement Approach.[86]

An important question emerged in Morgan Grenfell v. Welwyn Halfield DC,[87] where it was contended that an interest rate swap agreement, under a proper construction would be construed as gaming. Section 18 of the Gaming Act of 1845 provides that all contracts by way of gaming or wagering are null and void. Section 1 of the same Act provides that a promise to pay any money in respect of such contracts is unenforceable. The nature of a gaming contract is

[79] See Sec. 3 of ISDA Multicurrency Master Agreement (1992)

[80] A. Hudson; The Law of Financial Derivatives; op. cit. p. 65

[81] [1996] 4 All E.R. 733, 738g

[82] Cf. Steven Edwards; Legal Principles of Derivatives; (JBL 2002); p. 4

[83] Cf. A. Hudson; Swaps, restitutions and Trusts; (Sweet and Maxwell 1999); p. 46

[84] A. Hudson; The Law of Financial Derivatives; op. cit. p. 68

[85] See note 16 above; also Tony Ciro; op. cit. p. 96

[86] S. Edwards; op. cit. p. 5

[87] [1995] 1 All E.R.1

elaborated in Carlill v. Carbolic Smoke Ball Co.[88] Where two people with opposite views on a uncertain future event, enter into an agreement that one shall pay to the other a sum of money depending upon the determination of that event, they are entering into a wagering contract.

In *Morgan Grenfall*, the courts stated that the purpose of the parties to enter into a derivative contract was the deciding element, i.e., if the speculative element is coincidental to the purpose of the contract, then wagering is not the purpose of the derivative contract. In City Index v. Leslie,[89] derivative speculation was held lawful only when it was carried out for business purposes. This is also provided by Section 63 of the Financial Services Act of 1986 and Sched.1, Para. 12 thereto that derivative contracts are not unenforceable on the ground of gaming, if entered into by way of business and constitute offering or agreeing to offer, the buying, selling, subscribing for or underwriting of an investment In *Morgan Grenfall*, business activity is considered as an ordinary person would understand it, that is, an organisation involved in the capital market that regularly deals in interest rate swaps agreements is doing so in the form of business activity rather than on a casual or isolated basis.

3.3.3. The Legal Nature of Forwards Contracts

The basis for legal analysis of a forwards contract is that it may be classified as a futures contract. The significance of the classification is that if a contract is construed as a futures contract, it is void since it fails to fulfil the regulatory requirements attached to a futures contract. For example, in the US, the Commodity Exchange Act of 1936 (the CEA) provides *inter-alia* that trade in futures contracts must be through brokers registered with the Commodity Futures Trading Commission (the CFTC). In a number of cases, US courts have held that certain forwards contracts are in fact futures contracts subject to regulatory oversight.[90] The conflict is not unique to the US and persists in other jurisdictions, including the UK.[91]

US Courts have taken the mode of settlement in a particular forwards contract as a key to determine its actual nature. The fact that futures contracts are cash settled and are off-set by the parties, all forwards contracts that are cash settled rather than settled by actual delivery, should be categorised as futures.[92] In MG *Ref. & Marketing Inc.*[93] the Court held that an energy forwards

[88] [1892] 2 Q.B. 484 at 490-491

[89] [1992] 1 Q.B. 98

[90] See for e.g. Re MG Ref. & MKtg, Inc. and Futures, Inc. No. 95-14 CFTC LEXIS 190 (CFTC July 27, 1995); Transnor (Berm) v. BPN. Am Petroleum 738F. Supp. 1472

[91] See Larussa- Chigi v. CS First Boston; Unreported 18 Dec 1997, where forwards contract has been compared with so-called contract for differences.

[92] MG Ref. & Marketing Inc. op. cit

[93] ibid

contract was in fact a futures contract since it provided an opportunity for off-set, even though the contract is actually for the delivery of the underlying. This conclusion alarmed market participants for the test applied would also render swaps agreements as futures contracts.[94] The CFTC disagreed with the courts findings and decided that the contracts were forwards because they contained terms that provided for the delivery of the underlying, even though the parties routinely settle the contracts without delivery.[95] Several attempts have been made in the US to remove the uncertainty e.g. the enactment of the Futures Trading Practices Act in 1992 and the issuing of a number of policy statements exempting certain OTC transactions from provisions of the CEA but uncertainty persisted till the passing of Commodity Futures Modernisation Act 2000 (CFMA 2000).

3.3.4. The Legal Nature of Options Contracts

Courts have given different meanings to options and there is no precise definition of an options contract. At common law, in Mackay v. Wilson[96] Jordan CJ described options as "nearly always a ticklish thing". Options have attracted two contrary views:[97] one is that an option to purchase is 'a contract for valuable consideration'; *viz.* to sell the property (or whatever the subject matter maybe) upon the condition that the other party shall, within the stipulated time, bind itself to perform the terms of the offer embodied in the contract (*the Irrevocable Offer Theory*). The other view is that 'an option given for value is an offer'; together with a contract that the offer will not be revoked during the time, if any, specified in the option (*the Conditional Contract Theory*).

It has been suggested that the controversy has little significance from a regulatory point of view, since on either theory options would be regulated unless specifically exempted.[98] Furthermore, there are a number of different kinds of options with varied uses and different subject matter, which has resulted in confusion and uncertainty as to the nature of options.[99] Lack of a generic legal definition suitable for all options, and absence of a unified legal relationship created by different kind of options suggest different regulatory modes and standards for each kind of option.[100]

[94] Tony Ciro; op. cit. p. 97

[95] ibid

[96] [1947] 47 NSWSR. 315 at 318

[97] Braham v. Walker [1974] 132 CLR 57

[98] Financial Services and Markets Act 2000 make it illegal to carry on investment business in UK unless authorised or exempted under the Act and options fall under the category of investment business provided by the Act. Cf. Tony Ciro op. cit. p. 94

[99] Tony Ciro; ibid

[100] ibid

3.4. OTC Derivatives and Systemic Risks: Is Regulation Justified?

Systemic risk is recognised as the most valid reason for financial regulation. Systemic risk is not a very well-defined concept, compared to other risks across the financial world. Though the term is not very well defined, we all know what a systemic crisis is, when it occurs.[101] It has been suggested that systemic disturbances can be thought of in two stages.[102] Initially, it consists of an 'event' of some description that affects at least one financial institution adversely due to e.g. a sharp market move or a decline in the credit-worthiness of a key group of customers. This 'event' is sufficient to cause systemic problems if it simultaneously affects a large number of institutions.

The second stage comes when such an 'event' results in the non-settlement by the affected institutions. The follow-on situation is called 'contagion'.[103] A '*contagion*' situation is the more dangerous, where institutions are interconnected in the very area of activity affected. On the same grounds, economics justifies regulation only when there is manifest harm or its potential expressed in terms of externalities imposed on other participants or in terms of market failure.[104]

It has been argued that OTC derivatives do not create any new or unique risk.[105] The argument is based on the fact that though the increased use of OTC derivatives is new, they are composed of financial instruments and arrangements that have been around for decades. Credit, market, liquidity, operational and legal risks are, therefore, not a speciality of OTC derivatives only and are regularly faced by market participants in their traditional business. It is, however, not the type of risk which is alarming but the increased size of the risk caused by OTC derivatives.[106]

OTC derivatives can accelerate systemic risk by any or all of the following:[107] first derivatives have altered either the likelihood or the severity of an adverse 'event'. Secondly, widespread use of derivatives increases the correlation of default among financial contracts. In other words, OTC derivatives have made 'contagion' more likely. Thirdly, if risk is borne by more investors than before, more participants will be affected by the underlying shocks to the economy arising out of the adverse 'event'.[108] The externality of risk extends not only to other individual

[101] William R. White; Systemic Risk and Derivatives: Can Disclosure Help? In C. Goodhart op. cit. p. 314

[102] Speech given by Clifford Smout Published in C. Goodhart; op. cit. p. 325

[103] See Supra Para 2.1.3.2

[104] C. Goodhart; op. cit. p. 291

[105] Speech given by Clifford Smout Published in C. Goodhart; op. cit. p. 326

[106] ibid

[107] ibid

[108] Haluk Unal; Benefits, Risks and Regulations of Derivatives Markets available online at http://www.rhsmith.umd.edu/Finance/hunal/courses/bmgt745/topic8.doc.

investors but also to the economy as a whole when it strikes in the major market place. After all, even firms that do not use OTC derivatives will also be affected by such strikes.[109]

OTC derivatives financing is more prone to systemic risk because of 1) the complexity of the products, 2) comparatively less transparency and disclosure by the market participants, and 3) due to increased linkage between market segments and individual financial institutions.[110]

3.5. How to Regulate OTC Derivatives?

OTC derivatives regulation has been subject to vociferous public debate in recent years. This article is not intended to contribute new theoretical regulatory structures or to introduce an unprecedented regulatory strategy for OTC derivatives. In fact, this article compares and contrasts existing regulatory regimes in the perspective of developing countries with an objective to help them improve their own financial market conditions by increasing market efficiency and financial stability.

The regulatory challenge for OTC derivatives is to assess 1) the associated risk itself, 2) the benefits offered by the instruments and 3) the potential costs of regulatory interference.[111] There exists a tendency to overstate the risk of OTC derivatives which leads to proposals that would significantly raise the costs of derivative instruments. The challenge, however, is to limit the risks while preserving the efficiency of the capital markets.[112]

There are two approaches classified according to subject matter, to regulating OTC derivatives financing.[113] On the one hand, there is 'institutional' regulation, i.e., regulation of different kinds of enterprises involved in the financial markets and intermedation. On the other hand, there is 'functional' regulation i.e. regulation of financial instruments and markets according to the underlying functions they perform. Since there is a large variety of OTC derivative market participants and products, either regulatory approach can be complex.[114]

[109] ibid

[110] See Supra. Para. 1.3

[111] H. Unal; op. cit. p. 22

[112] ibid.

[113] Christopher L. Culp and Robert J. Mackay; Regulating Derivatives: The Current System and Proposed Changes: available online at http://www.cato.org/pubs/regulation/reg174b.html.

[114] Cf. ibid

There is another approach; a hybrid between functional and institutional derivatives regulation. The hybrid regulatory approach provides for the regulation of institutions both institutionally and functionally.[115]

On the institutional level, derivatives regulation could have the following elements:[116]

1. It specifies the 'permissible activities' in which an institution may engage;
2. It provides 'regulatory oversight' of the institutions engaged in permissible activity;
3. It provides rules for capital adequacy to ensure the financial stability of each financial institution;
4. It enforces prudential regulations to ensure compliance with regulatory requirements; and
5. It requires the end-users to periodically report the market value of their derivative positions.

On the functional level, derivatives regulation works by:

1. Providing definitions of permissible financial products;
2. Requiring compulsory licensing to deal in a lawful product;
3. Requiring certain products to be traded only on-exchange;
4. Providing margin requirements for certain products; and
5. Necessitating registration, documentation or other regulatory requirements for a product.

There is a tendency to prefer functional regulation to institutional regulation especially in the US. The view is taken on the basis that functions of the financial system are more stable than the institutions that provide those functions at any given time.[117] Another benefit of functional regulation is that it provides a set of functions to the financial system that are defined exclusively, and mutually exhaustively. Regulatory overlap is minimized, i.e., one function should not be regulated by more than once agency.[118] Functional regulation also precludes regulatory avoidance since institutions are run by people who can opt into another category to avoid regulations.[119]

Functional regulation, however, is not without its costs. Functional regulations are implemented as financial products (in the shape of defining permissible financial products) and market regulation. Although different functions of a financial system can be defined mutually exclusively, functions provided by particular financial products cannot be so defined. Another

[115] Cf. Christopher Culp; Derivatives Regulations: Problems and Prospects; available online at http://www.cei.org/gencon1005,01275.cfm.

[116] Christopher L. Culp and Robert J. Mackay; op. cit

[117] Christopher Culp; op. cit

[118] ibid

[119] Cf. ibid

disadvantage of functional regulation is that it greatly increases compliance costs for institutions, which are engaged in multiple financial products by subjecting them to multiple regulators. Defining highly complex financial products is also a challenge for functional regulation. No jurisdiction has, however, observed strict boundaries of functional or institutional regulation in its financial regulatory framework. Even the US, which is a leading advocate of the functional approach employs, as we will see in the next chapter, a hybrid form of derivatives regulation.

3.6. Regulatory Approaches to Combat Systemic Risk Arising out of OTC Derivatives

Systemic risk arsing out of OTC derivatives has alarmed regulators and different regulatory responses and suggestions have emerged to preclude systemic externalities of OTC failures. The first and most common regulatory response is invoking the rules for capital adequacy. Capital adequacy rules are instructions issued by regulators to ensure that financial institutions have sufficient capital to cover their investment activities.[120] This efficiently internalise the risk arisen during the course of business of an institution. The difficulties with capital adequacy requirements are that it is very difficult to define and price every kind of risk faced by a conglomerate financial market participant. The second problem is that there is no risk-pricing or VAR calculation formula, which is suitable for all market participants, regardless of franchise size. Another problem with capital adequacy rules is whether internal VAR calculations should be relied upon for required regulatory capital or external VAR calculations made by the regulators are necessary.

The second most common response is to introduce disclosure requirements. Since OTC transactions are off the balance sheet, they need to be subjected to mandatory disclosures as the parties should be able to judge counterparty risk. Additional disclosure of OTC positions along with the traditional disclosures is required and a periodic reporting system based on an internal risk-management system has been suggested in this regard.[121] Disclosure can bring comparability and help in strengthening external and internal market discipline.[122]

The third regulatory response is in the form of providing mandatory clearing of the OTC derivatives like the clearing of exchange-traded derivatives.[123] This can effectively reduce the counterparty risk. For mandatory clearing, clearing houses would be required to be made insolvency remote to avoid the situation of the failure of the clearing-house, which can cause great danger to financial system. Another regulatory suggestion is that OTC derivatives should be allowed only for hedging purposes and not for speculation. This, again, brings to the

[120] C. Goodhart; op. cit; p. 296

[121] ibid p. 299

[122] C. Goodhart; op. cit; p. 325

[123] CFMA. US. Sec.

difficult task of distinguishing between hedging and speculation from a counterparty stand point.[124] Yet another suggestion is that all OTC derivatives should be brought to exchanges, i.e., derivatives should only be allowed to be traded on an exchange.[125] Flex options are the most recent example. Still, the problem is that specialised products cannot be traded on an exchange. Financial innovation also continuously demands more specialised products.[126]

Others prefer stricter internal control; the introduction and strict observation of market participants, according to the sophisticated nature of their business, allowing only more sophisticated persons to deal in OTC derivatives and introduction of rules of consumer protection for OTC derivatives and users are also a subject to discussion in regulatory circles.

3.7. Interim Conclusions

OTC derivatives have posed financial markets to systemic risk in the past decades. One particular example is Barings Bank as there are suggestions that its failure almost led to some systemic externalities.[127] Though derivatives financing might not be the only cause of Barings failure, it was no doubt the major cause. Study of risks associated with derivatives has revealed their potential to pose threat to financial systems. There is a need to speed up regulatory response which is not only provides incentive for innovation but also keeps pace with such innovation since channelled innovation is recognised as beneficial for financial productivity and stability. Another challenge for regulators is to introduce regulation, which is cost efficient for both regulators when they force regulatory interventions; and for the regulated when they are compelled to regulatory compliances. Keeping in view the standards set forth, we will be better able to evaluate the efficiencies of derivatives regulations in some advance jurisdictions in our next part.

4. Regulation of OTC Derivatives in Advanced Jurisdictions

4.1. Introduction

The aim of this part is to provide a comparative analysis of regulatory regimes for OTC derivatives existing in advanced economies e.g. the UK and the USA. We will begin with the UK regulatory regime. For the purpose of better analysis and to give a proper critical treatment to latest regulatory changes carried out in the form of Financial Services and Markets Act 2000

[124] See Para. 1.2.1.3.1 supra

[125] Cf. C. Goodhart; op. cit; p. 293

[126] ibid

[127] C. Goodhart; op. cit; p. 295

(FSMA 2000), a comparison will be preferred between FSMA and its predecessor Financial Services Act 1986 (FSA 1986). After taking a precise overview of present regulatory structure, we will discuss the specific OTC derivative related provisions of FSMA 2000. Then we will move on to the US regulations for OTC derivatives and again our analysis will be in a comparative mode between the latest developments and the preceding regulatory structure.

4.2. Introduction to the UK Financial Regulatory Structure[128]

4.2.1. The FSA and the FSMA

The UK financial regulatory structure has been greatly reformed by FSMA 2000. FSMA 2000 can rightly be designated as a revolutionary step towards the creation of a single regulator, i.e., Financial Services Authority (FSA) regulating the entire financial conglomerate. The FSMA has abolished all the previous regulators for different kinds of financial activities like the Securities and Investment Board (SIB) and all the Self-Regulatory Organisations (SRO's).

The new FSA is empowered to regulate all the categories of financial business; deals with the official listing of securities, controlling insurance business and banking transfers, overseeing the regulations of Lloyds of London, combating market abuse, recognising and supervising investment exchanges and clearing-houses, regulating competition scrutiny, and overseeing the compensation schemes and the ombudsman scheme. The FSA has the objective of maintaining confidence in the UK financial system; the promotion of public understanding of the financial system including the promotion of public awareness of the risks and benefits of investment; to secure consumer protection by considering the degree of risk and experience that a consumer may possess and their need for accurate information; and the reduction of financial crime. In this regard, the FSA is required to make sure that regulated businesses are aware of the risks of their business being used in the commission of financial crime and to make sure that the necessary steps are taken to monitor, detect and prevent financial crime. The Parliamentary Committee and the Treasury have power to scrutinize the powers exercised by FSA.

Under FSMA (the Act), the regulatory structure more likely fits into the category of institutional regulation since after giving a very detailed list of regulated activities[129], it requires anyone who deals in such activities to seek authorisation.[130] The Act provides for certain qualification and other requirements for authorisation and then provides for strict regulation of an Authorised Person in accordance with its objectives. Only the relevant provisions of FSMA and the instruments provided thereunder relating to OTC derivatives will be discussed here.

[128] Cf. Butterworths Financial Regulatory Services; Vol. 1 Div. A

[129] Sec. 22 and Regulated Activities Order 2001/544

[130] Sec. 19

4.2.2. OTC Derivatives Regulation under FSMA2000

4.2.2.1. General Requirements

The UK financial markets are founded on the principle of freedom of contract and even an oral contract is binding on the parties without formalities. This creates a perfect environment for OTC contracts, where transactions are usually made by telephone. There are no specific laws governing OTC derivatives and transactions are generally subject to all the normal principles of common law and equity. General principles of formations and proof of contract, breach of contract, negligence, mispresentation, negligent misstatement, fiduciary duties etc., are applicable to OTC transactions and remedies available for other commercial disputes are all available in OTC derivative transactions.[131] OTC derivatives regulation is in practice subject to light or non-existent regulation[132] and the analysis calls for the following tests:

a. What derivatives products fall under the category of regulated activities?
b. If a product falls under a regulated activity, what are the requirements to deal in such products?

4.2.2.2. Regulated Derivatives Products under the FSMA 2000

The Act prohibits any one carrying out investment business in the UK, unless that person is authorised or exempted.[133] 'Investment' includes any asset, right or interest[134] covered by any of the articles falling under the Regulated Activities Order 2001/544.[135] As far as derivatives are concerned, Articles 83 to 85 are relevant. (See appendix 'A' for full text of the articles)

Articles 83 to 85 aim to identify financial transactions rather than commercial ones in order to overcome the uncertainties relating to the applicability of section 18 of Gaming Act 1845.[136] In a case dealing with Financial Services Act 1986 part 1 of schedule 1 paragraph 7-9, which contained the similar provisions as to the FSMA 2000 article 84 (3) and (4), it was held that these particular provisions amount to mandatory deeming.[137] The other provisions are merely an indication as to whether the transaction falls on the commercial or financial side.[138] Under

[131] E. Bettelheim, H. Parry & W. Rees; Swaps and Off-Exchange Derivatives Trading: Law and Regulation; (FT Law and Tax 1996); p. 15,16

[132] ibid

[133] Sec. 19

[134] Sec. 22 (4)

[135] See online at http://www.opsi.gov.uk/si/si2001/20010544.htm#83

[136] Cf. S. James; The Law of Financial Derivatives; (LLP 1999); p. 125

[137] Laurssa-Chigi v. CS First Boston (Unreported 18 Dec 1997)

[138] Cf. S. James; op. cit. p. 125

article 4 '*a transaction delivery*' seems to be the deciding factor in rendering a contract a future. Under FSA 1986 provisions[139] it was possible to run a foreign exchange book outside the scope of the provisions, as long as the contract provided for delivery within seven days.[140] This is now precluded by Article 84 (4) of the FSMA 2000, by providing an objective test to construe the actual nature of the transaction, where there exists an understanding regardless of the express terms of the contract; that the delivery would not be made within seven days.

Article 84 attempts to distinguish between a commercial and investment purpose, to ensure that the Act does not cover genuine commercial transactions, which also commonly provide for delivery in the future. In fact, it is not always the case even in financial transactions that the delivery is not made and the contract is closed-out by another transaction. Transactions carried on, e.g. at London Metal Exchange, may sometimes also be concluded by delivery. This may be very unusual, but not impossible.[141] This however, does not mean that the Act will not apply to such transactions and Art. 84 (3) clearly states that the transaction is to be regarded as made for investment purposes if it is made or traded on a recognised investment exchange. Another enquiry into Art 84 could be whether it covers only 'futures' contracts or is also applicable to 'forwards' contracts. The words "or made otherwise than on a recognised investment exchange but is expressed to be as traded on such exchange or on the same terms as those on which an equivalent contract would be made on such an exchange" are clear enough. The article also covers forwards transactions.

Contracts for differences cover a wide category of contracts. Contracts for differences under FSA 1986 schedule 1 Para. 9 covered interest rate swaps since their purpose or pretended purpose is to secure a profit or avoid a loss by reference to fluctuations in the value or price of property.[142] For the same reason currency, equity, commodity and total return swaps were also likely to be contracts for differences.[143] The position may have been changed now by providing article 85 (2) (b): "rights under a contract under which money is received by way of deposit on terms that any interest or other returns or other returns to be paid on the sum deposited will be calculated by reference to fluctuations in an index or other factor". This seems to exclude certain interest rate swaps where net payments are made.

The scope of options under Article 3 of the FSMA seem broader than FSA 1986 options that were limited to the options expressly provided for by it, like currency options, and gold, palladium, platinum and silver options, and did not cover the options to buy e.g. copper.[144]

[139] Note 3 para 8 of schedule 1 part 1

[140] Cf. ibid

[141] ibid

[142] Morgan Grenfall v. Welwyn Hatfield [1995] 1 All ER 1,12

[143] S. James; op. cit. p. 127

[144] Ibid

FSMA Article 83 starts with providing a sweep up provision, i.e., options to acquire or dispose off…(a) a security or contractually based investment (other than one of the kind specified by this article); and then specifically mentions some of the options, including the currency of the UK or any other country or territory. The sweep up provision brings every kind of options, which is a 'contractually based investment' within the scope of Article 83, regardless of the mode of settlement. A credit swaps option which gives the buyer the right to transfer the underlying asset will also be considered a contractually based investment. The position is clearer where the underlying asset is a security.

4.2.2.3. Requirements to Deal in a Regulated Derivatives Product

In our discussion of regulated derivative products above, it is evident that a large number of derivative products whether on or off-exchange fall within regulated activities. If an OTC product or other derivative activity falls within the regulated activities, it becomes subject to all regulatory requirements provided for in investment business. The Act makes it a criminal offence if a person carries on activities in breach of the general prohibition stated in Sec. 19 of the Act.[145]

Although a person who commits such criminal offence is subject to the maximum of two years imprisonment and an unlimited fine, it is a defence for a person to show that he took all reasonable precautions and exercised due diligence to avoid committing the offence.[146] Breach of the general prohibition may also result in the agreements being unenforceable (Sec. 26-29 of the Act). Under Sec. 22 of the Act, for an activity to be a regulated activity it must be carried on '*by way of business*'. The business element differs depending upon the activity in question.[147] It is a question of judgement whether or not an activity is carried on by way of business. Elements include degree of continuity, the existence of a commercial element and the proportion which the activity bears to other unregulated activities carried on by the same person.[148]

The salient features of the present UK regulatory approach can be summarised as follows:

1. It takes a liberal approach as to what OTC activities are taken and focuses on who is doing the activity;
2. When an activity falls under a regulated activity, it provides strict authorisation requirements;
3. When an authorised person is engaged in OTC activities, it provides strict rules for consumer protection, thus focuses on with whom the business is done.

[145] Sec. 23 of the Act (Contravention of the General Prohibition)

[146] Butterworths Financial Regulation Service; op. cit. Vol. 2 Para. 2.2.1

[147] FSMA 2001 (Carrying on Regulated Activities by way of business) Order 2001 S1 No. 1177.

[148] Butterworths Financial Regulation Service; op. cit. Vol. 2 Para. 2.3.3

From the perspective of risk, the regulatory approach requires strict capital adequacy rules. UK capital adequacy rules provide a required capital ratio that imposes both triggered and targeted capital to the total risk weighted assets.[149] It provides principles of business integrity; due skill, care and diligence; standards of reasonable care to organise and control with adequate risk management systems; financial prudence; proper standards of market conduct; consumer protections; clear and fair customer information; management of conflict of interest; and open coordination with the regulator.[150]

4.3. OTC Derivatives Regulation in the United States

4.3.1. The Commodity Futures Modernization Act of 2000 (CFMA 2000)

Derivatives regulation in the US was a mixture of banking, securities and bankruptcy laws. The situation created conflicts, complexities and ambiguities of jurisdiction and applicable law when multiple areas of law and regulation came together. The need to overhaul derivative regulation was long felt and as a result the Commodity Futures Modernization Act of 2000 (CFMA/the Act) was signed into law by President Clinton on December 21, 2000.[151] The CFMA 2000 replaced the Commodity Exchange Act of 1936 (CEA) and amended securities, banking and bankruptcy laws. The CFMA 2000 addresses uncertainties regarding the status of OTC derivatives and hybrid instruments under the CEA by providing a number of exclusions and exceptions. The CFMA 2000 also modernises the regulatory structure and clarifies the legal status of certain derivative products like non-retail swaps.[152] The most important provisions of the CFMA 2000 relate to the authorisation of the clearing of OTC derivatives and establishment of a framework for the regulation of clearing organisations.

Before the passing of the CFMA 2000 all trading of '*contracts for future delivery*' were required by CEA to be carried on in exchanges. Although Commodity Futures Trading Commission (the CFTC) had exempted a number of transactions from the application of the CEA, a large number of derivative transactions could not fit into the statuary exclusions or exemptions provided by the CFTC. The exemptions only covered some specific financial products related to futures and swaps. The result of this was a comparative disadvantage and fleet of business to

[149] C. Goodhart; The Emerging Framework of Financial Regulation; (CBP 1998); p. 1

[150] Butterworths Financial Regulation Service; op. cit. Vol. 1 Para. 6

[151] The Act was adopted as part of the Consolidated Appropriation Act of 2001 (HR 5457)

[152] Cf. Remarks of Thomas. J. Erikson; Commissioner Commodity Futures Trading Commission (Santa Clara, California July 16, 2002) available online at http://www.cftc.gov/opa/speaches02/opacricks-13.htm.

more flexible overseas markets.[153] The OTC derivatives related provisions of the CFMA will now be discussed and the regulatory infrastructure provided therein revealed.

Section 2 of the CFMA 2000 state the purposes of the Act, which are, *inter alia*, to eliminate unnecessary regulation for the commodity futures exchanges and other entities regulated under CEA; to bring jurisdiction clarity of CFTC; to provide a statuary and regulatory framework for allowing the trading of futures on securities; to promote innovation for futures and derivatives and to reduce systemic risk by enhancing legal certainty in the market for certain futures and derivative transactions; to reduce systemic risk by providing clearing facilities of transactions in OTC derivatives, through appropriately regulated clearing organisations. For OTC derivatives the CFMA 2000 has two main features:

a. It brings legal certainty for OTC derivatives;
b. It allows clearing facilities for OTC derivatives through recognised clearing exchanges.

4.3.2. Legal Certainty for OTC Derivatives

Before the passing of CFMA 2000, there was a great deal of uncertainty regarding the legal status and enforceability of OTC derivatives transactions. The CFMA 2000 brings legal certainty by providing that no contract shall be unenforceable under the CEA or any other provisions of federal or state law, based on a failure to comply with any exemptions or exclusions provided by CEA.[154] A broad range of swaps agreements and OTC derivatives agreements have been brought outside the application and jurisdiction of the CEA and CFTC respectively. The CFMA 2000 provides for a specific category of participants, which are '*eligible contract participants*',[155] and then provides that the transactions involving any commodity (other than an agricultural commodity) that is not executed on a '*trading facility*' is excluded from the CEA application, if they are entered into by Eligible Contract Participants (ECPs) and are subject to individual negotiations.[156] The term ECPs includes natural persons with more than 5,000000 US$ in assets, who enter into the related transactions for risk management purposes. It also includes non-US regulated insurance companies and banks and their US branches and agencies; participants acting as brokers, agents, investment advisers or fiduciaries; and financial institutions such as a large proportion of federally or stately regulated institutions. Numerous provisions of the CFMA 2000 apply to '*agreements, contracts or transactions*'. Swaps Exemption

[153] Cf. Testimony of Patrick M. Parkinson before the Subcommittee of Financial and Hazardous Material of the Committee of Commerce US to the US House of Representatives; (July 12, 2000) available at World Wide Web at http://www.federalreserve.gov/boarddocs/testimony/2000/20000712.htm.

[154] Amendment provided by the Act of Sec. 22 of CEA by adding a new clause (4) at the end of Sec. 22 (a)

[155] Sec. 1a (12)

[156] Sec. 2 (d)(1)

provided by the CFTC in 1993 was applicable to only 'swap agreements' and required a swap to meet certain tests of being a certain type of agreement to be excluded from CEA.[157] The enhanced application of the Act clearly makes it applicable to all types of swaps.[158]

A *trading facility* is defined as a person providing a facility in which multiple persons have the ability to execute or trade contracts by accepting bids and offers from multiple participants. An organised exchange is, inter alia, a trading facility that permits trading by or on behalf of persons who are *not* ECPs.

The swap exemptions (part 35 of CFTC regulations) contains four elements:[159]

1. The swap agreement is entered into between eligible swap participants;
2. The swap agreement is not part of a fungible class of agreements that are standardised as to their material economic terms;
3. The creditworthiness of the parties is a material consideration in entering into or determining the terms of swaps agreement; and
4. The swap agreement is not entered into or traded through a multilateral transaction execution facility.

The new Sec. 2 (d)(1) is broader than the old swaps exemption because first, a statuary exclusion that can only be modified by Congress is inherently more robust than a regulatory exemption that can be modified by agency action. Secondly, Sec. 2 (d)(1) applies to any transaction and not merely to 'swap agreements'. Thirdly, 'eligible contract participants' is broader than 'eligible swaps participants', fourthly, both the non-fungibility and credit worthiness requirements in swaps exemptions have been dropped; and finally, Sec. 2 (d)(1) replaces 'multilateral transaction execution facility' with only 'trading facility'.[160]

Another provision with legal certainty is Sec. 2 (d)(2) which states that nothing in CEA (except the provisions relating to derivatives clearing organisations) governs or applies to a transaction of an 'excluded commodity', if the transaction is:

1. Entered into on a principal-to-principal basis by parties trading for their own account or;
2. By parties trading as an authorised investment manager or fiduciary;
3. Between ECPs (other than while acting as brokers);
4. Executed or traded on an electronic trading facility.

[157] Memorandum for ISDA Members; CFMA 2000; prepared by Cravath, Swaine & Moore; (January 5, 2001); p. 14

[158] ibid

[159] ibid; p. 23

[160] Cf. ibid; p. 24

This makes it clear that the transactions entered into by ECPs on a principal-to-principal basis are exempt. But what is the principal-to-principal basis? This is said to include:

> "Any transaction whereby a party to a transaction books the transaction for parties' own account. It includes '*riskless principal*' transactions whereby one party enters into a transaction and thereafter contemporaneously enters into an off-setting transaction so that the risk or payments under the transactions net out. The fact that the party has entered into off-setting transactions in no way alters the principle to principle nature of the transaction and any party which has entered into a riskless principal transaction maybe assured that its contracts remain legally enforceable and excluded or exempted from the jurisdiction of the CFTC and/or SEC as applicable."[161]

Sec. 2 (g) provides for the '*excluded swap transactions*'. Swaps on all commodities other than agricultural commodities are excluded by Sec. 2 (g) from the application of CEA subject to similar conditions required to be satisfied for the application of Sec, 2 (d)(1) except that Sec. 2 (g) also requires that the agreement be '*subject to individual negotiations*'. While Sec. 2 (g) applies to all commodities except agricultural commodities, it clearly covers commodities like metals, chemicals and energy products that are not traded on a trading facility and are entered into by ECPs subject to individual negotiations. Further Sec. 2 (h)(1) provides that (subject to certain exceptions) nothing in CEA applies to an '*exempt commodity*', if carried on by ECPs at the time they enter into the transaction and is not entered into on a trading facility. The exemptions to Sec. 2 (h)(1) general exclusions are Sec. 5b and 12 (e)(2)(B) and certain provisions relating to fraud and manipulation of market price.

CFMA 2000 also provides for exclusions of certain swap agreements that fall under the definition of '*covered swaps agreements*', from the jurisdiction and application of CFTC or CEA when offered, entered into or provided by a bank.[162] A covered swaps agreement is a '*swap agreement*' including a credit or equity swap based on a commodity other than an agricultural commodity enumerated in Sec. 1a (4) of the CEA, if the swap agreement: [163]

a. Is entered into by ECPs;
b. Not executed or entered into on a trading facility.

Such a '*swap agreement*' is an agreement defined under Sec. 206 (b) of Gramm-Leach-Bliley Act, which states:

> "The term swaps agreements means any individually negotiated contract, agreement, warrant, note or option that is based, in whole or in part, on the value of, any interest in, or any quantitative measure or the occurrence of any event relating to, one or more

[161] Floor statement released by Congressman James A. Leach (December 15, 2000); S11867-8 (2000) also quoted by ibid.

[162] CFMA 2000 part 4 Sec. 407

[163] Sec. 402 (d) of CEA

> commodities, securities, currencies, interest or other rates, indices, or other assets, but not included any other identified banking product as defined in paragraphs (1) through (5) of subsection (a)."

This clarifies the status of swaps agreements and the new definition covers all interest, currency, credit, equity, commodity, weather or other derivatives contracts. For this purpose, swaps agreements do not include transactions involving the purchase or sale of a security or a put, call or option on a security since the definition of '*security*' in Sec. 2 (a)(1) of 1933 Act and Sec. 3 (a)(10) of 1934 Act has been amended by the Act by providing that 'security' does not include any swaps agreements.

The new provisions effectively remove any confusion about the status of swaps under US Securities Laws that existed before the Act. Title 3 of the Act provides a distinction between 'security based' and 'non-security based' swaps agreements. The former is a swaps agreement of which a material term is based on the price, yield, value or volatility of any security or any group or index of securities and the later means any swaps agreement that is not a security-based swap agreement.[164] The Act makes security-based swaps agreements subject to anti-fraud, anti-manipulation and anti-insider trading provisions of the 1933 Act and 1934 Act. It is, however, not clear whether the SEC has regulatory authority over security-based swap agreements.[165]

The Act establishes two categories of clearing organisations for derivative products: "*derivatives clearing organisations*" that are subject to regulations of the CFTC and "*multilateral organisations*" that are subject to banking or securities regulation.[166] OTC derivative transactions eligible for exclusion may be cleared through a multilateral clearing organisation and not through derivative clearing organisations. It is, however, not mandatory for an OTC derivative to be cleared, but when it is cleared, it must be cleared by a multilateral clearing organisation. To be registered as a clearing organisation a statement must be submitted that it complies with the core principles. The core principles address matters like financial resources, participant and product eligibility, risk management, settlement procedures; treatment of funds, default rules and procedures, rule enforcement, system safeguards, reporting, record keeping, public information and information sharing.[167] OTC transactions may also be cleared by a securities clearing agency regulated by SEC under the 1934 Act, or certain foreign clearing organisations approved by the SEC, CFTC or federal banking regulators. A multilateral clearing organisation is defined as a system used by more than two participants where the bilateral credit exposures of participants are effectively eliminated and replaced by a system of guaranteed, insured and mutualised risk of loss.

[164] Cf. Memorandum of ISDA Members; op. cit. p. 41

[165] Cf. ibid.

[166] The Commodity Futures Modernization Act of 2000: Watershed Legislation for Derivatives; May 2001 available at: http://www.mfcafe.com/pantry/ls_0501.html. Para IV

[167] ibid

4.4. Interim Conclusions

We have seen that although the US CFMA 2000 generally focuses on the regulation of products and markets it also provides core principles regulating intermediaries. Under the Act the CFTC is also required to review and report the possible replacement of intermediary or institutional regulation addressing *inter alia* the "*core principles*" and "*interpretation of acceptable business practices*". This clarifies the hybrid regulatory approach adopted by CFMA by providing the regulation of institutions both institutionally and functionally. In contrast, the UK regulatory regime set forth by FSMA 2000 connotes an institutional approach. It imposes a general prohibition to engage in investment business and then provides regulatory oversight into regulated investment business. The investment business under FSMA covers a large number of OTC transactions with certain swap exemptions.

The US OTC regulation has been generally subjected to deregulation by CFMA 2000 where a large number of swaps and other OTC derivatives have been exempted or excluded from the application of the CEA and the regulations of the CFTC. The emphasis shifted to ECP's (eligible contract participants). For a natural person to qualify as an ECP, he is required to have more than 5,000,000 US$ in assets and enter into the related transaction for risk management purposes. This again brings into question the blurred distinction between risk management and speculation.[168] Other ECPs include regulated banks and companies.

An optional clearing facility for OTC derivatives is a positive step. The number of market participants opting to avoid optional clearing facilities with obvious clearing costs and other requirements will by no means be attractive and a large number of participants will opt not to avail the facility. Core principles required to be observed by clearing organisations are efficient enough to prevent its failure, is another inquiry.

A comparison between US ECPs and UK Authorised persons, US CFMA exemptions and exclusions and UK FSMA regulated activities reveal that the UK OTC derivatives regulation is more relaxed for some swaps and other OTC transactions.[169] The result is that in the UK certain swaps are accessible to more market participants than in the US, with virtually no regulatory requirements. However, the institutional nature of the regulation requiring prudential standards and customer protection make it advent that all business activities are organised and channelled.

Furthermore, under the present regulatory structure, it is not possible in the US for other than ECPs to use swaps agreements. Under CFMA 2000 Sec 105 (c) the Board of Governors of the Federal Reserve is required to conduct a study of issues relating to the potential use of swaps agreements by non-ECPs'. The UK imposes no restrictions on offering OTC derivative

[168] See supra Para 1.2.1.3.1

[169] See supra Para 1.2.1.3.1

products to persons who are not authorised under FSMA. This freedom is fenced by requiring a high level of customer and consumer protection and setting prudential standards since the relationship is still governed by FSMA where one of the parties is an Authorised person.

Hitherto, we have developed a good knowledge of OTC derivatives financing, its associated risks, and the regulatory approaches adopted by UK and US financial regulators. In the light of UK and US regulatory approaches, an attempt is made to reveal the role that OTC derivatives can play in developing countries, and how regulators can use this monster in a useful manner.

5. Benefits, Suitability and Regulatory Challenges for Developing Economies

5.1. Benefits

This concluding part of the article will focus on the role of OTC derivatives in developing economies. We will deal with the questions like: Are there any benefits of OTC derivatives? Are they suitable for developing economies? If yes: what are the regulatory challenges for developing economies to use OTC derivatives to increase market efficiency without jeopardizing financial stability? While dealing with these questions we will discuss the role of OTC derivatives in developing countries generally and in Pakistan particularly where it is necessary and appropriate.

After ever-increasing use of OTC derivatives in the past three decades, there are still apprehensions about derivatives. One such apprehension is that derivatives do not serve any economic purpose, only increases speculation and market volatility and cause instability for institutions and the system. There is, however, a tendency to overstate the associated risks and ignore the economic role played by OTC derivatives. There are mainly two categories of OTC participants, i.e., end users or dealers. End users are government entities, institutional investors, financial institutions and corporations. The dealers include highly rated and large banks; highly rated insurance companies and securities firms. Dealers act as intermediaries who quote bids and offers and commit capital to satisfy customer demand for derivatives.[170]

Numerous studies conducted by international and national organisations have revealed that OTC derivatives provide several benefits to end users.[171]End users benefit from the lowest funding costs and more diversified funding sources by swaps; for example, a company can borrow in the cheapest capital market, even across border, without regard to the currency in

[170] Christopher L. Culp and Robert J. Mackay; Regulating Derivatives: The Current System and Proposed Changes; available at http://www.cato.org/pubs/regulation/reg174b.html

[171] Cf. ibid

which the debt is denominated or the fixed or floating interest rate payment mode. End users can also benefit from derivatives by hedging their exposures against risks arising from price and interest rate fluctuations. It is because of interest rate swaps that banks are able to offer long term funding, like mortgages with short term liabilities that re-price frequently, such as certificates of deposits; and better manage their asset liability mismatches. Commodity swaps are used by airlines and oil refineries to hedge their exposures to fluctuating oil prices.
Some users like institutional investors and portfolio managers may use derivatives to enhance asset yield. The case settlement benefit of derivatives enables institutions to exchange cash flow on one asset to cash flow of another asset like an exchange rate. Where securities are poorly traded for an undesirable feature, derivatives can provide a synthetic instrument to neutralize the undesirable element, thus, creating a higher yield instrument as compared to a traditional instrument of equal credit quality. Derivatives are an efficient tool for asset liability management. Borrowers can use interest rate swaps to raise the proposition of fixed rate to floating rate coupons for fixed rate coupons, thus alleviating the need to actually sell any of its securities.

Derivatives also benefit dealers in many ways.[172] Derivatives have increased both the average credit quality and the diversity of credit risk to which dealers are exposed. Derivatives also provide profitable income streams that help the dealers reconstruct their capital bases, and diversify their sources of income. With the help of derivatives dealers are improving their risk management techniques arising in traditional business practices. The risk management techniques originally developed for derivatives are also being applied to risk management and has resulted in the improved safety and profitability of these institutions.

Innovation is recognised as beneficial for the economy[173] Derivatives, as discussed earlier, reduce funding costs and diversify funding sources for market participants. An efficient derivative market can help boost the competitiveness of an economy in global economic uprising. Derivatives provide new and efficient tools to manage exposures to interest rates, foreign exchange rates and commodity prices; with an organised derivatives market an economy will have better exposure management capability and will attract the international business investors and large market participants. The lower cost funding provided by derivatives, help large capital formations increase business activity in spot markets and stimulate economic growth.

5.2. Are OTC Derivatives Suitable for Developing Economies?

OTC derivatives have been frequently criticized for the scale of their associated risks and high levelled leverage. The issue whether OTC derivatives are suitable for developing economies may

[172] Cf. ibid

[173] Cf. ibid

be address by inquiring into the following two questions: Firstly; can OTC derivatives fit into any financial system? Secondly, to what extent is the regulatory initiative plausible to introduce OTC derivatives in a developing economy?

There are two aspects of the first question: the regulatory aspect and the philosophical aspect. From the *regulatory aspect* of a financial system, we have observed in the preceding part while discussing the regulations of OTC derivatives in the UK and the US that the OTC derivatives market is doing well in both financial systems, regardless of opposite regulatory approaches. In the UK any OTC activity is allowed without regulatory requirements, unless the concerning activity falls under one of the regulated activities provided by the Regulatory Activities Order; whereas in the US no OTC derivatives activity is allowed, unless exempted or excluded from regulation by CFMA 2000 or other related regulatory enactments. It is however, submitted that from the perspective of developing countries, the US approach would be more suitable. It is the strong institutional and judicial background and principles long established, followed and carried out in the UK that allow UK regulators to adopt such a liberal approach, and such are scarce in developing countries.

Furthermore, ever-increasing innovation in the OTC derivatives market calls for checks and appropriate risk assessment before a new instrument is introduced in a developing market since the regulatory framework may not keep pace with the changing financial atmosphere. A US-type general prohibition, followed by approvals in the form of exemptions and exclusions after proper assessment of an OTC instrument is, therefore, more plausible for developing countries.

The *philosophical aspect* of financial systems calls for appropriate scrutiny of any developing country and a relatively close scrutiny, especially in the context of Pakistan. In principle, every financial system is meant for active participation in economic growth and welfare of the society at large. The objectives of a financial system are no different around the globe, regardless of its philosophical background. Pakistan being conservative economy with mixed Capitalist and Islamic philosophy may face difficulties in introducing an innovative financial device. Nevertheless, the present situation where standard derivatives products, like forwards and options, already exist and are allowed by the State Bank of Pakistan and where the rupee-dollar forward already has a liquid market, the introduction of more derivative products would not be a new prodigy. Furthermore, the OTC derivative trading in shares of small companies in the Karachi Stock Exchange have already been approved by the Securities and Exchanges Commission of Pakistan.[174]

[174] Approval dated 17 May 2002; Details are available at: http://www.Pakistaneconomist.com/issue2001.issue32/f&m2.htm

It might be argued that OTC derivatives are complex, exotic instruments and, thus, that participants in developing country markets will have difficulties in understanding them.[175] In fact, trading in standard derivative products like forwards and options is not new in for example India and Pakistan and related derivative products already exist in various markets including equity markets.

To what extent is then the regulatory initiative plausible to introduce OTC derivatives in a developing economy? The fact is that the OTC derivative market has emerged and grown in an unregulated atmosphere. Regulation of OTC derivatives emerged when their potential to cause financial meltdown was felt in some disastrous failures, many of which were directly or indirectly caused by derivative financing. The regulatory approach in the last century was to prohibit OTC derivatives for their same potential, but the regulatory approach in 21st Century is to allow OTC derivatives financing channelled in a systemically stable way because of their positive potential in mitigating risks arising out of traditional business with resulting financial stability and economic growth. This is the reason why the OTC derivatives market has gone through a large scale de-regulation in US.

Now the economies that do not have systems of derivatives hedging are believed to be deprived of the benefits of a beneficial financial instrument and are in a comparative disadvantage. Benefits of exchange trading of derivatives are not denied a tailor-made-low-cost OTC instrument is highly effective if the dangerous elements like illiquidity and undisclosed positions are removed. It is not necessary for financial innovation to originate from market participants. Initiatives in developing countries can be taken by the regulator and introduce new instruments with specific regulatory requirements; instruments that can attain the ultimate objectives.

OTC derivatives are, no doubt risky and highly leveraged instruments. This might form the basis for arguments against the introduction of OTC derivatives in developing countries. Banks and other financial institutions and corporations are less sophisticated in both technique and technology, so the risk element will be more prominent. It is, however, suggested that though the risks associated to OTC derivatives have caused great alarm, they are now well defined and comprehensively elaborated. Techniques like clearing, facilities for OTC derivatives and capital adequacy requirements and an increased emphasis on skilled and prudential management have proved effective to keep the OTC market well liquid and coping with other risks. Regulatory initiatives can *ab initio* curtail legal uncertainty. Furthermore as Alan Greenspan the Chairman of Federal Reserve Board of the US has rightly said, "there are some who would ague that the role of the bank supervisor is to minimise or even eliminate bank failure; but this view is mistaken in my judgement. The willingness to take risk is essential to the growth of a free market economy. [I]f all savers and their financial intermediaries invested only in risk free assets, the potential for business growth would be never realised."

[175] Cf. Nina Mehta; Myths behind Derivatives; available at http://www.blonnet.com/businessline/iw/2000/06/11/stories/0811ho17.htm

5.3. Regulatory Challenges for Developing Economies

5.3.1. Financial Integrity and the Reduction of Systemic Risk

Since derivatives are risky and highly leveraged instruments, developing economies that intend to introduce or have already allowed OTC transactions in different areas of financial activity have to combat certain regulatory challenges. Developing economies may not be strong enough to sustain defaults of large number of major market participants. Protection against systemic risk is therefore the biggest regulatory challenge for developing countries. Regulatory challenges for developing countries may be discussed under the following headings.

Integrity of the investment market is essential for the promotion of orderly raising of capital. Developing economies need to establish framework for the free operation of the market, establishing rules of conduct designed to improve the flow of information and the confidence of market participants. OTC derivative financing is required to be brought under the general heading of investment business and required to be authorised like credit institutions and investment firms. Once OTC derivatives are recognised as investment business subject to authorisation, other requirements like capital adequacy, minimum standards of prudential management and standards of internal control can also be applied.

Capital adequacy requirements are recognised efficient tools to internalising credit and other kinds of risks. The risk sensitive nature of the required capital, i.e., depending upon and increasing along with the nature and degree of the risk, would be more suitable for developing economies. Capital requirements may also be made adjustable depending upon the nature, size or sophistication of a firm. There is a corresponding need to establish systems to monitor compliance of capital requirements. Depending upon the regulatory model, capital compliance may be monitored by different regulators than the one that monitors compliance with conduct of business rules.[176] Influence can be taken from the guidelines of the 'Basle Capital Adequacy Accord' (1993) and the 'EC Own Funds and Solvency Ratio Directive' adopted in 1993. One of the major challenges, however, for capital adequacy rules is to design a usable method for calculating total risk that is suitable for all market participants.[177]

Because of the inter-linkage among financial institutions, close co-operation is necessary among regulators of different sectors of the national financial systems to assure the financial integrity of authorised financial institutions, prevent conflict of interest and to reduce systemic risk. This is the reason that leads to a single financial regulator in UK. The free flow of information and close co-operation among different regulators is highly important in the absence of a single financial regulator. To prevent systemic crisis, firms engaging in OTC activities should also be

[176] working paper on National Laws Regulating to OTC derivatives transactions and the public policy objectives of financial regulation; Office of Inter-affairs; US. CFTC; Issued July 2000

[177] Cf. C. Goodhart; Emerging Framework of Financial Regulation; (CBP. 1998); p.26

made subject to minimum standards of prudential regulation and internal control. The fact that OTC derivatives can be complex and difficult to understand presents a need for skilled management capable of understanding and managing risks associated with such exotic instruments. An appropriate settlement and clearing system also helps to reduce systemic risk arsing out of OTC derivatives. The US has already taken an initiative to provide a clearing facility for OTC transactions.

Certain institutions, like banks, securities houses and insurance companies are regarded as central to a financial system. Since they are given a monopoly in certain products and certain kinds of activities, they are usually regulated by specialised regulators (except in the UK), who exercise detailed supervisory authority over their activities.[178] In the context of OTC derivatives regulations two issues arise; should a monopoly on OTC derivatives be given to specialised institutions or should OTC activity of regulated institutions be specially regulated.[179]

The proponents that suggest that specialised institutions should be given the monopoly over OTC derivatives hold that this will enable the regulator to closely monitor and control the developments of OTC derivatives.[180] This kind of regulation is termed '*ring fencing*'.[181] Ring fencing necessarily provides that institutions should be restricted to their own specialized activities e.g. deposits-taking may be limited to banks that are then subject to disclosure and prudential requirements and securities dealing may be restricted to registered brokers/dealers, who are subject to requirements as to disclosure to customers and making determinations as to suitability of certain types of instruments for customers.

By ring fencing, OTC derivatives can be restricted to only one type of institution, which can be closely regulated. In return for monopoly over a product, control can be placed on these regulatory institutions, designed to control their solvency and conduct of business in the form of prudential management requirements. Ring fencing may also make possible the achievement of certain policy considerations relating to OTC derivatives. For instance, if it is determined to regulate swaps offered to the general public, one approach might be to limit the offering of swaps to the public to offers by institutions whose solvency and conduct of business is supervised.[182] Ring fencing, is however, criticized on the grounds that the focus should be on how to control an institutions' involvement in derivatives business rather than on forbidding it.[183] The second issue i.e. should OTC activity of regulated institutions be specially regulated is evidenced by US OTC derivatives regulations. As discussed in the preceding part, US OTC

[178] Cf. S. K. Henderson; Regulation of Swaps and Derivatives: How and Why? ; (JIBL 1993); p. 353

[179] Cf. ibid

[180] S. K. Henderson; op. Cit. P.354

[181] Cf. C. Goodhart; op. cit. p. 297

[182] Cf. ibid

[183] C. Gaoodhart; op. cit. p. 292

derivative regulation mainly focuses on individual OTC products. The system provides definitions of OTC products and clarifies the capacity to deal in those products. In recent years there has been a tendency towards specific derivatives legislations[184] Developing economies should be required to clarify questions as to capacity, i.e., whether or not a regulated institution should be permitted to enter into OTC activities and also the circumstances under which such activity is permitted or prohibited. Such clarifications may be necessary both to enable the institution to have access to the swap market and to protect the OTC market from potentially serious losses from a finding that the counterparty lacked capacity.[185]

5.3.2. Legal Certainty and Protection of Less Sophisticated Persons[186]

Certain issues with respect to the legal certainty of OTC derivatives transaction demand particular attention. Firstly, developing economies need to enhance legal certainty relating to enforceability of OTC derivative transactions under certain circumstances and between certain counterparties. For example, in some jurisdictions certain OTC products may fall under the laws relating to the prohibition of gambling. Removal of this uncertainty is vital. Secondly, there should be legal certainty as to the enforceability of bilateral contractual arrangements that are intended to govern the use of collateral, and the close out or liquidation of derivative positions in the event of a default or insolvency. ISDA provides legal certainty in this context by providing essential close out netting. In the absence of close-out netting and legal certainty regarding the enforceability of bilateral collateral arrangements OTC derivatives will always be exposed to legal risk.

Another challenge for developing countries will be the protection of the less sophisticated person or average citizen from the depredations of somewhat greedy and untrustworthy large institutions. The protection of less sophisticated persons may be achieved by any of the following ways: by excluding less sophisticated persons from the OTC derivatives market, and limiting the use of OTC derivative product to institutions and individuals which are subject to the regulations regarding dealing with the general public.[187] This approach is adopted by the US, where OTC products are limited to eligible contract participants (ECPs). ECPs are those market participants, which fulfil certain requirements and meet certain financial tests.[188] Secondly the protection is achieved on the pattern of the UK wholesale market regime, by regulating the conduct of businesses providing capital adequacy requirements for those market

[184] See for example Australian Securities Commission, Report on OTC Derivatives Markets (Canberra, Australian Government Publishing Services 1994); p. 6

[185] S. K. Henderson; op. cit. P. 354

[186] Cf. Working Paper, op. cit. p. 99

[187] Cf. S. K. Henderson; op. cit. p. 354

[188] See Part 3, Para. 3.4.1.1 supra

participants who are authorised in dealing with the general public in investment business including OTC products. The UK regulatory framework imposes a higher degree of disclosure and standard fiduciary obligations on market participants offering investments to the general public.[189]

Developing economies also need to prepare customer protection laws where the customers are protected from misleading, fraudulent and abusive practices. Full disclosure is required for customers making informed investment or risk management decisions. Customers' assets also need protection from defalcation on intermediary insolvency.[190]

There are certain other regulatory challenges, which according to market conditions could appear in a developing economy in OTC derivative regulation. For example, a government may wish to regulate the price of certain commodities (e.g. agricultural commodities), which it deems central for the proper functioning of its economy.[191] It may, therefore chose to regulate OTC instrument that affect the price or marketability of those commodities. Some jurisdictions especially developing, have systems like exchange controls intended to protect the domestic economy or monetary systems, to protect the integrity of the local currency, to manage the local interest rate, to restrict capital outflows or to protect domestic institutions from foreign competition.[192] Regulation of certain OTC products, e.g. swaps, would be important for the effectiveness of such protections.

6. Final Conclusions

OTC derivatives are no doubt very risky and highly leveraged instruments. At the same time, they can serve numerous financial purposes and participate in economic growth and prosperity. As far as the risks associated with OTC derivatives are concerned, we have seen that these risks are well identified and comprehensively defined. Legal liquidity, credit and market risks are exhaustively investigated and known by both financial regulators and market participants.

Secondly, these risks are not special to OTC derivatives, but are also faced by market participants in traditional investment business. It is true that OTC derivatives increase linkage between market segments and individual financial institutions. This linkage can cause contagion in case of failure and can ignite systemic meltdown, but certain regulatory tools like capital adequacy, increased disclosure requirements, and clearing facilities have proved to be effective to internalise these risks and prevent systemic externalities of such failures. With the

[189] S. K. Henderson. ibid

[190] IOSCO Objectives and Principles of Securities Regulation.

[191] S. K. Henderson. op. cit. p. 356

[192] Cf. ibid

help of regulatory tools the financial market regulators in both the US and the UK has made of OTC derivatives market very reliable and productive.

OTC derivatives are equally beneficial for end users, dealers and the economy at large. End users benefit from lowest funding costs and more diversified funding sources by the use of OTC derivatives. Hedging of risks arising out of traditional investment business is important and according to some US courts it is even compulsory. OTC derivatives hedging has proved itself an efficient instrument to hedge against different kinds of risks arising out of traditional business activities. Dealers can generate activities profitable income stream, reconstruct their capital basis and diversify their sources of income. With an organised OTC derivative market, an economy will have increased financial activity with better exposure management capability and will also attract international investment and large market participants. These are the benefits, which are longed for by any financial market regardless of nature or size. Contemporary economies that prohibit derivatives hedging are deficient in a beneficial economic income source, and are at a comparative disadvantage. The ability to use OTC derivatives to unbundled financial risk into separate components is an important step in the direction of creating more complete and efficient financial markets.

Worries related to OTC derivatives are that they fail to perform as expected in the times of stress when major firms are at risk of suffering loss and many other smaller institutions are at risk of illiquidity, if not insolvency. The fact is that OTC derivatives can give rise to systemic instability due to their dynamic nature of gross credit exposures, the absence of necessary information to market participants, their effects on available aggregate credit and market liquidity, and for their enlarged market size. Inadequate counterparty assessment, limited understanding of market dynamics and liquidity risk assessments, and legal and regulatory uncertainty are also major factors that participate in OTC derivatives market precariousness. Furthermore, the OTC market is dominated by internationally active large institutions and the failure of single such institution can bring global financial meltdown.

Increased market discipline with symmetric information mechanisms and increased cooperation between the regulator and the regulated is required to fight against these problems. The mechanism that makes mandatory the disclosure of the minimum information necessary for useful market discipline and effective official supervision and surveillance is essential. Prudential regulations and particularly capital adequacy requirements are also vital in this regard. A U.S-type clearing facility available for OTC transactions can effectively remove liquidity risks. Secondly, for the better and smooth function of the OTC derivatives market, developing economies are required to provide higher degree of legal and regulatory certainty. Enforceability of OTC derivatives and bilateral collateral arrangements and the recognition of close-out netting are major areas in this context.

> In addition to these challenges, developing countries wishing to introduce derivatives may face some peculiar challenges as well according to the individual circumstances and their financial and economic conditions. There might be policy considerations like the protection of the domestic economy or monetary system, protection of the market/price

of certain commodity that can be affected by OTC activities, or protection against capital outflows, which can necessitate regulation of certain OTC products, for example swaps, in a particular fashion. The US type functional approach with general restrictions followed by exemptions to deal in certain product after proper risk and regulatory assessments is believed feasible in such circumstances.