FOA

Managing the Risk of Financial Transactions

Guidelines for Market Participants

UK TRADE & INVESTMENT

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Introduction

The establishment of credible, liquid and transparent financial markets and services are a critically important mechanism for meeting the savings, investment, capital raising and risk management needs of governments, semi-private and private enterprises and individuals. However, any "financial activity" roadmap must be realistic, long-term and sustainable and operate within a credible and predictable legal and regulatory framework, if the deployment of financial markets and services are to be a major source and driver for sound economic advancement.

At the same time, every economic endeavour and activity carries risk and dealing and investing in financial instruments is no different. This means that market participants and users must have in place an effective framework of systems and controls for managing the various forms of risk that will be generated by their financial activity.

While the six risk management principles do not seek to cover every aspect of some of the more detailed risks that may arise in connection with dealings in specific financial instruments, they are reflective of the kind of good industry practice that is currently being followed by organisations and institutions engaged in financial trading and investment.

In many cases, however, the guidelines will need to be adapted to fit the size of the organisation, the scale of its dealing and investment activity, the nature and risk of its exposures, the expertise of its staff and any rights and duties imposed upon the organisation, either through its contractual relations or by any external regulatory agency. This also means that organisations should always consider seeking legal, accounting and other professional advice as regards the procedures, practices and controls that are appropriate to their own particular trading or investment activities and the risk of the transactions entered into by them.

Anthony Belchambers
Chief Executive
Futures and Options Association

The Futures and Options Association (FOA)

The FOA is a European industry trade association for 170 international firms and institutions which carry on business in futures, options and other derivatives or which use them in their business. Its principal role is to represent the interests of its members in the public and regulatory domain and deliver a wide range of support services to the core membership, which includes banks and financial institutions, brokers, commodity trade houses, energy and power market participants, fund managers, exchanges and clearing houses.

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1 EXECUTIVE SUMMARY

The increasing globalisation, accessibility and sophistication of financial markets and the creativity of investment bankers and firms and other financial institutions have fostered the introduction and use of a wide variety of financial instruments and structured financial transactions. Most organisations now use these instruments for investment purposes or short-term trading on price or, particularly in the case of derivatives, for hedging exposures or managing their portfolios more efficiently. In common with all forms of economic activity, investing or trading in financial instruments can generate healthy returns, but they also carry the risk of loss, which, particularly in the case of geared transactions, can be significant and can exceed the initial value of the instrument. Such losses are usually generated by excessive position-taking (in relation to capital), inexpert use of highly complex or leveraged transactions where the risks are not properly understood and monitored, unexpected market moves, fraud, ineffective risk management controls, inadequacies in corporate policy governing their use and/or insufficient product understanding.

Undertaking any transactions in financial instruments can have significant consequences for an organisation, its employees, customers and suppliers if their full economic effect or the nature of their risk is not properly understood, controlled and managed. The collapse of Enron demonstrated all too vividly the importance of good corporate governance and the need for boards and senior managers to properly understand the risks inherent in their business and the nature of the transactions entered into by the organisation. There are many other examples of financial institutions suffering significant losses as a result of not properly controlling and managing the risks which result from using financial instruments.

In developing its original Guidelines, the FOA was (and has continued to be) motivated by the need to produce a core set of basic recommendations for managing risk which were:

- consistent with best practice;
- capable of adoption by market participants, whether regulated or not and whatever their size;
- straightforward, practical and cost-effective.

These revised Guidelines address the broad spectrum of trading risks which are endemic to all forms of financial activity. They comprise six core principles and set out the some of the practical steps necessary to implement them. However, the form and extent of their implementation will depend upon the precise circumstances of the user, including the size, purpose, type and frequency of its transactions, and upon the staff and systems, financial and other resources available to the user. For example, a number of the recommendations rely on the very important principle of segregating functions to avoid conflicts of interest and establishing effective independent oversight, yet smaller firms may simply not have sufficient staff to establish independent surveillance units. In such circumstances, they will need to have monitoring procedures in place to ensure that conflicts of interest, where they exist, are managed effectively. Moreover, some organisations will, of course, be subject to their own special regulatory requirements or may be members of professional bodies which have issued their own guidelines or statements of best practice.

In view of the importance of having effective oversight procedures and controls in place for managing specific areas of risk to which an organisation may be particularly vulnerable, principles 3, 4, 5 and 6 focus on the identification and management of market risk, credit risk, operational risk and legal risk.

1. **The board of directors (or its equivalent) should establish and approve an effective policy for the use and risk management of financial instruments (particularly the higher risk type of products) which is consistent with the strategy, commercial objectives, financial position and risk appetite of the underlying business of the organisation.**

   In order to carry out this function, the board should inter alia determine the risks to which the organisation is exposed (e.g. market risk, credit risk, operational risk, legal risk); understand the purposes behind its transactional activity (e.g. trading as principal, investment or hedging); and ensure that all trading activities in financial instruments and any consequential risks are subject to effective reporting and internal control systems. To be able to perform its duties effectively, it is important that the board includes amongst its numbers, directors who have the appropriate levels of experience, knowledge and skills.

2. **Senior management should establish an organisational structure and an independent framework of internal controls and audit for managing the organisation's use of financial instruments which is approved by the board (or its equivalent) and consistent with the principles of good corporate governance and oversight for managing trading and investment risk.**

   The risk management function should provide for identifying, measuring, managing, monitoring, mitigating and reporting on all aspects of risk and should include a detailed analysis of the different types of risk to which the organisation is or may become subject.

   The framework should provide for reporting lines, counterparty and documentation approvals, competency training and assessment, appropriate accounting and disclosure treatment, the prevention of trading and market abuse, the setting in and enforcing of limits, segregation of functions and contingency planning.

3. **Senior management should ensure that there are procedures and controls in place sufficient to identify, measure, manage, mitigate and report on all forms of market risk which may be generated by the organisation's use of financial instruments and which may be caused by adverse movements in equity, bond, commodity, currency or other market prices, indices or rates or changes in the volatility of such movements.**

   Market risk policies should provide for the approval, execution, confirmation, recording, measuring, monitoring and reporting of transactions and address matters such as dealing authorities, the use of risk/position limits, procedures for evaluating exposures and stress testing.

4. **Senior management should ensure that there are procedures and controls in place to identify, measure, manage, monitor and report on all forms of credit risk generated by the organisation's use of financial instruments and secure its mitigation through the use of netting and collateral arrangements or other credit enhancement techniques.**

   An organisation's framework for addressing credit risk should include counterparty risk, third party risk, country risk and settlement and pre–settlement risk.

   It should be capable of differentiating between the risk profiles of over-the-counter and exchange-traded transactions; assessing the advantages and disadvantages of segregation; using, as appropriate, limits, netting and collateral to mitigate credit risk; and establishing a

contingency plan in the event of a counterparty, clearing/settlement organisation or broker experiencing financial difficulties.

5. **Senior management should ensure that procedures and controls for financial instruments are in place to identify, measure, manage, monitor, report on and, where practical, mitigate any operational risk which may be generated by the organisation's use of financial instruments, including particularly technological risk.**

   Processes should provide for an analysis of and a methodology for managing all types of operational risks faced by an organisation, including the impact of new products, counterparties, clearing and settlement organisations and customers; changes in the trade cycle; the automation of business processes; outsourcing of IT services; changes in management; and any sudden loss in business continuity.

6. **Senior management should ensure that procedures and controls are in place to identify, measure, manage, monitor, mitigate and report on the legal and regulatory risk of its use of financial instruments.**

   It is particularly important to make sure that an organisation and its counterparties have the legal capacity or power to enter into the financial instruments in question and their dealings are in compliance with relevant statutory requirements. The documentation should cover the nature of the relationship between the organisation and its bank or broker and the terms of dealing. Full consideration should be given to the use of, where available, market standard master agreements (particularly relevant in the case of netting) and the use of credit enhancement arrangements. It is also critical that the documentation is enforceable in the event of default or dispute.

These guidelines do not purport to be an insurance policy providing those who implement them with immunity from the risks associated with financial instrument activity; nor do they attempt to deal in detail with the different circumstances that may be peculiar to particular types of user. They do, however, suggest practical steps for implementing the recommendations and provide a useful good practice benchmark for managing the risk associated with the use of financial instruments. They are also consistent with the kind of internal controls that most well-structured organisations will have in place for addressing comparable areas of risk arising in connection with the organisation's other activities (and, to that extent, the principles will have, in some respects, broader application).

It is to be hoped that, by understanding and implementing these guidelines, users of financial instruments will become more aware of the risks associated with their financial dealing and investment activities and better prepared to manage them.

2 THE FINANCIAL TRADING ENVIRONMENT: AN OVERVIEW

A financial instrument is any contract or instrument that gives rise to an asset or liability for the organisation. Financial instruments include equities, bonds and commodities ('cash instruments') as well as contractual rights to receive cash or another financial instrument the value of which is based on an underlying asset, index or rate (a 'derivative'). Cash instruments may be securities that are easily transferable – often in electronic or dematerialised form - or other instruments such as loan agreements or deposits where the parties to the instruments have to consent to the transfer. Derivatives, which are usually in the form of futures, options or swaps, cover a wide range of financial products (e.g. equities and bonds), money rates (e.g. interest and exchange rates), indices (e.g. equities and commodity indices) as well as a broad spectrum of commodities (e.g. coffee, sugar, cocoa, precious and base metals, electricity, gas, oil) "exotics" such as weather and bandwidth and other areas of high commercial risk (e.g. credit). Whether transacted on a regulated exchange or on any other form of multi-lateral trading platform or bilaterally over-the-counter (that is, off-exchange or 'over the counter'), financial instruments today are being increasingly used - and used successfully - by growing numbers of corporates, financial institutions, building societies, insurance companies, commodity groups, fund managers and other organisations to meet their capital raising, investment, trading and risk management (or "hedging") needs.

Whether the purpose of trading is to raise capital, trade, invest or hedge against future adverse price movements in respect of underlying assets and/or portfolios, manage interest rate or exchange rate risks or take positions with a view to improving profits, financial instruments are and will continue to play an important and internationally recognised role in the world's trading and financial systems.

1. Trading on an exchange

Exchanges which provide an infrastructure for trading financial instruments (usually securities or derivatives) have to operate with a high level of integrity, efficiency and price transparency in order to deliver confidence in their markets and provide for the fair treatment of all market users. They usually have to be licensed in their own home country and be able to demonstrate continuing compliance with the requirements of that country. While these requirements and the degree of accompanying oversight and enforcement may vary from country to country (and from exchange to exchange), their purpose is generally to ensure that an exchange:

(a) maintains high standards of integrity and fair dealing;

(b) facilitates a "proper market" in their instruments;

(c) ensures that its prices are transparent and the price formation process is reliable;

(d) has a mechanism to monitor compliance with its rules;

(e) has effective arrangements for the investigation of complaints;

(f) has financial resources sufficient to sustain proper performance;

(g) has a high degree of security and operational reliability and appropriate contingency arrangements.

These requirements are supplemented by regular liaison between exchanges and their licensing authorities over matters such as market supervision, the development of new products and strategies, enforcement and market safety and integrity. Each exchange will usually have a broad range of regulatory rules, practices and procedures designed to meet its recognition or licensing requirements and attain its commercial objectives, including:

Membership rules, which will vary according to the category of member (e.g. some members may clear transactions (see later), whereas others may only be permitted to execute transactions), but which are designed to ensure that an exchange's members are fit and proper and adequately capitalised to carry on their trading activities.

Market regulation, which is designed to ensure that, on a day-to-day basis, market users conduct their exchange business in an orderly fashion. For example, there are rules on trading hours; rules preventing the dissemination of false information, the execution of false trades or market manipulation ("market abuse"); and emergency rules covering, for example, the imposition of position limits, the suspension of trading and, increases in the level of security required to cover the risk exposure. There are also rules and procedures for the detection, investigation and sanctioning of rules' breaches; and for registering transactions, checking mis-matches and publishing prices on a timely basis. Many exchanges supplement their enforcement rules with *in extremis* powers of intervention, usually exercisable where the market is being affected adversely by undesirable or improper trading practices (e.g. ordering a member to trade out of contract positions or reduce its net trading position).

Listing rules, which set a number of obligations which have to be met by companies that want their securities to be listed and admitted to trading on a regulated market operated by a stock exchange. In particular, they require any such company to set out specified information in the prospectus they issue to potential investors before they join the market. A prospectus is also required when the company chooses to raise additional funds by means of a further issue of securities. In addition to these initial disclosures, listed companies are also required to observe a series of continuing obligations, for example, by disclosing further information that could affect the share price. The regimes for disclosing "inside" or "price sensitive" information or periodic financial information about a company's performance and its futures prospects varies from jurisdiction to jurisdiction – as will the mechanisms for releasing such information to the outside world. While the obligations rest with company directors (and their advisors), listing and disclosure rules are increasingly a part of the regulatory requirements of the relevant regulatory authority rather than of the country's stock exchange.

Contract rules (generally applicable only in the case of derivatives), which address such matters as contract specification, the quality of goods, warehousing and points of delivery.

Arbitration procedures, which may range from providing "documents only" hearings to permitting full legal representation. They may cover not just instruments traded on the exchange, but also disputes over the dealing or investment activity in other financial instruments listed by or quoted on the relevant exchange.

All users should satisfy themselves as to the trading costs, liquidity and transparency of the execution venue for their transactions and, in particular, whether it is an organised and regulated exchange or some other alternative market (which may still be licensed by its home state authority, but which may be subject to less regulation and may be less transparent). For example, public disclosure of certain aspects of how the exchange is organised (e.g. governance structure, senior management structure) can assist transparency to the users.

2. Trading over-the-counter

A large and increasing range of trading in financial instruments is undertaken privately or "over-the-counter" (OTC) i.e. on a bilateral basis between financial institutions, organisations and companies. Dealings may be "internalised" within financial institutions (i.e. where client orders are executed not on an exchange but against a financial institution's own inventory or account or are matched with that of one of its clients) or executed on an electronic platform that may provide similar functionality as a regulated exchange. Such a platform may be the proprietary platform of a single institution (e.g. a bank or an energy trading company) or it may be owned or used by a consortium of financial institutions.

It should always be borne in mind that, while there is often a close interface between over-the-counter trades and exchange trades, OTC transactions:

(a) are not subject to exchange rules (although some may be incorporated in their terms) and should not be confused with out-of-hours trading in exchange listed or quoted contracts or trading on the exchange's electronic trading system, both of which will usually be covered by the exchange's own rules);

(b) unless otherwise specified, are not subject to clearing house rules, which means that, unless the parties otherwise agree, they are not subject to margin arrangements (although an increasing range of OTC contracts are now being "cleared" by recognised clearing houses);

(c) have a different risk profile to exchange-traded transactions;

(d) have the advantages of being able to be traded in non-standard quantities or at time or in currencies other than those quoted on an exchange and, in some jurisdictions, there may be applicable tax advantages (NB: Sometimes there may be no listed exchange-traded contract which means that the transaction can only be effected OTC);

(e) may, particularly where they are unusual or complex, be more difficult to value and be subject to lower levels of price transparency than exchange-traded instruments (NB: This reduced level of price transparency and the added elements of customisation desired by both parties may result in an increased cost, which may be clearly articulated or it may be embedded in the structure of the transaction).

3. The role of clearing and settlement in the securities markets

In the securities market the clearance and settlement function is usually performed by a clearinghouse— usually a CCP and a central securities depository (CSD), or an international central securities depository (ICSD). CCPs can provide not only the clearing function, but as noted above, they can legally interpose themselves as counterparty to both buyers and sellers. The buyer and seller interact with the CCP and remain anonymous to one another. As noted above CCPs may also provide netting services that reduce risk exposures, thereby reducing the gross margin requirements and liquidity needs of member institutions. A CSD or an ICSD can perform both clearance and settlement functions because it can facilitate the coordination and exchange of trade information between counterparties and hold securities and process change of ownership by book entry.

In the settlement phase, the movement of securities (such as ownership transfer and related

bookkeeping) is done at the CSD or ICSD, while the movement of funds is usually accomplished through the banking or payments systems. A number of major securities settlement systems have "embedded" payment or funds-transfer systems that accomplish settlement, whether in central bank or commercial bank money. A CSD or ICSD may hold securities owned by a party other than a member, thus requiring these non-members to interact with the CSD through an intermediary such as a custodian. Custodians hold securities on behalf of their owners and provide asset servicing e.g. monitoring dividend receipts and interest payments, filing information and claims with the relevant taxation authorities, and managing corporate actions such as voting and conversion rights relevant to owners of equities. Where the provisions of company law in the country concerned include requirements for trade reporting, disclosure of significant holdings, or foreign-ownership restrictions custodians may also perform this function. Because custodians can deal with the specific financial, operational, technical, and legal characteristics of local systems, foreign investors normally employ local custodian banks as agents in the clearance and settlement process.

4. The role of clearing in the derivative markets

The role of a clearing house, which may be an independently established organisation or a division of an exchange, is to act as a central counterparty for transactions in financial instruments, the principal objective is to help "guarantee" the financial performance of transactions in order to reduce counterparty risk, increase market liquidity and use efficient "straight-through processing" to maintain low settlement costs. The provision of a secure, effective and cost-efficient clearing service into the market place helps to protect the overall integrity of the market(s).

Traditionally, the provision of this kind of central counterparty service (CCP) has only been available in relation to transactions executed on a regulated market or exchange and, even then, usually in relation only to derivatives transactions. However, that position has changed, in some cases significantly, with a number of clearing houses/clearing divisions providing a similar CCP facility across a range of over-the-counter markets and financial instruments (e.g. the interbank interest rate swaps market, repos and other OTC products).

In order to become cleared, a contract must be traded between two clearing members of an exchange who are also members of the clearing house (and, by definition, capable therefore of meeting the necessarily high requirements concerning liquid assets and capital) at which point, through the process of novation, the clearing house will become the counterparty to both members thereby, in effect, guaranteeing the transaction. This means that contracts entered into between non-clearing members of an exchange will have to be "given up" to a clearing member for the contracts to be cleared.

Following the process of novation, each party to the transaction will be required to make an initial margin payment which represents a notional price movement greater than that which is believed likely to occur in the relevant contract over one day. These margin payments are required to be made in high quality assets (e.g. in certain currencies, acceptable government securities and money market instruments and a strictly specified range of equities) and are the subject of regular review to ensure they are an adequate representation of risk. In most cases, a clearing house will have default rules which are designed to protect its rights to use a defaulter's financial resources which are at its disposal to offset its financial obligations and to guard against the risk of a liquidator of a defaulter "cherry picking" profitable contracts which the member has entered with

the clearing house. Members of a clearing house will also usually have to contribute to a Default Fund, which is intended to meet the cost of any losses arising from defaulted contracts for which the clearing house has responsibility.

A clearing house performs its role:

- by assessing and managing member counterparty risk, delivery risk, banking and collateral lodgement risk and contract risk;

- by operating a centralised, automated treasury operation for the purpose of administering payments and receipts for the lodgement and withdrawal of collateral as well as the management of a multi-currency portfolio of significant proportions;

- by revaluing on a daily basis the novated contracts which it has entered into with its members and, reflecting the various price movements, collecting additional or "variation" margin from members whose positions have fallen in value and paying such margin to those whose positions have risen in value;

- by monitoring positions and reviewing financial reports, credit rating assessments and the internal controls of its member firms; and

- through the settlement and delivery of netted transactions for futures and options markets, and the issue of netted settlement instructions to a Clearing and Settlement Depository (CSD) or International Clearing and Settlement Depository (ICSD) for securities transactions (see next section) and OTC markets.

5. Selecting a broker [1]

When a customer deals with a licensed broker, that customer is entitled to expect to be dealing with a reputable and professional entity with well-trained and suitably qualified staff and one which will be regulated to a high standard (see Section 6). However, customers should remember that all trading and investment activity (whether in derivaties or other financial instruments) carries varying degrees of risk and no matter how well the regulatory authorities perform their duties, human errors, extreme market volatility, counterparty defaults and fraudulent behaviour can and do happen.

For these reasons, while the regulatory authorities may have extensive powers and sanctions designed to protect investors, customers where possible, should still (a) undertake their own enquiries as to the business and financial standing of their financial adviser/broker and the suitability of transactions entered into on their behalf; (b) establish their own internal controls and procedures for managing the risks underlying their financial exposures, including regular reviews of brokers and counterparties with whom they have credit exposure; and (c) ensure that they understand the nature of the transactions to be executed on their behalf (and not sign any documents until they are understood).

Regardless of size or type (e.g. bank or small specialist broker), brokerage houses will usually have a "back office", which balances, monitors and verifies customer positions and reconciles accounts;

[1] For the purposes of these guidelines, the term "broker", "counterparty" or "firm" includes banks, bank subsidiaries, investment banks, stockbrokers and commodity trade houses which are licensed or authorised to provide services or deal in financial instruments (including OTC transactions).

a "front office", which handles customer orders; a credit department for assessing and monitoring the creditworthiness of new and existing clients, particularly where credit lines are extended to them; a compliance department, which ensures that the firm observes the rules of its regulatory authority; and a research department, which is responsible for keeping abreast of market information and analysing and recommending trading strategies.

When selecting a broker, consideration should be given not just to fees and commissions, but also, where feasible, to a broker's financial strength, management structures, operational legal capacity to undertake the relevant business and to the effectiveness of its systems and procedures for dealing with contingencies and whether or not it is trading on its own account. The selection process should be the subject of documented assessment and regular review, where possible, by personnel free of any possible conflict of interest.

More particularly, a customer should:

(a) make sure that the broker is of good reputation, has (including its staff) sufficient experience of the financial instruments in question and is of adequate financial worth to undertake the required business;

(b) check that the broker is licensed to carry on the business in question and by whom the broker is licensed/regulated (NB: Different regulatory authorities have different rules);

(c) where possible, meet the broker to establish a proper working relationship and assess the overall operation and the kind of people running it;

(d) ensure that the Terms of Business include any restrictions to be set on the range of transactions to be entered into on the customer's behalf (NB: Pre-contract discussions are often evidential of what the parties intended and may be used to interpret any unclear or ambiguous terms in a customer agreement);

(e) understand the nature of the relationship with the broker (e.g. principle/agent); and, whether the broker is providing an execution-only service or is under an obligation to provide the customer with specific advice (which should not be confused with the provision of market information);

(f) where possible, obtain independent confirmation of the quality of service (e.g. from other customers);

(g) read all risk disclosure statements or notices, bearing in mind that, while all financial activity involves some degree of risk, generally, the greater the potential for profit the greater the risk of loss (NB: This is particularly true of geared products such as derivatives when they are traded for speculative purposes);

(h) find out how fees, commissions and other forms of remuneration are calculated and charged, taking into account the quality and range of services on offer;

(i) ensure that the range of services offered by the broker is appropriate and that any recommendations are supported by research and analysis;

(j) where appropriate, use a broker included on the list of any relevant exchange.

Customers should, no matter how reputable the broker, review their accounts to ensure that (a) no unauthorised transactions have taken place; (b) there is no excessive turnover in transactions; and (c) the commission charged in respect of dealings over the relevant period is as agreed.

If a customer does have a complaint, it should be raised first with the broker to provide the broker with an opportunity for investigating and, as appropriate, correcting the situation. If the customer is still dissatisfied, the matter should then be referred in writing to the relevant regulatory authority or exchange who may then investigate the complaint and/or refer it to arbitration.

6. The role of regulation

Regulatory policy and practice can vary significantly around the world. For example, in some countries there is a single unitary regulatory authority, while in others there are several sectoral authorities, each of which is responsible for regulating a different part of the financial services industry. Some jurisdictions may have separate Codes of Conduct for the carrying on of wholesale/professional business while others provide certain rules designed to protect retail customers, such as "best execution". Whatever the approach, the principle objectives of regulation are, in general:

(a) to maintain overall confidence in the integrity of markets and in the financial system;

(b) to ensure that companies and individuals carrying on financial services business are and continue to be "fit and proper" for that purpose;

(c) to provide appropriate protection for investors and customers of financial services;

(d) to reduce the potential for any financial service activity to be used for criminal purposes, particularly financial crime.

In furtherance of these objectives, most regulatory authorities will perform their role by:

(i) licensing and supervising institutions which provide financial services;

(ii) licensing and supervising exchanges, clearing houses and settlement organisations and other alternative market infrastructure providers;

(iii) enforcing the regulatory framework through the application of principles, rules and/or codes of conduct and by the exercise of various statutory powers;

(iv) co-operating with other competent authorities for the purposes of regulating complex groups, securing information and investigating and enforcing their rules;

(v) where possible, recognising the regulations of non-domestic authorities.

As such, the principles, rules and guidance of many regulatory authorities will usually comprise:

- **Licensing rules**, which cover firms and persons carrying on business in dealing, broking, giving advice on or managing financial products and instruments - the overall objective being to ensure that they are and continue to be of good repute, competent and sufficiently resourced to carry on their business. These licensing requirements may be

supplemented by registration requirements for key employees covering their competence and integrity.

- **Business conduct rules**, which prescribe how firms should conduct financial services business with their customers and manage conflicts of interest.
- **Advertising and marketing or financial promotion rules,** which are designed to prevent undesirable and misleading sales practices.

- **Client money and assets rules**, which require licensed firms to hold money and other assets (including collateral) separately from the firms' assets to give greater protection to them in the event of the firm becoming insolvent. In some jurisdictions, banks may not be permitted to protect customer assets in such a way as to give them preference over their depositors.

- **Financial rules**, which focus on the solvency and soundness of firms by requiring them to maintain, at all times, minimum financial resources to cover various forms of risk (e.g. position risk, credit risk and operational risk); keep adequate records; and submit regular financial reports. While these rules may vary when applied to banks, they will still be subject to capital adequacy and other rules, ensuring the adequacy of their systems and controls.

- **Market conduct rules**, which supplement the market integrity rules of exchanges and clearing houses, but cover insider dealing and market abuse.

- **Surveillance and enforcement rules**, which establish procedures for monitoring, investigating and, in the case of rules' breaches, sanctioning of firms.

- **Complaints/redress procedures**, (usually also available under the rules of an exchange), which provide customers (whatever their nationality) with simple, economic and speedy rights of redress (in addition to civil rights of action).

- **Compensation schemes**, which enable retail customers to seek compensation from a central fund in the event of the default of their broker, usually up to a maximum sum.

Customers doing business with an overseas institution either cross-border or with or through the local branch of an overseas institution will, in the main, be subject to the rules of the authority which licensed that institution (i.e. the rules of the country from which the service originates or where the institution is based). For example, customer money and assets will often (but not always) be held according to the rules and requirements of the institution's licensing authority. Such business may also come under and be governed by some of the rules of the regulatory authority of the country in which the customer is based or, in the context of branch business, the country in which the branch is established. For these reasons, customers should always check carefully with their broker to ascertain, in general terms, how and by which authority the broker is regulated; how the customer's money and assets will be held and under whose rules; and the extent to which and where the customer may be able to seek redress or compensation (including whether the customer can take action in the customer's own jurisdiction).

Customers should also be aware of the fact that, while the jurisdiction of most regulatory authorities is largely limited to financial services business conducted within or from their own jurisdictions, a regulatory authority may seek to exercise powers of investigation and enforcement in respect of behaviour outside its jurisdiction on the basis that that behaviour has an economic or market effect inside its jurisdiction (e.g. market manipulation).

3 PRINCIPLES FOR MANAGING FINANCIAL RISK

In general terms, risk can be defined as anything that can impede an organisation from achieving its strategic objectives. It encompasses not only some of the more predictable threats or hazards that an organisation may face, but also the omission to maximise opportunity or address the uncertainty of results not being as expected – and is endemic in all forms of commercial or trading activity.

In order to address risk in an efficient and effective manner, an organisation should:

(a) identify, on a continuing basis, all the risks relating to all its activities including transactions in financial instruments;

(b) determine its appetite and tolerance for risk based on its identification of risks, i.e. which risks it is prepared to accept and which risks it is not prepared to accept;

(c) develop effective and well-understood policies for defining the context, scope and objectives for managing risk (eg through the use of insurance or financial instruments including derivatives);

(d) develop specific responsibilities for implementing those policies;

(e) establish procedures for measuring, managing, mitigating and reporting on risk across the organisation on an ongoing basis, particularly market risk, credit risk, operational risk and legal risk.

While organisations around the world are focussing continually on how to manage risk effectively and being encouraged by regulatory agencies to implement robust systems and processes, the impact of globalisation and technology, the structural complexity of large global organisations and products and the growing interface between products and services are not only impacting significantly on the management of existing risks, but are also generating new and different kinds of risks, making the overall quantification and management of risk that much more complicated.

Principle 1: The Role of the Board of Directors [2]

The board of directors (or its equivalent) should establish and approve an effective policy for the use and risk management of financial instruments[3] (particularly the higher risk type of products) which is consistent with the strategy, commercial objectives, financial position and risk appetite of the underlying business of the organisation.

1.1 The board of directors is responsible for ensuring that its organisation has the requisite power to invest and trade as principal in the relevant financial instruments or use them for hedging purposes, as may be relevant, taking into account any applicable legal or regulatory constraints (see Principle 6).

1.2 The board should establish and approve a policy to govern the organisation's overall objectives for their use of financial instruments (and any limits on their use) consistent with the organisation's appetite and tolerance for risk, level of expertise and financial position. This means that the board should:

(a) determine the nature and allocation of its activities in financial instruments e.g. short-term or long-term; trading as principal, investing or hedging; and whether its Treasury is to be run as a profit centre (e.g. by using the leverage which is inherent in some financial instruments to enhance return) which may create more risks for the organisation, or as a cost centre solely for hedging purposes i.e. risk reduction);

(b) understand the number, size and nature of the key risks to which the organisation is exposed and assess their impact on the anticipated return on the organisation's financial activities and on any related business objectives (e.g. market risk, credit risk, operational risk, legal risk, etc) (see Principles 3, 4, 5 and 6);

(c) where the organisation is using financial instruments for hedging purposes;

(i) determine which part of the organisation's investment or commercial process should be protected and over what period by assessing those risks which are acceptable and those which are not;

(ii) evaluate the economic cost of hedging in terms of systems, people and transaction costs against the knowledge and experience within an organisation for accessing and accepting relevant dealing or investment risk; and

(iii) understand and agree the precise objectives of the strategy (e.g. to meet budgeted targets; to manage cashflow; to protect the value of existing or anticipated underlying cash or physical positions/investments; to guarantee prices to customers; to hedge exposure based on sales projections/orders; to keep within pre-determined price ranges).

1.3 Prior to setting the policy for using financial instruments, the board should be satisfied:

(a) that it (or those directors which are charged by the board with that responsibility) understands the nature of the transactions to be undertaken and the potential for risk and reward that attaches to them;

[2] Or any equivalent governing body

[3] The term "financial instrument" includes, unless otherwise indicated in the text, exchange-traded as well as OTC transactions.

(b) as to the qualifications and experience of senior managers and others who will be responsible for identifying and managing the risk associated with their use of financial instruments and that no undue reliance has been placed on too few specialists;

(c) that staff who are responsible for controlling risks and administrating transactions are independent of those initiating the transactions and have the skills and experience that enable them to challenge them effectively as may be necessary.

1.4 The board of directors should comprise individuals who have the relevant level of experience, skills and knowledge in order to perform its duties effectively. This means that there should be a clear definition of the appropriate skills set and a process of careful selection of the potential candidates.

Impact of remuneration policies

1.5 The board of directors should ensure that remuneration policies do not encourage excessive trading or undue risk-taking by traders or others using financial instruments. Even if the purpose of their use is risk reduction, increased risks may result from large performance-related bonuses which are based solely on the profitability of those engaged in the transactions.

Reporting on internal controls and systems[4]

1.6 While the implementation and detailed day-to-day management and monitoring of the organisation's investment and dealing strategy can be delegated to senior management (and the board may establish a special oversight committee to perform this function), the ultimate responsibility for the management of the organisation's risk will remain with the board as a whole.

1.7 This means that the board of directors should exercise their oversight responsibilities to ensure that:

(a) the reporting and internal control systems of the organisation:

(i) are such that senior management can monitor whether transactions are being undertaken in accordance with the stated objectives and strategy (e.g. in the case of hedging transactions, that the underlying instrument, rate, or commodity is properly identified and correlated with the hedging instrument) and in compliance with legal and regulatory requirements;

(ii) include adequate division (and regular review) of responsibilities for executing, confirming and settling transactions or, in the case of smaller firms with limited staff, include monitoring procedures sufficient to manage effectively conflicts of interest;

[4] The collapse of Enron illustrated how companies can manipulate balance sheets to increase leverage through the use of financial instruments and special purpose vehicles. More generally, boards are now taking actions to raise standards and enhance corporate governance and non-executive directors are being encouraged to ask key questions of their boards e.g. Do we use off-balance sheet financing? Is our level of debt transparent in the financial statements? What risks could significantly impact our organisation and how can we be assured that they are being managed adequately? Does our system of internal controls give sufficient early warning of problems? Is the audit committee aware of the scope of coverage by our internal and external auditors?

(iii) ensure that accounting practices do not put the company at risk of non-compliance with generally accepted accounting principles or result in misleading and inaccurate financial statements;

(iv) prevent the use of financial instruments from creating a false impression of the company's true financial condition and require full public disclosure of all assets, liabilities, derivatives, other transactions and activities (e.g. hedging transactions and special purpose vehicles) that could materially affect the company's financial condition;

(b) there is a consistent and readily verifiable method of measuring risk which is appropriate to the scale of trading activity;

(c) it receives regular information on risk exposure and the usage of financial instruments in a form which is understood by them and which permits them to make informed judgements as to the levels of risk and return in accordance with an agreed reporting framework that clearly sets out the report types, the frequency of the reports, the responsibility for producing them and the recipients of them;

(d) there is adequate monitoring of compliance with relevant laws and regulations (see section 6);

(e) there are adequate training programmes in place to ensure relevant skills are built up and maintained to understand, measure, manage, mitigate and report on the various risks faced by the organisation including market risk, credit risk, operational risk and legal/regulatory risk (see sections 3, 4, 5 and 6);

(f) internal controls are capable of being adapted to cope with significant changes in the business (e.g. layoffs, staff turnover or reduction, which can affect internal controls, financial accounting and reporting systems or result in key control procedures no longer being performed or performed less frequently or by individuals lacking proper understanding to identify and control errors) (see section 5).

1.8 For organisations of sufficient size or complexity, the board should consider supplementing its internal controls with an effective internal audit function to independently evaluate those controls, including the identification and evaluation of the key risks impacting the achievement of the organisation's trading and investment objectives. In addition, it may advise and support line managers in discharging their risk management responsibilities (see further paras 2.5 to 2.8).

1.9 In assessing the role of external auditors, the board should:

1.9 In assessing the role of external auditors, the board should:

(a) review the external auditors' proposed audit scope and approach and enquire into reasons for subsequent changes to the audit plan;

(b) enquire as to the degree of coordination of work between the external auditor and the internal audit function to ensure it is appropriate under the circumstances;

(c) review reports made by the external auditors to management and ensure that management responds appropriately to the findings;

(d) consider the independence of the external auditors in order to fulfil their role of reporting to shareholders.

Suggested action points

- *The board should ensure that appropriate processes and mechanisms are in place to facilitate compliance with good corporate governance and practice, particularly in the context of its relationships with its stakeholders (i.e. its customers, shareholders and employees).*

- *The board should ensure that its trading activities comply with the organisation's Articles of Association (or their equivalent) and any applicable laws.*

- *Before any transactions in financial instruments are executed, the board should review their proposed general purpose and use to ensure that:*

  - *they are consistent with the management capabilities and financial position of the organisation and the strategic, commercial, investment and trading objectives and appetite for risk of the underlying business;*

  - *they (and the purposes for their use) are set out in an approved list;*

  - *the risks and rewards of their use have been assessed and documented by persons independent of those responsible for trading them;*

  - *the policies and control procedures developed by senior management are appropriate and documented.*

- *The board should consider establishing a sub-committee of the board or nominating one (preferably two) individual directors to be responsible for the organisation's use of financial instruments.*

- *The board should ensure that the actual usage of financial instruments is monitored and reviewed regularly by persons independent of those responsible for trading or investing in financial instruments.*

- *The board should ensure that the management information presented to it is readily understandable, complete and sufficient to make informed judgements.*

- *The board should consider whether there is a requirement for its own general education as well as for the more detailed education of those of its directors who are charged with specific responsibilities as to the use of financial instruments; and ensure that key personnel are adequately trained.*

- *The board should review its existing remuneration policies to ensure that they are consistent with the purpose for which contracts are being traded by the organisation; and consider factoring in measures such as good compliance, prevention of loss (as well as*

the securing of profit) and long term performance when setting the methodology for calculating bonus payments.

- *The board should seek additional professional advice from external specialists to provide independent assessment and input where necessary.*
- *The board should consider carefully the role of external auditors and their capacity to fulfil that role in accordance with para 1.9.*

Principle 2: Implementing Board Policy for the Use of Financial Instruments

Senior management should establish an organisational structure and an independent framework of internal controls and audit for managing the organisation's use of financial instruments which is approved by the board (or its equivalent) and consistent with the principles of good corporate governance and oversight for managing trading and investment risk.

2.1 Senior management need to understand the key risks facing the organisation (and, on a continuing basis, their impact on the business objectives of the organisation); board policy as to how those risks are to be addressed; and the overall context in which financial instruments are to be used.

2.2 It is the responsibility of senior management to establish an organisational structure and clear written policies and procedures for managing risk. While these will vary from organisation to organisation, the underlying policy should:

(a) be consistent with the policy and objectives determined by the board;

(b) be embedded in the culture of the organisation and its employees;

(c) be to identify, measure, manage, mitigate and report on all aspects of risk inherent in the organisation's trading and investment activities in financial instruments (including their use for hedging purposes) in an integrated manner, taking account the geographical spread of the organisation and its business units and the size and complexity of its dealings (particularly the aspects of market, credit, operational and legal risks addressed in Principles 3, 4, 5 and 6);

(d) be able to generally reduce the incidence of financial misbehaviour which might otherwise not be detected (e.g. unauthorised trading activities, money laundering, market manipulation, embezzlement of funds, insider dealing, excessive and speculative trading, errors and incompetence);

(e) result in clear responsibilities being assigned to individual managers;

(f) be based on functional segregation between individuals responsible for entering into transactions involving financial instruments and those responsible for transaction processing, calculating profit and loss, monitoring risk, performing reconciliations and transaction reporting.

The board should approve the overall structure.

2.3 The framework of internal controls and procedures should be approved by the board and then implemented, carried out and monitored by persons with sufficient knowledge and authority to discharge their duties effectively and should include:

(a) approval of the usage of new financial instruments or changes in the use of such instruments;

(b) selection, approval and monitoring of brokers and other counterparties. Consideration should be given not just to their fees and commissions, but also to, among other things, their financial strength, management structures, operational and legal capacity to

undertake the relevant business, effectiveness of systems and procedures for dealing with contingencies, and whether or not they are trading for their own account. The selection process should be the subject of documented assessment and regular review, where possible, by personnel independent from those involved in trading to avoid possible conflicts of interest (NB: further details are set out in the chapter "The Financial Trading Environment: An Overview" under "Selecting a Broker";

(c) authorisation of individuals to negotiate, approve and execute transactions in financial instruments;

(d) setting of risk limits to control exposure and monitor transactions and positions in financial instruments and, as appropriate, on individuals, currencies, counterparties, transaction types to reflect the strategy, commercial objectives and risk appetite of the organisation;

(e) setting the rules for and overseeing investment performance, day-to-day transactional activity and the observance of any restrictions on the power of parties to enter into particular transactions;

(f) the keeping of records of discussion with brokers (NB: Brokers will often maintain an audio record of telephone conversations with all customers engaged in the execution of transactions);

(g) the carrying out of reconciliations between the position records of the trader, the back office settlements and accounting systems (which should be independent of the trading function) and bank, custody, clearing house, settlement organisation and other external reconciliations (also independently from the trading function and the settlement process) with a frequency that is compatible with the level of use and the size of the positions relative to the organisation's capital;

(h) the use of standard settlement instructions wherever possible, and the verification of any changes to them;

(i) the identification of late payments/receipts and checking on resetting of rates or prices;

(j) the monitoring of cash flows (particularly, in the case of derivatives, margin calls) to ensure that positions can be sustained, particularly in adverse market conditions and over a long period of time (e.g. in line with any underlying position being hedged);

(k) ensuring that transactions which contemplate physical delivery are either closed out or that the organisation is able to make or take delivery;

(l) procedures to measure, monitor and manage collateral supporting transactions in financial instruments;

(m) a process for valuing transactions and by whom they are to be valued;

(n) procedures for accounting for and evaluating exposures for tax purposes;

(o) procedures for performing independent validation of models;

(p) functional segregation between individuals responsible for entering into transactions in financial instruments and those responsible for transaction processing, calculating profit and loss, monitoring risk, performing reconciliations and transaction reporting;

(q) procedures and controls for recording, processing, valuing or executing transactions using appropriate systems which are consistent with and subject to equivalent standards for other systems used by the organisation (including contingency plans and back up) (NB: Pricing models and trade recording systems should be properly controlled to ensure that only authorised amendments or overrides are made);

(r) procedures for ensuring that all members of staff are aware of, observing and being kept up to date with internal control procedures.

2.4 Senior management should take steps to ensure that regular, intelligible and timely reports which monitor and focus management attention on key trading, investment and hedging risks are sent to those with responsibility for managing market, credit and operational risk and, as appropriate, to the board; and ensure that persons with responsibility for managing risk and all those involved with the execution and settlement of transactions and their supervisors are adequately trained and have sufficient knowledge and authority to discharge their duties effectively.

Role of Internal Audit

2.5 The Internal Audit function should have, or have access to, adequate skills and experience to audit any area of the business, specifically including any activity carried on in relation to financial instruments, particularly products which are high risk, complex or illiquid. The scope and remit of Internal Audit should be determined and approved by the Audit Committee (or, in the absence of such a Committee, by the board) of the organisation. There should be no restrictions placed upon the scope of the Internal Audit's work.

2.6 Internal Audit should submit to the Audit Committee (or board), for approval, a risk-based internal audit plan (typically annually with quarterly reviews), setting out the recommended scope of their work in the period. A risk-based approach may need to consider the assessment of risk in each area and, from that, the prioritisation and planning of audits and allocation of resources based upon the relative risk in the auditable entity. These risks should reflect two key considerations, inherent and residual risk, which can be used to rank or score the auditable entities.

2.7 The reviews should analyse the organisation's control environment and test the range and effectiveness of implemented controls for mitigating key risks (e.g. documentation, the operation of limits, processing of transactions, payments and receipts with counterparties, valuation of positions, accounting and taxation, credit and credit limit policy and procedures) within each area. They should review the expected and actual controls in place to mitigate those risks and identify any areas of weakness that leave the business exposed to unacceptable risk. Any areas of identified weakness should be addressed through a robust follow-up process.

2.8 While these responsibilities may be fulfilled internally (i.e. an Internal Audit function), the role of external auditors may sometimes also include an assessment of the quality of internal audit's testing of controls. Assessment of the role and capability of external auditors is a matter for the board (see paragraph 1.9).

Types of risk

2.9 Identifying and evaluating each of the different risks to which an organisation is subject is the foundation for developing and maintaining an effective control system.

Market risk (see Principle 3)

The risk of losses due to adverse movements in, as relevant, equity, bond, commodity, currency and other market prices, indices or rates or changes in the volatility of these movements.

Credit risk (see Principle 4)

Credit risk is defined as "the risk of loss if a counterparty fails to perform its financial obligations to the firm". It is found in all activities where success depends on counterparty, issuer or borrower performance. It arises any time that funds are extended, committed, invested or otherwise exposed through actual or implied contractual agreements, whether reflected on or off balance sheet." (Source: Guide to Risk Based Supervision, Bank of England, June 1998).

Operational risk (see Principle 5)

Operational Risk is defined as "the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events" (The New Basel Capital Accord, 2001). (NB: According to this definition, legal risk is included as part of operational risk but, for the purpose of these Guidelines, legal and documentation risk is addressed in a separate Principle (Principle 6).

Legal and documentation risk (see Principle 6)

Legal risk is the risk that an organisation, in the event of default or dispute, may be unable to enforce or rely on rights or obligations arising under contractual arrangements with its broker or counterparty. It includes specific unusual types of legal risk such as criminal liability and regulatory risk.

Cashflow risk

The risk that the organisation will have insufficient cash to meet its obligations (e.g. in the case of exchange traded derivatives, regular margin calls), particularly where they are necessary to sustain its position in an exchange-traded or other contract (e.g. where short-dated futures contracts are used to hedge long-dated OTC transactions or where additional margin calls are made intra-day).

Basis risk

The risk of loss due to a divergence in the difference between two rates or prices. This usually applies where an underlying physical position is hedged through using exchange-traded futures or options contracts which are not the same as (but may be similar to) the commodity or property which constitutes the physical position. They will therefore be subject to different prices, rates or values which may change over time and this may have an adverse

impact on the hedging arrangement. The same is true where short-dated contracts are used to hedge long-dated positions.

Accounting

2.10 The general objective of an organisation's accounting system should be to comply with generally accepted accounting principles and to reflect as accurately as possible the organisation's profits and losses. The accounting standards for financial instruments are long and detailed in both International Accounting Standards ('IFRS') and US Generally Accepted Accounting Principles ('US GAAP'). In general, there is a requirement to value financial instruments at 'fair value' although loans and some securities can be held at cost or amortised cost. In order to use financial instruments for hedging, specific requirements regarding documentation and continuous monitoring are necessary to achieve hedge accounting under both IFRS and US GAAP. When the documentation and monitoring requirements are met hedging transactions will not normally give rise to substantial gains or losses, because changes in the value of financial instruments used for hedging purposes will be offset by matching changes in value in the underlying instrument, product or index. In some jurisdictions, the tax authorities will treat hedging transactions in financial instrumentsas speculative transactions, so they will not be eligible therefore for "hedge accounting" treatment. It is important therefore:

(a) to understand fully the accounting and disclosure treatment that will be applied to transactions in each jurisdiction, as relevant;

(b) where "hedge accounting" is permitted, to differentiate between speculative positions and those positions meeting the requirements to qualify as hedges for accounting purposes (including, where appropriate, anticipatory hedges intended to address the price risk of underlying exposures which are not yet, but are intended to be, entered into by the organisation).

2.11 The accounting system should not result in misleading and inaccurate financial statements (see para 1.7(a) (iii) and (iv)). It should be capable of serving as a check on the organisation's activities as well as help revealing areas of abuse by, for example:

(a) preventing the use of financial instruments from creating a false impression of the company's true financial condition;

(b) ensuring that losses or profits are not hidden from management where a position is rolled over at a historical price;

(c) in the case of granting an option over a financial instrument, providing for the disclosure of any adverse movement in the market value of the position as well as accounting for the premium and profit/income;

(d) in the case of simultaneous long and short positions, ensuring that both the loss-making and profit-making legs of the transaction are disclosed;

(e) recording and monitoring all the risks generated by off balance sheet exposures and any special purpose vehicles;

(f) accounting fully for margins, spreads and premiums;

(g) in the case of commodities, distinguishing the different classes, grades, location and values.

Taxation

2.12 Prior to entering into a transaction, an organisation should fully evaluate the tax impact of the instrument (which may vary in terms of whether it is carrying on a dealing or investment activity or using the instruments for hedging purposes). In many jurisdictions, there are no specific rules for individual classes of financial instruments and recourse must be had to general principles of taxation, any specific concessions granted by the tax authorities and to the relevant accounting principles. An organisation should be clear about the tax treatment of transactional payments and receipts. Ideally there should be a high degree of symmetry in tax treatment between payments and receipts arising out of both the transaction itself and out of any underlying transaction that is being hedged, but if this is not the case the organisation will need to understand the effect on the economics of the use of the financial instruments in question.

2.13 The impact of withholding tax or stamp duty could significantly change the economics of a particular transaction, so an organisation will need to establish, for example, whether withholding tax needs to be deducted and accounted for on any of the payments it makes and whether any of its receipts are subject to withholding tax.

2.14 Organisations should also consider the applicability and impact of indirect taxes such as VAT, and state or other local taxes on any proposed transaction (for example, VAT may not be applicable to commodity derivatives transactions, other than in the context of physical delivery).

Suggested action points

- *Clear responsibility for the different aspects of risk management should be allocated to individuals with the appropriate skills, including responsibility for developing policies and procedures, and monitoring risks. Such responsibility should be incorporated into organisation charts and job descriptions (NB: Staff changes and turnover can place an organisation at risk, so contingency plans should be made for their impact and this may include the periodic rotation of staff who undertake key risk management functions and also succession planning).*

- *The organisation's internal controls and related independent arrangements and levels of expertise should be independently reviewed to ensure that they are appropriate.*

- *A matrix should be created setting out a brief description of each approved financial instrument and the detailed circumstances and rationale as to when it is to be used.*

- *Procedures should be designed and documented for the authorisation of new financial instruments and for the analysis of that risk.*

- *Procedures for approving brokers or counterparties should be designed and documented.*

- *Accounting policies should be appropriate and fully documented. Where hedge accounting is to be used particular attention must be paid to the requirements of the relevant accounting standards.*
- *All the taxation implications of transactions in financial instruments (including withholding taxes and VAT) should be taken into full consideration prior to trading.*
- *Risk measurement methodologies should be reviewed to ensure that they are proportionate to the complexity of the business and the nature of the trading portfolio.*
- *A detailed analysis should be prepared regularly of the risks arising from the organisation's positions in financial instruments sufficient to demonstrate that all risks are fully controlled.*
- *Management reports should be reviewed and distributed to the appropriate senior managers/directors on a timely basis and contain relevant, reliable and comprehensible information.*
- *Compliance with risk policies and limits should be monitored on a basis that is frequent enough to identify non-compliance before significant losses can be incurred.*

Principle 3: Managing Market Risk

Senior management should ensure that there are procedures and controls in place sufficient to identify, measure, manage, mitigate and report on all forms of market risk which may be generated by the organisation's use of financial instruments and which may be caused by adverse movements in equity, bond, commodity, currency or other market prices, indices or rates or changes in the volatility of such movements.

3.1 Senior management should ensure that all dealing and investment activities in financial instruments are properly organised and executed in accordance with board policy and the organisation's risk management framework and trading procedures.

3.2 Any new form of (or significant variation in) dealing and investment activity in financial instruments, particularly where new instruments or products are involved, should be subject to rigorous prior assessment and approval to determine appropriate parameters, controls and limits and ensure that any consequential risks are properly understood and within the organisation's accepted level of tolerance to risk. Such assessment should cover accounting and control procedures, IT and systems implications, relevant legal or regulatory approvals, tax implications and appropriate sign-offs in all relevant areas by senior line management.

Measurement of market risk

3.3 A consistent and readily verifiable method of measuring market risk which is appropriate to the scale of dealing and investment activity in financial instruments is essential. It should include monitoring transactional activity where financial instruments are used so that the impact on the organisation's market risk is known, understood and measured appropriately.

3.4 Before any measurement methodology is adopted, its advantages and shortcomings should be fully considered by the risk management function, measured against the nature and type of the organisation's trading activities and assessed against possible alternative methodologies.

3.5 When measuring the exposures of positions, consideration should be given to making provisions / fair value adjustments arising from, for example, large-size positions which may prove difficult to unwind at other than below-market prices.

3.6 Value-at-Risk (VaR) is one of several key measures for the assessment and monitoring of market risk. Since VaR is limited by some of its underlying assumptions (e.g. that the future risk can be predicted from the historical distribution of returns), the organisation should integrate VaR measures with all other risk indicators (e.g. scenario analysis and stress testing) in order to achieve a more complete picture of risk.

3.7 Whether evaluating a new model or assessing the accuracy of an existing model, a VaR backtesting policy should be adopted to compare realised trading results with model-generated risk measures. The most straightforward way to backtest is to plot the daily P&L against the predicted VaR and to monitor the number of exceptions or departures from the agreed confidence band. Steps should be taken to identify the source of error if exceptions are outside of the confidence band expectations.

Limit Setting

3.8 Overall organisation-wide risk limits should be developed to control exposure and monitor

transactions and positions in accordance with the risk appetite and tolerance of the organisation and the nature and extent of its dealing and investment activity in financial instruments, the expertise of its individuals and the availability of netting or collateralisation techniques. For example, in more complex situations, specific consideration should be given to:

(a) notional, maturity and (VaR) limits;

(b) organisation-wide stress-based limits to supplement VaR limits;

(c) sensitivity-based limits to manage risks within specific market parameters;

(d) trading limits by trader/desk/country/ industry sector and currency.

Reporting and monitoring

3.9 There should be an independent monitoring of market risk exposures versus limits to identify limit violations. Regular, intelligible and timely reports on dealing and investment activities in financial instruments should be prepared or checked by competent staff, independent of the organisation's dealing/trading activities, covering:

(a) a reasoned description of the profit/loss and trading activity in a given period, of the positions at the end of that period (including relevant portfolio VaR analysis) and, where relevant, of the underlying transactions being hedged by type of product;

(b) details of the level of operational exceptions (for example, errors on timely trade capture and generally for middle/back-office operations statistics on confirmed/affirmed/ unconfirmed/unaffirmed transactions;

(c) reconciliations of all items in the trade life cycle, including cash, stock, unmatched and failed transactions;

(d) utilisation against limits, giving details of any regulatory or internal limits breached in the period and action taken;

(e) where appropriate, stress test/scenario results;

(f) details of likely future activity, including hedging against any anticipated transactions.

3.10 Such reports should be circulated regularly and on a timely basis to the board and senior management and any relevant responsible sub-group of the board.

3.11 A formal process should be established to ensure that market risk issues and VaR limit violations are escalated to the appropriate level in the organisation on a timely basis. The trigger levels for escalation will be based on the materiality and duration of the limit breach.

Independent Price Verification

3.12 In order to produce reliable market risk reports on which management decisions can be based, market parameters (instrument prices, data sets, interest rates and foreign exchange rates) fed into the approved market risk measurement and assessment models must be

checked for integrity and reasonableness. Such parameters may be input into approved market risk measurement and assessment models manually or by automated feeds.

3.13 Policies and procedures should be developed to identify errors (such as manual input error, linkage error, systems error (when links fail) or third party input error) by comparing previous sets of market parameters (i.e. closing prices and rates) to current end-of-day market parameters; investigate the reasons behind large variations; and take appropriate action on a timely basis. Responsibility for identifying and correcting such errors should be allocated to appropriate and skilled staff who are independent of those engaged in the execution of transactions. If this is not possible, the variations should be checked or audited on a regular basis by an independent area such as Internal Audit.

3.14 If transactions do not have readily available market prices or are complex (e.g. structured products and the more complex OTC transactions), some form of independent pricing will have to be sourced either from within the organisation (where there is a sufficient degree of expertise to do so), or possibly externally from an institution other than the product provider. In the case of a particularly complex product, or where there is an illiquid market in a product, the only source of valuation may be the product provider itself. In this event, the valuation and the methodology used should be assessed particularly carefully by the organisation, including any conditions that may attach to any "buy-back" arrangement with the product provider.

Stress Testing and scenario analysis

3.15 It is important that an organisation understands the effects on it of sudden market changes (e.g. in price, volatility, liquidity) that are outside the norm. It should therefore:

(a) analyse the organisation's situation in the event of sudden or unpredictable market changes;

(b) put in place policies and procedures for reacting to such situations, including trigger points at which risk must be actively reduced and/or senior management should become more closely involved.

3.16 To be meaningful, stress testing and scenario analysis should be performed at multiple levels and tie back into the decision-making process and setting of risk appetite. It should be discussed in regular forum by risk monitors, senior management and risk takers. At senior management level, the results should guide the organisation's appetite for aggregate risk taking and influence the internal capital allocation process. At the book level, such tests may trigger discussions on how best to unwind or hedge a position.

3.17 Senior management should ensure that stress testing and scenario analysis is carried out with such regularity that is appropriate to the overall exposure of the organisation, the volume, size and nature of its trading and investment activities in all financial instruments and the impact upon it of meeting any additional margin calls or utilising available credit lines.

Suggested Action Points

- *New products approval policy and process should be implemented to ensure that risk implications such as changes to balance sheet profile and overall risk adjusted*

performance is identified and understood. Where necessary, the limit structure to monitor and report risk exposures should be updated. Consideration should also be given to measurement methodology, systems requirements and their 'fit' within the existing infrastructure, resource and training requirements.

- *Limits and limit procedures for market risk which are consistent with the commercial objectives of the organisation should be designed and documented and cover reporting lines, authorisations, action on limits' breaches and reports to the board of any significant limit excesses.*

- *Procedures should be developed for recording how transactions are to be made, documented and reported; to whom reports are to be made and with what frequency; and to which individuals (independent of the traders) confirmations are to be made.*

- *A policy should be determined for obtaining independent valuations of transactions (including the basis and frequency of valuation); clarifying any relationships with providers of valuations; and, ensuring that valuation methodologies are properly understood.*

- *Risk measurement and valuation techniques should be adopted which are consistent with the size of the risks being run and the extent of the activity undertaken.*

- *Stress testing and scenario analysis procedures should be implemented to ensure that the profit and loss consequences of extreme, market shocks are in line with the organisation's risk appetite and capabilities.*

Principle 4: Managing Credit Risk

Senior management should ensure that there are procedures and controls in place to identify, measure, manage, monitor and report on all forms of credit risk generated by the organisation's use of financial instruments and secure its mitigation through the use of netting and collateral arrangements or other credit enhancement techniques.

4.1 Credit risk exists in some form in most types of transactions involving financial instruments. Transaction credit risk should not, however, be considered in isolation, but be aggregated with credit risks arising elsewhere in the organisation so as to give a total picture. The organisation should therefore have in place procedures and competent staff to identify, analyse measure and manage all credit risks associated with its dealing and investment activities in all financial instruments to reduce, so far as possible, loss due to counterparty default and to ensure that they are within the organisation's credit risk tolerance.

4.2 Credit risk should be controlled by:

(a) reviewing regularly the brokers and counterparties with whom an organisation has credit exposure or with which it places, for example, margin monies;

(b) setting limits on exposures to counterparties and brokers, as appropriate (taking into account the financial strength, credit worthiness and experience of brokers / counterparties (as well as such issues as conflicts of interest), and monitoring and dealing with credit limit excesses or, where relevant, sudden margin calls caused by the effect of price movements or by the impact of new transactions;

(c) an analysis of credit exposures by counterparty taking into account, where appropriate, marked to market values;

(d) where appropriate and practicable, using enforceable netting agreements, collateral offsets and other credit advancement techniques, as appropriate and where practicable (see Para 4.9).

4.3 It should be noted that credit risk may vary according to, for example, whether the transactions are traded OTC (and where and with whom they are traded) or executed on or under the rules of an exchange or on any alternative market and whether they are cleared (see sections 2 and 3 of Chapter Two).

Defining and measuring pre-settlement and settlement risk

4.4 Credit risk from transactions in financial instruments arises in two distinct ways depending on the phase the contract is in when one of the parties fails. It arises either before settlement is due (i.e. pre-settlement risk) or when settlement is due (i.e. settlement risk).

4.5 Pre-settlement credit risk is the risk due to the cost of replacing a transaction if the counterparty/customer fails during the life of the transaction, but before final settlement is due. It arises where trades have a positive mark to market (mtm) value when the counterparty fails. The marked to market value represents the cost of replicating the contract with another party, or, put another way, the unrealised profit which has to be written off. Exposures change in value in line with market forces the cost of replacing a failed transaction can also vary and for this reason pre-settlement risk is also sometimes called market-driven credit risk. This risk

is one-sided for options, with only the option buyer assuming any risk, since the seller has already received value, in the form of the premium payment. For swaps, the risk is two-sided, since each side exchanges value at various points in time. The size of the pre-settlement risk is a reflection of the counterparty's creditworthiness, market volatility and the length of the pre-settlement period (or "tenor"). The latter is the most significant factor in over-the-counter derivatives, since the tenor of the trade can often be one year or longer.

4.6 Pre-settlement risk exposure should be measured by summing the current value of the contract (the current exposure (CE)) as well an estimate of its likely future value (the potential future exposure (PFE)). For organisations with less complex activities, the minimum standard should be to estimate current exposure using the mark-to-market value of the transaction, and adjust this by a simple add-on estimate of the potential for change in mark-to-market value. Various standards (e.g. the BIS add-ons) may be used for the PFE. These include straightforward percentage add-ons, based on the product, tenor or both. For organisations with large, complex transactions in financial instruments PFE should be modelled using historical volatilities (this is known as the historical method). Organisations requiring a more sophisticated and encompassing approach may adopt measures for estimation which use simulation methods such as Monte Carlo simulations, but which are atypical for most end-users. It is common even for sophisticated players to use a combination of approaches matching the materiality of the exposures in each product portfolio.

4.7 Settlement risk occurs when value is given to the counterparty without confirmation that value has been received in return. It materialises when a counterparty fails before it can deliver counter-value, leaving the organisation to pursue its claim for payment as an unsecured creditor. The risk lasts from the point at which an irrevocable instruction has been given to pay funds away until irrevocable confirmation that value has been received. This risk exists in some form for all trading activities at the point of trade settlement. The fundamental differences between settlement risk and pre-settlement risk are that the window of time over which settlement risk exists is typically much shorter (e.g. 2 days), much greater in magnitude, more certain (in the sense that the amount is fixed and easily identifiable), and it represents a loss of cash rather than unrealised profit. It is important to understand when and how settlement risk arises for all financial instruments including those settled through clearing houses and settlement organisations.

4.8 For most end-users, settlement risk exposure should be measured as 100% of the value to be received (e.g. the value of the security or cash flow due at settlement). Potential change in value over the settlement process is generally not a critical issue, except for complex portfolios comprising transactions with particularly long settlement period windows.

Netting and collateral (see Paragraphs 6.10 and 6.11)

4.9 The use of netting agreements and collateral offsets to mitigate credit risk are recommended, where practicable, as good proactive credit risk management practice. However, an organisation should first consider the costs of arranging the legal agreements, confirming their legal enforceability, establishing the methodologies and systems capability necessary to calculate net exposure and employing sufficiently competent staff to monitor, control and perfect collateral on a daily basis. For many end-users, particularly those with few transactions or those dealing in one-off transactions with a number of different counterparties/customers, the cost may outweigh the benefit if the use of these arrangements is expected to result in insignificant reductions in pre-settlement credit risk exposure.

4.10 Payment netting is a mechanism designed to limit settlement credit risk, by which the parties agree that if, on any date, amounts are payable between them in the same currency under the same transaction or a specified group of transactions (as the parties may agree), then such payment obligations are to be determined on a net (and not gross) basis. Prior to agreeing to its application, organisations should consider carefully the extent to which payment netting is to apply i.e. whether it should apply to obligations under one and the same transaction or across transactions, bearing in mind that this is largely a matter of law, regulation and systems capability.

4.11 "Close-out" netting is a mechanism designed to reduce net pre-settlement exposure in the event of counterparty failure. It applies only upon early termination of the transactions upon an event of default whereby obligations (whether for payment or delivery) under all outstanding transactions, entered into pursuant to the relevant master agreement, are required to be terminated, valued and converted (if appropriate) into the termination currency agreed by the parties, and determined on a net (rather than gross) basis. It is designed to stop liquidators enforcing and taking the profit on successful contracts while, at the same time, avoiding paying out on unprofitable transactions (i.e. where the failed counterparty owes money).

4.12 When providing for close-out netting in the relevant master agreement, organisations should adopt a "full two-way" (as distinct from a "limited two-way") payments approach (an additional option provided under some Master Netting Agreements), which means that if the close-out calculation results in an amount payable by one party to the other, that first party is obliged to make the payment regardless of whether the other party is the defaulting party. On the other hand, under the "limited two-way" payments approach, the first party is not required to make any such payment if the other party is the defaulting party. The "full two-way" payments mechanism is increasingly recognised in the market as the preferred approach. Many perceive it to be a fairer mechanism and that the regulatory capital benefits, which flow from using a netting agreement, will not be available if "limited two-way payments" is used.

4.13 Organisations should be aware that the issue of close-out netting often raises complex issues of enforceability, particularly in relation to entities organised overseas.

4.14 Many banks and brokers will demand that collateral be provided in relation to OTC transactions. A customer with considerable bargaining power (e.g. through a stronger credit rating than that enjoyed by many banks and brokers) may be able to insist on mutualised collateral arrangements. If a pre-agreed number is hit, other collateral must be provided by one party to the other or, less commonly, by each party to the other simultaneously.

4.15 The terms on which collateral is provided must be examined closely. Can it be pledged by the broker to a third party such as a clearing house? Is it commingled with property belonging to the broker or to other clients of the broker?

Credit risk on over-the-counter (OTC) transactions

4.16 In the case of OTC transactions, both pre-settlement and settlement credit risk arise. Generally, settlement risk is monitored and controlled separately from pre-settlement risk and other credit risks such as repayment risk. Pre-settlement and other non-settlement credit risks are usually aggregated by counterparty and the total picture of exposure considered

when setting credit limits. To achieve this, the credit risk inherent in a position stated on a basis that is equivalent to the credit risk inherent in a lending transaction – this is achieved by adding together the CE and PFE to create total exposure (TE), a risk amount which is regarded as a loan equivalent exposure, sometime called credit equivalent exposure (CEE). It is good practice to set limits on the aggregate CEE permitted for all derivative transactions, and to set such limits taking into consideration the range and aggregate amount of credit risks which arise through other transactions (such as placement of deposits or lending).

4.17 Settlement risk for different transactions involving the same counterparty are usually controlled by way of daily settlement limits. These limits measure the total settlement amount due on any particular day across all transactions. Although it is good practice to measure the risk from the point at which irrevocable payment instructions are issued to the point at which counter value receipt is confirmed, it is common for systems to be unable to identify these points with certainty. Daily settlement limits therefore commonly operate on an assumption that settlement takes a certain average, or sometimes worst case, number of days and apply the limit utilisation accordingly, with manual adjustments for trade fails. Where such assumptions are made in the programming of daily settlement limit systems, it is good practice for organisations to understand the limitations of the assumptions and to check periodically that they remain sound.

4.18 For OTC transactions it is therefore important to understand that transactions use both pre-settlement and settlement limit capacity. There are two limits which therefore have to be respected before a transaction can be accommodated. In this way, credit exposure is managed within tolerance levels both before and at settlement. At present, most OTC transactions proceed uncleared and without either party placing cash margin or any form of collateral with the other as security for its obligations. However, if an OTC transaction is cleared or an organisation does place margin or collateral with its counterparty, credit risk issues similar to those arising in connection with exchange-traded contracts are likely to exist.

Credit risk on exchange-traded transactions

4.19 It is a common perception that cleared transactions (see Section 2 "The role of clearing"), particularly when executed on an exchange, carry no credit risk. In reality, while the transparency of an exchange's price mechanism, coupled with daily marking to market and clearing of positions, may reduce risk, it does not eliminate credit risk.

4.20 The risk management function provided through the monitoring and margining procedures of clearing houses/clearing divisions of exchanges is an important benefit to the market as a whole. Indeed, as already explained (see Section 3 of Chapter 2), a CCP will generally stand behind a transaction (either as a counterparty to it once the transaction is cleared or by some other "guarantee" arrangement).

4.21 While in some markets, the benefit of this "guarantee" may be extended to cover a broker's customers, the benefit of clearing is more usually restricted to the exchange member through whom the customer organisation will gain exchange access and execute its transactions. This means that the organisation will not itself enjoy the benefit of any clearing "guarantee" i.e. the organisation's real credit risk will be with the broker, with the result that, for example, if the broker goes into default, any margin payments paid to the broker in order to sustain the organisation's positions in derivatives may be lost.

Credit risk on licensed brokers/counterparties

4.22 The likelihood of default of a licensed broker or counterparty is reduced through the imposition of financial reporting requirements and capital rules by the broker's regulatory authority, but (a) its solvency is still ultimately dependent upon the broker's ability to monitor risk, particularly credit risk where a broker may have a large number of credit lines out to a variety of its customers; and (b) such regulatory controls, although reducing credit risk, introduce and replace, to some extent, that risk with regulatory risk. Organisations should, where feasible and practical, assess the effectiveness of the relevant rules and regulations which apply to the brokers and counterparties and, indeed, of the relevant regulator itself.

Segregation

4.23 One way of reducing significantly the consequences of a broker/counterparty becoming insolvent is for an organisation to consider the merits of having its assets/money segregated. Most jurisdictions have rules which provide all customers of non-bank brokers with the right to have their assets held separately from those of their brokers/counterparties, i.e. held in a segregated account, the objective being to prevent the financial service provider from co-mingling client assets and positions with its own positions and to protect them in the event of the firm becoming insolvent. These legal arrangements mean that, where a non-bank broker carries out client trading in a segregated account, that trading will largely be insulated from the financial condition of the broker. However, this protection may not apply where, for example, the organisation has relinquished all rights to its money such that it is no longer regarded as "client money".

4.24 An organisation which does wish to have its money segregated should note that credit risk still exists:

(a) where, in order to gain access to an overseas market, its broker has to deal through other brokers which do not operate on a segregated basis;

(b) where the organisation's broker is a bank, because in some jurisdictions that bank will be deemed to hold the organisation's money in its capacity not as the organisation's brokers, but as its bank, in which case it may not be allowed to "prefer" that organisation's money over those of its other depositors (NB: If that money is not held with the broker bank but with another bank, then it may be treated and held in segregation by the broker bank as a broker);

(c) with the bank with which the segregated money is actually held because, if the bank became insolvent, that money will be treated just like any other deposit held with the bank, i.e. it will not be preferred over money held by the bank's other depositors;

(d) where collateral put up to cover margin obligations takes the form of an outright transfer of securities (with a contractual promise by the broker to re-deliver the securities when they are no longer needed as collateral) or where the broker is allowed to dispose of those securities, instead of taking the form of a charge or some other similar security interest.

4.25 In some jurisdictions, non-private and/or experienced customers may be permitted to opt out of segregation. Where that is permitted, the broker will usually be required to warn customers of the consequences of "opting out" of segregation, namely the loss of protections conferred by the relevant client money rules in the event of the broker becoming insolvent. On the other hand, "opting out" of segregation may result in the organisation being able to benefit from reduced commissions and charges (because the provision of segregation is a cost on the broker dealers' capital) and/or (where it is permitted) deal on credit lines from its broker (the customers' margin obligations being satisfied by drawing on the credit lines).

Country Risk

4.26 Cross-border dealings in financial instruments, in addition to any counterparty credit risk that may arise out of such activities, give rise to potential country risk that will need to be considered, monitored and managed. Country risk in this context is the risk that a country will impose exchange controls preventing counterparties from undertaking foreign exchange transactions and sending funds. It is good practice to establish limits, country by country, which capture, measure and control cross border exposures across all counterparties in those countries.

Contingency Planning

4.27 An organisation should plan in advance its actions in the event that a counterparty or a broker becomes insolvent. In particular, an organisation should be aware of the impact of an exchange's default rules and be able quickly to ascertain the current legal status of each of its contracts connected with the failed counterparty or broker, including its vulnerability to its positions being automatically closed out, transferred (to a new broker) or disclaimed. It will also need to have procedures to ensure that it serves all relevant notices and undertakes new transactions to cover positions that have become exposed because existing contracts are no longer in existence.

Trading on Credit

4.28 In some jurisdictions and/or in certain circumstances, a broker may be permitted to extend credit itself or via an affiliate or third party bank for the purposes of covering the initial and/or variation margin payments of customers and any other unpaid amounts usually up to a credit limit agreed with the customer. The actual size of a credit line is usually dependent on the financial strength and credit standing of the customer and the size of the broker.

4.29 Careful consideration should always be given to the advantages and disadvantages of trading on credit. The ability to obtain and trade on credit may materially reduce the costs of trading for a customer insofar as, in relation to non-segregated assets, margin calls, for example, can be netted across all non-segregated customer accounts; the broker may make credit available as a beneficial low cost service; and there may be cashflow advantages, particularly in the event of sudden market movements (providing the margin calls do not exceed available and agreed credit lines). On the other hand, trading on credit may result in a significant loss of overall transparency of the impact of dealings on an organisation's overall financial position (because trading on credit is not subject to the discipline of supporting adverse positions through payment of margin).

4.30 The broker is usually subject to the oversight of its regulatory supervisor in respect of its credit arrangements and the procedures and controls which govern the granting and monitoring of those arrangements e.g.:

(a) limits on exposures to individual customers or groups of collective customers;

(b) requirements to have adequate credit appraisal and management procedures;

(c) imposition of additional capital requirements.

It should be noted, however, that the nature of that oversight will be broad-based and may involve only periodic spot checks.

Suggested Action Points

- *The credit risk inherent in all activity in financial instruments and the consequences of trading on credit should be identified and analysed (with, if necessary, professional advice).*

- *Credit risk measures and limits should aggregate credit risk across all dealings in financial instruments and be appropriate to the size and nature of those dealings.*

- *Limit setting take into account all credit exposures which may arise with the organisation's counterparties.*

- *Credit limits should be structured to separate pre-settlement and settlement risks.*

- *If daily settlement limits are used the assumptions applied to their operation should be well understood by organisations and key under regular review.*

- *All practical steps should be taken to minimise credit risk through the use of netting agreements, collateral and other credit enhancement techniques.*

- *Limits for all types of credit risk should be established, together with procedures for authorising credit limit excesses and reporting them periodically to the board of directors.*

- *When dealing on credit, an organisation must monitor on a regular basis the value of its positions, margin calls and available collateral and assess the impact of those liabilities on its financial position, particularly in times of high volatility and have adequate procedures in place to ensure that the ability to trade on credit is not used as a means of hiding unauthorised trading activities.*

- *Policies, procedures and controls should be established:*

  - *for if and when a counterparty or broker becomes insolvent;*

  - *for the regular monitoring of exposures to all counterparties in all markets at all times (and the continuing appropriateness of limits);*

- *to establish the value of collateral during market movements and to track its whereabouts in any crisis situation.*

- *In exercising its rights to "opt out" (where permissible) from segregation, an organisation will have received a separate written notice setting out the consequences or they may be set out in a customer agreement. It is important that the notice is read and understood by the organisation and the relative advantages and disadvantages of being in or out of segregation are given proper consideration.*

Principle 5: Managing Operational Risk

Senior management should ensure that procedures and controls for financial instruments are in place to identify, measure, manage, monitor, report on and, where practical, mitigate any operational risk which may be generated by the organisation's use of financial instruments, including particularly technological risk.

5.1 Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk. (International Convergence of Capital Measurement and Capital Standards - June 2006)

5.2 Senior management should have oversight responsibility to identify and analyse all types of existing and potential operational risks faced by the organisation, which may arise from, for example:

(a) the introduction and development of new products;

(b) changes in management and/or the organisation's operations;

(c) the management of third parties, particularly in the context of the outsourcing and procurement of IT services[5];

(d) the development, introduction, security and use (and failure) of automated systems, particularly in relation to key business processes;

(e) human resource failures, particularly as regards people-related processes such as recruitment and training of staff;

(f) any loss in business continuity due to events such as natural disasters, terrorist acts;

(g) changes in regulatory and/or legal environment. (See further Principle 6 "Managing Legal and Documentation Risk").

5.3 Having identified and analysed areas of potential operational risks, senior management should ensure that appropriate internal controls and procedures are established to measure, manage, monitor, mitigate and report on such risks on a continuing basis, including:

(a) setting risk indicators and limits for operational areas (e.g. to ensure senior managers are advised of any escalation in risk);

(b) carrying out independent internal audits to assure management of the adequacy and effectiveness of the organisation's controls and procedures;

(c) ensuring segregation of duties, confirmations and reconciliations, reporting and monitoring. For example, individuals responsible for entering into transactions in financial instruments should be segregated from those responsible for transaction processing, calculating profit and loss, monitoring risk, performing reconciliations and transactional reporting;

[5] The FOA in conjunction with PricewaterhouseCoopers has produced separate Guidelines for the Procurement and Outsourcing of IT Services, which are available from the FOA (full details are given on the website, www.foa.co.uk).

(d) reporting on a timely basis:

(i) details of authorised and unauthorised changes in and/or access to IT systems;

(ii) information on staff issues, e.g. turnover rates, disciplinary events and changes in individual responsibilities;

(iii) dealing and investment activities in financial instruments (see Paragraphs 3.9 to 3.11).

IT Systems Management

5.4 Computer systems used for the initial recording, processing, valuing and risk modelling of transactions in financial instruments should be subject to the same procedures and controls as other systems used by the organisation. In particular, there should be a systems outline that sets out how the systems used for any process within the life cycle of a transaction are controlled. Any such outline should include:

(a) cover systems and data architecture, setting out the interfaces between the various systems;

(b) provide for the allocation of clear levels of responsibility, particularly over systems development, system operation, technical support and security administration;

(c) limit logical access to systems programs and data to authorised individuals (including the use of firewalls and encryption technology where the organisation is connected to the external environment); and include processes for detecting and reporting on access violation attempts;

(d) limit physical access to computer equipment, storage media and program documentation to authorised individuals through the use of appropriate security devices;

(e) provide that estimations are made (and periodically reviewed) of current and future systems capacity, based on current utilisation levels and anticipated growth rates, to ensure that adequate processing and capacity continues to be available at each processing location;

(f) ensure that systems processing is scheduled appropriately and deviations are identified and resolved in a timely manner;

(g) provide for the development, updating and regular testing of systems disaster recovery plans to enable the organisation to recover systems and data in a timely manner, and for their alignment with the organisation's business continuity plans;

(h) ensure that clear change control procedures are in place and adhered to when system developments, modifications and testing are being made.

In cases where spreadsheets and/or manual workarounds are used for reports (for example, for position keeping or valuation), procedures should be developed to ensure that access is carefully controlled and the spreadsheets are used only for their intended purpose. In addition, independent validation of the models underlying the spreadsheets and/or manual

workarounds should be carried out to ensure that these models are tested, reliable and consistent with the standards of external models.

5.5 An organisation should ensure that its business strategy is translated into specific system requirements so that system needs can be analysed and specified and appropriate systems selected. Once specified, design and development activity should ensure that systems are developed to a consistent standard and that systems documentation provides for long-term support and maintenance. Successful implementation of systems requires adequate testing, quality assurance, change controls and project management to ensure that systems meet business requirements on time and within budget. In addition, the development, planning and testing of contingency and disaster recovery strategies are crucial to ensure the timely recovery of key business processes and supporting systems.

Use of Electronic Order Routing Systems

5.6 Transactions in financial instruments are increasingly being conducted electronically and more and more business operations are able to process transactions from start to finish with minimal manual intervention. Direct connectivity with third parties (such as brokers) through the use of electronic order routing systems (EORS) is now commonplace. Although use of these systems can deliver many advantages to the end-user (e.g. more cost efficient and rapid transaction processing), dealing activities must be monitored closely to ensure that transactions are processed completely, accurately, on time and without duplication. It is also vital that controls are built into the systems covering, for example, trade input, verification and release to minimise errors and unauthorised trading. Senior management should also be able to access real time information about the precise status of each transaction and monitoring systems should be capable of providing early warning of potential difficulties in processing. Given the extent of and the degree of reliance based upon automation, all electronic systems should be subject to thorough testing prior to implementation. Examples of the kind of vital checks that should be made before and while using such systems are included in the suggested action points at the end of this Chapter.

5.7 5.7 When using EORS, due attention should be given to the following:

(a) Lack of compatibility – the organisation must ensure that it meets the IT hardware specifications and network configuration recommended by the EORS provider, as this can directly affect the EORS's performance;

(b) Adequate training – the organisation should ensure that all EORS users are aware that efficient performance can be inhibited by their own activities e.g. running additional software applications on dedicated EORS hardware. As a result, reference to best practice user guides issued by the EORS provider is essential. The effective communication of these best practice criteria to EORS users through training will help maximise EORS's performance;

(c) Security risk - the EORS provider will accept no liability for a systems failure that results from the introduction of viruses or similar items by an employee of the organisation (and may hold the organisation liable and seek appropriate damages). The organisation must ensure therefore that it has adequate procedures in place to raise awareness of the dangers of viruses and to minimise the risks of their introduction into the system. Security features should be in place to restrict trading access to authorised personnel

only (e.g. through the use of user names and passwords) and there should be procedures for managing access to and invalidating codes when authorised personnel leave the organisation;

(d) Systems failure and contingency arrangements - in the event of a systems failure, the organisation must ensure that it can swiftly access alternative mechanisms to support its trading activities. Particular care should be taken to check whether individual orders were executed prior to the systems failure before re-entering them via the back-up system;

(e) Incorrect or erroneous orders - directly inputting orders via an EORS exposes the organisation to potential losses where orders are incorrectly submitted to the exchange's central order book. To minimise these risks, it is vital that authorised personnel are properly trained in the use of the EORS and are aware of the procedure for correcting/amending incorrectly or erroneously entered orders.

5.8 When accessing an exchange, clearing house or settlement organisation electronically, an organisation must ensure that it is able to comply with both the letter and the spirit of that exchange's rules and regulations. The organisation must therefore have procedures in place whereby all employees authorised to use an EORS become familiar with and are able to access directly all applicable rules and regulations and any changes that may be introduced to those rules and regulations.

Third Party Dependencies[6]

5.9 An organisation may choose to outsource part of its support activities with a view to focusing on its core business activities, realising cost benefits, transferring risks and streamlining operations. Where the organisation carries out similar operational activities in a number of locations, it may also be beneficial to establish a central shared service to achieve economies of scale and the resulting cost efficiencies. The operational risks associated with outsourcing and shared services, however, need to be carefully managed by clearly defining measurable services, allocating responsibilities and accountabilities, and establishing contracts and service levels.

Professional Expertise and Human Resources

5.10 The level of expertise of managers and supervisors should be reviewed regularly by senior management or by the board of directors (or a sub-committee) to satisfy themselves that undue reliance is not being placed on too few specialists, or even a sole specialist. Staff changes and turnover can place an organisation at risk, so contingency plans should be made for such circumstances. This may include the periodic rotation of staff who undertake key functions, management succession, planning for key members of management and appropriate measures to mitigate the risk of loss of these personnel.

5.11 All personnel should fully understand their responsibilities, their reporting lines and the processes and procedures to which they are subject. This can be achieved by defining the scope of their responsibilities within documented job descriptions and procedures, and linking these to the performance appraisal process. These documents should be reviewed and updated on a timely basis.

[6] The FOA in conjunction with PricewaterhouseCoopers has produced separate Guidelines for the Procurement and Outsourcing of IT Services, which are available from the FOA (full details are given on the website, www.foa.co.uk).

5.12 An organisation's human resource department should work closely with all areas of the business to ensure that only suitable individuals are employed. Individuals involved in transactions (including those who manage risk, as well as their supervisors, and those responsible for assessing, reporting, controlling and providing required IT and auditing those activities) should be appropriately trained and have adequate knowledge and experience. Managers should understand not only the nature of the instruments but the broader business context in which they are used.

5.13 To ensure that individuals are properly informed and the organisation's risk management objectives are continually and appropriately aligned with individual objectives, individual training needs should be identified and met on a regular basis. Manager and staff training in technical and quantitative risk management skills should be complemented by training in other skills, such as project and people management, in order to build effective teams. This could include attendance at external courses, in-house training sessions and reading reference books.

5.14 Incentives should be developed to encourage voluntary disclosure of transactions which breach limits or pre-authorisation requirements and there should be an appropriate disciplinary framework for dealing with deliberate or consistent breaches.

Business Continuity Planning

5.15 Organisations should develop, test and keep under regular review contingency plans so that they can continue their activities (e.g. bearing in mind the speed with which prices can move, the ability to close out positions quickly) in the event of an operational failure on the part of the organisation itself (e.g. a failure of computer system) or resulting from an external problem (e.g. a systems breakdown, loss of key personnel, a failure of a third party (including brokers)) and, as necessary, move to alternative premises. For example, an organisation should ensure that its brokers are operational, that temporary offices have been identified, and all relevant IT and support functions are in working order. The organisation may wish to ensure also that its brokers have suitable and sufficient emergency switching facilities with appropriate brokers.

Reputational Risk

5.16 While reputational risk is often excluded from the definition of operational risk (for example, the New Basel Capital Standard excludes reputational risk for the purpose of calculating capital requirements), recent headline cases such as those involving lack of accounting transparency shows that any form of adverse publicity or perception about the organisation (whether justified or not) which damages its reputation can increase significantly its risk and/or its cost base in some of its key activities resulting in, for example, the withdrawal of credit lines, loss of customers, loss of key staff, the impact of tighter regulatory controls, loss of investment confidence and withdrawal of third party supplies.

5.17 In such circumstances, there has to be careful management of any contact with press, the development of an informed working relationship with any relevant regulatory authority and a very close focus on retaining the goodwill and support of customers and suppliers. Aside from general matters of administration and normal communications, contact should be restricted to or managed centrally by senior managers during the time of crisis.

Suggested Action Points

- *Management reports should be distributed to the appropriate senior managers/directors on a timely basis and contain relevant, reliable and comprehensible information;*

- *Computer systems should be examined to ensure that they are adequate and robust, independently reviewed and subject to controls to ensure amendments to programmes are adequate;*

- *The level of expertise in the organisation should be reviewed to ensure that there is no undue reliance on too few specialists;*

- *When using an EORS, an organisation should:*

  - *ensure that the PC hardware specification meets the provider's requirements;*

  - *ensure that any supporting hardware provided by the EORS provider is maintained in accordance with the provider's specifications;*

  - *ensure that the internal network configuration meets the provider's requirements;*

  - *where necessary, impose restrictions on running additional applications on dedicated EORS hardware;*

  - *impose appropriate security safeguards to prevent the introduction of viruses;*

  - *ensure that, in the event of failure of the EORS, appropriate back-up arrangements are available and accessible within a short timeframe;*

  - *if the EORS provider does not provide a help desk service, ensure that a similar support function is available to deal with internal enquiries.*

- *Contingency plans should be formulated and documented to ensure the continuance of trading activities in emergency situations and reviewed regularly to make sure they are capable of implementation. They should be monitored to ensure that they continue to reflect current activity, tested to confirm their effectiveness and are properly understood by key personnel.*

Principle 6: Identifying and Managing Legal and Documentation Risk

Senior management should ensure that procedures and controls are in place to identify, measure, manage, monitor, mitigate and report on the legal and regulatory risk of its use of financial instruments.

6.1 Legal risk is the risk that an organisation may be unable to enforce and rely on rights or obligations in the event of default or dispute, and arises usually under contractual arrangements with a broker or counterparty. It also includes other specific and unusual types of legal risk such as criminal liability and regulatory risk.

6.2 Senior management should be able to understand the different types of legal risk to ensure that there are procedures in place for monitoring, identifying and reacting to it (including at what point and to what degree its materialisation may require external or in-house legal advice) and quantifying liabilities arising from it including damage to reputation. Such procedures may overlap across legal risk management and compliance functions.

6.3 An organisation's legal risk policies should specifically address:

(a) Enforceability Risk – The risk that an organisation may be prevented from or restricted in enforcing its rights against a counterparty;

(b) Documentation Risk – The risk that documents to which the organisation will be subject are inadequate for managing the organisation's contractual risks;

(c) Liability Risk – The risk of loss which would arise if the organisation were to be held responsible by a court or an arbitration forum.

6.4 In the case of particularly complex transactions or where complex legal and documentation issues are involved (which is particularly likely to be the case with over-the-counter transactions), legal advice (internal or external) should be sought.

Enforceability Risk

6.5 Prior to engaging in any transaction, the organisation should:

(a) establish whether it has the necessary legal capacity or power to enter into the transactions in question and, if it has, whether there are any applicable restrictions (e.g. by examining the organisation's constitutional documents and any relevant statutory provisions); and whether, in general, its contracts are enforceable by law;

(b) take reasonable steps to satisfy itself on a continuing basis that its broker or counterparty is duly authorised or allowed to trade in relevant transactions with or on behalf of the organisation (e.g. by examining its counterparty's constitutional documents and, as appropriate, securing suitable warranties in the contractual documentation as to its capacity/authority to enter into the transactions);

(c) ensure that those who enter into transactions on the organisation's behalf are duly authorised to do so, detailing the parameters of delegation (including the purpose of trading) and the setting of any limits on any trading discretion that may be given to the organisation's employees or its brokers;

d) where it is required to provide cash margin or collateral for its transactions, establish whether it has the power to do so by examining its constitutional documents and any relevant statutory provisions; and that it will not be in breach of any contractual arrangement (such as a negative pledge) which it may have in place with a third party.

6.6 Contractual arrangements may also be found to be "unenforceable" where an organisation has property or assets' rights, regulatory or other business-critical licences, access to payment, settlement or other business systems and/or contractual rights exercisable in foreign jurisdictions. As a result, senior management should, in the case of cross-border dealings, assess the potential for difficulties for the organisation in enforcing its rights through foreign courts or exercising self-help remedies before enforcement becomes necessary (i.e. during the preliminary stages of due diligence). The organisation should always ensure that the relevant overseas jurisdiction recognises the mutual enforceability of court judgements. Where there is legal doubt, consideration should always be given to the merits of obtaining legal opinions (see paras 6.18 and 6.19).

6.7 Jurisdiction can be crucial if a counterparty becomes insolvent, particularly if the organisation needs to enforce or defend its contractual rights against its counterparties and/or any liquidator in a foreign jurisdiction or to counterattack against local assets or businesses. The organisation should therefore take care when negotiating the governing law of financial instrument transactions, since it will underpin the contractual resolution of cross-border issues or disputes, and determine the rights and liabilities of the parties and how the contract will be interpreted. The organisation should therefore investigate where, in such an event, it ranks in priority vis-à-vis other registered and legitimate claims in the event of counterparty insolvency. Self-remedies and claims on collateral could be effective, but an assessment of what action could be taken against the organisation also needs to be made.

Documentation Risk

6.8 The organisation should ensure that appropriate documentation (i.e. Terms of Business or Customer Agreements) is put in place with each broker to reduce legal risk, establish the basis of the relationship between the parties and cover the consequential duties, rights and obligations of the parties which are appropriate for the business to be transacted between them. It should also ensure that all transaction documents or any other forms of customer agreement are reviewed by internal or external legal counsel to ensure that they are in line with corporate policy and their terms (and any subsequent changes to them) are properly understood, particularly:

(a) the rights and obligations of the parties, the nature of their relationship (e.g. principle or agency; fiduciary or "arms-length"; "execution only"; or in what circumstances or in relation to which transactions it is intended that the brokers should provide and the organisation should rely on advice);

(b) the nature of the transactions that may be entered into between the two parties (and any limits on the types of transactions or their size or the number of them);

(c) the nature of any unwarranted representations (e.g. if the organisation is taking security, representations that the assets provided by way of collateral are wholly owned by the collateral provider and are not subject to other charges);

(d) the manner in which cash and assets are to be held and how they are to be identified and protected by the broker;

(e) the remedies to be invoked by or against the organisation in worst case scenarios, particularly for non-performance, and including the circumstances in which the broker or counterparty may close out or terminate transactions;

(f) credit reduction clauses, including provisions on netting, (e.g. where there is an event of default or early termination, the right to terminate all transactions simultaneously and net termination gains against termination losses), payment of margin or other credit enhancement obligations.

6.9 In some jurisdictions, organisations may be permitted to "opt out" of a number of protections generally provided under the regulatory system. For example, there may be a regulatory requirement that brokers must give "best execution" to customers i.e. to take reasonable care to deal at prices with customers which are the best available in the relevant market at the time of the transactions, but taking into account the nature of the order, the trading circumstances prevailing at the time of execution and the practices, procedures, conventions and liquidity of the market in question[7]. "Opting out" does not mean that a broker will not give good and fair execution, but the implications - both advantages and disadvantages – of "opting out" of certain rules/protections should always be properly understood by the organisation.

Use of Market-Standard Agreements

6.10 The organisation should aim to use market-standardised documentation (e.g. FOA, ICOM, IFEMA and ISDA) for financial transactions as widely as possible with each counterparty or broker. Such forms of documentation are time and cost efficient, avoid the parties engaging in lengthy negotiations, facilitate the organisation's focus on individually tailored terms and conditions, create more certainty and minimise the potential for misunderstandings.

6.11 The organisation should ensure that, for example:

(a) the documentation covers and is appropriate for the kind of transactions to be entered into between the parties;

(b) is valid for use and applicable to the purpose behind the transaction e.g. hedging arrangements between the parties;

(c) covers both settlement and pre-settlement risk and provides for payment netting and close-out netting (see paragraphs 4.8 to 4.12).

Documentation for margin or other credit enhancement arrangements

6.12 Where margin or some other form of credit support is to be given (whether by the organisation or a third party such as a parent company providing a guarantee), i.e. appropriate documentation must be put in place to reflect the relevant arrangements, for example:

[7] It should be noted that the term "best execution" goes to the overall quality of the execution of which price is a key – but not the only – component.

(a) the creation of a security interest over cash or securities;

(b) outright transfer of cash, warrants or securities;

(c) the provision of a guarantee from the parent organisation.

These approaches are often used together with set off mechanisms which provide for obligations between the parties to be set off against each other.

6.13 Prior to agreeing to any such arrangement, the implications of the relevant approach proposed to be adopted should be fully understood. For example, in the event that any security interest is to be created in favour of the counterparty, the organisation should ensure that the underlying assets may be used for such purpose (e.g. are not subject to any negative pledge). The organisation should also be aware that where a security interest is created over its assets in favour of the counterparty, its own ability to deal with those assets as a security provider will necessarily be restricted. If this is not the intention, the organisation may wish to discuss with the counterparty putting in place alternative arrangements (such as the provision of a guarantee from the parent organisation).

6.14 Additionally, where it is required in any documentation to give any representation relating to the ownership of the assets in respect of which security is to be given, the organisation should ensure that any such representation is true and accurate. If in doubt, legal advice should be sought.

Trade Confirmations

6.15 Since contractual rights and obligations come into being at the time when the parties agree on the terms of the relevant transaction over the telephone (and not subsequently when confirmations are exchanged), confirmations and period statements should be carefully and promptly checked to ensure that the terms agreed by the parties in respect of a transaction are accurately recorded and any discrepancies are immediately resolved.

Delegated authority

6.16 In addition to being bound by its documentation, an organisation may also be bound by statements made by persons who are held out by it as having apparent authority to deal or transact on its behalf (for example, hedging managers, purchasing managers), particularly in circumstances where a third party relies upon such statements and acts to its detriment. Transactions are often conducted over the telephone and this needs to be taken into account when considering matters such as delegation and authority to deal. Any individual who commits the organisation to transactions should have the necessary authority to do so and have sufficient understanding of the terms of the applicable mandate or account documentation.

Misrepresentation

6.17 Brokers may be under a duty to "know" their customers/counterparties. Any organisation which is asked to give information about itself (e.g. to provide details of its dealing authority) should ensure that it either gives only accurate answers or, where it is able to do so (e.g. the information is not required by law), declines to provide the information to avoid any risk of misrepresentation through, for example, partial disclosure. Where any representation is

required to be given in any documentation (including in any Terms of Business Letter or master agreement), the organisation shall only represent matters, the truth and accuracy of which can be verified by it. This is because a misrepresentation may result in a damages claim, loss of credit and, exceptionally, cessation of trading or even termination of transactions entered into through or with the relevant broker. For this reason, in-house monitoring procedures should review all representations and warranties made by the organisation.

Legal Opinions

6.18 Senior management should issue internal guidelines on the circumstances where the organisation must obtain a legal opinion from overseas counsel. Such legal opinions are useful methods of identifying legal risks in transactional arrangements, and are particularly important where the transaction jurisdiction is unfamiliar or unusual or known to be "high-risk". The organisation should compile (utilising legal support, as appropriate) and circulate internally a list identifying such jurisdictions.

6.19 Legal opinions should be reviewed by the organisation to ensure that:

(a) they accord accurately with the scope of the original instructions;

(b) any qualifications or underlying assumptions are recognised and understood;

(c) areas of legal risk to the organisation are properly addressed (e.g. to meet any regulatory obligation covering dealing risk);

(d) where legal counsel gives opinions on multiple issues, the related facts and assumptions should be scrutinised for relevance and accuracy;

(e) where legal opinions do not quantify the seriousness of a risk – legal counsel is pressed to make a risk assessment in the qualifications section of the opinion or through an advisory side-letter to the organisation (and, where appropriate to advise on steps to be taken to minimise the risk, particularly in foreign jurisdictions);

(f) any bankruptcy qualifications, which are crucial for counterparty and credit risk management purposes, are understood.

Liability Risk

6.20 This type of legal risk is the risk of loss that will arise if the organisation is held responsible by a court or arbitration forum in respect of a claim for damages or for recovery of an unpaid debt or action based on a breach of or a default under a contractual commitment. Other sources of potential liability risk include the commission of any tort, criminal offence or anti-competitive practice. The organisation should always seek to contain liability risk, particularly the consequences of giving or accepting advice to or from other parties. Methods of mitigating liability risk should be put in place wherever possible e.g. exclusions of liability or carve-outs of responsibility.

Regulatory Risk

6.21 This off-shoot of legal risk is the risk that an organisation may find itself in breach of any requirements that may be imposed upon it by a regulatory authority; or that the

organisation's brokers fail to deliver on those regulatory safeguards which are designed to protect the interests of the organisation which it is required to observe; or, when the regulations designed to achieve that purpose fail to do so because they are inadequate or because there has been a failure on the part of the broker's regulatory authority. This means, for example, that organisations should ensure that all external regulatory, legal and other reporting requirements and obligations are considered, acted upon and met and that organisations have some appreciation of the regulatory safeguards that their brokers are required to observe when dealing with them or on their behalf.

Suggested action points

- *The organisation should establish that it has the necessary power under its constitutional documents and any relevant legislation to trade transactions of the kind and in the manner envisaged (e.g. OTC or exchange-traded; for investment, dealing or hedging purposes; on domestic or overseas exchanges) and to enter into any related agreements or security documentation.*
- *Authority to enter into financial instrument transactions should be carefully defined and delegated to appropriate staff and be subject to regular monitoring and enforcement.*
- *A process should be established for reviewing and analysing transactional data for suspicious, unauthorised or unusual patterns of trade activity.*
- *A complete list of approved existing and potential brokers should be drawn up, circulated and updated, with annotations indicating in summary form any restrictions imposed on any of them.*
- *Account documentation, mandates or other documentation should be considered carefully and reviewed to ensure that they are fully understood and that they accurately reflect the nature of the relationship between the parties.*
- *Market-standard master agreements should be used and netting provisions checked for relevance to derivative transactions or other financial instruments of the kind being transacted.*
- *Any required margin or other credit support arrangements should be properly documented.*
- *Risk warning statements (and the implications of any "opt outs") sent by brokers should be read carefully and be understood before dealings commence with or through that broker.*
- *Where a legal risk has been identified, internal reporting procedures should be set up to facilitate effective liaison with internal and external legal advisers as necessary.*
- *The organisation should ensure that there is adequate internal awareness and understanding of relevant exchange and clearing house rules which govern its trading activities and a process established for evaluating the implications of any changes to those rules on the organisation's trading activities.*
- *Contacts with overseas legal counsel should be established to research into complex cross-border transactional issues.*

APPENDIX 1

GLOSSARY OF TERMS

N.B. These definitions and descriptions are accurate at the time of publication.

Alternative Trading System — A system which provides similar but "alternative" functionality to a regulated market (see "**Regulated Market**"), but which is not licensed as a regulated market and which may have more limited transparency and access (e.g. access may be restricted to wholesale participation).

Arbitrage — The simultaneous purchase of a financial instrument in one market and the sale of a financial instrument in the same or a different market where the objective is to profit from a discrepancy in the price relationship between them.

Best Execution — The obligation on a broker to obtain the best possible result for a customer with reference to price, timeliness of trade, size and the nature of the transaction, but taking into account a range of factors such as the state of the relevant market(s) at the time of execution and the nature of the customer's order and instructions. The preferred market is usually the market which offers the most favourable trading conditions in terms of transparency, liquidity and clearing and settlement arrangements to the envisaged transaction.

Chinese Wall — An independence arrangement within a financial institution which is designed to contain and segment the flow of inside information between clearly identified business areas in order to prevent the misuse of that information and manage the institution's conflicts of interest.

Clearing — See Section 3 in Chapter 2 and Paragraphs 4.19 – 4.21

Collateral — Assets provided by one party (or a third party acting as a credit support provider) to the other party to secure payment of the first party's obligations in relation to a financial transaction in the event of default. Collateral may also take other forms such as the provision of a guarantee by a parent organisation.

Credit Risk — See Paragraph 2.9

Derivative — A financial instrument the value of which is dependent on or derived from the price movements in one or more underlying assets (such as currencies, commodities, equities, equity indices, interest rates, securities and any combination of these).

A derivative can be traded on an exchange, on an alternative trading system (see "**Alternative Trading System**") or "over-the-counter" (see "**Over-the-counter**"). Exchange-traded contracts tend to be short term and standardised, whereas over-the-counter derivatives are more varied (and may be more complex) and are structured to meet the needs of the parties.

Efficient Portfolio Management — A generic term used to describe a strategy for reducing risk or cost or generating additional capital or income (with no, or an acceptably low level of, risk) in the management of portfolios usually through the use of derivatives which are economically appropriate for that purpose and where the exposure created by those transactions is fully covered by cash, securities or other property sufficient to match that exposure.

Forward Rate Agreement (FRA)
A contract for difference under which one party (the buyer) and the other party (the seller) agree to exchange at a specified time the difference between a pre-agreed fixed rate and the then current interest rate. If rates have risen, the seller pays to the buyer at maturity the difference in rates. If, on the other hand, rates have fallen, the buyer pays to the seller the difference.

Futures
Contracts to buy or sell a standard quantity of a specific asset (or, in some cases, receive or pay cash based on the performance of an underlying asset, instrument or index) at a pre-determined future date and at a price agreed through a transaction undertaken on an exchange.

Gearing (or Leverage)
In the context of a derivative transaction, gearing is a generic term used to describe the situation where a party may be required at the time a transaction is executed to put up only a small proportion of the total price of the transaction. This element of gearing has the effect of enhancing the risks and rewards involved in transacting derivatives.

Hedging
A generic term used to describe the use of derivatives or other financial instruments for the purpose of reducing or modifying risk exposure in, for example, interest rates, exchange rates, commodity prices or equity prices. (See also page 1.2(c).

Insider Trading
Wrongful use (including dealing) of information which has not been made public of a precise nature relating to one or more issuers of financial instruments or to one or more financial instruments, which, if it were made public, would be likely to have a significant effect on the price of those financial instruments. In the context of commodity derivatives, the information must also be of a kind that a user of markets on which such derivatives are traded would expect to receive in conformity of expected market practice on those markets.

Liquidity Risk
This is the risk of (1) an inability to trade or of being able to trade only at a discounted price because of a lack of supply or demand or (2) a counterparty not being able to meet its settlement/payment obligations.

Margin
Cash or securities deposited with an exchange both as a form of collateral and a way of settling realised profit and loss on positions. Margin payments are designed to ensure that clearing members have sufficient resources to support open positions (that is, positions not matched by offsetting transactions or satisfied by delivery). For this reason, margin is calculated and adjusted on a daily basis according to present market movement.

Market Abuse Manipulation)
Transactions or orders to trade which give or are likely to give false or **(or** misleading signals as to the supply, demand or price of financial instruments, or which secure, by one or more persons acting in collaboration, the price of one or several financial instruments at an abnormal or artificial level, or which employ fictitious devices or any other form of deception or contrivance.

Market Risk
See Paragraph 2.9

Mark-to-Market
The valuation of a security, derivative or other financial transaction, or a portfolio of such securities or transactions against current market prices.

Master Agreement
A master agreement setting out the terms (including the terms as to netting) of the various transactions covered by it. (See Paragraphs 6.10 & 6.11)

Netting	The process by which a single payment obligation is derived from a number of sums owing between the parties. "Close-out netting" is the netting of payment obligations produced upon termination of a master agreement governing such obligations. "Payment netting" is the netting of payment obligations denominated in the same currency under the same transaction or a specified group of transactions (as the parties may agree). Unlike close-out netting which only applies upon termination of the master agreement, payment netting operates on an on-going basis, during the life of the relevant master agreement.
Operational Risk	See Paragraph 2.9.
Options	There are two forms of options: put or call options. Put options are contracts sold for a premium that gives one party (the buyer) the right, but not the obligation, to sell to the other party (the seller) of the contract, a specific quantity of a particular product or financial instrument at a specified price. Call options are similar contracts sold for a premium that gives the buyer the right, but not the obligation, to buy from the seller of the option. Options may also be cash-settled. By their nature, options give risk to different risk profiles between buyers and sellers. Option buyers are exposed to limited loss (that is, the premium or fee) but theoretically unlimited profits. Option sellers, on the other hand, have limited opportunities for profit, but potentially unlimited loss, although such exposures can be limited by hedging or by contractual provisions which "cap" the amount of potential loss.
Over-the-Counter (OTC)	A security or other instrument that is not traded on a "regulated market" (i.e. an exchange) but by way of private negotiation between counterparties. OTC instruments can be created by and under any provisions acceptable to the parties and permitted by law. (See also "**Derivative**".)
Regulated Market	A market which provides a multi-lateral dealing facility for the buying and selling of financial instruments and which operates according to non-discretionary rules set by the operator; and which is licensed and regulated as a "regulated market" (see also "**Alternative Trading Systems**").
Rollover Risk	In the context of exchange-traded transactions, rollover is the process by which a transaction entered into in respect of a particular settlement date is replaced by a new transaction which is to be settled on the next succeeding settlement date. Rollover risk is the risk that the market price for the new transaction may deviate from its fair value.
Segregation	See Paragraphs 4.23 to 4.25
Settlement organisation	See Sections 3 and 4 of Chapter 2
Swap	A contract under which the parties agree to exchange cash flows, the amounts of which are determined by reference to an underlying asset, instrument, index or notional amount.
Value-at-risk (VAR)	A measure of quantifying market risk based on an estimated probable (generally within a 95%-99% confidence level) loss over a given period of time in the value of an asset or portfolio of assets.

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