



**RISK MANAGEMENT PROCESS:
GUIDELINES FOR UCITS MANAGERS**

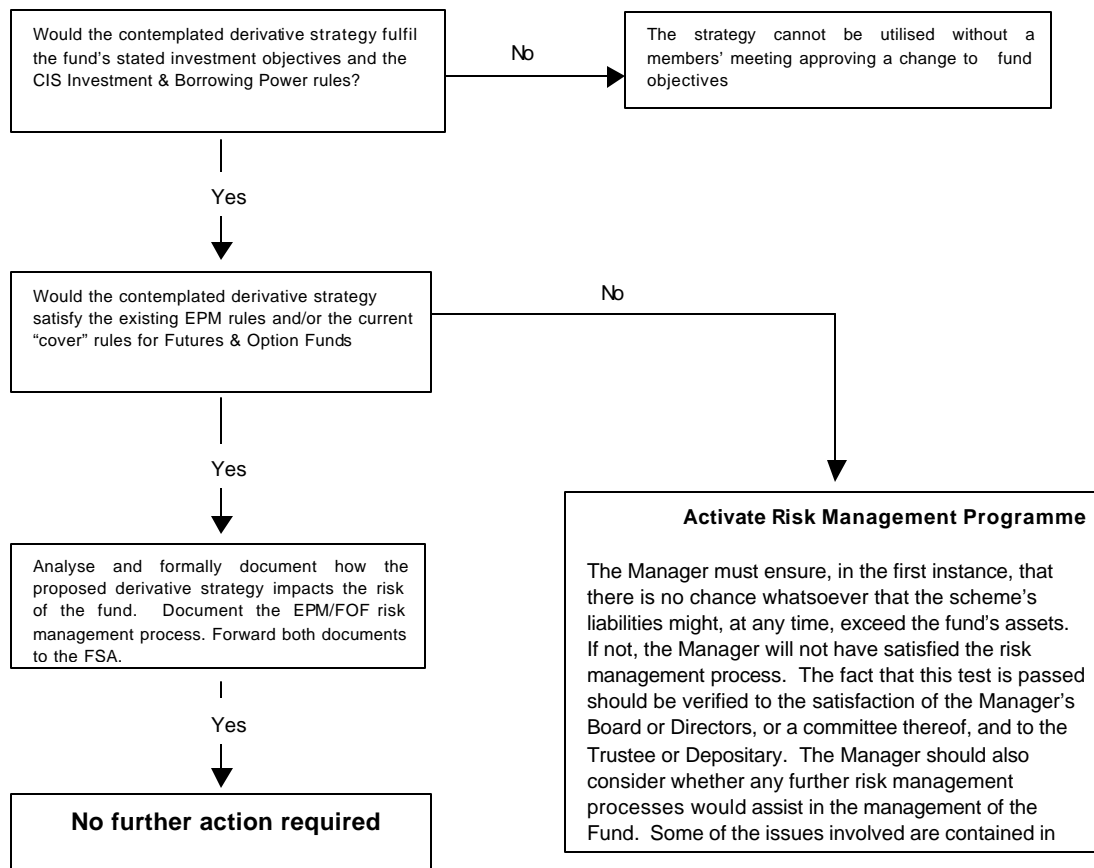
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FOREWORD

The UCITS Amending Directive on investment powers (the "Product Directive"), which was adopted on 21st January 2002, widened the investment powers of UCITS schemes and facilitated a more liberal use of derivatives by fund managers in return for observance of certain broad-based standards for managing their risk in using and disclosing their exposure to derivatives.

In implementing the Directive, the FSA, in its rules, enlarged upon those standards within Chapter 5, Investment and Borrowing Powers, of the Collective Investment Schemes Sourcebook contained within the FSA Handbook. As a response to the Product Directive and its implementation in the United Kingdom and in particular to the requirement that authorised fund managers "must use a risk management process enabling it to monitor and measure as frequently as appropriate the risk of a scheme's derivative positions and their contribution to the overall risk profile of the scheme", the Investment Management Association (IMA), the Depositary and Trustee Association (DATA) and the Futures and Options Association (FOA), established a joint working party to draft Guidelines to assist UCITS managers in developing appropriate mechanisms for managing the various risks generated by their use of derivatives. To ensure that any future regulatory changes are addressed, together with any changes in industry best practice, a standing committee will be maintained. The FSA support this industry led initiative and during the drafting of this document have provided helpful input, which has been incorporated into these Guidelines.

Managers should note that they will only be obliged to address the principles contained within these guidelines if their planned UCITS derivative strategies do not pass the following tests.



This document is intended to provide a helpful indication of some (but not all) of the kinds of controls and procedures that may be adopted by UCITS managers when taking advantage of the more liberal derivative regime. They are in no way conclusive or exhaustive and in many cases will need to be adapted to fit the size of the fund, its investment objectives and policy, the expertise of the manager's staff and any requirements that may be imposed upon the fund and/or the manager either contractually or by regulation. UCITS managers should consider seeking appropriate external professional advice as regards the procedures, practices and controls appropriate to their own particular use of derivatives.

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Definitions

For sake of simplicity this document uses the following generic terms:

- *AFM* - authorised fund manager - a unit trust manager or an authorised corporate director of an OEIC
- *Depositary* – a unit trust trustee or an OEIC depositary
- *Derivative* – future, option, contract for difference, forward foreign exchange contract
- *EPM* – efficient portfolio management;
- *Exposure* – regulatory exposure, and related cover requirement, rather than economic exposure;
- *FOF* – Futures and Options Fund
- *FSA* – Financial Services Authority
- *GFOF* – Geared Futures and Options Fund
- *OEIC* - Open Ended Investment Company
- *OTC* – Over the Counter
- *UCITS* – Undertaking for Collective Investment in Transferable Securities - UK unit trusts or OEICs that fulfil the requirements to enable them to be promoted throughout the European Union.
- *VaR* – Value at Risk

These Guidelines have been produced by, the Investment Management Association, the Depository and Trustee Association and The Futures and Options Association.

The Investment Management Association (IMA)

The IMA represents the UK collective investment scheme and investment management industry.

The IMA was formed on 1st February 2002 when the Association of Unit Trusts and Investment Funds (AUTIF) and the Fund Managers Association (FMA) merged to establish a new association.

IMA's key objectives are to:

- make representations to the UK Government on legislative, regulatory and taxation matters which affect the business interests of its members;
- liaise with the Financial Services Authority and other organisations in the UK and Europe on regulatory issues affecting investment funds and asset management;
- increase the public awareness and understanding of investment funds;
- seek to improve the standards of training in the industry;
- add value to member companies by providing them with information, guidance and assistance in matters related to their business;
- offer an information service to external parties interested in the activities of the UK investment funds industry.

Further information on the IMA can be obtained from its website (www.investmentuk.org).

The Depository and Trustee Association (DATA)

DATA was formed in 1999 and represents the industry views of depositaries of open-ended investment companies and trustees of unit trusts within the UK.

Its prime objective is to promote, support, oppose or propose changes in the relevant UK legislation, in respect of the responsibilities of members of the Association and to promote and support the development of the depository and unit trust trustee industry in the UK. In addition, DATA undertakes to promote and support research, and to coordinate and support initiatives for the future growth of the industry.

Further information on DATA can be obtained from its website (www.datasoc.co.uk).

The Futures and Options Association (FOA)

The FOA is an industry trade association for firms and institutions carrying on business in futures, options and other derivatives or which use such products in their business. It covers the whole spectrum of financial, metal, "soft" commodity and energy products. 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 membership."

The FOA fulfils this role by:

- constructive liaison with regulators, government and other political and trade bodies at national, European and international levels;
- raising public awareness and understanding of the derivatives industry;
- producing standardised industry documentation, publications and guidelines;

- delivering training courses and workshops.

Further information on the FOA can be obtained from its website (www.foa.co.uk).

MEMBERS OF THE IMA, DATA AND FOA JOINT WORKING PARTY

Lloyd Dyett (Chairman) Director, Bank of New York Trust and Depositary Company Limited, Chairman of DATA Technical Committee	DATA
Anthony Belchambers Chief Executive, The Futures and Options Association	FOA
Richard Bolchover Director, Close Fund Management Limited	IMA
Nigel Brown Global Head of Risk Management, HSBC Asset Management Limited	FOA
Grant Chambers Senior Compliance Manager, The Royal Bank of Scotland plc, Trustee and Depositary Services	DATA
Doug Shaw Head of Derivative Investment, Gartmore Investment Management Limited	IMA
Jim Irving (Secretary to the Joint Working Party) Senior Adviser – Regulation, The Investment Management Association	

1. SCOPE AND BACKGROUND

1.1 Scope

The FSA's Principles for Business no. 3 states that a firm must take reasonable care to organise and control its affairs responsibly and effectively, with adequate risk management systems. Whilst it is clear that there are a number of areas to which an AFM should apply a risk management process, these Guidelines specifically address those required in relation to the management of derivative positions within UCITS schemes.

It is not the intention of the joint working party to produce a comprehensive reference guide to derivative instruments, markets etc. Whilst this document focuses on the risk management processes required by the FSA regulations in relation to the management of UCITS, it should not be read in isolation. Users of this document should also refer to the Futures and Options Association's document "Managing Derivatives Risk: Guidelines for End Users of Derivatives", which can be accessed on their website at www.foa.co.uk. Another relevant document is the "Guide to Sound Practices for European Hedge Fund Managers" drawn up by The Alternative Investment Management Association Limited, which can be accessed on their web-site at www.aima.org.

It should also be noted that the principles contained within these Guidelines apply to those AFMs that wish to take advantage of the increased flexibility provided by the UCITS Product Directive. Those AFMs that wish to continue to limit their use of derivatives to Efficient Portfolio Management ("EPM") or Futures and Option Fund ("FOF") techniques fall outside the scope of these guidelines. Within their transitional provisions, the FSA has provided that, subject to full disclosure to investors in the relevant fund prospectus, those AFMs that wish to continue to limit their use of derivatives to EPM techniques, may not be required to add any additional control processes over and above those required under the EPM rules.

Those AFMs that continue to limit their use of derivatives to EPM or FOF techniques are still required to analyse and formally document how the proposed strategies impact risk within the fund and to document their EPM/FOF risk management process. These documents will need to be lodged with the AFM's Supervision team at the FSA, prior to the AFM implementing the strategies.

1.2 Responsibilities

Within the unit trust structure the manager operates the scheme and, most significantly, makes all the investment decisions. The trustee safeguards the property and assets of the unit trust and also has a duty of oversight over the activities of the manager.

Under the OEIC structure, the equivalents to the manager and trustee are the authorised corporate director (ACD) and the depositary. The ACD and depositary have similar responsibilities as under the unit trust structure.

In both structures, the separation of management of the scheme property from the possession and ownership of it is a fundamental element of investor protection.

As regards the subject of these Guidelines, i.e. the risk management process, the FSA rules require the AFM to "use a risk management process enabling it to monitor and measure as frequently as appropriate the risk of a scheme's derivative positions and their contribution to the overall risk profile of the scheme".

The FSA's guidance notes state that the depositary should take reasonable care to review the appropriateness of the risk management process in line with its duties of oversight.

1.3 The existing regime – EPM, FOFs and GFOFs

EPM - the concept of EPM is derived from Article 21 of the UCITS Directive of 1985, which enables member States to authorise UCITS 'to employ techniques and instruments relating to transferable securities ... provided that such techniques and instruments are used for the purpose of efficient portfolio management'. A similar enablement relates to techniques and instruments intended to provide 'protection against exchange risks in the context of the management of their assets and liabilities' (Article 21.2). The concept was adopted and expanded upon within the Financial Services (Regulated Schemes) Regulations of 1991 and subsequently the Collective Investment Schemes Sourcebook contained within the FSA Handbook. The implementation of this concept now appears somewhat prescriptive in nature, however, at the time it represented a major increase in flexibility for UCITS managers, enabling modern derivatives and currency based techniques to be used for the efficient portfolio management of the scheme.

There are three specific requirements. First, the transaction must be economically appropriate for the purposes of EPM; Secondly, the exposure must be fully covered by cash or other property sufficient to meet any obligation to pay or deliver that could arise; And third, the transaction must be entered into for one or more of three specific aims -

- The reduction of risk;
- The reduction of cost;
- The generation of additional capital or income for the scheme with no, or an acceptably low level of, risk.

The first two aims, together or separately, allow for tactical asset allocation, that is a switch in exposure through use of derivatives rather than through sale and purchase of underlying property. Also, a specific limitation derived from the 1985 UCITS Directive is that schemes subject to that directive have to be, generally speaking, invested in transferable securities, and it therefore follows that an alternative exposure obtained through derivatives in the portfolio should not remain there indefinitely: the scheme must revert to transferable securities of some kind within a reasonable time. Accordingly, for schemes subject to the 1985 UCITS Directive, any tactical asset allocation must be temporary.

Similarly, the aim of reduction of risk allows for the use of derivatives with a view to switching the currency exposure of all or part of the underlying scheme property away from a currency, which the AFM considers to be unduly prone to risk.

The third aim, of taking a no-risk or low-risk gain, must be achieved by way of arbitrage from writing covered options or from stock-lending.

There is a general requirement for 'individual' cover of the right kind and also a 'global' cover requirement, to prevent or limit gearing. There are specific provisions to ensure that speculation is not classified as EPM - the purpose being to control or manage risk rather than to take advantage of risk

FOFs - there is also a framework that currently exists for non-UCITS authorised unit trust schemes to utilise derivatives, not simply by way of EPM, but as part of the general investment management policy applicable to the scheme. This framework encompasses both futures and options funds, and geared futures and options funds. While the types of property are virtually the same for both of these categories, there are important differences between them in the degree to which exposure is permitted and in the manner in which the exposure is measured.

The FOF is 'covered', in the sense that it is permitted to invest in derivatives as long as the exposure itself is suitably covered from within the property of the scheme. Some limited investment without cover is permitted, in the form of purchased options. The purpose of cover is to ensure that a FOF is not and cannot become exposed to the risk of loss of property, or money, or both, to an extent greater than the value of the fund together with permitted borrowing of 10%. At the time when a derivative is bought, sold or written, therefore, the scheme must hold property which is of the right kind and sufficient in value or amount to match the exposure which exists or may arise as a result of the derivative. Since purchased options result in no exposure except that of loss of the premium paid, they can be held on an uncovered basis, but with a cash 'set aside' to ensure that holdings of such derivatives do not unbalance the fund. The general requirements about cover within the EPM rules are modified in some respects where it is sought to use two derivatives on the same underlying asset as cover for each other. Broadly speaking, this is possible, subject to a number of specific regulations, where one of the two derivatives has an exposure which, in terms of risk, is equal and opposite to the exposure of the other.

GFOFs - the geared futures and options fund, on the other hand, is permitted to invest and retain 20% of the property of the scheme in initial outlay. In volatile markets, this may lead to a greater exposure to profit or loss than in the case of a futures and options fund.

1.4 Expanded powers of the new regime

The UCITS Amending Directive on investment powers (the "Product Directive"), which was adopted on 21st January 2002, widened the investment powers of UCITS schemes and facilitated a more liberal use of derivatives by AFMs in return for their observance of certain broad-based standards for managing their risk.

The Product Directive sets four principles which govern the use of derivatives; namely that:

- their use should not result in any divergence from the investment objectives of the scheme as laid down in the scheme prospectus (Article 21(2));
- the "global exposure" generated by their use should not exceed the total net value of the fund's portfolio (Article 21(3)), taking into account reasonably foreseeable market movements and certain "look through" requirements;
- the AFM should employ a risk management process that monitors the exposures of the scheme, is appropriate to the use of derivatives and is communicated to the competent authority (Article 21(1));
- the types of derivatives strategies and techniques used and the investment limits governing their use should be disclosed to actual and potential investors, paying particular regard to where the net asset value is likely to be particularly volatile, i.e. the fund is a "higher volatility fund" (Article 24a).

1.5 Implementation of the new regime by the FSA

The previous section of this document describes the regulatory environment within which the FSA has consulted upon, and subsequently issued, Policy Statement 135 (PS 135). In keeping with the UCITS directive, PS 135 widens the investment powers of UCITS schemes so as to allow derivatives to be used as part of the general investment policy of the scheme. In implementing the Directive, the FSA intend to remove the concept of EPM and replace it with a series of measures designed to allow competitive product development whilst maintaining appropriate levels of investor protection. A new chapter (CIS 5) has been added to the sourcebook with the existing CIS 5 remaining during the transitional period, but becoming CIS 5A. The new CIS 5 provides for new UCITS schemes only and implements a mixed fund approach.

As before, all derivatives exposure must be covered globally, however, the individual cover requirement has been removed. This switch in emphasis has caused the FSA to reconsider its approach toward purchased options. The FSA's Policy Statement 135 deems exposure to equate to the obligation to which a scheme is, or can be committed and, the FSA argue that the holder of an option has no obligation to the counterparty, other than the amount paid by way of premium. Consequently they conclude that purchased options do not require inclusion within the exposure calculation. A further departure from the old regime is the requirement for the AFM to include a buffer zone within their global exposure calculations in the shape of a forecast of 'reasonably foreseeable market movements'. There is a new requirement to ensure that transferable securities and money market instruments with embedded derivatives comply with the global cover requirement.

A 'look through' principle exists which requires spread limits to be complied with in relation to the underlying assets unless the derivative relates to an index which is sufficiently diversified, published in an appropriate manner and is a representative benchmark for the market to which it refers.

Under the EPM guidelines only options, futures and contracts-for-difference which resembled an option were permitted as appropriate over-the-counter (OTC) derivative instruments. This has been relaxed to permit the use of any type of contract-for-difference, thus allowing swaps to be utilised for the first time. The counterparty involved in an OTC derivative transaction will now have to provide confirmation of the price on a daily basis, as opposed to weekly under the previous regime. Furthermore, a relaxation in the counterparty exposure limits from 5% to 10% has been implemented, provided the counterparty is an approved bank.

New spread limits to a single body have been introduced which will affect derivative use. A 20% maximum exposure applies to a combination of transferable securities, money market instruments, deposits and OTC derivatives issued by a single body.

A further significant departure from the previous regime is the explicit requirement for the AFM to construct a formal risk management process that is appropriate to the complexity and sophistication of derivatives used within the scheme. They must disclose details of this to the FSA, together with the types of derivatives to be used, their underlying risks and any quantitative limits that exist. Thereafter, the AFM is required to notify any material change. The FSA's guidance notes state that the depositary should take reasonable care to review the appropriateness of the risk management process in line with its duties of oversight.

Where there is any use of derivatives, the derivative policy must be disclosed prominently within the prospectus and, upon request, the AFM must provide a holder with additional risk related information to that which is already disclosed within the Prospectus. If the AFM considers the scheme is likely to be highly volatile, an appropriate disclosure must also be made within the prospectus.

1.6 EPM and FOF style techniques

As we are already aware CIS 5.2.26 R (1) requires an AFM to use a risk management process that enables it to monitor and measure as frequently as appropriate the risk of a scheme's derivatives positions and their contribution to the overall risk profile of the scheme. However, those AFMs that wish to limit their use of derivatives to the pre-existing EPM or FOF techniques may not be required to add any additional control processes over and above those already required under the relevant EPM or FOF rules.

Although compliance with the existing rules should enable some AFMs to avoid significantly enhancing their risk management process, it should be stressed that, regardless of the complexity of techniques used, all AFMs managing the new mixed fund UCITS are bound by CIS 5.2.26 R (2). This requires the AFM to notify the FSA, in advance of its use, details of the risk management process it proposes to employ. The notification must include the methods for estimating risks in derivative transactions, the types of derivatives to be used within the scheme, the underlying risks inherent in those derivatives, and any relevant quantitative limits that are to be applied. The AFM is additionally expected to provide advance notification to the FSA of any material alteration to such details.

1.7 Practical implications of the new regime

The expanded powers of the new regime offer AFMs a more flexible approach in their use of derivatives within a UCITS scheme. Such increased flexibility may manifest itself as a new strategy or fund type or, in some cases, it may prove a simpler and more efficient method of implementing an existing strategy. At its most fundamental level, the new regime allows an AFM to use derivatives as part of the general investment policy of the scheme, not just as EPM. This will allow the AFM to obtain market exposure by way of derivatives without the requirement to 'invest in transferable securities within a reasonable period of time'. This will have an obvious appeal to those AFMs that wish to gain exposure to any market where barriers to entry or repatriation controls exist.

This same relaxation may foster a growth in synthetic funds, the most likely variant of which is the index tracker fund. Operators of, and investors in, such funds stand to benefit from the reduced commissions, reduced transaction fees, lack of stamp duty and lack of custody fees that are associated with derivatives. In a world of CAT standard products, index tracker funds with zero tracking error that can be constructed in a simple and cost efficient manner will be of obvious interest to all AFMs.

With the burden of investment in the underlying transferable security removed, asset allocation switches can be executed instantaneously and permanently – again allowing the AFM and the investors to benefit from the reduced costs.

Seemingly minor changes, such as ability to utilise swaps for the first time, is likely to stimulate growth in the number of guaranteed or protected capital and income funds. Under the existing regime, any protection would

have to be constructed using options and the regulatory cover requirements made this unnecessarily complex and expensive. The expanded powers of the new regime will dramatically simplify such a strategy.

Many other fund types may be more prevalent under the new regime encompassing strategies as diverse as tactical asset allocation, volatility trading or forms of gearing. The benefits of the new regime are both tangible and numerous. Product development will continue to be stimulated thus truly embracing the hypothesis of efficient portfolio management.

2. SUMMARY OF PRINCIPLES

The increasing sophistication of investment strategies and growing investor demand for greater capital protection and more predictable performance are generating increased use of derivatives to manage portfolios more efficiently, provide “guarantees” and deliver benchmarked returns. This, in turn, has led to increasing regulatory recognition of the role of derivatives in fund management, but tempered by an awareness that they can also generate unexpected and sometimes significant losses if they are used imprudently (e.g. excessive position taking in relation to net assets, ineffective risk management controls, insufficient product understanding). The problem for AFMs is that by omitting to use derivatives to manage their portfolios more efficiently, they may be speculating unnecessarily with the underlying investments of the fund in ways which can be just as dangerous as using derivatives inexpertly or imprudently. Equally, if they do not use them for enhancing return through, for example, tactical asset allocation, they may be accused of failing to maximise returns for their investors. Conversely, they can equally be taken to task if they permit the fund to take positions in derivatives without having proper controls or sufficiently experienced staff in place to manage the consequential risk.

In developing these Guidelines, the IMA, DATA and the FOA have been motivated by the need to produce a core set of basic recommendations for AFMs in the management of derivatives risks within UCITS portfolios which:

- are compatible with the regulatory requirements of the FSA;
- are drawn from and consistent with the principles of good industry practice for managing the risks of using derivatives set out in the FOA’s Guidelines described above in Scope;
- are practical, cost-effective and capable of adoption by AFMs;
- will assist Depositaries of UCITS to fulfil their oversight responsibilities.

In all cases, the form and extent of the implementation of these Guidelines will depend upon:

- the size, purpose and frequency of derivatives dealings by each AFM;
- the overall strategy and risk profile of the UCITS;
- the extent to which AFMs are permitted by regulations to use derivatives.

The degree of implementation will also depend upon the size of and the staff and resources available to an AFM. For example, a number of the recommendations rely on the very important principle of segregating functions to avoid conflicts of interest and establishing an effective independent audit, yet small size AFMs may 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.

As the FSA rules require that appropriate systems and controls need to be in place to facilitate compliance with good practice with regard to derivatives held by UCITS. Consequently AFMs should establish a risk management process consisting of:

- An appropriate supervisory structure;
- An independent framework of internal controls, varying according to the complexity and sophistication of the derivative strategies within the UCITS concerned;
- A process for approving the use of new instruments or strategies.

These Guidelines do not purport to be an insurance policy providing those who implement them with immunity from the risks associated with derivatives activity; nor do they attempt to deal in detail with the different circumstances and strategy that may be peculiar to particular types of AFM. They do, however, mirror the kind of internal controls that most well-structured organisations will have in place for addressing the use of derivatives.

It is to be hoped that by understanding and implementing these Guidelines, AFMs will become more aware of the risks as well as the benefits of using derivatives and be better prepared to deal with them.

3. CATEGORIES OF RISK

The AFM is required to analyse risks within the UCITS portfolio and document how the proposed derivative strategy will impact such risks. The principal risks that the AFM should consider are listed below.

Market Risk - the risk of losses due to adverse movements in equity, bond, commodity, currency and other market prices, indices or rates or changes in the anticipated or calculated volatility of these movements (i.e. volatility risk).

Credit Risk - "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 - "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).

Legal and Documentation Risk - the risk that, in the event of counterparty default or a dispute, an AFM may be unable to enforce or rely on rights or obligations arising under contractual arrangements with its broker or counterparty.

Cash Flow Risk - the risk that an AFM will have insufficient cash to meet the margin calls necessary to sustain its position in an exchange-traded 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 cash position is hedged through using exchange-traded futures or options contracts which are not the same as (but may be similar to) the property which constitutes the underlying 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.

Regulatory Risk - the risk of disciplinary measures being taken against the AFM due to a breach of the rules or principles contained within the FSA's Handbook.

Reputational Risk - while this is often excluded from the definition of operational risk (for example, the New Basel Capital Accord excludes reputational risk for the purpose of calculating capital requirements), recent headline cases show that any form of adverse publicity or perception about an AFM, whether justified or not, can increase significantly its risk and/or its cost base through, for example, the withdrawal of credit lines, loss of investor confidence, loss of key staff and withdrawal of third party supplies.

4. RISK MANAGEMENT PROCESS

The board of an AFM should establish and approve an effective policy and an appropriate supervisory structure for the use and risk management of derivatives which is consistent with regulatory requirements and the investment policy and risk profile of the UCITS

4.1 Appropriate supervisory structure

The FSA Handbook, Supervision module, states that the FSA “aims to focus and reinforce the responsibility of the management of each firm to ensure that it takes reasonable care to organise and control the affairs of the firm responsibly and effectively and develops and maintains adequate risk management systems.” To this end, the FSA have specified a number of “controlled functions” which it sees as key within firms’ operations, and stated that individuals performing these important functions should be “approved persons”. A number of the functions described in this section are likely to be undertaken by “approved persons”.

An appropriate structure for an AFM will depend on the complexity and sophistication of derivative strategies utilised and typically will apply some or all of the following processes.

- i **Committee** - the AFM must nominate one or more senior individuals (“Committee”), who maintain a significant degree of independence from the fund manager, to be responsible for the AFM’s use of derivatives in a UCITS.
 - the AFM must ensure that the Committee understands derivative instruments;
 - the Committee should regularly provide the board of the AFM with management information on fund derivative positions and exposure that is readily understandable, complete and sufficient for the board of the AFM to make informed judgements.
- ii **Responsibility** - the Committee must be made formally responsible to the board for the establishment and maintenance of an appropriate independent framework of controls which:
 - must ensure that the actual usage of derivative s is monitored and reviewed regularly by persons independent of those responsible for managing derivatives and that these activities comply with the FSA’s CIS and Conduct of Business Sourcebooks, and any applicable laws;
 - must approve the qualifications and experience of senior managers and others who will be responsible for identifying and managing the risk associated with their use of derivatives and ensure that no undue reliance has been placed on too few specialists;
 - must ensure 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;
 - should, where appropriate, seek additional professional advice, and/or support, from external specialists to provide independent assessment and input where necessary;
 - must consider carefully the role of external service providers and their capacity to fulfil their roles;
 - must ensure that procedures are adequately documented;
 - should establish contingency plans to cater for staff changes and turnover. This may include the periodic rotation of staff who undertake key risk management functions and also succession planning.
- iii **Internal audit** - the AFM should supplement 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 UCITS investment objectives. In addition, it may advise and support line managers in discharging their

risk management responsibilities. The internal audit function should have, or have access to, adequate skills and experience to audit fund derivatives risks.

- iv **External audit** - the AFM should assess the role of external auditors reviewing their proposed audit scope and approach, enquiring as to the degree of coordination of work between them and the internal audit function to ensure it is appropriate under the circumstances, reviewing their reports to management and ensuring that management responds appropriately to their findings.
- v **Remuneration** - the AFM should review its remuneration policies to ensure that they are not likely to bring about disfunctional returns and consider factoring in measures such as compliance, prevention of loss (as well as the securing of profit) and long term performance when setting the methodology for calculating bonus payments.
- vi. **Notification** - the AFM must:
 - notify the FSA with details of its risk management process, in particular the methods it uses for estimating risks in derivative transactions along with advance notice of any change in such details;
 - notify and discuss with the depositary, details of this process and any subsequent changes.

4.2 Independent Framework of Internal Controls

- i **Competence** - the AFM's framework of internal controls must be implemented, carried out and monitored by persons with sufficient knowledge and authority to discharge their duties effectively and should cover the principles set out in these Guidelines. All members of the AFM's staff with responsibility for managing risk and all those involved with the execution and settlement of transactions and their supervisors must be adequately trained and have sufficient knowledge and authority to discharge their duties effectively. They should also be aware of, observing and being kept up to date with internal control procedures.
- ii **Appropriateness** - to assist in determining the appropriate level of controls for its organisation, the AFM must carefully consider the degree of complexity and sophistication of the derivative strategies that it intends to utilise. CIS 5.2.27 G (3) states that "an authorised fund manager is expected to demonstrate more sophistication in its risk management process for a scheme with a more complex risk profile than for one with a simple risk profile".

The under-noted examples have been drawn up with this guidance in mind. They are for illustrative purposes only and are not intended to be either exhaustive in nature or relied upon to exclusively demonstrate compliance with the regulations. It is assumed that all examples are already subject to generic risk management functionality such as segregation of responsibilities, training and competence, reconciliation policy and limits setting policies.

Complexity of Strategy	Fund Type (example)	Strategy	Components	Typical Risk Management process may include;
Low	US Growth	Hedge currency risk	Forward currency deal	Similar approach to EPM rules. Full notional exposure covered individually by assets. Economic Appropriateness ensured
Moderate	Capital Protected	Protected return plus a proportion of any market rise	Equity plus OTC options	Cover measured in terms of liability adjusted for historic volatility of index. Independent price review of OTC derivatives. Scenario analysis to review performance of capital protection
High	High Income	Synthetic exposure,	Exchange traded options, OTC options	Cover measured in terms of liability coupled with VaR modeling. Back

		written options to generate income and hedging volatility	(plain vanilla and exotic), futures and volatility swaps	testing used to verify performance of VaR model. Analysis of sensitivity of the fund to changes in interest rates, index levels and volatility levels. Stress testing against capital erosion. Independent price review of OTC derivatives
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No matter how simple or complex are the derivative strategies utilised by the AFM, the FSA Regulations set absolute minimum standards for cover, counter-party exposure etc.

- iii **Responsibility** - clear responsibility for the different aspects of risk management must 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.
- iv **Segregation** - functional segregation must be established between individuals responsible for entering into derivatives transactions and those responsible for transaction processing, calculating exposure, monitoring risk, performing reconciliations and transaction reporting.
- v **Processes**- processes should be formalised that address:
 - selection, approval and monitoring of brokers and other counterparties, auditors, trustees or depositaries and any other service providers. 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;
 - authorisation of individuals to negotiate, approve, and execute transactions;
 - setting the procedures for and overseeing day-to-day transactions and the observance of any restrictions, both internal and external, on the power of parties to enter into particular transactions.
- vi **Procedures** - clear written policies and procedures should be established for managing the risk facing UCITS, that are sufficient to identify, measure, manage, mitigate and report on all forms of market risk that may be generated by adverse movements in equity, bond, currency or other market prices, indices or rates or changes in the volatility of such movements. These:
 - must be consistent with the relevant CIS Sourcebook requirements;
 - should be embedded in the culture of the AFM and its employees;
 - should be targeted at reducing the incidence of matters which might otherwise not be detected (e.g. unauthorised trading activities, market manipulation, embezzlement of funds, insider dealing, excessive and speculative trading, errors and incompetence).
- vii **Monitoring** - a consistent and readily verifiable method of measuring derivative exposure is essential. The primary consideration for a UCITS scheme should be compliance with the cover requirements as laid down by Chapter 5 of the CIS Sourcebook. In essence, this prohibits it from entering into any derivative transaction unless the total exposure, in terms of the principal or notional principal created by the transaction, can be covered from within its scheme property. Exposure and cover requirements should be determined with reference to the CIS Sourcebook and the relationship between the definitions for principal and notional principal and the instrument itself.

At least daily, intelligible and timely reports on fund exposures should be prepared, checked and circulated to the Committee by competent staff, independent of the AFM's derivative activities, which provide:

- a reasoned description of each fund exposure, including, if appropriate, relevant portfolio VaR analysis;
- details of likely future activity;
- 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);
- evidence of completed reconciliations of all items in the trade life cycle, including cash, mark to market margining, stock, unmatched and failed trades;

- details of utilisation against exposure limits, giving details of any regulatory or internal exposure limits breached in the period and action taken;
- where appropriate, stress test/scenario results.

A formal process should be established to ensure that exposure issues and, if appropriate, VaR limit violations are escalated to the Committee on a timely basis. The trigger levels for escalation will be based on the materiality and duration of the exposure limit breach.

Some generic principles can be applied when measuring exposure and these have been summarised within the table below.

Instrument		Exposure created	Rationale
Purchased options.		None (other than premium paid).	The purchaser has the right, but not the obligation, to exercise the option. There can be no financial liability to the holder other than the amount paid by way of premium. If the option is out-of-the-money to the holder it is simply lapsed. Suggested by CIS 5.3.2 R (3).
Written options (except in the case of options on futures).		Notional exercise value of the contract.	This gives the right of potential exercise to a third party. Therefore, the notional underlying may conceivably have to be delivered out thus creating exposure for the scheme. Suggested by CIS 5.3.2 R (3).
Written option (in the case of an option on a future).		Marked-to-market valuation.	As above, this gives the right of potential exercise to a third party. However, the notional underlying is not delivered upon exercise, as the contract is cash settled. Thus exposure for the scheme is limited to the marked-to-market value. Suggested by CIS 5.3.2.R (3)
Futures		Marked-to-market valuation.	This is an obligation to which the scheme is committed. The notional underlying is not delivered upon maturity, as the contract is cash settled. Thus exposure for the scheme is limited to the marked-to-market value. Suggested by CIS 5.3.2 R (3).
Contract for difference, which is an index derivative (and resembles a future).		Marked-to-market valuation.	Suggested by Defined terms for 'notional principal'. Glossary, CIS Sourcebook.
Contract for difference, which is an index derivative (and resembles an option).		Notional exercise value of the contract.	Suggested by Defined terms for 'notional principal'. Glossary, CIS Sourcebook.
Any other Contract for difference		Notional lot size of the contract.	Suggested by Defined terms for 'notional principal'. Glossary, CIS Sourcebook.

Forward Contract	Marked-to-market valuation.	Suggested by Defined terms for 'principal'. Glossary, CIS Sourcebook.
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When measuring the exposures of UCITS derivative 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.

CIS 5.3.3 R (2) requires the AFM to consider 'reasonably foreseeable market movement' when determining cover requirements. One potential method of forecasting such a value is to employ a VaR model. 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 AFM should integrate VaR measures with all other risk indicators (e.g. scenario analysis and stress testing) in order to achieve a better picture of risk.

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

Any monitoring of exposure should include monitoring of transactional activity in order that the impact on each UCITS risk profile is known, understood and measured appropriately.

- viii **Limit-setting** - where appropriate, limits and limit procedures for derivative exposure which are consistent with the CIS Regulations, or the investment objectives of each UCITS, if tighter, should be designed and documented and cover reporting lines, authorisations, action on limits' breaches and reports to the AFM and trustee or depositary, of any significant limit excesses.

More complex situations, may require consideration of:

- notional, maturity and VaR limits;
- stress-based limits to supplement VaR limits ;
- sensitivity-based limits to manage risks within specific market parameters.

- ix **Independent Price Verification** - in order to produce reliable derivative exposure reports on which management decisions can be based, market parameters (instrument prices, data sets, interest rates and foreign exchange rates) fed into the approved derivative exposure measurement and assessment models must be checked for integrity and reasonableness.

Market parameters may be input into approved derivative exposure measurement and assessment models manually or by automated feeds which may give rise to manual input error, linkage error, systems error (when links fail) or third party input error. Policies and procedures should be developed to identify and correct these errors by comparing previous sets of market parameters (i.e. closing prices and rates) to current end-of-day market parameters, investigating the reasons behind large variations, and taking the appropriate action.

Responsibility should be allocated to appropriate and skilled staff who are independent of those responsible for trade execution. If this is not possible, the variations should be checked or audited on a regular basis by an independent area such as Internal Audit.

In the case of OTC products , some form of independent pricing will have to be sourced either from within the AFM's organisation (where there is a sufficient degree of expertise to do so), or possibly externally from an institution other than the product provider.

As a function of their oversight responsibility, the depositary may require to be provided with evidence of independent price verification.

- x **Stress testing and scenario analysis**- is appropriate for those funds with more complex or sophisticated derivative strategies. CIS 5.3.3 R (2) states “Exposure is covered globally if adequate cover from within the scheme property is available to meet the scheme’s total exposure, taking into account the value of the underlying assets, any reasonably foreseeable market movement, counterparty risk, and the time available to liquidate any positions”.

In order to determine what can be considered a “reasonably foreseeable market movement”, the AFM should consider implementing stress testing and scenario analysis procedures. This should ensure that the exposure consequences of extreme, market shocks can be measured against the current market volatility thus providing a benchmark for measurement. It is important that an AFM understands the effects on it of sudden market changes (e.g. in price, volatility, liquidity) that are outside the norm. It should therefore:

- analyse each fund’s situation in the event of sudden or unpredictable changes;
- 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.

Exposure should at all times remain in line with each fund’s investment objectives together with the regulations contained within the CIS Sourcebook.

The AFM’s senior management should ensure that stress testing and scenario analysis is carried out with such regularity that is appropriate to the overall exposure of each fund, and the impact upon it of meeting any additional margin calls.

To be meaningful, stress testing and scenario analysis should be performed at multiple levels and tie back into the decision-making process. It should be discussed in regular forum by risk monitors, senior management and fund managers. The results should guide the AFM towards considering each fund’s future appetite for risk taking or they may trigger discussions on how best to unwind or hedge a position.

The AFM should advise the depositary of the results of stress testing and scenario analysis and of any steps taken as a consequence.

- xi **Reporting** - regular, intelligible and timely reports which focus attention on key derivative risks should be supplied to those with responsibility for managing market, credit and operational risk and, as appropriate, to the Committee to ensure that the reporting and internal control systems of the organisation:

- are such that the Committee can be assured that transactions are being undertaken in accordance with the stated objectives and strategy (e.g. in the case of hedging transactions, that the underlying instrument or rate is properly identified) and in compliance with CIS and COB Sourcebook requirements;
- 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;
- ensure that it receives regular information on risk exposure and the usage of derivatives in a form which is understood by them and which permits them to make informed judgements as to the level of derivative exposure 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;
- ensure that 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 UCITS including market risk, credit risk, operational risk and legal/regulatory risk.

As part of it’s duty of oversight, the depositary will review the findings of such reports and the consequent actions taken by management.

4.3 New Derivative Strategy or Instruments

- i **Strategy** - any new form of derivative strategy, particularly where new instruments or products are involved, must be subject to rigorous prior assessment and approval. This process should determine appropriate parameters, controls and limits, to ensure that any consequential risks are properly understood and within the relevant fund's accepted level of tolerance to risk. Critically, the Committee and the individual fund manager responsible for the portfolio should have a common understanding of the new strategy.

As part of the process for approving a strategy, the fund manager should provide the Committee with a report which identifies and documents:

- the investment objectives of the fund and the fund's investment policy contained within its Instrument of Incorporation and Prospectus;
- the intended derivative strategies and confirms that these do not conflict with the objectives;
- any constraints on the derivative strategy, e.g. permitted instruments, size, geographical and market limitations;
- the fund's appetite for risk, the main risks and how the AFM's fund manager intends to address such risks, e.g. avoidance, hedging or acceptance of that risk;
- any regulatory constraints;
- the planned processes for monitoring derivative positions;
- confirmation that the opinion of the depositary has been sought.

- ii **Instruments**- prior to approving the use of any new type of derivative instrument, the fund manager should provide the Committee with a report that confirms that

- they are consistent with the AFM's management capabilities, including efficiently executing, settling, administering and pricing the new instrument, that all relevant front and back office staff have received any necessary instrument specific training and that any necessary manual work-arounds to fund valuation systems have been fully tested and documented;
- the derivative instruments and related strategy are set out in an approved/revised list and that this has been advised to the FSA and fund depositary;
- the risks and rewards of their use have been assessed and documented by persons independent of the fund managers and dealers ;
- the policies and control procedures developed by the AFM's senior management are appropriate and documented. Such assessment should cover accounting and control procedures, IT and systems implications, relevant legal or regulatory approvals and appropriate sign-offs in all relevant areas by the AFM's senior line management;
- investors have been properly informed (prospectus, KFD requirements etc, including if the fund should be classified as a higher volatility fund) of intended revisions to derivative strategies and instruments to be utilized;
- the opinion of the depositary has been sought.