

Derivatives: A practical guide to trustees' responsibilities

December 2011

Foreword

Derivatives play a central part in many pension schemes' risk mitigation strategies. Trustees must understand not only what derivatives are, but they must understand their responsibilities for the oversight of their scheme's derivative activities and for decisions about the use of derivatives. The NAPF's *Derivatives made simple*, launched at its Trustee Conference in December 2010, addressed the question of what trustees need to know about derivatives. This Guide, building on the 'made simple', addresses what trustees need to do to monitor and control their scheme's derivative positions and when making decisions on the use of derivatives.

The derivatives landscape is not fixed. In particular, legislative initiatives in the European Union as part of a wider international response to the financial crisis will have a major impact on derivatives. The initiatives will increase the cost of derivative strategies and could raise issues about the safety of scheme assets put up as collateral. Trustees need to be aware of these developments and take advice where necessary.

The changes will be the result of two particular pieces of European Union legislation currently under negotiation: the proposed Derivatives Directive (EMIR – European Market Infrastructure Regulation) and the proposed fourth Capital Requirements Directive (CRD IV). The proposed Derivatives Directive will require derivatives to be cleared through a central counterparty (CCP) clearing house. The clearing houses' current arrangements for collateral will greatly increase the cost of derivatives for institutions, like pension funds, with one-way derivative positions. The impact will not be immediate. The Regulation is due to come into effect from end-2012, but the texts of the Regulation currently being considered provide for a three year exemption for pension schemes, with the possibility of a further two year extension. Furthermore, the clearing obligation will only apply where there is a clearing house able to clear the particular contract and designated as such by the European Securities and Markets Authority (ESMA).

The Derivatives Regulation is not the only source of additional cost. Even where there is no clearing requirement, Over the Counter (OTC) derivatives will become more expensive because of European legislation being enacted under the heading of the fourth Capital Requirements Directive. This is a package of three Regulations and an amended Directive that will implement the international standard on bank capital recommended by the Basel Committee on Banking Supervision (Basel III). In an effort to encourage the migration of derivatives to central clearing, CRD IV will increase the amount of capital that banks must hold against derivatives that are not cleared through a CCP clearing house. The increased cost of banks' capital requirements will inevitably be passed back to the pension funds and other institutions that are the banks' counterparties. Derivatives regulation and bank capital requirements will thus operate a pincer movement to raise costs that could profoundly affect the economics of derivatives as a risk mitigation tool.

Acknowledgements

The Guide is the work of many hands and we are very grateful to everyone involved in putting it together. It was taken forward by the NAPF's Financial Instruments Working Group under three chairmen: Gareth Derbyshire, Gerry Degaute and Michael O'Brien, and we are grateful to them – and to the Working Group – for their encouragement and support. We are particularly grateful to those, from inside and outside the Working Group, who had a hand in drafting different sections of the Guide: Hugh Cutler, Julia Delaney, Andrew Evans, Jon Exley, Nick Horsfall, Michael O'Brien, Max Ramirez, Cliff Speed and Stephen Woodcock. We are also grateful to the Society of Pension Consultants (SPC)'s Investment Committee for their comments on an earlier draft.

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1 Executive Summary

This document is intended to be used by pension scheme trustees and investment committees when using, or considering the use of, derivatives. For those unfamiliar with derivatives, we would recommend the NAPF's *Derivatives made simple* as an introduction.

This paper provides guidance in the areas of governance, education, modelling, implementation, documentation and collateral, execution, monitoring and review and accounting.

Given the very high relevance of swaps to pension scheme investment strategies, the paper focuses on swaps. There is also a bias towards over-the-counter (OTC) derivatives, as these bring more complexities to pension schemes.

The key recommendations are:

1. Decisions should be taken by a dedicated group with a high level of expertise.
2. All trustees should undertake training to understand the key issues.
3. Modelling provides a very useful tool in understanding investment strategies and pension liabilities, but should not be overly relied upon as no model can predict the future with certainty.
4. Implementation should usually be undertaken by an investment manager or other suitably qualified agent using counterparties that have been carefully selected. Pooled solutions will be simpler to implement, but there is less scope for tailoring.
5. Documentation for segregated solutions can be complex, but is extremely important in protecting trustees. The effective management of counterparty risk using collateral is a particularly significant part of the agreement.
6. Execution of derivative trades can be expensive, and the costs are not always transparent. Careful analysis and understanding in this area are vital, and there are many ways of mitigating the costs and risks.
7. All derivative positions will need careful monitoring and regular review. For many positions this will be daily monitoring by the investment manager and monthly or quarterly monitoring by the investment committee or trustees.
8. Trustees should ensure that the scheme's accountants are briefed early in the process of employing derivatives to ensure that all positions are properly accounted for.

2 Governance

The principles surrounding the governance of decisions relating to derivatives are the same as those for other asset decisions, such as setting investment strategy. Many trustee bodies will, however, be less familiar with derivative instruments than with more traditional assets such as equities or fixed income securities.

The key elements of effective governance relating to derivatives are:

- decisions should be taken by individuals that have sufficient understanding of derivatives;
- training and expert advice should be sought; and
- delegation to a dedicated and appropriately experienced sub-group is likely to lead to more efficient decision-making and implementation.

Roles of different parties in solution design

The assets within a pension scheme are there to back the payment of pension benefits that have been promised. The assets are legally owned by the trustees for the benefit of members.

With this in mind, the following general concepts underlie the design and implementation of any derivative solution:

- While the trustees must remain responsible for the design of any derivative solution, the process could be led by either the sponsor or the trustees, drawing as necessary on expert advice. However, there may be differences between sponsor and trustees in the motivations for a given strategy and the formats which would then be preferred. An example might be a desire on the sponsor's part to hedge accounting liabilities, but on the trustees' part to hedge discontinuance liabilities. Such differences of motivation and interest should be understood by all parties.
- There are a number of areas of due diligence and sign-offs that should to be followed at a trustee level. These should include:
 - investment advice that the solution is strategically aligned to the trustees' primary aim of securing members' benefits;
 - analysis of any solution and how robust it is to withstand downside risks, such as poor market conditions or counterparty default;
 - analysis of how the scheme could lose money;
 - discussion with the Scheme Actuary and understanding of how any strategy might impact the scheme (this would include an understanding of the impact on technical provisions, funding status and also contribution requirements); and
 - planning for availability of collateral.
- In any event, where there are likely to be material changes to the scheme's use of derivatives, there should be full consultation between the trustees and the sponsor.

Full Trustee Board versus Investment Committee

Where decisions will result in “material” impact on a fund’s strategy, they should at least be debated prior to delegation by the full trustee board. The full trustee board would be responsible for defining “material” in this context. Examples of “material” might include the execution of swaps to reduce the risks arising from interest rate movements, inflation or longevity.

The key decision on the overall level of risk to be taken (and therefore the return which will be targeted) would also naturally be taken by the full trustee board.

The use of an investment committee, with members of suitable experience, can be an efficient way to govern investment decisions and could prove more efficient than having the trustee board discuss the full detail of such decisions. This applies equally to derivative strategies.

Examples of decisions that are less material in the context of a pension scheme and that could be delegated to an investment committee might include:

- the choice of investment manager for derivative strategies;
- documentation relating to the management and execution of the strategy; and
- selecting constraints for mandates.

Delegation to a dedicated derivatives sub-group of the investment committee might be appropriate for detailed implementation decisions. This might also apply where the aim is to implement a decision quickly – on the basis that smaller groups will most likely be able to act more quickly than larger groups.

Decisions that can be delegated to an asset manager

Decisions relating to the day-to-day management, execution and settlement of derivative strategies would naturally be left to the investment manager(s). Decisions include but are not limited to:

- determining the most efficient instruments for execution, within the constraints of the mandate;
- selecting counterparties, subject to the constraints of the investment manager’s mandate;
- the choice of collateral, which should nevertheless be subject to strategic guidelines approved by the trustees;
- the action to be taken arising from credit or other events relating to the derivative contracts; and
- assessing / achieving best execution.

3 Education

Even where a dedicated committee is used to make decisions, it is recommended that all trustees undertake sufficient training to ensure they develop and maintain an appropriate level of understanding of derivatives.

There are many providers of education on derivatives. These include service providers such as consultants, asset managers, investment banks, custodians and lawyers. There are also a range of industry bodies, universities, professional bodies and commercial training organisations.

Some trustees will have the advantage of having access to a sponsor which has a treasury function that will be familiar with the derivative markets and will thus be able to benefit from this “in-house” expertise. When seeking education, trustees should keep in mind:

- the requirements of the Pension Regulator;
- their obligation to fulfil their duty to schemes members; and
- the requirement to assess adequately the advice that they have received.

The level of education required for a trustee body should be commensurate with the level of responsibility assumed; the main trustee body would require a lower knowledge level than a dedicated investment sub-committee.

Assuming an investment committee exists, the main trustee body should be confident that:

- its own knowledge and understanding is consistent with that required by the Pensions Regulator (in particular Code of Practice 07, Trustee Knowledge and Understanding);
- the investment rationale and objective supporting the use of derivatives is clearly framed, articulated, documented and understood;
- the principal merits and demerits of a derivative based approach vis-à-vis the use of physical securities are understood;
- the credit risk arising from the use of instruments (in particular over-the-counter or “OTC” contracts) and the associated counterparty risk is understood;
- appropriate controls are in place around the use and management of collateral; and
- the costs involved both in terms of execution and ongoing monitoring and management are fully quantified and understood.

A higher degree of expertise is expected of an investment committee. In addition to the points for the main trustee body, the committee should have a deeper understanding of:

- the manner in which the financial instruments are executed, focussing on the risks and costs involved and on assessing best execution and how this will be achieved and monitored;
- the pay-off profiles associated with the use of these instruments under various market and economic scenarios;

- the impact on the asset-liability risk profile as a result of the use of these derivatives / financial instruments;
- the potential collateral requirements and the ability of the pension scheme to meet these – the investment committee will be expected to understand the implications for the liquidity profile of the investment portfolio under various economic and market scenarios;
- the manner in which the collateral will be managed;
- the manner in which the derivative portfolio will be managed;
- where derivatives are being used to hedge a liability, control an asset risk or synthetically replicate a physical asset investment, the “basis risk” arising from differences between the exposures underlying the derivative and the liability or physical asset being hedged/replicated;
- any conflicts of interest (actual or potential) that may arise from the use of derivatives; and
- the control process around the management of the counterparty risk and the contingency plan in the event of a counterparty default.

4 Modelling

Asset and liability models are widely used as risk management tools. They enable a pension scheme to understand the nature and extent of the risks they are taking under different investment strategies relative to their liabilities. While modelling has its limitations and unavoidable inaccuracies, it is important that trustees understand the risks and potential rewards to which their pension scheme is exposed through its investment policy and liabilities. Models may be either “stochastic”, employing large numbers of random simulations of future events with the aim of quantifying probabilities of different outcomes, or “deterministic”, with the aim of testing the effects of defined scenarios.

Specific requirements for modelling strategies using derivatives

In some cases derivatives are used for efficient implementation of investment decisions, with the derivatives designed to provide exposures equivalent to investment in an underlying asset, such as equities. An example could be the use of equity index futures in combination with cash holdings as a proxy for an investment in a physical equity index-tracking fund. In such cases there may be certain technical and practical differences between the derivative-based investment and investment in the underlying asset that trustees should understand. However, these will not necessarily be significant enough to warrant a distinction between the derivative and the underlying asset in the modelling – the same model can be used for both.

In other cases, the use of derivatives can require a more extensive model than that used for strategies employing just investments in the traditional asset classes of equities, bonds and property. This is particularly relevant for options strategies.

An exhaustive list is not possible, but the following are relevant to modelling certain derivative strategies often considered by trustees and the particular characteristics of typical UK pension scheme liabilities:

- **Liability inflation caps and floors.** Typical UK pension scheme benefits are indexed to RPI inflation (although an increasing number will reference CPI), subject to limits. If a significant liability-hedging exercise is under consideration, a model that properly allows for the effect of these caps and floors on the liability valuation is important.
- **Equity and other options.** Equity options provide a return dependent on the price of an equity or equity index being above or below specified levels at a specific time or times. Equity options are assets in their own right and their prices can vary for reasons other than just movements in the prices of the reference equity or equity index. Quantifying these sensitivities is an important part of understanding and reaching a decision on the use of equity options. The same applies to modelling of options on other asset classes or of options on derivatives such as swaptions.
- **Interest rate and inflation swaps.** The analysis and comparison of different liability-hedging strategies for pension schemes requires a robust model of interest and inflation rates at different terms. In addition, it is likely to be appropriate to model the potential divergences between swap and bond market rates.
- **Credit default swaps (CDSs).** CDSs are derivatives on the credit risk attaching to bonds and lack the sensitivity to interest rates that comes with bond investment. A separate model of credit spreads is needed to model properly the characteristics of CDSs.
- **Longevity swaps.** Derivatives linked to the longevity of members of a pension scheme are a means of hedging such risks. Models of experienced and future expected longevity are not widely used but could be considered.

Choice of assumptions

Assumptions may be derived from analysis of historical experience, from current asset prices or be a matter of subjective judgement. No single approach is clearly the best for all circumstances. Trustees should ensure that they understand the basis for assumptions-setting and the primary areas of subjectivity. The implications of assumptions for the results of modelling analysis should be understood as well, such as whether they will tend to imply that a particular asset or derivative is over or under-priced in the market at present.

Modelling providers

Modelling can be undertaken by a number of different organisations: investment/actuarial consultants, investment managers, investment banks and even, for a few of the larger pension schemes, a dedicated “in-house” team. In choosing to employ one or more organisations to provide a modelling analysis, trustees should understand whether the analysis they will receive constitutes formal advice or not. Investment advisers may not be prepared to provide advice dependent upon modelling analysis undertaken by another organisation and, if this is the case, they need to be asked to carry out their own modelling in order to advise. In some cases, trustees may see an advantage in obtaining modelling results from more than one organisation as a comparison, even if the advice ultimately comes from a single source.

5 Method of implementation

Use of an asset manager

Trustees will typically use an asset manager to execute derivative trades on their behalf. Trustees should ensure that they are entirely satisfied with the manager's ability to execute the trades in an efficient, low risk manner.

The following manager attributes are important:

- evidence of the resources and expertise required to execute the trades;
- a robust execution methodology, which will include evidence of best execution and the ability to manage conflicts (for example arising from a larger trade for another scheme);
- the ability to manage total costs for the trustees;
- high quality reporting; and
- risk management including trade compliance and approval procedures.

Alternatives to using an investment manager

There are also alternative approaches, including using an execution only agent. The trades would then be passed to the scheme's custodian to maintain. The use of an execution agent is similar to the use of an asset manager, in that both have a direct duty of care to, and are acting on behalf of, the trustees.

Discretion provided to execution agent

If the trustees decide on non-discretionary execution (i.e. where specific instructions are provided) then there could be issues relating to liquidity and market impact. For substantial trades in markets that are not extremely liquid and transparent, non-discretionary execution should be in conjunction with "triggers". Otherwise, the trustees could be exposed to the risk of trading at market and transaction cost levels that are unattractive.

Alternatively, discretionary execution can allow for market conditions, for example liquidity, or for the investment manager's market views. There might also be the opportunity to allow "crossing" of trades to take advantage of other parties wanting to take opposite positions. The size of the trade may determine whether it can be executed as a single tranche or requires sub-division.

Choice between pooled and segregated solutions

Pooled solutions and segregated solutions each bring advantages (+) and disadvantages (-).

These are summarised below:

	Pooled	Segregated
Speed of implementation	+	-
Documentation	+	-
Anonymity	+	-
Flexibility	-	+
Leverage	-	+

Choice of counterparties for segregated mandates

The final choice of counterparty is made at the trade execution stage, which is discussed in Section 7. Under a segregated mandate, trustees will need to identify a “panel” of potential counterparties with which contracts will be established prior to trading (the documentation required is discussed in Section 6). The trustees will also need to reach a decision on the extent of counterparty diversification required in the final portfolio.

The responsibility for selecting these counterparties can reside with any competent organisation with the necessary regulatory authorisations. This could include the sponsor, consultant or investment manager. However, the documentation and contracts will ultimately be between the pension scheme and the counterparty banks, so the trustees will need to satisfy themselves that the banks selected are appropriate.

The key considerations for counterparty selection are:

- ability to deliver on contracts executed;
- capacity to execute the trades required at an acceptable cost; and
- creditworthiness.

Particularly where trustees are looking to enter very long term contracts, there will be a focus on the financial and reputational strength of the counterparty banks. This should involve consideration of credit ratings and any other credit analysis of the banks. In addition, significant weight will be placed on the level of protection that is available within the documentation backing the contracts. The two should be considered hand-in-hand. Poor levels of protection within the documentation would be considered an area for concern for trustees.

In terms of capacity to execute the trades required, this needs to be based on a case-by-case consideration, and usually should involve input from independent market-based participants, such as the scheme’s asset manager, about the capability of the banks concerned.

The use of (corporate) relationship banks often causes issues for trustees. However, provided a framework can be put in place such that there is suitable protection for the scheme (quality of bank and documentation), together with a process that allows for best execution, then it should be possible to allow for the use of relationship banks.

The number of counterparties and the case for diversification are linked issues. In general, trustees should prefer more rather than fewer counterparties so that bank-specific events (default, downgrade etc) can be more efficiently managed. However, the number of counterparties chosen should make allowance for:

- the liquidity of the underlying market;
- the size of the intended derivative exposures relative to the scheme's assets;
- the number of counterparties offering competitive prices in a particular market (the aim should be to have a good chance of achieving best execution);
- the availability of counterparties of a suitable standing; and
- the regional base of a bank and any potential impact this may have on the quality of the scheme's protection against bank failure and on the efficiency of the execution process.

In general, if the scheme's strategy represents a large proportion of market liquidity, or is a large proportion of scheme assets, then there will be a preference for more rather than fewer counterparties.

6 Documentation and collateral

When employing pooled funds, the documentation is typically similar to that for any other type of pooled investment and will be non-negotiable. However, when using derivatives directly (the segregated approach), the following documents will be required:

- International Swaps and Derivatives Association Master Agreement and Schedule (ISDA); and
- Credit Support Annex (CSA).

In addition, the trustees need to ensure that the use of derivatives is within their powers as set out in their trust deed and any relevant legislation.

In the case of longevity hedging, this can be implemented using derivatives (governed under ISDA) or through insurance contracts.

ISDA Master Agreement

The ISDA Master Agreement is a standard document which aims to cover all market participants. It aims to govern a broad range of derivative contracts and defines the processes required for different eventualities such as early termination of derivative contracts. The Schedule is part of the ISDA Master Agreement and is used to identify additions to the Master or variations of it. In the Schedule parties choose whether and how certain provisions will apply.

Trustees should seek legal advice to ensure any changes required for their specific circumstance (for example, due to being a pension scheme) are included in the ISDA Schedule.

Credit Support Annex (CSA)

The CSA is the document that governs the collateral management process. A CSA defines the terms or rules under which collateral is posted or transferred between swap counterparties to mitigate the credit risk arising from "in the money" derivative positions.

Please refer to the sub-section below on "collateral management" for further information.

Umbrella ISDA documentation

An "umbrella" ISDA is a Schedule agreed between an asset manager and a bank, where the bank agrees to use the template for clients of the asset manager. Umbrella ISDAs have the benefit of the knowledge and negotiating power of the asset manager. Trustees should seek advice to ensure the documentation meets their requirements.

As noted above, if pooled funds are used the documentation is arranged between the pooled fund and the counterparties by the investment manager. Pension schemes then enter into an investment management agreement with the investment manager.

Collateral management

Changes in the value of a derivative contract will create a credit risk exposure of one counterparty (the one for whom the derivative has a positive value, or is "in-the-money") to the other counterparty (for whom it has negative value, or is "out-of-the-money"). To minimise this credit risk, "collateral" is passed from the out-of-the-money counterparty to the in-the-money counterparty. Pension schemes may therefore find themselves either receiving collateral or "posting" it, depending upon market developments.

The credit support annex (CSA) governs this process by stipulating factors such as:

- the assets that are eligible to be used as collateral;
- the "Valuation Percentages" or "Haircuts" which govern the proportion of a collateral asset's market value recognised for the purposes of meeting a collateral requirement (for example if securities have a haircut of 10 per cent specified in the CSA, then £110 of securities would only count as £100 of collateral);
- frequency of collateral exchange; and
- how collateral is valued.

Where a segregated portfolio is being established, trustees should seek advice on the terms of the CSA and ensure they are comfortable with the collateral process and the security that it provides. It is important to highlight that terms in the CSA (such as what asset types are eligible as collateral) may affect the valuation of derivatives contracts and therefore the costs of execution. Trustees should therefore ensure this is considered when setting up the documentation.

Central clearing

Over recent years, public and private sector entities have undertaken a coordinated effort to improve the post-trade infrastructure for OTC derivatives transactions. The recent financial crisis demonstrated the need to further enhance the safety and transparency in the OTC derivatives markets. As a result, authorities in many jurisdictions have set out several important policy initiatives encouraging greater use of so-called central counterparty (CCP) clearing houses for OTC derivatives: central counterparties would act as the counterparty to every trade – effectively acting as a clearing house and reducing counterparty risk.

The use of CCP clearing houses gives rise to potential concerns, for example:

- standardisation of contracts may reduce flexibility for investors;
- they may require greater levels of collateral (for example initial margin, which is often not needed in OTC derivatives transacted by pension schemes), which will reduce investors' ability to put their assets to their best use;
- they may be less flexible in the sorts of collateral accepted (for example always requiring cash), which may cause a drag on returns or additional transaction costs for investors; and
- they may introduce another layer of costs.

7 Execution

Execution agent

As discussed above, execution of derivative transactions will normally be delegated to an investment manager. In certain situations, for example, where the execution is regarded as non-discretionary, execution may be undertaken by another party, such as a corporate treasurer with the necessary competences. However, bank counterparties will require confirmation that the party executing the transaction on behalf of the trustees has the legal authority to do so in order to ensure that contracts are subsequently enforceable.

Derivative transactions can be executed in a number of ways. In order to understand the issues involved in the choice of execution approach we first consider, in the widest sense, the costs of implementation.

Components of implementation costs

Implementation costs for a derivative transaction (in addition to asset manager fees and other direct costs of parties acting on behalf of the pension scheme) include the following:

- dealing margins – the difference between the bid or offer levels accepted with a bank counterparty and the mid-market levels at the time of trading; and
- market impact – the extent to which market mid-level prices move before and after the execution process as a consequence of the derivative transaction being undertaken.

Dealing margins

Dealing margins are not easily identified in the case of many over-the-counter (OTC) derivative transactions, especially in the case of the derivative instruments generally used by pension schemes. In particular, for many of these instruments the market “mid-level” may not be precisely defined and different banks may quote different mid-levels at any point in time.

If at the time of execution with the pension scheme, the bank is in the process of seeking market counterparties to hedge an earlier transaction in the opposite direction the bank is said to be “axed”. In this case, the bank may offer an attractive dealing level compared to other banks.

Market impact associated with the transaction

Market impact involving movements in the market in favour of the pension scheme after the transaction has taken place can be seen in the context of the individual transaction as partly or wholly offsetting the dealing spread. A sustained market impact in favour of the pension scheme can be a disadvantage if the transaction is part of a programme requiring further tranches to be executed.

Movements in the market *against* the pension scheme *before* or *after* the transaction has taken place could arise:

- as a result of general market movements unrelated to the particular trade (which simply would represent a loss and could be attributed *with hindsight* to poor market timing); or
- because of poor implementation, there may be leakage of information to counterparties resulting in traders buying or selling in the market ahead of the pension scheme.

Activity by traders under the second of these items is covered by strict rules supervised by the Financial Services Authority.

Control of information

Control of information can be enhanced by a number of means:

- delegating design of the execution process to a small sub-committee with information disseminated from the group only on a strict need-to-know basis;
- use of coded accounts under pooled fund arrangements for initial transactions (with subsequent post-trade novation to segregated and named client accounts); and
- giving some discretion in instrument choice to the asset manager.

Against this background we now consider the key design features that should be considered by those responsible for the design of the execution process.

Size and timing

The size of a trade affects both dealing margins (larger trades attract larger dealing margins in both proportionate and absolute terms) and potential market impact. However, market movements unrelated to the transaction are likely to be the main element in a pension scheme's overall investment performance.

Some of the execution strategies that can be considered either singly or in combination are:

- **Single execution or multiple tranches**

The choice depends on market capacity – single execution is likely to result in the highest *explicit* dealing margins, although these may be lower than the market impact costs associated with splitting the execution over time. Tranching can take place into uniform sections or can focus initially on the largest risks. Single execution does have the advantage of certainty of locking in a single price, that is, it offers more price certainty vis-à-vis phased execution.

- **Non-discretionary or discretionary**

Discretion can be given to investment managers to take advantage of perceived good value in terms of market levels and transaction costs to time the execution. If no view is taken on the attractiveness or unattractiveness of current market levels and risk management is regarded as an immediate priority then non-discretionary may make more sense.

- **Trigger based**

Trigger levels can be established at which either the full transaction or individual tranches are executed. This approach has benefits in terms of reducing the risks of pre-trade market impact. However, trigger levels do have disadvantages. Setting trigger levels can be a largely or wholly subjective process. For example, with triggers on interest rates, if they are set too high the pension scheme can miss a trade just below a trigger which may look attractive with hindsight and if they are set too low they can result in trading at levels which look unattractive with hindsight. Thought should be given to the amount of risk being hedged when considering trigger levels. Widespread use of “landmark” triggers (when many investors are all waiting for the same market level) can lead to market anomalies that exacerbate these two problems.

Involvement of bank counterparties in the execution process

Investment banks will generally act as counterparties to pension schemes in derivative transactions. However, banks with a strong relationship with the corporate sponsor or the Trustee Board may seek to be more closely involved in the execution process in two ways:

- the bank may seek a “last look” on any execution giving it the ability to match the best terms offered by another bank; or
- the bank may seek “exclusivity”, thus becoming the only counterparty asked to quote a price for the full trade while other banks’ quotes, based on a smaller trade size, are used only for benchmarking using some agreed formula for dealing margins.

Last look

In theory a “last look” offers the pension scheme the ability to improve on the “best” pricing available. However, the following should be considered:

- counterparty exposure limits will need to be considered either at the time of trading or through post-trade novations;
- the bank with last look needs to be given an incentive to offer good terms in the first round of pricing, otherwise overall competition is diminished;
- The integrity and reputation of the pension scheme and asset manager need to be considered if other banks are asked to put in place documentation and provide live quotations where another bank is being given preferential treatment; and
- last look arrangements must not compromise the confidentiality and control of information described above; for example, it is important that the trading arm of the bank involved has no knowledge of the overall size of transaction involved.

Last look is normally viable where trades are undertaken in normal market size. Large and/or complex trades often cannot be executed in full competition. Instead the asset manager/pension scheme will choose a single bank (“exclusivity”) offering the best terms in normal size to trade the larger transaction and hence try to avoid disclosing the full trade to multiple counterparties.

Exclusivity

In contrast to last look, exclusivity (showing the trade to only one particular bank) may be justified where the transaction is, for example, too large to be executed in competition. In these circumstances, as discussed above, the investment manager will typically show the full trade to only one bank and use other banks for benchmarking based on smaller trade sizes and using pre-agreed dealing margins relative to this benchmark. In these circumstances exclusivity means that one bank obtains priority as the only bank offered the transaction. However, the following issues need to be considered:

- the investment manager has significant responsibility in determining the benchmarking and agreeing reasonable dealing margins relative to this market level;
- the bank must be a credible and competitive counterparty to ensure that it will be capable of delivering the promised terms without the pension scheme incurring large market impact costs; and, again
- there must be strict confidentiality around the timing and nature of the trade and, in particular when dealing with a single bank on an exclusive basis, all parties must understand the need for confidentiality and the information barriers between the “private” and “public” sides of the bank.

8 Monitoring and review

Key areas for trustees/investment committees to develop a formal set of protocols include:

- **Responsibility for monitoring**

It is the duty of the trustees to decide to whom they delegate the responsibility for monitoring the performance of the financial/derivative instruments and their associated risks. Day-to-day monitoring will most often be carried out by an asset manager or custodian and central to this is the daily valuation of derivative positions.

For OTC transactions, pricing will come from the executing bank, but sole reliance upon this will not constitute best practice unless independently verified. Best practice would be to obtain at least two valuations - particularly for large/complex portfolios. These may be driven by the custodian/fund administrator, prime broker, asset manager or external valuation provider (the latter particularly in the case of complex or more opaque instruments).

- **What needs to be monitored**

Beyond the day-to-day valuation process, there are a range of things which should be kept under review and reported to the trustees on a regular basis:

- counterparty exposure and associated creditworthiness of the counterparties;
- valuation of the derivative, notional exposures and the extent of gearing in the portfolio and at the total scheme level;
- measures of the sensitivity of the derivative portfolio to changes in key market factors, such as interest rates;
- performance relative to benchmark, where applicable; and
- collateral adequacy, especially for portfolios with material gearing in terms of the immediately accessible eligible collateral assets.

- **Delegated responsibility for monitoring**

Best practice should require that the delegated agent is a fiduciary who reports on an agreed basis to the trustees, but subject to a further requirement to report more frequently on an exceptions basis when they cannot agree prices or collateral with the executing bank.

Ideally monitoring by the fiduciary should be daily for transparent products and at least monthly for less transparent products. Formal reporting should be on a quarterly basis.

Collateralisation (and the monitoring thereof) should be as frequent as makes operational sense, given the volatility of the instruments and relative weighting of the derivative notional position as a percentage of the overall portfolio.

- **Frequency of monitoring**

Monitoring needs to reflect what is realistically feasible but at a minimum needs to be on a quarterly basis.

Review

The reasons for establishing a derivative portfolio will naturally tend to dictate who takes primary responsibility for reviewing the portfolio structure, how often it is reviewed and what circumstances should lead to change. The preferred review arrangements are likely to be different for long-term strategic positions and those which have a tactical component.

In practice, many derivative portfolios will be established with both strategic and tactical considerations in mind. Market conditions are often a factor in structuring portfolios designed to hedge liability risks. Equity option portfolios are almost always designed allowing for more tactical views on both equity market valuations and equity option prices. In general, where options are used (and not just equity options), changes in markets relative to option strike levels can significantly affect the future risk and return characteristics of a pension scheme's investment policy and therefore warrant review whenever material market movements have taken place.

- **Strategic positions**

It will normally be for the trustees to review, on advice, derivative positions established for long-term strategic reasons. The frequency of review would then be consistent with the normal frequency with which other strategic decisions are reviewed and change will result from changes in the key factors influencing long-term strategy: the trustees' attitude to risk (reflecting the sponsoring company's circumstances), the pension scheme's financial position, its funding agreements with the sponsor and the structure of its liabilities.

- **Tactical positions**

Where there is a more tactical component to the derivative portfolio structure, it makes sense to establish a mechanism for frequent review that permits the pension scheme to respond to changes in market conditions. The responsibility for review would typically fall to the group responsible for the initial structuring decision. It is appropriate to establish a governance mechanism by which regular and relevant market information, portfolio data and risk analysis are provided to this group.

If, on the other hand, the trustees have delegated the detailed structuring decisions to a third party – most likely an investment manager – then the responsibility for review and for taking action as needed would fall to that organisation, subject to the terms of the mandate set by the trustees. This clearly does not remove the need for the trustees to monitor the actions taken and the performance of the portfolio relative to its objectives on a regular and frequent basis.

Whether a trustee-controlled process or a delegated mandate is best is a case-by-case judgement. This should take into account trustee availability and expertise, costs, the likely need for fast decision-making and implementation, the variety of decisions which could be taken (a wide scope makes it harder to define an investment management mandate) and the capabilities of investment managers and advisers. Of course, a compromise approach is possible with a range of day-to-day decisions delegated within a mandate which is kept under frequent review by the trustees and their advisers and amended in response to more significant market changes.

9 Accounting requirements

There are many different types of derivative contracts and the market is continuing to develop new products. This section covers the accounting and disclosure requirements for the four main types of derivative contracts used by pension schemes (options, futures, swaps and forward foreign exchange).

The accounting requirements for derivatives are set out in the Statement of Recommended Practice (SORP) for pension schemes issued by the Pensions Research Accountants Group (PRAG) under guidelines set by the Accounting Standards Board (ASB). The SORP is supplemented by additional guidance from PRAG "Accounting for derivatives in pension schemes" which gives information on typical contracts and provides worked examples and suggested disclosures.

The Pensions SORP is UK Generally Accepted Accounting Practice and hence differs from International Financial Reporting Standards used by listed companies. In the derivatives accounting for UK pension schemes the fair value basis required by the SORP will, however, normally be the same as the value required under International Accounting Standard 39 *Financial Instruments: Recognition and Measurement*.

Year-end valuation

The year-end valuation of derivative contracts should be included, as a separate investment class, in the net assets statement within investment assets and/or investment liabilities. The notes to the financial statements should include an analysis of derivatives, by type, and state whether the contracts are exchange-traded or Over the Counter.

The valuations will be provided by the investment manager or custodian and should be based on fair value as set out below:

Derivative	Type	Valuation
Futures	Exchange Traded	Exchange price at the year-end date
Options	Exchange Traded	Exchange price for closing out the option at the year-end
Options	Over the Counter	Pricing models e.g. Black-Scholes
Swaps	Over the Counter	Current value of expected net cash flows arising from the swap, using a discounted cash flow model and market data at the year-end
Forward Foreign Exchange	Over the Counter	The gain or loss from closing out the contract at the year-end date by entering into an equal and opposite contract

Changes in value and transactions

Gains and losses on contracts should be included within change in market value within the pension scheme accounts. Changes in value are unrealised until the contract is closed. There is no accounting requirement to differentiate between unrealised and realised gains and losses. Interest and transaction costs are normally included within investment income and expenses respectively.

Derivatives payments and receipts are included within the investment reconciliation table in the notes to the financial statements. It should be noted that not all derivatives have a purchase price and some require a deposit to be placed with a broker. In these cases the cost of investment is nil and the broker balance is an asset.

The cash flows relating to derivatives include:

Contract	Purchases	Receipts
Options	Premium paid and any close out costs	Premium received and any close out receipts
Futures	Variation* payment for unrealised loss on close out	Variation* receipt for unrealised gains on close out
Swaps	Payments for unrealised loss on cancellation of the contract	Receipts for unrealised gain on cancellation of the contract
Foreign Exchange	Currency sold for trades settled	Currency received for trades settled

*Variation payments and receipts are payments or receipts for the profit or loss on the contract.

Change in value of derivatives may have a related cash movement in the margin monies (for futures contracts) or collateral (for swap contracts) and these are accounted for within cash and amounts due to / from brokers.

Financial statement disclosures

The financial statements should make the following disclosures in relation to derivatives, where material:

- the accounting policies for derivatives;
- the year-end valuation, a summary of investment movements and investment income;
- disclosure of any collateral held and pledged;
- disclosure of the key details of the contracts;
- amounts of initial and variation margin; and
- the objectives and policies for holding derivatives and details of the nature of derivative payments and receipts.

Investment report disclosures

Where derivatives are a material part of the pension scheme's investments trustees should include in their investment report:

- a commentary on the use of derivatives in the investment strategy and the use of hedging to mitigate risks;
- the performance of derivatives and any issues relating to marketability, security and valuation (to be included within the commentary on investment performance); and
- details of how derivatives fit within the trustees' risk management policy for market risk, currency risk, credit risk (e.g. counterparty risk) and interest rate and inflation risk.

Practical considerations

Derivatives transactions and balances might not be included within the standard reporting from the scheme's investment managers and custodians. Trustees should therefore ensure that the scheme's accountants have discussed the reporting requirements at an early stage with the investment managers and custodians to ensure that the relevant information is available. For example, collateral and margin monies may be classed within cash and other investments in manager/custodian reports – hence more detailed analysis will be required to ensure these are accounted for correctly.

For schemes with multiple derivative contracts trustees should ensure that the scheme's accountants have determined in advance the level of aggregation of contracts in the financial statements and the level of detail for comparative disclosures. The aim should be to keep the disclosures to a reasonable length and summarise information into an easy to understand format.

Derivative contracts which have an asset value should not be netted off against contracts with a liability value. The financial statements and notes to the financial statements should include the nominal (or gross exposure) value of all derivatives contracts.

Pension scheme accounts do not include the liabilities to pay pension benefits in the future. There is a net assets statement (assets less short-term liabilities) rather than a balance sheet. Consequently net assets could rise or fall significantly in a year, but if a derivative is hedging liabilities to pay future pensions the net effect on the scheme's actuarial position may be significantly lower than that implied by the movement in net assets. A note to the accounts to this effect may be helpful in these circumstances.

Further guidance

Financial Reports of Pension Schemes – A Statement of Recommended Practice (revised May 2007) – A PRAG publication, ISBN 978 1 84140 949 8 (£20)

The PRAG guidance "Accounting for Derivatives in Pension Schemes" is a useful guide setting out the accounting lifecycle of typical contracts, sample disclosures and worked examples, ISBN 0 907110 15 0 (£15)



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December 2011

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The leading voice of retirement provision through the workplace

Price £35.00
Member price £18.00