



**Financial Services
Commission**

Insurance Guidance Note No. 11
Insurance Companies Ordinance 1987
Guidance Notes On The Use Of Derivative
Contracts In Insurance Funds

Date of Paper : 11th July 1997

Version Number : V1.00

File Location : document7



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Introduction

- 1 This Note discusses valuation issues surrounding the use of derivative contracts in those funds of an insurer which are subject to "asset valuation rules" set out in Part II of the Insurance Companies (Valuation of Assets and Liabilities) Regulations 1996 ("the Regulations"). * It is therefore relevant to the statutory solvency valuation of all the "other than long-term business" funds of a general business or composite insurer and of the long-term non-linked and index-linked funds of a long-term or composite insurer. Many of the same principles are relevant to the use of derivatives in property-linked funds, which is also covered in this note. It is not relevant to valuation for the purposes of shareholders accounts.

To date, insurance companies licensed in Gibraltar have not used derivatives widely. The golden rule is that the effect of a derivative contract must be fully understood before it is entered into. It is the responsibility of the directors to ensure that they understand the nature of the derivatives their company proposes to use. (See also Insurance Guidance Note No. 5 - Systems of Control Over Investments (and Counterparty Exposure) including the use of derivatives). Whilst the Insurance Supervisor and the Assistant Insurance Supervisor (Tel. 40283) are prepared to advise on the admissibility of derivatives under the Regulations, their advice is not definitive (only the courts can provide definitive rulings on legislation) and they cannot advise on whether a particular course of action is a prudent one for the company concerned.

- 2 There is no restriction (except in linked funds) on the derivative contracts which insurers may transact (subject to over-riding conditions such as the need for a company to be managed in accordance with the criteria of sound and prudent management). However, the Regulations do set out:
 - (a) rules to be satisfied before a derivative which is an asset to the insurer may be given an admissible value
 - (b) the valuation rule in the event that the conditions at (a) are satisfied
 - (c) the rule for the determination of the liability under any derivative contract which, at the moment, is a liability to the insurer
 - (d) rules for determining the effect of derivative contracts on the admissibility of holdings in the underlying assets
 - (e) a rule requiring recognition of a contingent liability in any case where a derivative contract is not strictly covered by the underlying assets
- 3 Rules of the nature of (a),(b) and (c) above are familiar from the valuation regulations for other kinds of transaction. Item (d) is needed because the policy is to restrict the admissibility of economic exposure to specific assets. Depending on the nature of the contract, derivatives can increase, decrease or cancel the economic exposure of insurers to the underlying assets.
- 4 Item (e) is needed because some derivatives can change rapidly from being an asset to being a liability; moreover, in some cases the liability can be theoretically unlimited. If a company uses such derivatives without proper cover, it could rapidly use up not only its free assets but also eat into its required minimum margin of solvency. For prudential reasons, therefore, it is necessary for the company to recognise an appropriate contingent liability in respect of contracts which are not properly covered, even in cases where they are currently an asset to the insurer. Regulation 19 establishes this obligation (the "provision for adverse changes").



What Kind Of Derivatives?

- 5 Regulation 14 refers to options, futures contracts and contracts for differences, the definitions being derived from Schedule 1 to the Financial Services Ordinance 1989. These terms cover all current basic types of derivative instrument. For example, swaps fall under contracts for differences; warrants fall under options.
- 6 The linkage of the definitions to the Financial Services Ordinance may however give rise to some confusion as to whether forward currency contracts are included within the scope of regulation 14. This is because such contracts would not normally be regarded as being an "investment" under that Ordinance. Notwithstanding this, they fall squarely within the definition of a futures contract and therefore usually fall within the scope of regulation 14. However, regulation 3 does provide that forward currency contracts are not to be treated as derivatives, where they are for the purpose of settling the sale or purchase of an asset and are to be effected within a short period defined in that regulation.
- 7 The rules described below are relevant also to instruments which take some other legal form but which have characteristics of derivatives. The issues are discussed under quasi derivatives.

The Status Of The Guidance

- 8 This guidance, in particular the examples throughout this note, is intended to illustrate how the above conditions are to be interpreted in practice. Many of the examples address the conditions set out in paragraph 11 or 13 below. However, they tend to deal with only one or two of those conditions without reference to whether the other conditions are satisfied.
- 9 Whether or not the examples are sensible courses of action depends heavily on the circumstances of the insurer. Moreover, there may be other equally acceptable -or even preferable - ways of achieving the same objective.
- 10 Finally, although several of the examples illustrate traps for the unwary, it is inevitable that there are other traps which have not been illustrated in this note. There can be no substitute for testing any proposed course of action against the "first principles" set out in paragraphs 11 or 13 below.

Conditions Governing Admissibility: Conditions Governing Use Of Derivatives In Linked Funds

Admissibility Of Derivatives Which Are Assets Of The Insurer

- 11 Derivative instruments which, at the time of the valuation, are an asset to the insurer may be given an admissible value only if they satisfy the seven conditions set out below:
 - (a) are for the purposes of reduction of investment risks or efficient portfolio management - Reg. 14(2)
 - (b) satisfy the "in connection with" test Reg. 14(2) and (3)
 - (c) are covered - Reg. 14(2) and (4)
 - (d) are listed on a regulated market or transacted with an approved counterparty - Reg. 14(6)(a)
 - (e) are capable of being readily closed out - Reg. 14(6)(b)



- (f) are based on underlying assets which are themselves admissible, an index of such assets or an official index of retail prices - Reg. 14(7) and (8)
 - (g) have a prescribed pricing basis - Reg.14(8)
- 12 Failure to satisfy any one of these conditions means that the contract has no admissible value. On the other hand, where a derivative contract is currently a liability to the insurer, that liability must be recognised whether or not the above conditions are satisfied.

Linked Funds

- 13 Use of derivatives in linked funds (whether currently an asset or a liability to the insurer) is permitted only if all the conditions below are satisfied. These are very similar to those summarised in paragraph 11, the only significant difference being at condition (f).
- (a) are for the purposes of reduction of investment risks or efficient portfolio management
 - (b) satisfy the "in connection with" test
 - (c) are covered
 - (d) are listed on a regulated market or transacted with an approved counterparty
 - (e) are capable of being readily closed out
 - (f) are based on underlying assets which are themselves permitted links, an index of such assets or an official index of retail prices
 - (g) have a prescribed pricing basis

Liquidity

Regulated Markets And Approved Counterparties

- 14 The purpose of requiring that derivative contracts are listed on a regulated market or transacted with an approved counterparty is to ensure that they are acceptably liquid. Regulation 14(6)(a) refers to a "listed" contract, which is one listed on a "regulated market". A main derivatives exchange of a developed country is likely to qualify as a "regulated market" although companies are responsible for satisfying themselves on this point.
- 15 In the original version of the Regulations, there was an additional test to be satisfied by a "listed" derivative, namely that it should be "regularly traded" on the market in question. Given the requirement for an admissible derivative to be capable of being "readily closed out" (see paragraph 17 below), the "regularly traded" requirement added nothing and has been dropped.
- 16 The definitions of an approved counterparty are set out in the Regulations. There are one or two traps for the unwary here. For example, a subsidiary of an authorised bank or investment firm would not count as an approved counterparty unless it was itself an authorised bank or investment firm. Where a derivatives transaction was arranged with the head office of a non-EEA bank (as opposed to a transaction arranged through an authorised branch in an EEA state), the bank would not necessarily qualify as an approved counterparty for the purpose of that transaction. Nor do we believe it is possible for an EEA insurance company to satisfy the definition of "approved counterparty" because of a restriction in the First EC Insurance Directives (reflected in section 21 of the Ordinance). To the extent that this is so, derivative transactions

between two insurers or between two funds of the same insurer would not satisfy the approved counterparty test. However, there is nothing to prevent a non-insurance subsidiary of an authorised EEA insurance company from qualifying as an approved counterparty.

Capable Of Being Readily Closed Out

17 Regulation 14(6)(b) sets a test that the insurer reasonably believes that the contract may be readily closed out. The appropriate interpretation of "readily" is that the insurer cannot reasonably foresee any circumstances in which it would need to close out part or all of the contract at a few days notice and would not be able to do so. "Readily" may therefore mean very different things, depending on the nature of the contract.

18 "Readily closed out" - Example 1

An insurer has sold a 12 month OTC Turkish Lira forward to hedge the currency risk in its Turkish equity portfolio.

It will need to be able to close out the forward at short notice if it decides subsequently to disinvest in Turkey. To regard this contract as capable of being readily closed out, it must satisfy itself either that there is adequate liquidity on the foreign exchange market for Turkish Lira or that it would be able to close out the original transaction with an approved counterparty (not necessarily the one who transacted the original forward) at short notice.

19 "Readily closed out" - Example 2

An insurer has bought an index-linked contract for differences to match exactly its policyholder liability (apart from death benefit) under a group of 5-year index linked bonds. The terms of the contract are such that, on early surrender, the benefits are limited to whatever can reasonably be realised for the underlying assets, less reasonable expenses.

In such circumstances, it is entirely reasonable to arrange for partial realisation to pay death claims and early surrenders once a month, say, so as to minimise realisation expenses. An agreement with an approved counterparty to this effect would certainly satisfy the "may be readily closed out" test.

Reduction Of Investment Risks: Efficient Portfolio Management

20 We do not propose to try to distinguish absolutely between the two terms; in practice, they overlap. Since they are alternative components of a set of conditions, it is not necessary to decide whether a particular transaction is consistent with one of these terms rather than the other. Provided that a transaction is for the purposes either of reduction of investment risks or efficient portfolio management, the condition is satisfied. (In other words, a particular case may not be justifiable as efficient portfolio management but qualify as reduction of risks; or vice versa.)

Reduction Of Investment Risks

21 Reduction of investment risks is to be interpreted broadly. To qualify, a transaction must achieve the following:

- (a) in any case where a group of assets is "earmarked" to match specific policyholder benefits where the policyholder bears an investment risk (notably in the case of linked liabilities), there must either be:
 - (i) a reduction in the risks to the company of mismatching of those assets and liabilities, while having a neutral or



beneficial effect on the investment risks of the policyholder;
or

(ii) a reduction in the investment risks of the policyholder, while having a neutral or beneficial effect on the risks to the company of mismatching

(b) in any case where there is no such earmarking of assets, it must reduce the risks to the company of mismatching between its assets and liabilities at large.

22 In either case, exactly what constitutes a reduction in risks is not very straightforward. Most derivative contracts will leave the insurer worse off than if the contract had not been transacted under some foreseeable circumstances. (For example, a purchased option might bring benefits to the insurer; or it might expire worthless, leaving it worse off than if it had not transacted the option.) If we were to insist that a contract aimed at "reduction of risks" could never leave the company or policyholder worse off, practically nothing would qualify. In practice, we take a much less extreme view. A contract which brings benefits (to company or policyholder, as appropriate) under some circumstances while having adverse consequences under other circumstances can be said to be reducing investment risks if:

(a) any adverse consequences of the contract are unforeseeable; or

(b) the extent of any adverse consequences is insignificant, in particular:

(i) small; and

(ii) reasonable, given the benefits resulting under other circumstances

23 It is also worth stating the obverse of the conclusion in the previous paragraph. A derivative contract which has any significant adverse consequences on investment risks cannot qualify as "reduction of investment risks". It is not a case of balancing the advantages and the disadvantages; rather, there must be no significant disadvantages. Having said that, derivative contracts which change the investment risks without necessarily reducing them may qualify as efficient portfolio management under some circumstances.

24 **"Reduction of investment risks" - Example 1**

An insurer, wishing to improve matching between its assets and liabilities decides to shift the economic balance of part of its portfolio from equities to gilts. To achieve a rapid switch of exposure, it decides to retain the equities, to sell a FTSE- 100 future and to buy a gilt future. Both futures are margined daily, thereby minimising the insurer's exposure to its counterparty.

The purpose of the FTSE future is to reduce exposure to equities. Adverse consequences could only arise from this if there was a serious possibility that the fortunes of the company's equity portfolio would depart significantly from those of FTSE. Similarly, the purpose of the gilt future is to buy exposure to gilts of a particular term. The mean term of the insurer's liabilities might be different, in which case there would be a risk that gilts of that term might behave significantly differently from the gilt future.

Drawing on the criteria in paragraphs 21 and 22, this transaction could indeed be taken to "reduce risks" over the short to medium term in circumstances where the congruence between portfolio and future (and between mean terms of the gilt future and the insurance liabilities) was good. (In the longer term, repeated costs of rolling over the futures might make such an assessment problematical.) Moreover, if the intention was to hold the futures only for a

short time, to give the company the opportunity to decide which equities to sell and gilts to buy, it is most unlikely that there would be any problem about justifying a "reduction of risks", even where congruence was not at a particularly high level.

25 **"Reduction of investment risks" - Example 2**

An insurer, fully invested at present, believes that equity prices will rise. It decides to anticipate future cash inflows (for example, receipt of dividends declared but not yet distributed) by purchasing an index call option, due to expire after the relevant cash will have been received.

Once the dividends had been received, it would clearly be acceptable for the insurer to invest the receipts in equities immediately. Use of the option anticipates such a future risk profile while giving the insurer the option not to invest if the market does not behave as expected. This can be regarded as reduction of risks.

However, where the insurer significantly gears the fund (for example, where the amount of cash notionally required to ensure rights can be exercised is significantly in excess of a prudent estimate of the aggregate of cash currently available and net cash inflows), the adverse risk consequences are clearly inconsistent with reduction of risks.

26 **"Reduction of investment risks" - Example 3**

An insurer, has a portfolio of short and medium-dated fixed interest securities, backing a set of liabilities with a longer average maturity date. In order to improve matching of its assets and liabilities, it decides to purchase a Long Gilt exchange-traded future with the intention of rolling over the future on each settlement date for the foreseeable future.

At first sight, this transaction appears to be gearing the fund. However, short-dated fixed interest securities behave rather like cash so that the gearing effect should not be significant. It is perfectly possible that this transaction could justify treatment as reduction of investment risks.

In principle, adverse risk consequences arise from the retention of exposure to short dated stocks (as opposed to realisation for cash) and any mismatch between the characteristics of the security underlying the gilt future and those of the ideal security for matching purposes. It might be possible to reduce the first element of this risk by selling a short or medium term gilt OTC forward.

27 **"Reduction of investment risks" - Example 4**

An insurer wishes to hedge a sectoral portfolio of UK stocks in a linked fund. It cannot find a suitable sectoral hedging instrument and therefore decides to use a FTSE-based put option.

Assuming (taking into account the historical record) there was good reason to expect a rough correlation between the performance of the sectoral portfolio and FTSE, use of a FTSE option to hedge such a portfolio is consistent with reduction of investment risks. The downside for the policyholder is that the option expires worthless at a time when the sectoral portfolio had declined in value (i.e. that FTSE and the sectoral performance move in opposite directions). If that happens, the fund will only be worse off (compared with the alternative strategy of doing nothing) to the extent of the cost of the option. But, under the above assumptions, this is relatively unlikely, the costs are relatively small and outweighed by the benefits from the option in the event of any significant downside in the equity values generally. This instrument therefore passes the tests in paragraph 22.

A future, rather than an option, might also be used to protect the fund under the above circumstances and it is possible that this would qualify as "reduction of investment risks". However, this requires rather better prospects of correlation between the relative performances of FTSE and the portfolio than is necessary to justify use of an option in this context (because the downside is considerably more severe). Even where a future can not be justified as reducing risks, it may be possible to justify using one for efficient portfolio management. See paragraph 32.

Efficient Portfolio Management

- 28 The concept of efficient portfolio management is related to the question of how an insurer manages its assets so as to fulfil its prudent adopted investment strategy. When assessing whether a transaction caused a reduction of investment risks, the appropriate comparison was with a "do nothing" strategy. But when considering efficient portfolio management, the right comparison is with a non-derivative strategy having broadly the same economic effect. The fact that a derivative transaction increases asset risk (i.e. the risk that the value of the portfolio will drop) does not necessarily prevent it from being regarded as for the purposes of efficient portfolio management. The same increase in asset risk might well have been achievable by trading in the underlying assets. However, a derivative contract which gives rise to a significant adverse consequence which could not result from a prudent strategy of investing in or disinvesting from (as the case may require) the assets underlying the transaction can never be consistent with efficient portfolio management. It follows that use of derivatives which has the effect of significantly gearing the total investment return on the fund is incompatible with efficient portfolio management.
- 29 Subject to the over-riding condition that there must be no reasonably foreseeable significant adverse risk consequences arising from the use of derivatives (as opposed to arising from investing in or disinvesting from the underlying assets), we believe that a transaction is consistent with efficient portfolio management if, under normal circumstances, it will assist the company to make progress towards its investment objectives:
- (a) more quickly; and/or
 - (b) more easily; and/or
 - (c) more efficiently; and/or
 - (d) more cheaply; and/or
 - (e) more flexibly
- than can be achieved without the use of a transaction of that nature.
- 30 Where there are no material benefits from using derivatives other than saving of tax, the question arises whether this is sufficient for the "efficient portfolio management" test to be satisfied. From the point of view of the company, its future tax position is not completely under its control and there is always a theoretical possibility that instruments which attract favourable tax treatment today may be adversely treated next year. Nevertheless, some tax changes are more foreseeable than others. Provided that it is not reasonable to foresee that a tax advantage might be removed (or even reversed) with retrospective effect, it can legitimately be invoked to justify efficient portfolio management.
- 31 In assessing whether an adverse risk consequence arises, the company's investment risk position must be considered in all cases. Further, in any case where a group of assets is "earmarked" to match specific policyholder benefits where the policyholder bears an investment risk (notably in the case of linked

liabilities), the consequences of the use of derivatives on the asset risk of the earmarked assets must also be taken into account.

32 **“Efficient portfolio management” - Example 1**

An insurer judges that the UK equity market is going to drop significantly. To reduce exposure to the market immediately (and to minimise transaction costs if its view changes subsequently), it sells a daily-margined exchange-traded FTSE future with principal equal to the value of a significant part of its well-diversified portfolio.

This is an example of efficient portfolio management provided that the insurer's portfolio is reasonably congruent with the equities making up FTSE. The comparison to be made here is with the strategy of selling the appropriate part of its portfolio (in contrast to the example in paragraph 27). The only circumstances in which the company will be worse off than under the alternative strategy arise when FTSE rises (giving rise to a loss on the index future) at the same time as the value of the company's equity portfolio falls. If congruence is good, the chances of a significant adverse effect on asset values resulting from the use of derivatives can be regarded as unforeseeable.

Even if congruence between portfolio and FTSE was good, a fund manager pursuing such a strategy would not necessarily be immune from criticism. By purchasing an option rather than selling a future, he could have protected his portfolio while leaving himself in a position to benefit from (unexpected) growth in the index.

Which is the better strategy - or indeed, whether either strategy is appropriate - can only be a matter for professional judgement in the light of the circumstances of the company and the tests for efficient portfolio management set out in paragraph 29.

33 **“Efficient portfolio management” - Example 2**

An insurer, currently with mainly fixed-interest investments, wishes to gain exposure to the equity market. It decides to retain its fixed interest income while achieving exposure to the capital gain potential of equities, at the same time saving transaction costs. It proceeds by selling a gilt future while buying a FTSE future.

This is consistent with efficient portfolio management, provided that there is good reason to believe that fluctuations in the market value of the fixed interest portfolio would be well-correlated with fluctuations in the price of the relevant gilts underlying the future. Otherwise, the transaction might give rise to adverse risk consequences, of a size which is inconsistent with efficient portfolio management. This is particularly the case if the position were to be retained over a considerable period.

34 **“Efficient portfolio management” - Example 3**

An insurer sees the opportunity to generate additional income (over money market deposit rates) by purchasing a basket of FT-SE 100 stocks and selling FT-SE futures at above "fair value".

Occasionally there is an opportunity to generate income through risk-free arbitrage of this kind, even after taking expenses and tax into account. Provided that the basket of stocks was congruent with FT-SE, this would constitute efficient portfolio management.

35 **“Efficient portfolio management” - Example 4**

An insurer is fully invested in equities, apart from a cash balance of around £1m which it expects to stay roughly constant for the foreseeable future.

Seeking additional equity exposure, it transacts a contract for differences under which it would receive the product of £1m and 150% of any percentage rise in FTSE above the level current on the day of the transaction; it would pay the product of £1m and 150% of any falling FTSE.

This kind of geared risk profile cannot be achieved by buying or selling the underlying stocks. Under no circumstances can it be regarded as efficient portfolio management.

36 "Efficient portfolio management" - Example 5

A company buys call options relating to stocks whose current value represents a significant proportion of the value of the company's fund. The options are mainly well out-of-the-money.

We would normally regard purchase of out-of-the-money call options (which, under normal circumstances, would be likely to expire worthless) as being speculative in nature. Although there might occasionally be a big gain, most of the time the premium will be lost. Accordingly, such use of derivatives will lead to increased volatility in fund performance; if significant, it is inconsistent with efficient portfolio management.

In contrast, it is easy to see that covered out-of-the-money put options can be used for "reduction of investment risks", for example to provide portfolio protection (but see the example in paragraph 37 below).

37 "Efficient portfolio management" - Example 6

A company has the practice of transacting a derivative which has the effect of providing "portfolio insurance" for a short period over its financial year-end (but, as a general rule, not at other times of the year).

It is quite possible that this is an example of grossly inappropriate portfolio management. The question to be asked is why the portfolio should need protection only around the year-end. Unless there is a satisfactory answer, the transaction is unlikely to count as either reduction of risks or efficient portfolio management.

38 One further dimension to risk needs to be considered, namely whether it arises from the possibility of market movements or of failure of a counterparty to honour its obligations. We regard a contract which decreased market risk but gave rise to a significant increase in counterparty risk as having adverse risk consequences and therefore inconsistent with either reduction of investment risks or efficient portfolio management. What is "significant" in this context is a matter for professional judgement in the light of the circumstances of the company. But, as a guide, we would normally regard a contract which, under reasonably foreseeable circumstances, would increase the company's exposure to a counterparty to somewhere near the prescribed admissibility limit (or the company's own limit, where lower) as giving rise to a significant increase in counterparty risk and therefore having adverse risk consequences. In a linked fund, admissibility limits are irrelevant; it will probably be necessary for the company to set its own benchmarks as to "significance", which may reasonably vary to some extent according to the investment objectives of the fund.

39 "Efficient portfolio management" - Example 7

A company wishes its funds to gain exposure to the Japanese stock-market but is content to track the Nikkei index rather than attempt to out-perform it by stock selection. It therefore buys a Nikkei future and covers it with a short-notice deposit of appropriate size. Every 3 months, it simply rolls over the future.



This kind of use of derivatives has traditionally not been allowable for UK unit trusts categorised as securities funds. With one caveat however, the economic effect should be extremely close to that of an outright purchase of the stocks underlying the index, in the appropriate proportions.

However, the caveat is important. Unless the contract is margined regularly (probably at least weekly), the company would expect to build up a significant volume of counterparty risk as the index rises. This in itself would be sufficient to fall outside the terms of efficient portfolio management. But provided that the counterparty risk and the costs of rollover are kept to an insignificant level, there is no reason why such an arrangement cannot fall within the interpretation of efficient portfolio management set out in paragraph 29.

The “Continuing Nature” Of The Test

40 A derivative which initially satisfies the "efficient portfolio management" or "reduction of risks" tests will not necessarily continue to do so. This is particularly the case with derivatives which are some way out of the ordinary. A derivative which fails the test cannot be admissible (or a permitted link) even if it passed the test at the outset. This possibility should be kept under review.

41 The “continuing nature” of the test - Example 1

A company buys a barrier option to protect its UK equity portfolio at a time when FT-SE 100 is at 3000. The barrier is set at 2400; no amount is payable unless FT-SE has fallen through the barrier at some point. Thereafter, the option behaves as a standard option.

It is possible that this kind of option would satisfy the "reduction of risks" test at the time it was transacted. For example, it could be a method whereby a life company is able to satisfy the "resilience test". However, if FT-SE falls close to the barrier, the instrument becomes a highly speculative one. It now has a significant market value although the exercise value remains at nil for the time being. Retention of the option becomes a gamble as to whether the index will fall through the barrier or not and would no longer be consistent either with "reduction of risks" or "efficient portfolio management". (Nor, incidentally, would it pass the "in connection with" test at this stage - see paragraph 53.) At this point, the admissible value is nil and a company wishing to protect its portfolio for solvency purposes would need to close out the option (and conceivably, although not necessarily, purchase another barrier option with a lower barrier).

The "In Connection With" Test

42 As a general rule, free-standing derivatives are inadmissible. The usual requirement is that a derivative must be used in connection with an asset of a different type for the purposes of efficient portfolio management or reduction of investment risks. However, under regulations 14(2) and (3), free-standing derivatives or combinations thereof can be admissible provided that they satisfy certain conditions. We refer to the alternative tests jointly as the "in connection with" test. An analogous test applies in linked funds.

43 The following combinations also pass the "in connection with test", provided that they are used for the purposes of efficient portfolio management or reduction of investment risks:

- (a) a derivative which has the effect of an approved derivative contract used in connection with an admissible asset (or permitted link) for such purposes

- (b) a combination of derivatives which synthesise an admissible asset (or permitted link)
- (c) a combination of derivatives which synthesise the combination of an admissible asset (or permitted link) and an approved derivative contract

44 In each of the above cases, although the drafting of regulation 14 (or Schedule 3) is not explicit on this point, "a derivative", "an admissible asset" or "a permitted link" is to be read as covering one or more instruments in each case.

45 An "admissible asset" must be admissible in its own right. A chain of "connected" derivatives (other than a combination which falls within conditions (b) or (c) of paragraph 43) pass the "in connection with" test if the first derivative in the chain is used "in connection with" some other kind of admissible instrument. For example, see the example in paragraph 76 below.

46 The "in connection with" test is part of the barrier to admissibility for speculative derivative instruments. The connection must be for the purposes of efficient portfolio management or reduction in investment risks, not merely incidental to it. This leads to two corollaries, one obvious, the other perhaps less so.

47 The first corollary is that there must be a relevant asset to be connected to. The derivative in paragraph 48 below fails the "in connection with test".

48 **The "in connection with" test - Example 1**

A company buys a listed put option on a particular stock or index, without holding either the relevant stock (or, if appropriate, basket of stocks) or an appropriate future or call option.

There is no asset of the fund with which this option can be connected for the relevant purposes. Therefore, even though the degree of "speculation" is limited to the initial cost of the option, no admissible value can be given to such an asset.

49 **The "in connection with" Test - Example 2**

A company buys an index call option whose exercise index level is approximately equal to the current level of the index.

It is perfectly legitimate to regard a purchased call option on an individual asset as being used "in connection with" cash or other readily realisable assets which would enable the option to be exercised. Moreover, provided that the underlying asset was one that the fund could reasonably hold, then (as illustrated in paragraph 27) the transaction should qualify as being for the purposes of reduction of investment risks unless it gave rise to significant adverse risk consequences (see paragraph 22). By analogy, an index call option could certainly be regarded as being used "in connection with" sufficient cash or "near-cash" (see paragraph 73) to allow the underlying stocks to be purchased at the exercise price.

However, taking this example to an extreme, if a fund invested in purchased call options to the extent that the cash or "near-cash" in the fund fell significantly short of the amounts notionally needed to exercise the options, this would not be consistent with efficient portfolio management. ("Significantly" should be interpreted here in the context of the size of the fund. But a number of such transactions may be individually insignificant but nevertheless significant in aggregate.) Such use of derivatives would certainly give rise to significant adverse risk consequences (i.e. gearing). This applies even



though an index call option would normally be cash-settled, there being no intention to purchase the assets underlying the index.

50 The above examples might be interpreted as illustrating a rule that the combination of call options plus cash satisfies the "in connection with" test while the combination of put options plus cash fails it. However, this is not invariably the case.

51 **The "in connection with" test - Example 3**

A company purchases an index call option with a (variable) exercise price struck at $(2L-K)$ where K is the index level at the time of purchase of the option and L is the index level at the time the option is exercised. It has sufficient cash in its fund to notionally exercise the option.

This option is cunningly constructed to have the same payoff as a conventional put option with price struck at K . The conclusion is as in the example in paragraph 48 therefore; any connection with the cash in the fund is incidental to the purposes of reduction of risks or efficient portfolio management and the option is inadmissible.

52 The second corollary mentioned in paragraph 46 is that the value of the derivative must be "small" at the time the transaction is initiated by comparison with the value of the asset it is connected with. (Moreover, there must be a reasonable possibility that it will remain small.) Otherwise, where the value of the derivative is very likely to become "too large" compared to the value of the connected asset, the connection is incidental to the purposes of efficient portfolio management, rather than for those purposes.

53 This issue does not commonly arise when using derivatives for hedging or shifting the balance of a portfolio. However, it would arise in the case of a derivative whose value is capable of fluctuating strongly and to a considerable size compared to the value of the underlying asset (for instance, the barrier option in the example in paragraph 41). The issue can also arise when derivatives are used to give a precise match to guaranteed benefits. It is considered further in the section on quasi derivatives.

Admissibility Of Underlying Assets: Underlying Assets A Permitted Link

54 Under the Regulations, a derivative contract based on a category of asset which is not admissible can never have an admissible value. For example, gold is not considered to be a suitable asset to cover insurance liabilities. By the same token, it would be anomalous if an insurer were able to assign an admissible value to an option or future on gold.

55 We will not entertain any request for a concession where derivatives based on inadmissible assets are purchased in pursuance of a general investment strategy. However, there might be special cases where holdings of derivatives based on inadmissible assets represent a sensible method of hedging assets covering a specific liability or, more generally, of managing the company's liabilities. Under such circumstances, we would be prepared to consider granting a concession to allow such derivatives to be admitted.

56 Very similar considerations apply in linked funds. A derivative cannot be a permitted link unless it is wholly based on property, or indices, which are themselves permitted links.

Cover

- 57 The penultimate condition which must be satisfied by an insurer who wishes to value a derivative as an asset is that the transaction must be "covered" by assets which have been "earmarked" for the purpose. The Regulations allow reasonable flexibility as to which assets may be considered to provide cover.
- 58 In order to satisfy the "cover" condition in the Regulations the insurer must be sure that it is not exposing itself to any significant basis risk. That is to say, there is no reasonably foreseeable possibility that it will suffer a significant loss as the result of acquiring or realising investments in order to satisfy its obligations under the derivative contract.
- 59 Where, at the present time, the insurer holds the assets due to be delivered under the contract (and expects to continue to hold them until delivery date), we will say that the contract is strictly covered. Similarly, other derivative contracts which will deliver (or would deliver following exercise of an option by the insurer) the appropriate assets before the exercise date of the former contract can also constitute strict cover.
- 60 Digressing temporarily from asset admissibility, there is another important angle to cover which applies whether a derivative is currently an asset or a liability to the insurer and, if the former, whether it is admissible or not. A contract which is not covered or covered only approximately will give rise to the requirement to make a provision for adverse changes, as discussed in the section on liabilities arising from derivative contracts. Indeed, the formal cover requirement set out in regulation 14(4) is that a significant provision for adverse changes is not required in respect of the contract.
- 61 A contract which is strictly covered cannot give rise to a provision for adverse changes. A contract which is covered but not strictly covered must logically give rise to such a provision. But in many practical cases, the provision is likely to be immaterial.
- 62 To sum up, the Regulations do not require an admissible derivative to be strictly covered; but they do require it to be covered "reasonably strictly". And a derivative which is not covered "reasonably strictly" and therefore inadmissible, will certainly give rise to a provision for adverse changes.
- 63 It follows from the above that the question of cover does not arise in respect of contracts which can never impose obligations on the insurer (e.g. purchased options, warrants). On the other hand, contracts where the liability is potentially unlimited can be covered only by an appropriate holding of the corresponding assets. Finally, as illustrated in the example in paragraph 48, the "in connection with" test and, indeed, the other conditions set out in paragraph 11 remain relevant even where the question of cover does not arise.

Cover And Basis Risk

- 64 It is not always practicable to arrange for a contract to be strictly covered. However, we do not propose to set numerical limits governing whether the basis risk is to be regarded as significant. In determining this for a particular case, we would expect the insurer to have regard to:
- (a) the size of the transaction. A relatively large basis risk (expressed as a percentage of the value of the underlying assets) would constitute a breach of the cover requirement where the value of the notional principal is sizeable; it may be acceptable if the value of the notional principal is a very small percentage of the value of the fund.

- (b) aggregation of risks. The basis risk on a particular transaction may not be significant; but when aggregated with that on a number of other similar transactions, it can become so.
- (c) inherent volatility of the fund. A particular quantum of basis risk is more likely to be regarded as significant in the context of a fund with reasonably stable investment performance than in one which is rather volatile in nature (e.g. a long-term linked Hong Kong Fund). The test is whether the derivative itself adds significantly to the existing investment risk.
- (d) the fact that basis risk is, of its nature, very volatile

"Unforeseeable" Circumstances?

- 65 It is impossible to give general guidance as to what is unforeseeable. But a few considerations may help. In assessing what might happen to the value of any assets, an insurer is entitled to have regard to market experience in recent years. It is certainly not unforeseeable that a certain security might become virtually worthless. However, a huge general decline in asset values might legitimately be regarded as unforeseeable.
- 66 Similarly, an insurer would be expected to make an exceptionally prudent assessment of its cash outflows in the period before the settlement date of a derivatives contract before concluding that it had sufficient cash to cover its liabilities. It would be far from unforeseeable that its best estimate of cash outflows would be exceeded in practice.

Other Pre-Requisites For Cover?

- 67 In assessing cover, the insurer must obviously first allow for all assets needed to meet a prudent estimate of all other liabilities which will be due for settlement before delivery date. Moreover, assets which are earmarked for a different purpose must not be counted as cover for a derivatives transaction. Examples of the latter would be assets earmarked for repayment of a debt or to provide cover for another derivatives transaction.

- 68 Cover - Example 1 - Suitability for covering for a commitment to deliver a fixed amount of cash (The following list is not intended to be exhaustive.)

Acceptable as strict cover

Cash already paid to the counterparty by way of initial margin

A derivatives contract guaranteed to deliver to the insurer sufficient cash to cover its liabilities (e.g. a sold future may cover a bought future)

A holding guaranteed to deliver income of the right magnitude at the right times to cover payment obligations (e.g. an interest rate swap is covered by the appropriate underlying holding).

Cash or "near-cash"

May be acceptable as partial cover, subject to the magnitude of the basis risk

A holding in gilts, other than those which count as near-cash

A well-diversified portfolio of readily realisable equities

Unacceptable, even as partial cover

Borrowed assets

Assets covering another derivatives transaction

Assets providing security for a debt

Dividends due before delivery date but not yet declared

A portfolio of securities which is not well diversified or containing significant holdings of securities not readily realisable in the short term

Debts (including anticipated tax recoveries), other than those which count as "near-cash"

69 **Cover - Example 2**

An insurer with a portfolio of US equities wishes to remain exposed to the US market for the next 3 months. It wishes to protect itself against the risk of the dollar weakening and considers it unlikely that it will strengthen. It decides to sell a dollar future (i.e. dollars sold to buy sterling) to the current value of half of its US equity portfolio, for settlement in 3 months time.

Provided that the portfolio of equities is well-diversified and readily realisable, it may be possible to consider it to be covering the future, despite the fact that it is at first sight not obviously appropriate for the purpose. The following argument justifies this treatment.

Leaving aside movements in the US market, the insurer can never suffer a cash loss as a result of movements in the exchange rate. If the dollar falls, the gain in the forward currency contract matches the fall (in sterling terms) of half the equity portfolio. If the dollar rises, the reverse is true. Under the latter circumstances, the insurer might need to sell some of his equity portfolio (which would have appreciated in value in sterling terms) in order to meet his obligation to supply dollars under the forward currency contract. Because the portfolio has been assumed to be well-diversified, this should not be a problem. The same assumption could not necessarily be made of a holding of equities traded on a market which was often turbulent.

There is nevertheless basis risk associated with this contract reflecting the eventuality that the dollar might strengthen and the US equities fall in value over the period. The insurer would have to consider whether this risk was significant, bearing in mind the tests in paragraph 64, before classifying this transaction as "covered".

Similar considerations apply if the company decides to hedge the currency risk on the whole of its portfolio, rather than just half of it. However, in the latter case, there is in principle a considerable risk that the portfolio could fall in value, leaving the insurer "over-hedged". Assuming this reached levels which could not be regarded as de minimis, the currency hedge could neither be regarded as for the purposes of reduction of investment risks nor efficient portfolio management under the interpretation of the section on "Reduction of investment risks; efficient portfolio management". But naturally, in assessing the risks, the insurer would be entitled to place due weight on any systems it had in place to close out any "excess hedging" beyond de minimis levels, as it arose.

70 **Cover - Example 3 - Suitability for covering a commitment to deliver physical assets (or cash to the value of those assets). (The following list is not intended to be exhaustive.)**

Acceptable as strict cover

A holding of the assets in question

A derivatives contract guaranteed to deliver to the insurer sufficient assets to cover its liabilities (e.g. a bought future can cover a written call option)

May be acceptable as partial cover, subject to the magnitude of the basis risk

Cash or "near-cash"

A holding in gilts

A well-diversified portfolio of readily realisable equities

Unacceptable, even as partial cover

Borrowed assets

Assets covering another derivatives transaction

Assets providing security for a debt

Dividends due before delivery date but not yet declared

A portfolio of securities which is not well diversified or containing significant holdings of securities which are not readily realisable

Debts (including anticipated tax recoveries) other than those which count as "near-cash"

71 **Cover - Example 4**

An insurer has purchased an index put option to hedge its entire holding of Japanese equities. It has the opportunity to sell some of those assets at a favourable price. It proposes to retain the whole of the option contract.

Purchased options do not require cover. However, the other conditions in paragraph 11 remain relevant. In particular, the "in connection test" remains relevant. After the asset sale, part of the option is no longer "in connection with" any relevant assets.

By analogy with the example in paragraph 48, the "excess" part of the option cannot be an admissible asset. The remaining part would be admissible provided of course that it passed the appropriate tests in the first place.

72 **Cover - Example 5**

An insurer has sold an index future which is covered by an appropriate holding of assets. It has the opportunity to sell some of those assets at a favourable price. It proposes to retain the whole of the futures contract.

The asset sale will partly uncover the future, unless the insurer simultaneously tops up the cover by earmarking other suitable assets. Where the insurer does not hold such suitable assets, it can regard the derivatives contract as being split in two for asset valuation purposes. One part would definitely not be covered; the other part could be if the basis risk remained insignificant. Obviously, this would require that the remaining assets were reasonably representative of the index.

"Near-Cash"?

73 "Near-cash" means cash which is reasonably certain to be received by the insurer before delivery date or assets which could, with reasonable certainty, be converted into a known amount of cash before delivery date, at the insurer's discretion. The principal examples are:

- Amounts deposited with or loaned to authorised banks and building societies which are redeemable before delivery date (including a prudent estimate of interest due before delivery date)
- Approved securities (as defined in regulation 2 of the Regulations) which can be redeemed before delivery date (including a prudent estimate of interest due in the meantime)
- Dividends declared but not yet paid



- An exceptionally prudent estimate of net cash inflows expected before delivery date. (A prudent estimate of the net position may of course be negative! In that case, the insurer would be obliged to regard that as a prospective liability, to be taken into account as described in paragraph 67.)

74 **Cover - Example 6**

An insurer has sold a FTSE- 100 future.

On the delivery date, it will receive cash if the original index level price is greater than the market price; otherwise it will have to pay cash. Because of the basis risk, it is not possible to cover this contract substantially with cash or near-cash. For example, if the value of the contract was £1m per 100 index points, at least several £m in addition to the cover of the underlying principal (depending partly on the length of the interval before delivery date) of cash or near-cash would be needed as cover before the insurer could be reasonably certain that this would not be completely eroded by a sharp rise in FTSE. It is most unlikely that this could be regarded as an insignificant basis risk. In passing, it is also most unlikely that this could be justified as reduction of investment risks or efficient portfolio management.

The contract could expediently be covered by a well-diversified portfolio of securities making up the FTSE index (the primary cover) of approximately the right value (i.e. the market value of the basket of FTSE securities underlying the transaction), together with a secondary holding in cash or near-cash equal to the provision for adverse changes (see the section on liabilities arising from derivative contracts), if any. If the performance of the actual portfolio can reasonably be assumed to be closely correlated with that of FTSE, the basis risk is likely to be minimal.

However, if the covering securities providing the primary cover were to be replaced by ones which were either:

- not well diversified; or
- not well-matched to the FTSE-100 index; or
- of insufficient value to provide full cover

the basis risk could be substantial. If so, the contract could no longer be regarded as covered.

75 **Cover - Example 7**

An insurer wishes to rebalance his portfolio by selling UK equities and buying US equities. He wishes to change market exposure immediately but to give himself time to realise his UK holdings and select appropriate US holdings. He sells a FTSE future, buys a dollar future from an approved counterparty and an S&P future, all for settlement on the same date and all to the value of the UK equity portfolio.

The S&P future is covered by the dollar future. Assuming that the portfolio of equities is a well-diversified selection of stocks making up FTSE-100, the proceeds of the sale plus the balance on the FTSE future should in aggregate realise approximately enough to cover the obligation to deliver sterling under the dollar future. The amount will be insufficient to the extent that the actual stocks underperform between the current date and the date of realisation, relative to FTSE-100. Provided that the basis risk was insignificant, then the equity portfolio, taken together with an appropriate holding in cash or near-cash (to allow for the mismatch between the portfolio and the index) would cover this contract.

It is also instructive to consider the "in connection with" test. Use of the currency forward and the index futures appears to be consistent with efficient portfolio management. The FTSE future is clearly being used in connection with the UK equity portfolio. But the natural interpretation is that the currency forward is used in connection with the FTSE future and the S&P future in connection with the currency forward. In the situation above, if the FTSE future is covered, it becomes an admissible asset. So the currency forward is used "in connection with" an admissible asset; it is itself admissible. The same argument works for the S&P future.

76 **Cover - Example 8**

Same situation as in the example in paragraph 75 except that the various contracts are not all due for settlement on the same date.

The analysis is very similar to that of the example in paragraph 75. The basis risk would also include the risk of adverse movements in currencies and/or indices between the settlement dates of the various contracts. Obviously, the size of this additional risk will depend on the intervals between settlement dates and the perceived volatility of indices, equity portfolio and exchange rates. Nevertheless, it is by no means out of the question that these derivatives could be regarded as covered.

Cover Fallacies

The following are illustrative examples of fallacies.

77 **Cover fallacies -Example 1**

I have sold an index future which is currently showing a slight profit to me on the basis of current market value. It does not require cover.

WRONG! It may in future show a considerable loss. It is difficult to arrange for strict cover because of small changes in the composition of the index from time to time. An appropriate diversified selection of the assets underlying the index is however likely to be regarded as covering this transaction, depending of course on the size of the basis risk.

78 **Cover fallacies - Example 2.**

Earmarking of assets of sufficient current value to cover the basis risk will always ensure that the relevant derivative contract is covered

WRONG! The assets may not be suitable (e.g. because of volatility or non-realizability) for cover. And of course, if the basis risk is significant, the contract cannot be regarded as being covered

79 **Cover fallacies - Example 3.**

A margined contract is automatically covered.

WRONG! Margining guarantees only that the insurer can cover adverse market movements to date. It confers no assurance that it will be able to cover any foreseeable future market movement.

80 **Cover fallacies - Example 4.**

I have entered into an OTC arrangement for 3 months whereby I sold an index futures contract on day 1. On each subsequent day, I am committed to closing out my futures position and simultaneously re-selling another index future for the original end-date at the close-out price. (In view of the nature of the arrangement, my counterparty has offered extremely favourable terms on dealing costs!) The basis risk for any pair of sale and purchase contracts is small and the contract therefore requires minimal cover.



WRONG! No doubt, little will go wrong with this arrangement from one typical day to the next. But over a period, a lot could go wrong with it. Having regard to the point in paragraph 64 on "aggregation of risks", it is clear that the contract requires cover as if a normal 3 month index future had been sold.

Cover For Derivatives In Linked Funds

- 81 There is in practice no difference in the nature of the cover criterion, whether a derivative is used in connection with linked or non-linked assets. That is to say, a derivative covered by assets of a linked fund would be covered if the fund were a non-linked one; and vice versa. (However, a derivative in a linked fund is of course legally required to be covered, unlike a derivative in a non-linked fund.)

The Pricing Basis

- 82 The final condition to be satisfied by an admissible (or permitted) derivative is that it satisfies the prescribed pricing basis. This is usually unproblematic. Assets acquired or disposed of under options or futures contracts are normally transferred at a fixed price, specified at the time the contract is transacted. Nevertheless, more exotic price structures do occur. The Regulations allow considerable (but not total) flexibility. The paragraphs below cover the conditions to be satisfied by admissible assets. The conditions for permitted derivative contracts in property-linked funds are equivalent.
- 83 Under regulation 14(7), amounts payable under an admissible contract for differences may be calculated by reference to the value of any admissible asset or income from any admissible asset. Contracts based on an index of such asset values or income are equally acceptable. So are contracts based on the difference between current and amortised value, provided that there is a generally accepted accounting practice for determining the amortised value of the asset in question. Finally, contracts based on fluctuations in a national index of retail prices for any Zone A country (in particular the RPI) pass the test.
- 84 Regulation 14(8) prescribes the pricing methods allowable for an admissible option or futures contract. The exercise or contract price may be fixed (the traditional approach) or may be determined by reference to any of the quantities mentioned in the previous paragraph or by any combination of these.
- 85 The most significant exclusions from the above prescribed pricing bases are where a contract value, or buying or selling price of an asset, is determined partly by reference to:
- an inadmissible asset; or
 - the amortised value of an asset where there is no generally accepted accounting practice (for insurance companies) for the determination of such amortised value

86 Pricing - Example

A company transacts an option to buy listed shares in ABC plc at a price which is related to the price of (listed) DEF shares on the exercise date.

This satisfies the pricing basis requirements set out in regulation 14(8). Of course, it still needs to satisfy all the other requirements of regulation 14 before it could be given an admissible value. The "capable of being readily closed out" and "efficient portfolio management or reduction of risks" tests would undoubtedly need particularly careful justification.

The Valuation Rule For Derivatives Which Are Assets

- 87 The basic rule set out in regulation 14 is that derivatives which satisfy the conditions described in paragraph 11 above shall be valued at current value, taking into account any amounts paid or transferred to the insurance company, whether by way of variation margin or otherwise. Current value is defined to be market value, in the case of a listed derivative, or close-out value in the case of an OTC derivative. Under this rule, fully-margined derivatives clearly have a value of zero; the intrinsic value of the contract is represented either by a deposit in the margin account or by assets already transferred to the insurer by the counterparty.
- 88 It might appear at first sight, therefore, that full credit can be taken for any fully-margined derivative contract, irrespective of whether it satisfies the conditions summarised in paragraph 11. This is not the case. Margining (or collateralisation) cannot "legitimise" a derivative contract which would not otherwise have an admissible value. Regulation 15(1)(d) and (e) provides that admissible assets equal in value to any such margin paid or transferred to the company shall be left out of account if the margin is in respect of a derivative contract which does not satisfy all the conditions described in paragraph 11. Therefore, although the company has received assets equal to the intrinsic value of the contract, it is required to leave an equal value of assets out of account. In effect, the net benefit of having transacted the derivative contract is nil, for the purposes of statutory valuation.
- 89 Notwithstanding the above strictures, we do of course encourage companies to margin (or collateralise) their contracts wherever appropriate as a means of reducing credit exposure of the fund to the company's counterparty.

Liabilities Arising From Derivative Contracts

- 90 The starting point is that a derivative which is currently a liability to the insurer (leaving aside the effect of any margin which has already been paid, received or transferred) should be valued at its current value. In the case of an exchange-traded derivative; this is its market value; in any other case, it is what the insurer would reasonably expect to pay to close out all its obligations under the contract. This applies irrespective of whether or not the conditions summarised in paragraph 11 apply.
- 91 Moreover, as noted in paragraph 13, no derivative (whether currently an asset or a liability) may be used in a property-linked fund unless all the conditions of that paragraph apply.
- 92 **Liabilities arising from derivative contracts - Example**
- An insurer with a well-diversified portfolio of FTSE stocks in a linked fund believes that UK equity prices are likely to fall in the foreseeable future but recover in the medium term. It decides to sell a FTSE- 100 call option (adequately covered by its portfolio - see section on "Cover").
- This is a somewhat problematical case. Particularly careful justification will be needed before written options can be taken to be for the purposes of reduction of risks or efficient portfolio management.
- Suppose, for example that the insurer's investment strategy is to reduce exposure to FTSE stocks. When assessing whether selling an option counts as efficient portfolio management, it is necessary to consider the non-derivative alternative, in this case to sell the relevant stocks. If the index in fact rises above the strike level, the insurer will effectively lose any gain above that level.

However, that is irrelevant to the current discussion; the insurer would clearly also have given up the gain if it had sold the stocks.

If the index falls below the strike level, the option will expire worthless. The insurer will therefore benefit from the option premium but will nevertheless still be exposed to severe falls in the stocks. In the terms of paragraph 31, this is an adverse risk consequence of the derivative strategy. If the transaction is to count as efficient portfolio management, the insurer would need to be convinced that the adverse risk consequence was insignificant; in other words, that the risk of the market falling sufficiently far that the insurer was left significantly worse off than by selling the stocks could be neglected. This could only be resolved on a case by case basis, taking into account the volatility of the market, the price of the option, the difference between initial market and option strike levels and respective tax considerations.

The above gives an analysis for one particular investment strategy; it might be quite different for any other strategy.

Provision For Adverse Changes

- 93 In addition, where a contract is not strictly covered, the insurer must make an appropriate provision for adverse changes under the terms of regulation 19. This applies to any contract that:
- (a) may give rise to an obligation on the insurer, irrespective of whether it is an asset or a liability at the current time; and
 - (b) where an adverse change would affect the level of free assets of the company.

94 Provision for adverse changes - Example 1

An insurer has sold a call option on a stock which it does not hold. On a best estimate basis, it has just sufficient asset in its fund to allow it to buy the stock necessary to perform the obligation.

This contract is not covered and could not therefore be used in a linked fund. It is perfectly foreseeable that the value of the assets in its fund or those underlying the derivative will change to the extent that the insurer needs more than its best estimate in order to perform its obligations under the contract. A provision for adverse changes will be needed.

In passing, it is also clear that such a transaction gives rise to significant adverse consequences in the investment risk profile of the portfolio. Under the condition described in paragraph 29 above, it could not be regarded as being consistent with efficient portfolio management. Nor, clearly, does it satisfy the "in connection with" test.

95 Provision for adverse changes - Example 2

An insurer considers selling a put option on an equity holding which, if exercised, will require it to pay £1m for the holding. It currently has a cash balance of £0.5m but expects a net cash outflow, apart from new premium income, of £0.3m. However, due to estimating uncertainties, such net cash outflow might be as high as £0.6m. Taking account of new premium inflows, can this contract be regarded as covered?

Prudence requires the most pessimistic assumption for net outflows, namely £0.6m. This gives rise to a cash shortfall of £0.1m, leaving aside the cash needed to cover the option. It follows that new premium inflows would have to be at least £1.1m, on an exceptionally prudent assumption, for the contract to be regarded as covered.

- A provision for adverse changes would be required in respect of the uncovered part of the contract.
- 96 The provision must be sufficiently large to cover the basis risk. It follows that a contract which is covered, but not strictly covered requires, in principle, a provision for adverse changes to be established. However, in many practical circumstances, such provision may be immaterial.
- 97 The starting point for assessment of the provision is a comparison between the assets underlying the derivative contract and the assets notionally attributed by the company to meet its liabilities (including prospective or contingent liabilities) under the contract. For this purpose, it is necessary to identify particular assets of the relevant fund (the "identified assets") as being available to meet liabilities under the contract in question.
- 98 Where the contract is not strictly covered, the company should consider the potential variation between the value of the assets underlying the derivative contract and the identified assets. This will lead to an assessment of the potential liability which could arise from the lack of strict cover. Such variation may of course arise either from general market movements (e.g. if gilts are attributed against an equity index future) or of specific stock value changes (e.g. if a small number of stocks are attributed against an equity index future).
- 99 It will be necessary to take account of the potential volatility of each block of assets, including the possibility that prices of the blocks will move in different directions. The assessment would be based initially on historical volatility but would also have regard to the possibility that volatility might be different in future.
- 100 The level of provision may also depend on the company's techniques for monitoring (and, where appropriate, hedging or closing out transactions so as to reduce exposure) and the frequency with which exposures are monitored by senior management. However, a general intention to manage the exposure as the need is perceived to arise is not sufficient to obviate the need for, or even reduce, a provision.
- 101 As a general rule, we would expect companies to set provisions on bases which are at least as prudent as the following:
- (a) in the case of a derivative based on a broadly-based equity index:
 - (i) that a 25% adverse movement in the index occurs in the near future; and
 - (ii) the possibility of a greater adverse movement should be allowed for, to the extent that this is consistent with the historical record or, otherwise, where it would be imprudent to ignore the possibility
 - (b) in the case of a derivative whose value depends significantly on the value of a small number of assets, the assumptions in (a) will be insufficiently prudent. Conversely, the assumptions in (a) may be too severe in other cases. (For example, a 25% adverse movement in a short gilt index might be considered extremely unlikely.)
 - (c) analogous assumptions should be made in respect of the attributed assets (see paragraph 97)
 - (d) the effect of adverse changes to the value of the derivative and the attributed assets should be compounded (on a probabilistic rather than arithmetical basis), assessing the (positive or negative) correlation between the two variables in a very prudent manner. For example, in

the case of long-dated gilts attributed against an equity future, independent 25% adverse movements should be assumed.

The Provision For Adverse Changes And Linked Funds

- 102 A provision for adverse changes ought not to arise in the case of derivatives used in property-linked funds. A contract which was strictly covered would not give rise to a provision in any case. And a contract which was not covered would be illegal in a property-linked fund.
- 103 But perhaps the most common case relates to a contract which is covered but not strictly covered. By virtue of condition (b) of paragraph 93, a provision cannot arise for such a contract in a linked fund because its fortunes have no effect on the level of the free assets (since any change in its value is matched by an equal change in the total linked benefits payable to policyholders). By contrast, as noted in paragraph 61, a derivative in a non-linked fund which was covered but not strictly covered would in principle require a provision. Therefore, although the criteria for determining whether a contract is covered (or strictly covered) do not differ between linked and non-linked funds, the consequences of the absence of strict cover do differ between the two cases.

Responsibility For Calculation Of The Provision

- 104 Responsibility for calculation of the provision rests with the Directors. Even in a long-term business company, it is not one of the "long-term" liabilities. As with the remaining "other than long term business" liabilities, it will be liable to review by the auditors. However, for derivative contracts transacted in connection with assets of the Long-term Fund, it will often be appropriate for the Appointed Actuary to take account of the provision in his assessment of the long-term liabilities under regulation 32, in accordance with professional guidance notes.

Overlap With The Resilience Test

- 105 In some circumstances, there may be an element of overlap between the provision for adverse changes and the provision required in respect of long-term business under regulation 32. Double-counting of the provision is however unnecessary! To the extent that the provision for adverse changes relates to general market movements (as opposed to movements in one or two specific holdings), it may be notionally released in calculating (subsequently) the provision required under regulation 32.

Quasi-Derivatives

- 106 Certain more traditional types of instrument acquired in the normal course of trading (for example, convertible stocks and partly-paid shares), as well as traditional types of practice such as sub-underwriting, have the characteristics of derivatives. In addition, derivatives also exist in securitised form. To illustrate the latter point, there is little difference between investing in a "bond" whose maturity value is determined according to the level of some market index and transacting a contract for differences based on that index (especially if, in practice, it is unforeseeable that the notional principal representing the investment could be eaten away completely by adverse market movements). This section considers how all these "quasi-derivatives" are dealt with by the Regulations and what are the practical implications.
- 107 New regulation 14A aims to make more transparent the treatment of "quasi-derivatives". Essentially (and with certain defined exceptions), a contract or asset is to be treated as having the effect of a derivative contract if it embeds an option or obligation to acquire, dispose of or convert an asset or provides

for payments akin to those which would be made under a contract for differences.

108 **Quasi-derivatives - Example 1**

Examples of instruments which "have the effect of a derivative contract"

- Partly-paid shares
- An agreement to underwrite or sub-underwrite a share issue
- Bonds convertible to equity
- Stock lending and REPO agreements which do not satisfy the conditions set out in paragraphs (2) and (3) (or (4)) of regulation 11
- Instruments which provide an income (or maturity value) set by reference to fluctuations in the value of some specified asset or by reference to fluctuations in an index
- Futures and options funds

Examples of instruments which do not "have the effect of a derivative contract"

- Shares (unless the rights conferred by the shareholding are such that the income or maturity value is partly or wholly determined by reference to the value of some specified asset or index)
- Gilts issued by a state in Zone A
- Holdings in collective investment schemes which fall under the UCITS Directive
- Stock lending and REPO transactions which satisfy the conditions set out in paragraphs (2) and (3) (or (4)) of regulation 11
- Contracts for sale or purchase of assets (i.e. securities, land) within a defined period (the normal settlement period for on-exchange transactions in the case of listed securities and 20 working days in other cases)
- Contracts for conversion of currency in connection with sale or purchase contracts of the type mentioned in the previous bullet point
- Contracts for sale or purchase of equipment

N.B. Neither of the above lists should be taken as exhaustive!

109 An asset having the effect of a derivative contract is an admissible asset if the corresponding (hypothetical) derivative contract would satisfy the conditions set out in paragraph 11. It is a permitted link if the corresponding hypothetical derivative contract would satisfy the conditions set out in paragraph 13.

110 **Quasi-derivatives - Example 2**

A company buys an unlisted bond issued by a manufacturing company, whose maturity value is determined according to the value of FTSE 100 on the maturity date.

This is not an admissible asset or permitted link. It has the effect of a contract for differences (of an admissible class) used in connection with a loan. But it is neither listed nor transacted with an approved counterparty. However, a similar product transacted with an approved counterparty would be admissible provided that the "efficient portfolio management" and "reduction of risks" criteria could be justified.

111 Where the conditions of paragraph 11 are satisfied, the value of the quasi-derivative is, as usual, the current value (i.e. the market value in the case of a listed asset). Where the conditions are not satisfied, the quasi-derivative has no value except in respect of any payments whose value is guaranteed. By virtue of regulation 14A(4), such payments are to be given an assignment value, as if they were debts.

112 **Quasi-derivatives - Example 3**

A company buys a bond whose maturity value is equal to the product of

- (i) the issue price; and**
- (ii) the ratio of the price of gold on maturity and the price of gold at issue,**

with a guarantee that the maturity value will not be less than the issue price.

This product has the same economic effect as a debt (to repay the issue price) plus a contract for differences based on the gold price. The latter would not be admissible (since gold is not an admissible asset). Therefore the value of this instrument for solvency purposes would be the limited to the assignment value of a debt to repay the issue price.

113 The above examples are perhaps a little exotic. With more commonly met examples (such as listed convertibles, partly-paid shares, sub-underwriting), there will not usually be a problem over justifying that the conditions of paragraphs 11 or 13 are satisfied. Clearly, however, cases need to be examined on their merits. Where such instruments are used to an abnormal extent, in particular where they give rise to a significant level of gearing of the fund, there must be grave doubts as to whether this is consistent with efficient portfolio management. If not, they could only be valued in accordance with the rule in regulation 14A(4) described in paragraph 111.

114 **Quasi-derivatives - Example 4**

A company holds a listed convertible bond giving it the right to convert to a specified number of equity shares of the issuer during a specified period.

This is clearly an asset having the effect of a derivative contract, in accordance with regulation 14A(1)(c). It is equivalent to a "vanilla" bond held in connection with a pair of options, one to sell the bond and the other to buy equity, the options being exercisable either as a pair or not at all. The test set by regulation 14A(4) is whether the hypothetical options would satisfy the conditions set out in regulation 14(2). It is easy to see that they would do so, provided that they were consistent with reduction of investment risks or efficient portfolio management. We would expect this to be justifiable in normal circumstances.

115 Where the embedded derivative could place the insurer under a liability to take some action, the question of a provision for adverse changes arises. Traditional practices do not appear inherently likely to give rise to a material provision, however, although each case must be considered on its merits.

116 **Quasi-derivatives - Example 5**

An insurer sub-underwrites a new share issue.

The insurer has effectively granted the underwriter an option to sell a number of shares at an agreed price. Provided there is sufficient cash or near-cash in the fund to cover the whole of the purchase, if the underwriter should exercise its option, a provision for adverse changes is not required. This is separate from

the question of whether the insurer should make a prudent provision for the contingent liability it has taken on.

Structured Products And The "In Connection With" - And "Efficient Portfolio Management" Tests

- 117 Instruments which are hybrid in form between loan and derivative, sometimes referred to as structured products, are commonly free-standing instruments, not used "in connection with" anything. Nevertheless, they may satisfy the "in connection with" test, by virtue of regulation 14(2)(b). They satisfy the test provided that once they have been notionally separated into "bond element" and "derivative element", the latter can be considered as "held in connection with" the former (for the purposes of reduction of investment risks or efficient portfolio management).
- 118 Such structured products are often used to provide a precise match to the policyholder benefits promised under long-term products such as guaranteed income or equity bonds. There is a tendency for these products to become ever more exotic, to the extent that it is rather difficult to decompose them hypothetically into a combination of basic instruments such as loans and options having the same economic effect. Nevertheless, this must in principle be done in order to ensure that the "in connection with" and other tests are being observed. This is sometimes not very easy!
- 119 It is sometimes argued that a product which provides a precise match to the policyholder liabilities automatically satisfies the "reduction of risks" test. This is a fallacy! Precise matching may well be essential, in order to satisfy section 64B(2) of the Ordinance. However, as paragraph 31 above sets out, the impact of the use of a derivative structure on the policyholder risk must also be considered. If the effect of the "derivative element" is to adversely affect some aspect of the risk to policyholders in a significant way, that would cause the product to fail both the "efficient portfolio management" and "reduction of risks" tests.
- 120 **Structured products - Example 1**
- A company offers a guaranteed income bond which offers 11% income on the amount in vested per annum for 5 years. The bond has a minimum maturity value of 20% of the original investment (less initial charge, when FTSE falls by 5% or more over 5 years. It returns the original investment (less initial charge) if FTSE ends the 5 year period at or above its opening value. Between these two limits, the maturity value varies pro rata to the fall in FTSE. The insurer purchases a structured product which matches its policyholder liability closely.**
- The analysis should in principle be carried out on the structured product purchased by the insurance company rather than the policyholder benefit structure. In practice, it may not matter much.
- Clearly, the purchased structured product can be separated notionally into "loan" and "derivative" components. However, the "derivative component" cannot be regarded as reducing investment risks. Even though it allows the company to match its policyholder liability precisely, it certainly cannot be said to have a broadly neutral effect on the investment risks of policyholders. If the index falls slightly (unlikely on the basis of its past record, but far from inconceivable), the policyholder will be considerably worse off than if he had invested in the assets underlying the index.
- Moreover, since the derivative component increases asset risk to the policyholder, it cannot be regarded as being for the purposes of efficient portfolio management.

Such a derivative would be inadmissible. A derivative having similar characteristics in a long-term linked fund would be illegal.

- 121 Notwithstanding the instrument illustrated in the example in paragraph 120 above, rather similar instruments can be admissible (or permitted in a long-term linked fund). To assess this, the following steps are appropriate:

Step 1 - Identify a broadly comparable non-derivative investment strategy

As discussed above, the investment will not satisfy the "efficient portfolio management" or "reduction of investment risks" tests if it gives rise to a significant increase in the policyholder's risk. It is therefore appropriate to consider how the company might have constructed a broadly similar investment strategy without using derivatives. The policyholder's risk can then be compared for the derivative and "benchmark" non-derivative strategy.

Step 2 - Compare the risks inherent in the two strategies

The task here is to identify instances in which the derivative strategy underperforms the non-derivative strategy. It is quite likely to be the case that sometimes one outperforms, sometimes the other but that neither is clearly "better" than the other. However, that is irrelevant. The test set out in paragraph 29 requires that any underperformance by the derivative strategy should be either insignificant or not reasonably foreseeable.

In making the comparison of risks, it will usually be appropriate to consider how the strategies would have performed historically. However, it will hardly ever be appropriate to argue that because one strategy would have outperformed another historically, the risks of underperformance in the future can be ignored. As a general rule, historical data may be used to calibrate a statistical model of future performance. But where the future values of model parameters can reasonably be expected to be different from their historical counterparts, suitably cautious assumptions should be made.

Step 3 - Identify any reasons why the comparison is unfair to the derivatives strategy and whether such unfairness is the main reason for comparative under-performance

One popular technique is for derivatives strategies to incorporate a minimum performance guarantee, using some kind of embedded option. Such a guarantee cannot be provided free and will therefore give rise to some degree of under-performance. Its effect should in principle be stripped out before making the comparison above.

- 122 Bearing in mind the practical difficulties mentioned above, we would not object to a structured product which provides a precise match to policyholder liabilities being deemed to satisfy the "in connection with" and "efficient portfolio management" tests provided that:

- (a) the analysis above has been carried out; and
- (b) either:
 - (i) any underperformance by the derivative strategy is either insignificant or not reasonably foreseeable
 or:
 - (ii) significant underperformance by the derivative strategy occurs only at levels of total investment return well above the risk-free rate and arises wholly or mainly as a result of the incorporation of a guarantee (or some similar benefit) amongst the benefits provided by the derivative strategy

- 123 In making a comparison above between the performance of derivative and non-derivative strategies, it is always the total return to the insurance company (after making appropriate allowance for tax and reasonable investment management expenses) which should be considered. If part or all of the investment risks under either strategy are assumed by the company, then it is the appropriate product allowance which the company would make to cover those risks which would be taken into account.
- 124 The above method of analysis relies on an assessment of the significance of underperformance. It is difficult to be very precise about what is significant. But under prevailing investment conditions, we would certainly regard a 20 percentage point underperformance over a 5-year term as significant in circumstances where the total return on the non-derivative strategy is at levels up to the risk-free rate. Under the same conditions, a 5 percentage point underperformance could not reasonably be regarded as significant. Moreover, at very high levels of return, it might be reasonable to deem an underperformance above 20 percentage points to be insignificant.
- 125 **Structured products - Example 2**
- A company issues a 5 year stock-market bond linked to FT-SE 100, offering the following return on the initial investment (after deduction of initial charge):**
- If the index stays constant or falls, the initial investment will be reduced by the percentage fall in the index, except that the maturity value is guaranteed not to be less than 80% of the initial investment**
- If the index rises by up to 100%, the initial investment will be increased by the product of the percentage rise in the index and 110%**
- If the index rises by more than 100%, the maturity value will be 210% of the initial investment**
- The company transacts a structured product with an approved counterparty which exactly matches these terms.**
- Where the index falls or rises by up to 100%, this product clearly satisfies condition (b)(i) of paragraph 122. Since a 100% rise over 5 years is significantly in excess of the risk free rate of return, the capping at 210% easily satisfies condition (b)(ii).
- 126 The conditions described in paragraph 122 are not intended to be an absolute requirement. Other structures may be admissible (or permitted) provided it can be shown from first principles that they satisfy the various tests.

The Effect Of Derivatives On Admissibility Of The Underlying Holdings

- 127 As explained in Insurance Guidance Note No. 4 on asset valuation, the approach in the Regulations is to limit aggregate exposure to certain types of asset for solvency purposes, rather than to limit holdings in those assets. Where a company's aggregate exposure exceeds the prescribed limit, excess assets have to be left out of account. In principle, derivatives may have the effect of increasing or decreasing exposure to underlying assets; their effect must obviously be taken into account in assessing the aggregate exposure.
- 128 However, the Regulations provide that it is unnecessary to consider changes in exposure resulting from contracts for differences based on well-diversified indices (e.g. FTSE futures). It would be most unlikely that such contracts could have a significant effect on underlying exposure to particular assets (e.g. to specific equities).

- 129 Regulation 15 of the Regulations provides that, for the purposes of computing aggregate exposure:
- (A) where a derivative contract places an insurer under an obligation to buy certain assets, it is deemed to have bought those assets
 - (B) where a derivative contract places an insurer under an obligation to sell certain assets, the sale is deemed to have taken place only if the contract is "listed" or if the sale is due within 12 months to an approved counterparty
 - (C) where a contract gives the insurer an option or could oblige it to buy certain assets, it is deemed to have bought them "if it is prudent to assume" that they will be bought
 - (D) where a contract gives the insurer an option or could oblige it to sell certain assets, it is deemed to have sold them only if the sale is due within 12 months to an approved counterparty and "if it is prudent to assume" that they will be sold
 - (E) a contract for differences (other than one based on a well-diversified index) or a contract or asset having the effect of a derivative contract is treated in the same way as an appropriate combination of options or futures having equivalent economic effect
- 130 The treatment of futures is fairly straightforward. However, the treatment of options is more complex. One issue surrounds when it is prudent to assume something for the purposes of cases (C) and (D) above. The point here is that prudence has to be construed in the context of limiting aggregate exposure. Where the situation is unclear, it will be more prudent to assume higher exposure than lower exposure. Therefore for the purposes of Case C, it will generally be prudent to assume that the option to buy has been exercised. The only exception would be where the option was so far out of the money that it was clear that it would not be exercised. Similarly, for Case D, it will generally be prudent to assume that the option to sell would not be exercised. The only exception would be where the option was so far in the money that it was very unlikely that it would not be exercised.
- 131 **Effect on admissibility of the underlying holdings - Example 1**
- A company transacts a contract for differences with an approved counterparty under which it receives (pays) £1000 for every £1 rise (fall) in the value of ABC shares and also receives (pays) £1000 for every £1 rise (fall) in XYZ shares above the strike levels of:**
- ABC shares - £2.50**
- XYZ shares - £3.50**
- with the rise being determined on the basis of the market price in 6 months time.**
- Any payment by the insurer will be limited to a maximum reached when the share prices fall to**
- ABC shares -£2.00**
- XYZ shares - £3.00**
- The current share prices are:**
- ABC shares -£1.75**
- XYZ shares - £1.00**

The analysis gets a little tortuous and can most conveniently be considered by imagining that the insurer had transacted two separate contracts for differences, one in respect of ABC shares and one in respect of XYZ shares. These are considered in the examples at paragraphs 132 and 133 below.

The conclusion is that the effect of the contract for differences is to increase the current aggregate exposure of the company to ABC by £1750; there would be no increase in the company's aggregate exposure to XYZ.

132 **Effect on admissibility of the underlying holdings - Example 2**

Using the example of company ABC in paragraph 131 above, this contract has the same economic effect as the following combination:

- (a) a futures contract to purchase the shares (today) at the strike price (£2.50)
- (b) a (purchased) option to sell those shares at £2.00 per share to an approved counterparty
- (c) an agreement to sell the shares in 6 months time at the then current price, assuming that the option at (b) has not been exercised

Drawing on the considerations in paragraph 130, the insurer has to take into account the effect of hypothetical contracts (a) and (b) above for the purposes of computing current aggregate exposure. However, for the purposes of computing aggregate exposure, contract (c) is to be disregarded.

Therefore, under Case A of paragraph 129, it is necessary to assume that the shares have been purchased. On the other hand, if the conditions set out in Case D are satisfied, it may be possible to regard them as being subsequently sold. The hypothetical option (b) is due for exercise within 12 months with an approved counterparty. It therefore satisfies the first leg of the test in Case D. On the other hand, it would not be "prudent to assume" that the option to sell the ABC shares would be exercised. The share price might easily recover above the exercise price of £2.

The conclusion, therefore, is that the effect of the contract for differences is to increase the company's aggregate exposure to ABC shares by £1,750, the current value of 1000 shares.

133 **Effect on admissibility of the underlying holdings - Example 3**

Using the example of company XYZ in paragraph 131 above, this contract has the same economic effect as the following combination:

- (a) a futures contract to purchase the shares (today) at the strike price (£3.50)
- (b) a (purchased) option to sell those shares at £3.00 per share to an approved counterparty
- (c) an agreement to sell the shares in 6 months time at the then current price, assuming that the option at (b) has not been exercised

As in the example in paragraph 132, the company is deemed to have bought the shares. Under normal circumstances, it would seem very unlikely that the market price of XYZ shares would exceed the exercise price on maturity of the contract. Therefore it would be "prudent to assume" that the option to sell the XYZ shares would be exercised. For the purposes of Case D, such shares would be assumed to be sold. The contract does not give rise to any aggregate exposure to XYZ shares.



134 It is not possible to leave an asset out of account. All assets have to be assessed as to their effect on aggregate exposure. However, where an insurer holds an option, it is obviously not possible for it to be worse off than if he simply discarded the option!

135 **Effect on admissibility of the underlying holdings - Example 4**

An insurer, with holdings in the equity of ABC company to the extent of 1% of its Business Amount, purchases a call option on the same equity in respect of a holding equivalent to 4% of its Business Amount. The exercise price is close to the current market price of the equity.

Case C of paragraph 129 applies. Suppose for a moment that the option has to be deemed to have been exercised. Under Case C, the exercise date of the option is not relevant. The company would be deemed to have bought the assets.

The aggregate exposure to ABC would therefore be 5%. 2.5% would be inadmissible. The company must leave out of account not only its 1% holding in ABC but also a further 1.5% of assets which would otherwise be admissible. Although the option would have a value, it would be unlikely to exceed the value of assets which would be admissible in the absence of the option but which are now to be left out of account on the grounds of excess aggregate exposure to ABC. In other words, the insurer holds an asset - which can never turn into a liability - which leaves it worse off than if it did not hold that asset!

Clearly, for the purposes of computing aggregate exposure, it cannot be sensible - let alone prudent - to assume that the option will be exercised in full. On the other hand, bearing in mind the argument in paragraph 130, it would certainly be prudent to assume that exposure is increased. The solution is to assume that the option is exercised in part. to the extent that the admissibility position is no less favourable than if the insurer simply disregarded the option. Following this analysis, the aggregate exposure in this example would be slightly in excess of 2.5%, the excess being equal to the current value of the entire option. The value of the option would be cancelled out by the value of the admissible assets left out of account.

136 **Effect on admissibility of the underlying holdings - Example 5**

Same as Example RR, except that insurer has written a put option (rather than purchased a call option).

The analysis is more straightforward than the example in paragraph 135 above. Again Case C of paragraph 129 applies. However, in this case, it is clearly prudent to assume that the option will be exercised. The aggregate exposure to ABC would be 5%. The company must leave out of account not only its 1% holding in ABC but also a further 1.5% of assets which would otherwise be admissible.

The Effect On Admissibility Of Closing Out A Derivative Contract.

137 While the closing out of a derivative contract eliminates the market risk associated with that contract, it does not of itself eliminate the credit risk to the original counterparty. In general, therefore, closure will cancel the impact of the derivative on aggregate exposure to the underlying assets. But the company's aggregate exposure to the original counterparty will not be affected by closure.

138 Even where a contract is closed out with the original counterparty, the credit risk can not necessarily be taken to be eliminated. This will only be achieved if the closing-out transaction is drawn up in such a way as to provide for the legal right of offset between amounts due under the two contracts.