

Chapter 3

Market risk

3.2 Derivatives in insurance

Application

- 3.2.1** **R** This section applies to an *insurer*, unless it is:
- (1) a *non-directive friendly society*; or
 - (2) [deleted]
 - (3) [deleted]
 - (4) a *pure reinsurer*; or
 - (5) a *Solvency II firm*.
- 3.2.2** **G** [deleted]
- 3.2.3** **R**
- (1) This section applies to a *firm* in relation to the whole of its business, except where a particular provision provides for a narrower scope.
 - (2) Where a *firm* carries on both *long-term insurance business* and *general insurance business*, this section applies separately to each type of business.
- 3.2.3A** **G** [deleted]

Purpose

- 3.2.4** **G** *PRA Rulebook: Non-Solvency II firms: Insurance Company – Capital Resources 13* provides that a *derivative, quasi-derivative or stock lending transaction* will only be an *admissible asset* if it is approved. This section sets out the criteria for determining when a *derivative, quasi-derivative or stock lending transaction* is approved for this purpose. ■ INSPRU 3.2.5 R to ■ INSPRU 3.2.35 R set out the criteria for *derivatives and quasi-derivatives*. ■ INSPRU 3.2.36 R to ■ INSPRU 3.2.41 R set out the criteria for *stock lending transactions*.

Derivatives and quasi-derivatives

- 3.2.5** **R** For the purpose of *PRA Rulebook: Non-Solvency II firms: Insurance Company – Capital Resources 13 (Admissible assets in insurance)*, and also in relation to *permitted links*, a *derivative or quasi-derivative* is approved if:

- (1) it is held for the purpose of efficient portfolio management (■ INSPRU 3.2.6 R to ■ INSPRU 3.2.7 R) or reduction of investment risk (■ INSPRU 3.2.8 R to ■ INSPRU 3.2.13 G);
- (2) it is covered (■ INSPRU 3.2.14 R to ■ INSPRU 3.2.33 G); and
- (3) it is effected or issued:
 - (a) on or under the rules of a *regulated market*; or
 - (b) off-market with an *approved counterparty* and, except for a forward transaction, on approved terms and is capable of valuation (■ INSPRU 3.2.34 R to ■ INSPRU 3.2.35 R).

3.2.5A

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- (1) *PRA Rulebook: Non-Solvency II firms: Insurance Company – Capital Resources 13.3* requires *firms* to consider first whether an asset is a *derivative* or *quasi-derivative* transaction notwithstanding that it is also capable of falling within one or more other categories in *PRA Rulebook: Non-Solvency II firms: Insurance Company – Capital Resources 13.1*. If it is a *derivative* or *quasi-derivative* transaction it is only admissible if it satisfies the conditions for it to be approved under ■ INSPRU 3.2.5 R. *Firms* should be able to justify whether or not their assets are *derivatives* or *quasi-derivatives*.
- (2) A *quasi-derivative* is defined as a contract or asset that has the effect of a *derivative* contract. *Quasi-derivatives* may be regarded as those contracts or assets which are not *derivatives* but which effectively contain an embedded *derivative* component which significantly impacts the contracts or assets cash flow and risk profile so as to mirror the economic effect of a *derivative*. A *derivative* is defined in the *Glossary* as a *contract for differences*, a *future* or an *option* and includes a *securitised derivative*, which is an *option* or *contract for differences* that is *listed*. A *securitised derivative* may also be a *debenture*.
- (3) A deposit with interest or other return calculated by reference to an index or other factor is excluded from the definition of *contract for differences* by article 85(2) of the *Regulated Activities Order*. However, if the return on the deposit is in the nature of that on a *derivative* (for example, an *option* or a *future*) then the deposit is a *quasi-derivative*.
- (4) A holding in a fund investing in *derivatives* may or may not be a *quasi-derivative* depending on its ongoing investment policy and governance and any investment decisions from time to time which might deviate significantly from the investment policy. It should be treated as a *quasi-derivative* if its risk profile is such that the value of *units* in the fund is expected to mirror the value of a *derivative*.
- (5) The assets in the following list, which is illustrative and not exhaustive, all have features which could lead to their being assumed to be *quasi-derivatives*:
 - (a) a bond whose redemption proceeds are directly linked to the performance of the FTSE 100 index but with a guaranteed minimum;
 - (b) an investment fund that is managed to give high leverage that mirrors a call option;

- (c) an investment whose value it is reasonably foreseeable could become negative; and
- (d) a credit-linked note, that is, a security with an embedded credit default swap.

Efficient portfolio management

3.2.6

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A *derivative* or *quasi-derivative* is held for the purpose of efficient portfolio management if the *firm* reasonably believes the *derivative* or *quasi-derivative* (either alone or together with any other covered transactions) enables the *firm* to achieve its investment objectives by one of the following (or, in relation to *permitted links*, in a manner which includes but is not limited to):

- (1) generating additional capital or income in one of the ways described in ■ INSPRU 3.2.7 R; or
- (2) reducing tax or investment cost in relation to *admissible assets* or *permitted links*; or
- (3) acquiring or disposing of rights in relation to *admissible assets* or *permitted links*, or their equivalent, more efficiently or effectively.

Generation of additional capital or income

3.2.7

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The generation of additional capital or income falls within ■ INSPRU 3.2.6R (1) where it arises from:

- (1) taking advantage of pricing imperfections in relation to the acquisition and disposal (or disposal and acquisition) of rights in relation to assets the same as, or equivalent to, *admissible assets* or *permitted links*; or
- (2) receiving a premium for selling a covered call *option* or its equivalent, the underlying of which is an *admissible asset* or *permitted link*, even if that additional capital or income is obtained at the expense of surrendering the chance of greater capital or income.

Reduction of investment risk

3.2.8

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A *derivative* or *quasi-derivative* is held for the purpose of reducing investment risk if the *derivative* or *quasi-derivative* (either alone or together with other fully covered transactions) reduces any aspect of investment risk without significantly increasing any other aspect of that risk.

Significant increase in risk

3.2.9

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For the purposes of ■ INSPRU 3.2.8 R, an increase in risk from a *derivative* or *quasi-derivative* is significant unless:

- (1) relative to any reduction in investment risk it is both small and reasonable; or
- (2) the risk is remote.

3.2.10 **G** ■ INSPRU 3.2.8 R does not require that a *derivative* or *quasi-derivative* has no possible adverse consequences. Often a *derivative* or *quasi-derivative* is effected to protect against a severe adverse consequence that only arises in one circumstance. In all other circumstances it may itself lead to adverse consequences, even if only because it expires worthless resulting in the loss of the purchase price. Conversely a *derivative* or *quasi-derivative* may reduce risk in a wide range of circumstances but lead to adverse consequences when a particular circumstance arises, e.g. the default of the *counterparty*. Only rarely does a *derivative* or *quasi-derivative* give rise to no adverse consequences in any circumstances. The test is merely that the increase in risk should not be significant, that is it should be both small and reasonable, or the risk should be remote.

3.2.11 **G** [deleted]

Investment risk

3.2.12 **R** For the purposes of ■ INSPRU 3.2.8 R, investment risk is the risk that the assets held by a *firm*:

- (1) (where they are *admissible assets* held by the *firm* to cover its *technical provisions*) might not be:
 - (a) of a value at least equal to the amount of those *technical provisions* as required by *PRA Rulebook: Non-Solvency II firms: Insurance Company – Technical Provisions, 4*; or
 - (b) of appropriate safety, yield and marketability as required by *PRA Rulebook: Non-Solvency II firms: Insurance Company – Technical Provisions, 6.2(1)*; or
 - (c) of an appropriate currency match as required by *PRA Rulebook: Non-Solvency II firms: Insurance Company – Risk Management, 3.2*;
- (2) (where they are held to cover *index-linked liabilities*) might not be appropriate cover for those liabilities as required by ■ INSPRU 3.1.58 R; and
- (3) (where they are held to cover *property-linked liabilities*) might not be appropriately selected in accordance with contractual and constructive liabilities and appropriate cover for those liabilities as required by *PRA Rulebook: Non-Solvency II firms: Insurance Company – Risk Management*, in particular the definition of ‘investment risk’.

3.2.13 **G** In assessing whether investment risk is reduced, the impact of a transaction on both the assets and liabilities should be considered. In particular, where the amount of liabilities depends upon the fluctuations in an index or other factor, investment risk is reduced where assets whose value fluctuates in the same way match those liabilities. In appropriate circumstances this may include:

- (1) a *derivative* or *quasi-derivative* that is linked to the same index as the liabilities from the index-linked contracts; and

- (2) a *derivative* or *quasi-derivative* whose value depends upon the factors which give rise to general insurance claims, e.g. a weather *quasi-derivative*.

Cover

3.2.14

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A *firm* must cover an obligation to transfer assets or pay monetary amounts that arises from:

- (1) a *derivative* or *quasi-derivative*; or
- (2) a contract (other than a *contract of insurance*) for the purchase, sale or exchange of assets.

3.2.15

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An obligation to transfer assets or pay monetary amounts (see ■ INSPRU 3.2.14 R) must be covered:

- (1) by assets, a liability or a provision (see ■ INSPRU 3.2.16 R to ■ INSPRU 3.2.24 R); or
- (2) by an offsetting transaction (see ■ INSPRU 3.2.25 R to ■ INSPRU 3.2.27 R).

3.2.16

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An obligation to transfer assets (other than *money*) or to pay monetary amounts based on the value of, or income from, assets is covered if the *firm* holds:

- (1) those assets; or
- (2) in the case of an index or basket of assets, a reasonable approximation to those assets.

3.2.17

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An obligation to pay a monetary amount (whether or not falling in ■ INSPRU 3.2.16 R) is covered if:

- (1) the *firm* holds *admissible assets* or *permitted links* that are sufficient in value so that the *firm* reasonably believes that following reasonably foreseeable adverse variations (relying solely on cashflows from, or from realising, those assets) it could pay the monetary amount in the right currency when it falls due; or
- (2) the obligation to pay the monetary amount is offset by a liability. An obligation is offset by a liability where an increase in the amount of that obligation would be offset by a decrease in the amount of that liability; or
- (3) a provision at least equal to the value of the assets in (1) is implicitly or explicitly set up. A provision is implicitly set up to the extent that the obligation to pay the monetary amount is recognised under *PRA Rulebook: Non Solvency II firms: Insurance Company – Overall Resources and Valuation*, in particular chapters 3-7, either by offset against an asset or as a separate liability. A provision is explicitly set up if it is in addition to an implicit provision.

- 3.2.18** **R** A *firm* must implicitly or explicitly set up a provision equal to the value of the assets or offsetting transactions held to cover a non-approved *derivative* or *quasi-derivative* transaction.
- 3.2.19** **G** A *firm* is required to cover a *derivative* under ■ INSPRU 3.2.14R whether it satisfies the other conditions for approval under ■ INSPRU 3.2.5R or not. Under ■ INSPRU 3.2.17R a *firm* may cover an obligation to pay a monetary amount by setting up a provision. If the *derivative* is not covered at any time by other means then a provision needs to be set up to complete the cover taking into account obligations to pay monetary amounts that would arise if, for example, an obligation to transfer assets could not be met in full. By doing so, a *derivative* becomes covered. If it satisfies the other conditions under ■ INSPRU 3.2.5R it is an *approved derivative* and may be taken into account for solvency purposes to the extent permitted by the large exposure limits and market risk and counterparty limits.
- 3.2.20** **G** Exposure to a transaction includes exposure that arises from a right at the *firm's* (or its *subsidiary undertaking's*) option to dispose of assets.
- 3.2.21** **G** Cover serves three purposes. First, it protects against exposure to loss from the transaction which is being covered. The value of the cover increases (or if the cover is a liability the amount of that liability decreases) to match any increase in obligations under the transaction.
- 3.2.22** **G** The second purpose of cover is that it prevents excessive gearing in the investment portfolio by the use of *options* and their equivalent. A *firm* is required to cover all obligations under an admissible transaction including obligations that would arise only at the option of the *firm*, e.g. the liability to pay the exercise price under a bought *option*.
- 3.2.23** **G** The third purpose of cover is that it protects against the risk that the *firm* may not be able to deliver assets (including *money* in any currency) of the right type when the obligation falls due under the transaction. An obligation to deliver assets is covered only if the *firm* holds those assets or has entered into an offsetting transaction that would deliver those assets when needed. An obligation to pay *money* is offset only if the *firm* holds cash in the right currency, its equivalent or assets that could reliably be converted into cash in the right currency.
- 3.2.24** **R** Cover used for one transaction must not be used for cover in respect of another transaction or any other agreement to acquire, or dispose of, assets or to pay or repay *money*.

Offsetting transactions

- 3.2.25** **R** An offsetting transaction means:
- (1) an *approved derivative*, *approved stock lending transaction* or an *approved quasi-derivative*; or

(2) a covered transaction with an *approved counterparty* for the purchase of assets.

3.2.26 **R** A transaction offsets an obligation to transfer assets away from the *firm* only if it provides for the transfer to the *firm* of those assets, or their value, at the time, or before, the obligation falls due.

3.2.27 **R** A transaction offsets an obligation to pay a monetary amount only if it provides for that monetary amount to be paid to the *firm* at or before the earliest date on which the obligation might fall due.

Lending and borrowing assets

3.2.28 **R** Assets that have been lent by the *firm* are not available for cover, unless:

- (1) they are non-monetary assets that have been lent under a transaction that fulfils the conditions in ■ INSPRU 3.2.36 R; and
- (2) the *firm* reasonably believes the assets to be obtainable (by return or re-acquisition) in time to meet the obligation for which cover is required.

3.2.29 **R** Assets that have been borrowed by the *firm* are not available for cover except as allowed by ■ INSPRU 3.2.30 R.

3.2.30 **R** Borrowed *money* may be used as cover only where:

- (1) the *money* has been advanced or an *approved credit institution* has committed itself to advance the *money*; and
- (2) the borrowing is or would be covered.

3.2.31 **G** ■ INSPRU 3.2.30 R in effect allows borrowings to be used to bridge the gap between an obligation under a transaction that might fall due at one date and cash or its equivalent that would only become due at a later date. Borrowings may not be used to gear the investment portfolio.

Examples of cover requirements

3.2.32 **G** Examples of cover by assets for the purposes of ■ INSPRU 3.2.16 R:

- (1) a bought put *option* (or a sold call *option*) on 1000 1 *shares* (fully paid) of ABC plc is covered by an existing holding in the fund of 1000 1 *shares* (fully paid) of ABC plc;
- (2) a bought call *option* (or sold put *option*) on 1000 ordinary 1 *shares* (fully paid) of ABC plc is covered by cash (or its equivalent) which is sufficient in amount to meet the purchase price of the *shares* on exercise of the *option*;
- (3) a bought or sold *contract for differences* on short-dated sterling is covered by cash (or its equivalent), the value of which together at

least match the notional principal of the contract. For example, a LIFFE short sterling contract, or a successive series of such contracts, is covered by 500,000; and

- (4) a sold *future* on the FT-SE 100 index is covered by holdings of equities, which satisfy the reasonable approximation test for cover in ■ INSPRU 3.2.16R (2) in relation to that *future*, and the values of which together at least match the current mark to market valuation of the *future*. For example, if the multiplier per full point is 10, and if the eventual obligation under the *future* is currently 2800, the valuation of the *futures* position is $2800 \times 10 = 28,000$.

- 3.2.33 **G** Examples of cover by offsetting transactions for the purpose of ■ INSPRU 3.2.25 R would include a bought *future* which is guaranteed to deliver to the *firm* at the relevant time sufficient assets to cover liabilities under a sold call *option*.

Off-market transactions

- 3.2.34 **R** For the purpose of ■ INSPRU 3.2.5R (3)(b), a *derivative* or *quasi-derivative* is on approved terms only if the *firm* reasonably believes that it could, in all reasonably foreseeable circumstances and under normal market conditions, readily enter into a further transaction with the *counterparty* or a third party to close out the *derivative* or *quasi-derivative* at a price not less than the value attributed to it by the *firm*, taking into account any valuation adjustments or reserves established by the *firm* under PRA Rulebook: Non-Solvency II firms: Insurance Company – Overall Resources and Valuation, in particular chapter 7.

- 3.2.34A **G** In considering whether the first transaction could be readily closed out in all reasonably foreseeable circumstances under normal market conditions, the *firm* should satisfy itself that it cannot reasonably foresee any circumstances in which it would need to close out all or part of the contract at a few days' notice, and would not be able to do so.

- 3.2.35 **R** For the purpose of ■ INSPRU 3.2.5R (3)(b), a *derivative* or *quasi-derivative* is capable of valuation only if the *firm*:
- (1) is able to value it with reasonable accuracy on a reliable basis in compliance with PRA Rulebook: Non-Solvency II firms: Insurance Company – Overall Resources and Valuation, 3.1; and
 - (2) reasonably believes that it will be able to do so throughout the life of the transaction.

- 3.2.35A **G** The purpose of ■ INSPRU 3.2.34 R and ■ INSPRU 3.2.35 R is to ensure the appropriate application of PRA Rulebook: Non-Solvency II firms: Insurance Company – Overall Resources and Valuation, to *derivatives* and *quasi-derivatives* effected or issued off-market with an *approved counterparty*.

Stock lending

3.2.36

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- (1) For the purposes of *PRA Rulebook: Non-Solvency II firms: Insurance Company – Capital Resources 13 (Admissible assets in insurance)*, a *stock lending* transaction (including a *repo* transaction) is approved if:
- (a) the assets lent are *admissible assets*;
 - (b) , the *counterparty* is an *authorised person*, an *approved counterparty*, a *person* registered as a broker-dealer with the Securities and Exchange Commission of the United States of America or a bank, or a branch of a bank, supervised, and authorised to deal in investments as principal, with respect to *OTC derivatives* by at least one of the following federal banking supervisory authorities of the United States of America:
 - (i) the Office of the Comptroller of the Currency;
 - (ii) the Federal Deposit Insurance Corporation;
 - (iii) the Board of Governors of the Federal Reserve System; and
 - (c) adequate and sufficiently immediate *collateral* (■ INSPRU 3.2.38 R to ■ INSPRU 3.2.41 R) is obtained to secure the obligation of the *counterparty*.
- (2) ■ INSPRU 3.2.36R (1)(c) does not apply to a *stock lending* transaction made through Euroclear Bank SA/NV's Securities Lending and Borrowing Programme.

3.2.36A

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- (1) For the purposes of the *rules on permitted links*, a *stock lending* transaction (including a *repo* transaction) is approved if:
- (a) the assets lent are *permitted links*;
 - (b) the *counterparty* is an *authorised person*, an *approved counterparty*, a *person* registered as a broker-dealer with the Securities and Exchange Commission of the United States of America or a bank, or a branch of a bank, supervised, and authorised to deal in investments as principal, with respect to *OTC derivatives* by at least one of the following federal banking supervisory authorities in the United States of America:
 - (i) the Office of the Comptroller of the Currency;
 - (ii) the Federal Deposit Insurance Corporation;
 - (iii) the Board of Governors of the Federal Reserve System; and
 - (c) adequately and sufficiently immediate *collateral* (■ INSPRU 3.2.38 R to ■ INSPRU 3.2.41 R) is obtained to secure the obligation of the *counterparty*; and
 - (d) provided that, for the purposes of *property-linked assets* only:
 - (i) where the *linked policyholder* bears the whole of the risk associated with the *stock lending* transaction, they must receive the whole of the recompense (net of fees and expenses);
 - (ii) the extent of any risk that the *linked policyholder* bears in relation to the *stock lending* transaction must be disclosed to them; and

(iii) where the risk associated with the *stock lending* transaction is borne outside the *linked fund*, the *linked fund* should receive a fair and reasonable recompense for the use of the *linked policyholders'* funds.

(2) ■ INSPRU 3.2.36R (1)(c) does not apply to a *stock lending* transaction made through Euroclear Bank SA/NVs Securities Lending and Borrowing Programme.

3.2.37 **G** ■ INSPRU 3.2.36 R refers only to *stock lending* transactions where the *firm* is the lender. There are no special *rules* for a transaction under which the *firm* borrows securities.

Collateral

3.2.38 **R** For the purposes of ■ INSPRU 3.2.36R (1)(c), *collateral* is adequate only if it:

- (1) is transferred to the *firm* or its agent or, in the case of a letter of credit, meets the conditions described in ■ INSPRU 3.2.38A R;
- (2) is, at the time of the transfer or, in the case of a letter of credit, at the time of issue, at least equal in value to the value of the securities transferred, or consideration provided, by the *firm*; and
- (3) is of adequate quality.

3.2.38A **R** The conditions referred to in ■ INSPRU 3.2.38R (1) are that the letter of credit is:

- (1) direct, explicit, unconditional and irrevocable; and
- (2) issued by an *undertaking* which is:
 - (a) not a *related undertaking* of the *counterparty*; and
 - (b) either an *approved credit institution* or a bank, or a branch of a bank, whether chartered by the federal government of the United States of America or a US state, that is supervised and examined by at least one of the following US federal banking supervisory authorities:
 - (i) the Office of the Comptroller of the Currency;
 - (ii) the Federal Deposit Insurance Corporation;
 - (iii) the Board of Governors of the Federal Reserve System

3.2.39 **G** For the purposes of assessing adequate quality in ■ INSPRU 3.2.38R (3), reference should be made to the criteria for credit risk loss mitigation set out in ■ INSPRU 2.1.16 R. The valuation rules in *PRA Rulebook: Non-Solvency II firms: Insurance Company – Overall Resources and Valuation* apply for the purpose of determining the value of both *collateral* received, and the *securities* transferred, by the *firm*. In addition, where *collateral* takes the form of assets transferred, under the *rules* in the *PRA Rulebook: Non-Solvency II firms: Insurance Company – Capital Resources 13* any such asset that is not an *admissible asset* does not have a value.

- 3.2.40** **R** For the purposes of ■ INSPRU 3.2.36R (1)(c), *collateral* is sufficiently immediate only if:
- (1) it is transferred or, in the case of a letter of credit, issued before, or at the same time as, the transfer of the *securities* by the *firm*; or
 - (2) it will be transferred or, in the case of a letter of credit, issued, at latest, by the close of business on the day of the transfer.
- 3.2.41** **R** *Collateral* continues to be adequate only if its value is at all times at least equal to the value of the *securities* transferred by the *firm*. This will be satisfied in respect of *collateral* where the validity of the *collateral* or the *firm's* interest in the *collateral* is about to expire or has expired if sufficient *collateral* will again be transferred or issued at the latest by the close of business on the day of expiry.
- 3.2.42** **G** References in ■ INSPRU 3.2.40R (2) and ■ INSPRU 3.2.41 R to the close of business on the day of the transfer or the day of expiry are to close of business on that day in all time regions.