

Guide on the Use of Financial Derivative Instruments for Unit Trusts and Mutual Funds

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Chapter 1 - Introduction

1. This Guide on the use of Financial Derivative Instruments for Unit Trusts and Mutual Funds (the “Derivative Guide”) is prepared by the Investment Products Division of the Securities and Futures Commission (the “SFC”). With reference to 7.26 of the Code on Unit Trusts and Mutual Funds (“UT Code”), this Derivative Guide aims to provide basic information and general guidance to market practitioners on the use of financial derivative instruments¹ (“derivatives”), including the calculation of net derivative exposure (as defined in the UT Code), for schemes authorized by the SFC (“SFC-authorized schemes” or “schemes”) in their compliance with the relevant requirements under the UT Code.
2. In this Derivative Guide, the UT Code refers to the Code on Unit Trusts and Mutual Funds effective on 1 January 2019, following its gazettal, and as maybe updated and revised from time to time.
3. For the purpose of this Derivative Guide, UCITS schemes means (i) Undertakings for Collective Investment in Transferable Securities (UCITS) domiciled in France, Luxembourg, Ireland and the Netherlands, and (ii) collective investment schemes domiciled in the United Kingdom authorized as UK UCITS.
4. This Derivative Guide is for general reference and is not meant to be exhaustive. It may be updated and revised from time to time.
5. Compliance with all the requirements in this Derivative Guide does not necessarily mean an application will be accepted or authorization will be granted. An applicant should refer to the SFC Handbook for Unit Trusts and Mutual Funds, Investment-Linked Assurance Schemes and Unlisted Structured Investment Products (“Handbook”), UT Code and other guidance (including this Derivative Guide) issued by the SFC and seek professional advice in case of doubt.
6. Product providers (as defined in the UT Code) are encouraged to consult the Investment Products Division of the SFC if in doubt about any specific issues arising from the application or interpretation of the UT Code or this Derivative Guide. Please note that each application for authorization will be considered on a case-by-case basis.

¹ “Financial derivative instruments” refers to financial instruments which derive their value from the value and characteristics of one or more underlying assets (see 3.7A of the UT Code).

Chapter 2 – General matters

1. Hong Kong domiciled schemes should comply with all the relevant requirements on the use of derivatives that are set out in the UT Code. These include the limits on net exposure arising from the use of derivatives (“net derivative exposure”) in Chapter 7 and Chapter 8 of the UT Code². In calculating the net derivative exposure, derivatives acquired for investment purposes that would generate incremental leverage at fund portfolio level are converted into their equivalent positions in their underlying assets. Further guidance on the calculation of the net derivative exposure is set out in Chapter 3 of this Derivative Guide.
2. The SFC has been adopting a streamlined approach to the authorization of UCITS schemes. Having considered the local laws and regulations governing UCITS schemes and arrangements for cross-border cooperation and exchange of information, UCITS schemes from relevant jurisdictions are deemed to have generally complied in substance with the relevant provisions, including the requirements on the use of derivatives, under the UT Code. Please refer to the Application of the Code on Unit Trusts and Mutual Funds on UCITS Funds³ for details on the relevant provisions in the UT Code that are applicable to UCITS schemes.
3. All SFC-authorized schemes (i.e. Hong Kong and overseas domiciled schemes including UCITS schemes) must, in their product key facts statements (“KFS”)⁴, disclose the purpose of and the expected maximum net derivative exposure arising from derivatives investments⁵. In calculating the net derivative exposure for disclosure in the KFS, all SFC-authorized schemes should comply with the relevant requirements and guidance in this Derivative Guide. Further guidance on the disclosure of the use of derivatives is set out in Chapter 5 of this Derivative Guide.
4. Management companies should note that other than the calculation and monitoring of net derivative exposure, it remains the management company’s responsibility to establish an appropriate risk management framework to effectively monitor and measure the risks of the derivative positions of a SFC-authorized scheme (including, without limitation, market risk, liquidity risk, counterparty risk and operational risk) and the contribution of these risks to the overall risk profile of the scheme.
5. To ensure the disclosure on the net derivative exposure in the KFS is fair and not misleading, the management company should monitor the net derivative exposure of a scheme on an ongoing basis.

² The limit on net derivative exposure of a scheme authorized under Chapter 7 of the UT Code may not exceed 50% of its total net asset value (“NAV”). The respective limits on net derivative exposure for specialized schemes under Chapter 8 of the UT Code (if any) are set out in the relevant Chapters. For example, a scheme authorized under 8.9 of the UT Code is subject to the limit on net derivative exposure of not exceeding 100% of its NAV.

³ The Application of the Code on Unit Trusts and Mutual Funds on UCITS Funds is available at the SFC website: <https://www.sfc.hk/web/EN/faqs/publicly-offered-investment-product/application-of-the-code-on-unit-trusts-and-mutual-funds-on-ucits-funds.html>

⁴ Pursuant to 6.2A of the UT Code, an authorized scheme must issue a product KFS. Illustrative templates of the product KFS are available on the SFC website: <https://www.sfc.hk/web/EN/regulatory-functions/products/list-of-publicly-offered-investment-products/products-key-facts-statements.html>

⁵ Applications by funds under mutual recognition arrangements will be processed in accordance with the relevant circulars and guidance.

Chapter 3 – Calculation methodology of net derivative exposure

A. Conversion methodology

1. In calculating the net derivative exposure, derivatives acquired for investment purposes that would generate incremental leverage at the scheme portfolio level are converted into their equivalent positions in their underlying assets.
2. The use of derivatives under the following circumstances (“Excluded Circumstances”) may be excluded from the calculation of net derivative exposure:
 - 2.1 netting, hedging or risk mitigation;
 - 2.2 cash flow management;
 - 2.3 market access or exposure replication (without incremental leverage at the fund portfolio level)⁶; and
 - 2.4 investments in conventional convertible bonds.

Further guidance (including examples) on the Excluded Circumstances are set out in Part B under this Chapter.

3. When calculating the net derivative exposure of a scheme, the following steps should be applied.
 - 3.1 Identify all the derivatives positions and identify if there are any derivatives used under Excluded Circumstances.
 - 3.1.1 For the derivatives used under the Excluded Circumstances for the purposes of (i) cash flow management and (ii) market access or exposure replication (without incremental leverage at the fund portfolio level)⁶, as well as the derivatives embedded in conventional convertible bonds, the corresponding exposures may be excluded from the calculation provided that the relevant conditions as set out in Part B of this Chapter are met.
 - 3.1.2 For derivatives used for the purposes of netting, hedging or risk mitigation, any residual derivative exposure arising from these arrangements (e.g. an exposure being over-hedged) should be included in the calculation.
 - 3.2 Calculate the exposure of each individual derivative (including any embedded derivative) not involved in the Excluded Circumstances. Pursuant to 7.31 of the UT Code, derivatives that are embedded in a financial instrument should also be included in the calculation of net derivative exposure.
 - 3.3 Calculate the residual exposure after netting, hedging or risk mitigation arrangements as follows:
 - 3.3.1 calculate the exposure of each individual derivative (including any embedded derivative) used for the purposes of netting, hedging or risk mitigation;

⁶ This is not applicable to passively managed index funds (including ETFs) or structured funds. Please refer to paragraph 24 of this Chapter for details.

- 3.3.2 the exposures of derivatives under the netting, hedging or risk mitigation arrangements can be used to offset the corresponding derivative positions;
 - 3.3.3 if the netting, hedging or risk mitigation arrangement involves cash positions, the market value of cash positions can be used to offset the exposures of the derivative positions involved; and
 - 3.3.4 the absolute value of the resulting calculation is equal to the residual exposure after netting, hedging or risk mitigation arrangements.
- 3.4 The net derivative exposure of a scheme is calculated as the sum of:
- 3.4.1 the absolute value of the exposure of each individual derivative not involved under the Excluded Circumstances; and
 - 3.4.2 the absolute value of the residual exposure of each individual derivative used after netting, hedging or risk mitigation arrangements as described in paragraph 3.3 of this Chapter.
4. The calculation of exposure of each derivative should be converted into the base currency of the scheme by using the spot rate.
 5. Where a currency derivative has two legs that are not in the base currency of the scheme, the exposures of both legs must be taken into account in the calculation, except otherwise provided for under Part B of this Chapter.
 6. For the purpose of calculating the net derivative exposure, a look-through approach is not compulsory when a scheme invests in other schemes⁷.
 7. The conversion methods for calculating exposure for a non-exhaustive list of derivatives are set out in Annex 1 to this Derivative Guide.
 8. For non-standard derivatives not covered in Annex 1 to this Derivative Guide, the management company should exercise professional judgment with due skill, care and diligence in applying an appropriate method for the calculation. Such calculation method should generally be based on the market value of the equivalent position in the underlying asset, although the notional value or the price of the derivative may be used if it is more conservative.

B. Excluded Circumstances

9. As set out under paragraph 2 of this Chapter, derivatives which are used under the Excluded Circumstances may be excluded from the calculation of net derivative exposure. The overarching principles in relation to the use of derivatives under the Excluded Circumstances are as follows:
 - (a) the use of derivatives must be in line with a scheme's investment objectives and policies;
 - (b) no incremental leverage is created at the scheme's portfolio level as a result of the use of derivatives; and

⁷ Pursuant to 7.12 of the UT Code, a scheme which invests 90% or more of its total NAV in another single scheme will be authorized as a feeder fund. For the purpose of complying with the investment restrictions, the feeder fund and its master fund will be deemed a single entity.

- (c) there is no material change to the overall risk profile of the scheme (and in the case of netting, hedging and risk mitigation arrangements, management companies must also be able to demonstrate verifiable reduction of risk by the use of derivatives at the scheme's portfolio level).
10. With respect to the Excluded Circumstances where the use of derivatives is excluded from the calculation of net derivative exposure, the onus is on the management companies to demonstrate that the general overarching principles in paragraph 9 of this Chapter as well as the specific conditions relating to each Excluded Circumstance (under Part B of this Chapter) are fulfilled.

Netting, hedging or risk mitigation

11. Netting, hedging and risk mitigation arrangements may be taken into account to reduce the net derivative exposure of a scheme.
12. Netting arrangements are combinations of trades on derivatives and/or cash positions referring to the same underlying assets (in the case of derivatives, irrespective of the maturity dates of the derivatives), and where the trades are concluded with the sole aim of eliminating the risks linked to the positions taken through the other derivatives and/or cash positions.
13. A scheme may net positions:
- 13.1 between derivatives with the same underlying asset, even if their maturity dates are different; or
 - 13.2 between a derivative and the same corresponding underlying asset.
14. If a scheme proposes to net the positions of interest rate derivatives fully or partially in accordance with duration netting rules, which take into account the correlation between the maturity segments of the interest rate curve, the management company should consult the SFC in advance.
15. Hedging or risk mitigation arrangements are combinations of trades on derivatives and/or cash positions which do not necessarily refer to the same underlying asset, and where the trades are concluded with the sole aim of offsetting risks linked to the positions taken through the other derivatives and/or cash positions.
16. Hedging or risk mitigation arrangements may only be taken into account when calculating the net derivative exposure of a scheme if the principles set out under 7.25 of the UT Code are complied with. These principles are:
- 16.1 they are not aimed at generating any investment return;
 - 16.2 they are solely intended for the purpose of limiting, offsetting or eliminating the probability of loss or risks arising from the investments being hedged;
 - 16.3 although they may not necessarily reference to the same underlying assets, they should relate to the same asset class with high correlation in terms of risks and return, and involve taking opposite positions, in respect of the investments being hedged; and
 - 16.4 they exhibit price movements with high negative correlation with the investments being hedged under normal market conditions.

Hedging arrangements should be adjusted or re-positioned, where necessary and with due consideration on the fees, expenses and costs, to enable the scheme to meet its hedging objective in stressed or extreme market conditions.

17. Where the derivatives involved in the hedging or risk mitigation arrangements are not referenced to the same corresponding underlying assets being hedged, the following requirements should be met:
 - 17.1 such arrangements may only be adopted in the best interests of investors, with due consideration on the costs involved, where derivatives referenced to the same corresponding underlying assets are not available and/or the use of such derivatives is not cost effective;
 - 17.2 such arrangements should be used in a prudent and consistent manner with provable empirical evidence, demonstrating that such arrangements are efficient in limiting, offsetting or eliminating the risk of the scheme's portfolio;
 - 17.3 on an ongoing basis, the management companies should regularly monitor and review factors such as correlation, effectiveness of such arrangements as well as the economic linkage between the derivatives involved in such arrangement and the hedged positions;
 - 17.4 where such arrangements are deemed to be less effective, the management companies should consider other alternatives for the purposes of hedging or risk mitigation, and to take appropriate actions to limit the risks or exposure; and
 - 17.5 the residual risks are properly managed in all market circumstances.
18. Hedging or risk mitigation arrangements set out in paragraphs 16 and 17 of this Chapter are not applicable to exclude the derivative positions involved under market neutral or long/short investment strategies for the purpose of calculating net derivative exposure.
19. Illustrative examples on the use of derivatives relating to the Excluded Circumstance of netting, hedging or risk mitigation are set out in Part A of Annex 2 to this Derivative Guide.

Cash flow management

20. Cash flow management refers to the use of derivatives to adjust exposures of a scheme on a temporary and transient basis (e.g. for the purposes of (i) subscription or redemption management, (ii) portfolio rebalancing or asset allocation and (iii) securities settlement), as well as the acquisition of derivatives passively through corporate actions.
 - 20.1 When using derivatives to adjust exposures of a scheme, to qualify under the Excluded Circumstance of cash flow management, the overarching principles as set out under paragraph 9 of this Chapter must be fulfilled.
 - 20.2 When a scheme acquires derivatives passively through corporate actions, the exposures arising from such derivatives may be excluded from the calculation of net derivative exposure provided that the scheme does not intend to hold the derivatives for a prolonged period of time.
21. Illustrative examples on the use of derivatives relating to the Excluded Circumstance of cash flow management are set out in Part B of Annex 2 to this Derivative Guide.

Market access or exposure replication (without incremental leverage at the fund portfolio level)⁸

22. A scheme may use derivatives to (i) gain access to a restricted market or (ii) replicate the exposure of a particular investment or a basket of investments. Where the use of derivatives for such purposes does not create incremental leverage at the scheme's portfolio level as compared to a direct holding of the corresponding reference investment or basket of investments and meet the overarching principles as set out in paragraph 9 of this Chapter, it may be excluded from the net derivative exposure calculation⁸:

Swapping the economic exposure of a scheme's portfolio with other asset(s)

- 22.1 A derivative, which swaps the performance of financial asset(s) held in the scheme for the performance of other reference financial asset(s), is not taken into account when calculating the net derivative exposure if such derivative:
- 22.1.1 totally offsets the market risk of the swapped assets held in the scheme so that the scheme's performance does not depend on the performance of the assets swapped out; and
 - 22.1.2 does not include additional optional features, leverage or risks as compared to a direct holding of the reference financial asset(s).

Holding of derivatives with cash backing as equivalence to cash position of other asset(s)

- 22.2 A derivative is not taken into account when calculating the net derivative exposure if the following conditions are met:
- 22.2.1 the combined positions of (i) the derivative relating to financial asset(s) and (ii) cash or cash equivalents held by the scheme is equivalent to holding a cash position in the reference financial asset(s) – i.e. the relevant amount of cash and cash equivalents should be equal to the total underlying market value of the derivative involved; and
 - 22.2.2 the derivative is not considered to generate any incremental leverage or market risk.

The holding of cash and cash equivalents of an amount of (i) the mark-to-market value of the derivative involved or (ii) the margin or collateral required for the derivative cannot meet the condition under paragraph 22.2.1 of this Chapter. This arrangement is considered to create leverage at scheme's portfolio level and therefore cannot meet the overarching principle of the Excluded Circumstances under paragraph 9(b) of this Chapter.

23. For the purpose of paragraph 22.2.1 of this Chapter, cash and cash equivalents refer to (i) cash, (ii) short-term deposits, (iii) high quality money market instruments (see Note (1) to 7.36(j) of the UT Code) and (iv) money market funds authorized under 8.2 of the UT Code or regulated in a manner generally comparable with the requirements of the SFC and acceptable to the SFC.

⁸ This is not applicable to passively managed funds (including ETFs) or structured funds. Please refer to paragraph 24 of this Chapter for details.

24. Where a scheme is passively managed, the exposure arising from the use of derivatives for the purpose of market access or exposure replication should be included in the net derivative exposure calculation, regardless of whether or not incremental leverage at scheme's portfolio level will be created from the use of such derivatives.
25. Illustrative examples on the use of derivatives relating to the Excluded Circumstance of market access or exposure replication (without incremental leverage at the fund portfolio level) are set out in Part C of Annex 2 to this Derivative Guide.

Investment in conventional convertible bonds

26. The embedded derivative in a conventional convertible or exchangeable bond held by a scheme can be excluded from the net derivative exposure calculation if the following conditions are met:
 - 26.1 the scheme holds the conventional convertible or exchangeable bond as a single instrument and has no intention to (i) dispose the bond component by retaining the embedded derivative; or (ii) strip out the embedded derivative in the bond for trading; and
 - 26.2 the option (under the embedded derivative) to convert to other securities is exercisable by the scheme.

Debt instruments with loss-absorption feature may have embedded derivatives and may be converted to equity on the occurrence of a trigger event (e.g. contingent convertible debt securities). These instruments are not covered under this Excluded Circumstance and must be included in the calculation of net derivative exposure⁹.

27. Illustrative examples on the use of derivatives relating to the Excluded Circumstance of investment in conventional convertible bonds are set out in Part D of Annex 2 to this Derivative Guide.

⁹ Please refer to the questions under the section headed "Debt instruments with loss-absorption features" of the Frequently Asked Questions on Implementation and Transition Arrangements of the Code on Unit Trusts and Mutual Funds (Effective on 1 January 2019).

Chapter 4 – Specific applications

A. Structured funds

1. A scheme which is passively managed (including unlisted index funds, exchange-traded funds (“ETFs”), leveraged and inverse products (“L&I products”) and non-index linked structured funds) with net derivative exposure exceeding 50% of its NAV must comply with the requirements under Chapter 8.8 (structured funds) of the UT Code.
2. In determining whether a passively managed scheme may fall under Chapter 8.8 of the UT Code, the Excluded Circumstance regarding market access or exposure replication (without incremental leverage at the fund portfolio level) is not applicable (see paragraphs 2.3 and 24 of Chapter 3 of this Derivative Guide).

B. Embedded derivatives

3. An embedded derivative¹⁰ is a derivative that is embedded in another security, namely the host contract (see Note to 7.31 of the UT Code). The exposure of the embedded derivative should be included in the calculation of the net derivative exposure (unless otherwise provided for under Part B of Chapter 3 of this Derivative Guide).
4. Depending on the structure, asset-backed securities (“ABS”) (e.g. mortgage-backed securities, collateralized debt obligations) may or may not be regarded as derivatives.
 - 4.1 If the income and hence the value of an ABS come directly from the cash flows generated from a specified pool of underlying assets associated with the ABS, such ABS is considered as a securitization of its underlying assets and is not deemed as embedding a derivative.
 - 4.2 The underlying assets of an ABS should not be securitized financial instruments. If the underlying assets of an ABS are other ABS (for example, a collateralized debt obligation backed by other collateralized debt obligations), such ABS should be included in the calculation of net derivative exposure of the scheme.
 - 4.3 If the the income and hence the value of an ABS are derived with reference to, instead of coming directly from the cash flows of, a specified pool of underlying assets, such ABS is considered as a synthetic ABS embedded with a derivative. The embedded derivative should be taken into account in the calculation of net derivative exposure of the scheme.

C. Investment limitations and requirements

5. The exposure to underlying assets of derivatives, together with the other investments of the scheme, may not in aggregate exceed the corresponding investment restrictions or limitations applicable to such underlying assets and investments as set out in 7.1, 7.1A, 7.1B, 7.4, 7.5, 7.11, 7.11A, 7.11B and 7.14 of the UT Code (“Underlying Issuer Concentration Limits”) (see 7.27 of the UT Code).

¹⁰ Examples of securities that are generally considered as having embedded derivatives are equity linked notes and credit linked notes.

6. The following requirements apply for the purpose of calculating the Underlying Issuer Concentration Limits:-
 - 6.1 Netting arrangements in accordance with the conditions set out in paragraphs 12 and 13 of Chapter 3 of this Derivative Guide may be taken into account, that is:
 - 6.1.1 if a derivative is used for a netting arrangement which involves the other derivative position, the exposures of the derivative positions may be netted off with each other; and
 - 6.1.2 if a derivative is used for a netting arrangement which involves a cash position, the exposure of the derivative position may be netted off by the market value of the corresponding cash position.
7. For over-the-counter (“OTC”) derivatives held by a scheme, the limits on the net counterparty exposure as set out in 7.1, 7.1A and 7.28(c) of the UT Code apply (see Note (3) to 7.1 of the UT Code), irrespective of the purposes of the use of the OTC derivatives.
8. The requirements on (i) the counterparty of the OTC derivatives and (ii) the limit on the net counterparty exposure of an OTC derivative under 7.28(b) and 7.28(c) of the UT Code also apply to the embedded derivatives.
9. Subject to prior consultation with the SFC, an SFC-authorized scheme may reinvest the cash collateral received from sale and repurchase transactions in investments other than those set out in 7.36(j) of the UT Code if the following requirements are met:
 - 9.1 the re-investment, together with the scheme’s net derivative exposure, do not in aggregate exceed 50% of the scheme’s net asset value;
 - 9.2 the re-investment is consistent with the scheme’s investment objective and strategies;
 - 9.3 the re-investment is limited to securities which are sufficiently liquid and of good quality; and
 - 9.4 the re-investment is subject to the corresponding investment restrictions and limitations applicable to such investments or exposure as set out in Chapter 7 of the UT Code and complies with Notes (3) and (4) to 7.36(j) of the UT Code.

Re-investment of cash collateral received from sale and repurchase transactions in compliance with the above requirements shall not be subject to the limitation in 7.21 of the UT Code which allows borrowing of a scheme of up to 10% of the scheme’s net asset value.

Chapter 5 – Disclosure

1. All SFC-authorized schemes (i.e. Hong Kong or overseas domiciled schemes including UCITS schemes)¹¹ should disclose in their KFS the purposes of and expected maximum net derivative exposure arising from the use of derivatives . An illustrative disclosure in the KFS is set out below¹²:

Use of derivatives / investment in derivatives

- The fund will not use derivatives for any purposes.

Or

- The fund's net derivative exposure may be [up to 50%] / [more than 50% but up to 100%] / [more than 100%] of the fund's NAV.

2. The expected maximum leverage arising from derivatives investments should be derived from an assessment made under normal market conditions, taking into account the scheme's investment objectives and strategy.
3. Management companies are expected to exercise professional judgement with due skill, care and diligence in determining such expected maximum net derivative exposure, taking into account the specific features and risks of the scheme.
4. The net derivative exposure should be calculated in accordance with the requirements and guidance set out in Chapter 3 of this Derivative Guide.
5. Management companies should monitor the use of derivatives and the net derivative exposure of each scheme on an ongoing basis to ensure that the disclosure of the scheme's expected maximum net derivative exposure in the KFS is fair and not misleading. The scheme's net derivative exposure should be monitored daily. Depending on the investment strategies and portfolio composition of a scheme, as well as the specific market circumstances, management companies should assess whether an intra-day calculation is necessary. More frequent calculations may be required, for example, in time of increased market volatility or extreme market condition. It is the responsibility of the management company to exercise its professional judgement in deciding the monitoring policies and procedures that are appropriate for and proportionate to the scheme's use of derivatives.
6. A scheme's leverage arising from derivatives investments should not exceed the stated maximum threshold under normal market conditions. Where the threshold is exceeded due to market movements, the management company is expected to take all necessary steps to reduce the scheme's leverage within a reasonable period of time to ensure the disclosure is not misleading, while taking into account the interests of the scheme's investors.

¹¹ Applications by schemes under mutual recognition arrangements will be processed in accordance with the relevant circulars and guidance.

¹² See also the KFS illustrative templates posted on the SFC's website:
<https://www.sfc.hk/web/EN/regulatory-functions/products/list-of-publicly-offered-investment-products/products-key-facts-statements.html>

7. All Hong Kong domiciled schemes should comply with the financial reporting requirements pursuant to 11.6 and 11.6A of the UT Code and include in their financial reports the information required under Appendix E of the UT Code.
8. The SFC may also collect data or other information to conduct surveillance and monitoring on the use of derivatives by SFC-authorized funds where appropriate.

Annex 1 – Calculation method of net derivative exposure

Table 1: Conversion method for calculating exposure of a non-exhaustive list of derivatives

Types of derivatives	Conversion method
Futures	
Currency futures	Number of contracts x notional contract size
Interest rate futures	Number of contracts x notional contract size
Bond futures	Number of contracts x notional contract size x market price of the cheapest-to-deliver reference bond
Equity futures	Number of contracts x notional contract size x market price of underlying equity share
Index futures	Number of contracts x contract multiplier x index level
Plain vanilla options	
Plain vanilla currency option	Notional contract value of currency leg(s) x delta
Plain vanilla interest rate option	Notional contract value x delta
Plain vanilla bond option	Number of contracts x face value of reference bond x market price of reference bond x delta
Plain vanilla equity option	Number of contracts x number of equity share(s) x market price of underlying equity share x delta
Plain vanilla index option	Number of contracts x contract multiplier x index level x delta
Warrants or rights	Number of shares/bonds x market value of underlying referenced asset x delta
Swaps	
Currency swap	Notional value of currency leg(s)
Plain vanilla fixed/floating interest rate swap	Market value of underlying or notional value of the fixed leg
Basic total return swap	Underlying market value of reference asset(s)
Credit default swap	Protection buyer: Market value of the underlying reference asset Protection seller: The higher of the market value of the underlying reference asset or the notional value of the credit default swap
Contract for differences	Number of shares/bonds x market value of underlying referenced instrument

Types of derivatives	Conversion method
Forwards	
FX forward	Notional value of currency leg(s)
Forward rate agreement	Notional value or notional principal amount

Annex 2 – Illustrative examples of application of Excluded Circumstances

A) Netting, hedging or risk mitigation

1. The following non-exhaustive list of examples illustrates situations where the use of derivatives may fall under the Excluded Circumstance of netting, hedging or risk mitigation.

Currency exposure

- (a) A HKD-denominated scheme may enter into a EUR/HKD foreign currency forward contract (or cross-currency swap) to reduce the currency risk arising from its EUR-denominated investments, where the total exposure of such foreign currency forward contract (or cross-currency swap) does not exceed the total exposure of the EUR-denominated investments.

Note: To qualify as currency hedging, one leg of the currency derivatives used should be paired to the base currency of the scheme. As an alternative, the scheme may also use EUR/USD to manage the currency risk, provided that USD and HKD are pegged and the requirements on hedging or risk mitigation arrangements set out in paragraphs 16 and 17 of Chapter 3 of this Derivative Guide are met.

- (b) A HKD-denominated scheme may enter into a CNH/HKD foreign currency forward contract (or cross-currency swap) to reduce the currency risk of its CNY-denominated investments, where the total exposure of such foreign currency forward contract (or cross-currency swap) will not exceed the total exposure of the CNY-denominated investments.

Note: To qualify as currency hedging, one leg of the currency derivatives should be paired to the base currency of the scheme. CNY and CNH refer to the same currency (i.e. Renminbi) traded in the onshore and offshore markets respectively. Management company should closely monitor the price movements of CNY and CNH to ensure the requirements on hedging or risk mitigation arrangements set out in paragraphs 16 and 17 of Chapter 3 of this Derivative Guide are met, in particular, the use of CNH derivatives is effective in managing the CNY currency risk of the scheme's portfolio.

Interest rate exposure

- (c) A scheme may enter into a short position on bond futures in a highly correlated currency and with a similar duration to reduce the interest rate risk of a corporate bond, notwithstanding that the credit risk of the corporate bond will remain un-hedged.

Note: In determining whether the bond futures is having similar duration of the corporate bond, the yield curve risk between long-dated and short-dated fixed income instruments / interest rates derivatives should be taken into account.

- (d) A scheme may reduce the duration of its bond portfolio by entering into a short position on bond futures, whereby the price movements of the bond futures should be highly correlated with the movements of the relevant bond portfolio value.
- (e) A scheme may enter into an interest rate swap to reduce the interest rate risk of a bond portfolio by paying fixed and receiving floating rates in view of rising interest rate environment, or vice versa, where the exposure of the interest rate swap does not exceed the total exposure of the bond portfolio. The credit risk of the corporate bond may remain un-hedged.

Equity exposure

- (f) A scheme which primarily invests in equities in Market A may enter into a short position on Market A equity index futures contracts to manage the market risk of the scheme, where the use of the index futures contracts does not create material incremental leverage and there is demonstrable reduction of risk of the scheme.
- (g) An equity scheme which invests in Markets A, B and C (in a proportion of 30%, 30% and 40% respectively) may enter into short positions on a combination of equities index futures contracts on Markets A, B and C in the same proportion (i.e. 30%, 30% and 40% respectively) to manage the market risk of the scheme, where the use of the index futures contracts does not create material incremental leverage and there is demonstrable reduction of risk of the scheme.

Credit exposure

- (h) A scheme may purchase credit default swap related to the same issuer of a corporate bond held by the scheme to reduce the credit risk of the portfolio, notwithstanding that the interest rate risk of the portfolio will remain un-hedged.
- (i) A scheme investing in high yield bonds in emerging markets may use a credit default swap index with constituents with high correlation and economic linkage with the scheme's investments to manage the credit market risk of the portfolio, where the use of the credit default swap index does not create material incremental leverage and there is demonstrable reduction of risk of the scheme.

Roll-over of derivatives hedging

- (j) Referring to the example on currency hedging under paragraph 1(a) of this Annex, the HKD-denominated scheme enters into a new EUR/HKD foreign forward contract in view of the expiry of the existing forward contract for the continuation of hedging the currency risk in the EUR-denominated investments.

2. The following non-exhaustive list of examples illustrates situations which will not qualify as netting, hedging or risk mitigation arrangements in the calculation of net derivative exposure:

Writing covered call option

- (a) A strategy which is associated with an ETF investment held by a scheme by obtaining the option premium from selling a covered call option on that ETF or the index which the ETF tracks. This will not qualify as a netting, hedging or risk mitigation arrangement because the selling of call option may not exhibit high negative correlation price movements with the ETF investment held by the scheme when the price of the ETF investment drops (and therefore the principle under paragraph 16.4 of Chapter 3 of this Derivative Guide cannot be met).

Using derivatives to adjust a scheme's exposure to align with a benchmark (often referred as "benchmark hedging")

- (b) A portfolio management practice which uses foreign currency forward contracts to align the currency exposures of a portfolio with a "reference" benchmark. This will not qualify as a netting, hedging or risk mitigation arrangement because this strategy does not involve a hedged position held by the scheme.

B) Cash flow management

3. The following non-exhaustive list of examples illustrates situations where the use of derivatives arrangement may fall under the Excluded Circumstance of cash flow management.

Subscription and redemption management

- (a) When a large subscription order is received but the corresponding proceeds have not been settled, a scheme may take a long position on index futures contracts to gain market exposure in line with the scheme's investment objective. Such exposure through index futures contracts will not exceed the corresponding amount of the subscription order. In addition, such derivative position will be unwound in a timely manner.
- (b) During the period between the receipt and settlement of a large redemption order, a scheme may dispose its investment positions and keep cash with a view to meet the redemption request. At the same time, the scheme may enter into a long position in index futures contracts to maintain its exposure to market in line with the scheme's investment objective. Such exposure through index futures contracts will not exceed the corresponding amount of the redemption order. In addition, such derivative position will be unwound in a timely manner.

Portfolio rebalancing / asset allocation

- (c) A scheme (which invests in physical stocks globally) may rebalance its geographical allocation due to changes in the market outlook (e.g. shifting from Country A to Country B) by taking a short position on equity index futures in Country A (up to the amount of physical holding of stocks in Country A by the scheme) and taking a long position on equity index futures in Country B, where the long exposure on Country B index futures equals the short exposure on Country A index futures. Such derivative positions are only temporary and will be unwound in a timely manner upon the rebalancing of the physical equity investments of the scheme from Country A to Country B.

Securities settlement – use of currency forwards for settlement of securities transactions

- (d) A scheme may use foreign currency forward contracts to lock in the forward currency exchange rate in view of the upcoming settlement of purchase or sale of securities by the scheme. The amount of other currency involved in the foreign currency forward contracts would equal to the value of the securities denominated in such currency. The tenor of the foreign currency contracts would reflect the relevant securities settlement deadline. The actual delivery of the securities and currency should also occur by such settlement deadline.

Corporate actions – derivatives passively acquired through corporate actions

- (e) A scheme may passively obtain options from the issuer of a security held in the portfolio due to corporate action, and the scheme does not intend to hold the options for a prolonged period of time.

C) Market access or exposure replication (without incremental leverage at the fund portfolio level)¹³

4. The following non-exhaustive list of examples illustrates situations where the use of derivatives may fall under the Excluded Circumstance of market access or exposure replication (without incremental leverage at the fund portfolio level).

Swapping the economic exposure of a scheme's portfolio with other asset(s)

- (a) A scheme invests in a fully funded participation note to gain exposure to a stock in a restricted market. The participation note does not include additional features, leverage or market risk as compared to a direct holding of the underlying stock.
- (b) A scheme holds a part of its assets in equities in Market A. The scheme then enters into a derivative contract to swap the performance of those Market A equities held by the scheme with the performance of a basket of equities in Market B. The derivative instrument does not include additional features, leverage or market risk as compared to a direct holding of the referenced basket of equities in Market B.

Holding derivatives with cash positions as equivalence to cash position of other asset(s)

- (c) A scheme invests a part of its assets in index futures and hold cash and cash equivalents positions (including cash in margin account and short-term certificate of deposit), the aggregate amount of which is equal to the underlying market value of the index futures contract.
- (d) A scheme invests 90% of its NAV in physical securities and holds 10% of its net asset value in cash or cash equivalents for liquidity management on an ongoing basis. To avoid the out-of-market risk, the scheme invests in index futures with the underlying market value of the index futures contracts equal to the amount of the cash buffer held by the scheme (i.e.10% of the scheme's NAV).

D) Investment in conventional convertible bonds

5. The following example illustrates situation where the embedded derivatives in convertible or exchangeable bonds may be excluded from the calculation of the net derivative exposure.

- (a) A scheme intends to get credit exposure to Entity A by investing in a conventional convertible bond issued by Entity A (as Entity A does not issue any traditional plain bonds). The convertible bond is embedded with an option to convert to equities which is exercisable by the scheme. The scheme treats the convertible bond as a single instrument and does not intend to strip out the embedded option in the convertible bond for trading.

6. The following example illustrates situation where the embedded derivatives in convertible bonds should not be excluded from the calculation of the net derivative exposure.

- (a) A scheme invests in contingent convertible bonds or bail-in bonds (being debt securities with loss-absorption features), which may be written down or converted to equity when a pre-specified triggering event occurs. This does not satisfy one of the conditions of the Excluded Circumstance of investment in conventional bonds that the option to convert is exercisable by the scheme (see paragraph 26.2 of Chapter 3 of this Derivative Guide).

¹³ This is not applicable to passively managed funds (including ETFs) or structured funds. Please refer to paragraph paragraph 24 of Chapter 3 of this Derivative Guide for details.