Annex 1

Regulatory requirements on selling of accumulators

Classification of accumulators

In determining whether a product is classified as an accumulator, authorized institutions ("AIs") should make reference to the product features mentioned in this circular. While the product structures and features keep evolving, and there may not be a single definition that can fit all types of accumulators, the following paragraph provides general guidance but AIs should exercise professional judgment to reasonably classify accumulators for the purpose of complying with the relevant requirements.

> *"Accumulators/Decumulators, in general, are structured products which consist of a series of options/forward contracts within a single contract where customers, when writing the options or entering into the forward contracts, are obliged to purchase/sell a fixed sum of underlying asset(s) (e.g. stock(s), foreign currency(ies)) at a predetermined strike price periodically, within a specified period. The upside is usually "capped" (e.g. gain amount is capped, number of settlements with positive returns is limited when compared with those for losses, with knock-out features etc.). Accumulators/Decumulators, for the purpose of determining the applicability of the relevant regulatory requirements in this circular, may or may not have knock-out features or a multiplier."*

For illustration purpose, an example of a foreign exchange ("FX") structured product that should be classified as an accumulator according to the above guidance is provided in **Appendix A**.

Suitability assessment

As accumulators involve customers' writing of a series of options or entering into a series of forward contracts, they are derivative products and complex products associated with significant investment risks. AIs should adopt a cautious selling approach and sell accumulators only to Professional Investors[1]. AIs should assure themselves that the customers have the risk appetite for acquiring the underlying assets with leverage (where applicable), fully understand the nature and risks of the products, and have sufficient net worth to be able to assume the risks and bear the potential losses of trading in the products. AIs should ensure that an accumulator transaction is suitable for the customer in all the circumstances, irrespective of whether there is solicitation or recommendation.

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[1] As defined in Part 1 of Schedule 1 to the Securities and Futures Ordinance ("SFO").

AIs should take reasonable steps to establish customers' financial situation, investment experience and investment objectives, and assess the customers' knowledge of derivatives. As a general principle, AIs should sell accumulators only to customers with experience in investing in structured investment products or writing options. Exceptions should be strongly justified[2].

Product risk rating

Given that accumulators are associated with significant investment risks, AIs should in general assign the highest risk rating to such products. AIs should develop thorough understanding of accumulators during product due diligence and provide adequate training to staff to ensure that they are fully conversant with the characteristics, nature and extent of risks of the products.

Concentration risk

When considering the suitability of a transaction, AIs should ensure that the potential financial impact on the customer, particularly in adverse market conditions, is fully taken into account, in addition to the AIs' own credit risks and commercial interests. AIs should take into account the customer's total maximum exposure, i.e. using the full notional amount, for assessment of the customer's exposure to accumulators.

AIs should refrain from making any solicitation or recommendation of accumulator contracts to customers who already have high concentration in accumulator contracts (taking into account the customers' total maximum exposure as well as their ability to withstand losses and fulfil potential margin obligations under adverse market conditions) or in the specific underlying asset, e.g. a particular stock. Accordingly, guidance should be provided by AIs to their sales staff on the criteria for identifying such customers, and thresholds for specific accumulators should be set in assessing customer's concentration risk.

Transactions with mismatches or exceptions

Given the nature and structure of accumulators, there will be very little room to justify risk mismatch transactions. If there is any risk mismatch transaction at all, the transaction needs to be strongly justified and reviewed by a senior officer and/or an independent internal control unit (other than a credit control unit). For accumulator transactions with mismatches or exceptions, AIs are reminded to comply with the controls required in the HKMA's circular on "Investor Protection Measures in respect of Investment, Insurance and Mandatory

[2] For example, an exception may be made for customers who have high risk tolerance and their maximum exposure to accumulators represents only an insignificant portion of their portfolios with the AIs; or for selling FX accumulators to customers for hedging of their risk exposure, subject to proper controls within the AIs to safeguard the customers' interests.

Provident Fund Products" of 25 September 2019. AIs should ensure that transactions with mismatches or exceptions are subject to prudent policies and control procedures, clear guidance to staff, adequate compliance review and management supervision, as well as proper audit trail to demonstrate compliance.

Provision of alternatives and rationale for investing in accumulators

In view of the complex structure and significant risks of accumulators, AIs should provide customers with reasonable alternative investment products with lower risks and/or less complex structure for addressing their investment needs. Selling of accumulators to customers should be justified with specific grounds recorded, in particular the rationale for investing in accumulators instead of reasonable alternative investment products, given the risk return profile of accumulators and the customers' personal circumstances. AIs should obtain the customers' acknowledgement of such investment rationale and maintain proper audit trail.

When dealing with a Sophisticated Professional Investor[3] ("SPI") under the Streamlined Approach where the Product Category is accumulators, AIs can comply with the requirements of providing reasonable alternative investment products with lower risks and/or less complex structure for addressing the customer's investment needs, recording the rationale for investing in accumulators rather than such alternative investment products and obtaining the customer's acknowledgment of such rationale through the provisions in the Product Category Information Statement provided to the SPI.

Product disclosure

AIs should provide sufficient information on the key nature, features and risks of accumulators to enable the customers to understand the product before making an investment decision, and provide prominent and clear warning statement(s) about the product to the customers prior to and reasonably proximate to the point of sale or advice. Reference can be made to a non-exhaustive list of examples of the minimum information and types of warning statements in the guidance "Minimum information to be provided and warning statements" issued by the Securities and Futures Commission ("SFC"), where relevant.

AIs should properly disclose and explain to the customers the key features and risks of accumulators. Accumulators, for example, should not be misrepresented or described as mere schemes of buying/ accumulating the underlying asset on discount throughout the contract period as this is not the case. AIs should ensure that their sales staff always present balanced views, drawing the customers'

[3] Referred to in the joint circular on "Streamlined approach for compliance with suitability obligations when dealing with sophisticated professional investors" of 28 July 2023 issued by the HKMA and the Securities and Futures Commission.

attention to the structure, disadvantages and downside risks (including the worst case scenario) as well. Moreover, AIs should have adequate arrangements to ensure that the key product features and risks as well as the terms and conditions of the accumulator contract and the related credit facility/ margin requirements are clearly disclosed and explained to the customers in the language and manner that they understand.

In addition to market risk of the underlying asset and counterparty risk of the contract counterparty, the key features and risks of the accumulator that should be specifically disclosed to the customers include but are not limited to the following (where applicable):

(a) Knock-out:

- For those accumulator contracts that have a knock-out clause, AIs should clearly disclose to the customers that when the market price of the underlying asset is at or above the knock-out price, the accumulator contract will terminate (i.e. the customers will cease to accumulate any further underlying asset from the knock-out date). The customers' potential profit is therefore capped by the knock-out feature.

(b) Potential losses are magnified and could be very substantial:

- The customers may suffer substantial loss as they are bound by the accumulator contract to take up periodically (e.g. daily) the agreed amount of the underlying asset (at the strike price) when the market price falls below the strike price.
- AIs should draw to their customers' particular attention any "multiplier" condition (i.e. the customers are required to take up twice or multiple times of the agreed amount of the underlying asset when the market turns against them) and the customer's maximum exposure after fully taking into account the "multiplier" condition.
- For customers to make well informed decisions, AIs should also inform the customers of their total maximum exposure arising from the proposed contract together with all other outstanding accumulator contracts of the same underlying asset type (e.g. all stock accumulator contracts or all FX accumulator contracts).
- AIs should ensure that their customers are aware that they may not be able to early terminate the accumulator contracts, and even if the AIs consent to the customers' request for early termination, the customers will likely need to bear unexpectedly high exit costs and losses.
- In case of stock accumulators, AIs should alert their customers that the share price of a company could move substantially in particular on corporate specific news/developments and this could pose significant risk to the customers. Similarly, for FX accumulators or stock accumulators involving exposure to a foreign currency, the exchange rate of the relevant foreign currency may go up or down.

(c) Contract tenor:

- AIs should make sure that the customers are aware of the contract tenor and the implications of a long contract period. In order to facilitate the customers' decision of the contract tenor, AIs should explain to the customers that accumulator contracts with a longer tenor will be associated with higher risks and usually higher costs of early termination.

(d) Additional risks associated with margin trading or use of credit facility:

- For customers who plan to enter into accumulator transactions on a margin basis or with the use of credit facility, AIs should disclose clearly to the customers that they need to be prepared for paying interest costs for the margin/credit facility and meeting margin calls which require them to make top-up payments to cover the full marked-to-market losses for the remaining period of the contract. Such payment could be substantial in poor market conditions and/or when the contract has a long remaining period.
- In addition, AIs should explain to the customers that in poor market conditions, the customers may have to meet margin calls at short notice while their abilities to make top-up payments may be much worse than during normal times, due to the significant fall in market value of other financial assets. If AIs reserve absolute discretion to raise the margin level, they should inform the customers of this fact, as this could add further liquidity pressure on the customers.
- AIs should ensure that their customers understand that when they fail to meet margin calls, the contracts may be closed out without the customers' consent and the customers will have to bear the consequential losses and costs which could be very substantial.
- When an AI intends to reduce or stop another existing credit facility (e.g. trade finance facility) of a customer to cover the AI's exposure to the customer, e.g. as a result of the customer's marked-to-market losses, the AI should promptly inform the customer.

(e) Hedging:

- AIs should ensure that their staff do not misrepresent or give any impression to investors that accumulators can be a hedging tool for decumulators, and vice versa.

AIs should remind the customers that if they do not understand the features and risks of accumulators, they should make enquiries with the sales intermediaries or seek professional advice before entering into such an arrangement.

Audit trail

AIs should maintain adequate and unambiguous records to demonstrate that they have complied with the relevant regulatory requirements, including proper suitability assessment and risk disclosure. AIs should also maintain proper audit trail evidencing that sufficient independent monitoring is performed to prevent and identify non-compliance.

Decumulators

For stock decumulators, AIs should have adequate controls and procedures to ensure that they and their customers do not breach any short selling restrictions as result of such contracts.

Exemptions for Institutional Professional Investors and Qualified Corporate Professional Investors[4]

In dealing with Institutional Professional Investors and Qualified Corporate Professional Investors, AIs can be exempted from the requirements of suitability assessment and product disclosure mentioned above, except that AIs should still assure themselves that the customers understand the nature and risks of the products and have sufficient net worth to be able to assume the risks and bear the potential losses of trading in the products.

Further guidance for FX accumulators

(A) Framework for assessing customers' expected exposure to FX accumulators

For the calculation of asset concentration in accumulators, as stipulated above, AIs are required to take into account a customer's total maximum exposure, i.e. using the full notional amount (regardless of the currencies involved) for assessment of the customer's exposure to FX accumulators.

In view of the link between the Hong Kong dollar ("HKD") and the US dollar ("USD") as well as relatively low volatility of HKD and USD against other major currencies[5], the HKMA has been allowing AIs to use a flexible approach in the calculation of asset concentration for FX accumulators involving major currency pairs. The framework, formulated for measuring the expected exposure to FX

[4] "Institutional Professional Investors" is defined under paragraph 15.2 of the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission ("SFC's Code of Conduct") and "Qualified Corporate Professional Investors" refers to Corporate Professional Investors which have passed the assessment requirements under paragraph 15.3A and gone through the procedures under paragraph 15.3B of the SFC's Code of Conduct.

[5] For the purpose of this circular, other major currencies refer to Euro, UK Pound Sterling, Australian dollar, New Zealand dollar, Canadian dollar, Swiss Franc, Japanese Yen, Renminbi (both CNY and CNH), and Singapore dollar.

accumulators in major currency pairs is set out in **Appendix B**. AIs which are not yet ready to use the flexible approach should continue to use the full notional approach in their suitability assessment.

For calculation of gross exposure under the Streamlined Approach when dealing with an SPI, AIs may also adopt the expected exposure framework in **Appendix B**.

(B) Treatment of FX accumulators for hedging purpose

The overarching principle is that only the properly hedged amount of a customer's exposure in a FX accumulator contract is exempted from inclusion in the calculation of concentration risk.

(I) Treatment of FX accumulators for hedging existing FX exposure

If a customer already holds a position in FX product(s) or anticipates some FX cash flows and intends to enter into a FX accumulator contract to hedge against such existing FX exposure, it is permissible not to include the relevant amount of such FX accumulator contract in the calculation of concentration risk. However, AIs should implement proper policies, procedures and controls, provide proper staff training, and maintain proper record in respect of assessing the hedging need of the customer; the amount needed to be hedged; whether the product is a proper hedging tool in all the circumstances and the rationale; and whether the tenor and the maximum exposure in the FX accumulator contract are appropriate. In performing these assessments, AIs should understand and have due regard to the customer's circumstances, such as the amount and timing of customer's anticipated cash flows and other exposure in respect of the relevant currency.

For example, if the maximum exposure associated with the proposed FX accumulator contract is materially higher than the original position or anticipated cash flows in a particular foreign currency, or the investment tenor is longer than the tenor of the risk to be hedged, there will be over-exposure which the AI should warn the customer about and should be included in the calculation of concentration risk.

If it is the customer's intention to hedge against the exposure to the relevant foreign currency, AIs should ensure that the customer is aware that accumulators with knock-out clauses or other features to cap the upside (where applicable) may not serve such intended hedging purpose.

Further, whenever an AI becomes aware of changes in a customer's circumstances such that a transaction in FX accumulator contract no longer serves as a hedge (e.g. the risk exposure to be hedged no longer exists) and becomes an investment, the AI should, as soon as practicable, review the customer's position, draw to the customer's attention the fact that customer has an exposure to the FX accumulator, and take or recommend appropriate actions to address the situation.

(II) Treatment of FX accumulators other than for hedging existing FX exposure

If a FX accumulator contract is entered into other than for hedging a customer's existing FX exposure, AIs should observe all relevant regulatory requirements, including the requirements for assessing the customer's concentration risk and the minimum expected exposure percentage for FX accumulators. For the avoidance of doubt, a FX accumulator contract will not be regarded as being entered into for hedging purposes if the customer enters into the FX accumulator contract first and subsequently takes up other FX product(s).

Since FX accumulators are of high risk, the exposure in FX accumulators should not be netted out by other FX products when considering asset concentration on a product level. In this connection, the HKMA notes that perfect hedge for FX accumulators is uncommon given the costs involved especially as each product has its particular terms, tenor, strike price, etc.

Nevertheless, the HKMA does not rule out the possibility that in exceptional circumstances, some customers may have genuine need to use other FX products to hedge certain existing FX accumulator contracts (e.g. if the cost of unwinding the existing FX accumulator contracts is higher than the cost of hedging). AIs should have strong justifications and proper documentation to support such claim, including but not limited to: thorough analysis of all relevant terms and structure of the existing FX accumulators and the other FX product for hedging and critical review of the proposed arrangement of hedging against existing FX accumulator contracts, to demonstrate genuine hedging. In this case, the properly hedged amount of the FX accumulator contracts may be excluded from the calculation of concentration risk.

(C) Sale of FX accumulators to corporate banking customers

Having regard to the difference in the risks of FX products as compared with other underlying assets and the nature of corporate banking customers, it is considered reasonable to allow more flexibility in respect of the sale of FX accumulators to corporate banking[6] customers.

(I) Additional exemptions from the following requirements when FX accumulators are used as a hedging tool for corporate customers:

[6] Corporate banks refer to AIs which operate as corporate banks or have dedicated corporate banking units.

(a) only selling to Professional Investors;
(b) taking reasonable steps to establish customers' investment experience and assessing customers' knowledge of derivatives;
(c) only selling to customers with experience in investing in structured investment products or writing options;
(d) assuring themselves that the customers understand the nature and risks of the accumulators;
(e) providing customers with reasonable alternative investment products with lower risks and/or less complex structure for addressing their investment needs;
(f) recording the rationale for investing in accumulators rather than such alternative investment products given the risk return profile of accumulators and the customers' circumstances;
(g) obtaining the customers' acknowledgement of the investment rationale and maintaining proper audit trail;
(h) providing strong justification and conducting review by a senior officer and/or an independent internal control unit other than a credit control unit for any risk mismatch transaction; and
(i) refraining from making any solicitation or recommendation of accumulator contracts to customers who already have high concentration in accumulator contracts or in the specific underlying asset;

However, where there is over-hedging (e.g. investment amount is materially in excess of the risk exposure, or investment tenor is longer than the tenor of the risk to be hedged), such transactions in FX accumulator contract are not exempted.

The above exemptions only apply to accumulators linked to FX but not other underlying assets.

(II) For non-hedging transactions of FX accumulators by "large/sophisticated" corporate customers[7]:

Corporate banks are exempted from adopting the requirements specified in (C)(I) above, except item (i) which is exempted only for hedging transactions for corporate customers.

[7] A corporate customer may be classified as "large/sophisticated" corporate customer if it is a:
(i) company listed on any stock exchange;
(ii) corporate entity, public body, tertiary institution, registered charitable organization or other legal entity having a dedicated/specialised investment function;
(iii) trust;
(iv) person falling under any of the paragraphs (a) to (i) of the definition of "professional investor" in Part 1 of Schedule 1 to the SFO;
(v) professional partnership in a designated field (law, accounting, taxation, actuary or finance); or
(vi) group entity (including holding company, subsidiary and associated company) of any of (i) to (v) above.

(III) For non-hedging transactions involving other corporate customers:

Corporate banks should continue to observe the HKMA's requirements concerning the sale of accumulators.

(IV) Others:

No exemption is granted in respect of product risk rating and the SFC's standards. The HKMA expects AIs to follow similar standards as those applicable to SFO-regulated investment products in selling FX accumulators.

Appendix A

An example of a FX structured product (involving e.g. AUD/HKD) that should be classified as an accumulator:

The product has predetermined Strike Rate (e.g. AUD/HKD 5.05) and Cap Rate (e.g. 5.37), and consists of 12 fixing/ expiry dates (each followed by a settlement date). On each fixing/ expiry date:

- *If the Expiry Reference Rate (of AUD/HKD) is greater than the Cap Rate (5.37), the customer will receive a fixed pre-determined amount (of money or return) on the settlement date. In this case, the upside for the customer is capped.*

- *If the Expiry Reference Rate (of AUD/HKD) is less than or equal to the Cap Rate (5.37) but greater than or equal to the Strike Rate (5.05), the customer must buy a predetermined amount of AUD against HKD at the Strike Rate (5.05) on the settlement date.*

- *If the Expiry Reference Rate (of AUD/HKD) is less than the Strike Rate (5.05), the customer must buy a predetermined amount of AUD against HKD at the Strike Rate (5.05) on the settlement date. In such situation, the customer will incur a loss which could potentially be unlimited.*

Appendix B

Framework for AIs' assessment of customers' expected exposure to FX accumulators

<table>
<tr><th rowspan="2">Currency pair
(see Note 1)</th><th colspan="2">Minimum expected exposure percentage</th></tr>
<tr><th>For AIs which have methodologies satisfying the conditions</th><th>For AIs that do <u>not</u> have relevant methodologies</th></tr>
<tr><td>USDHKD
(pegged currency pair)</td><td colspan="2">2%</td></tr>
<tr><td>HKD or USD against one of the other major currencies</td><td>40%</td><td>100%</td></tr>
<tr><td>Other currency pairs</td><td colspan="2">100%</td></tr>
</table>

Note 1: Other major currencies refer to Euro, UK Pound Sterling, Australian dollar, New Zealand dollar, Canadian dollar, Swiss Franc, Japanese Yen, Renminbi (both CNY and CNH), and Singapore dollar. There are a total of 21 combinations of currency pairs. The expected exposure measurement of asset concentration should only be applied to FX accumulators involving HK dollar or US dollar as at least one leg of the currency pair.

Three Scenarios of Currency Pair:

I. For currency pair of USDHKD: 2%

Since US dollar and HK dollar are linked, the minimum expected exposure percentage is to be set at 2% of the notional amount for USDHKD FX accumulators.

II. For currency pair involving either HKD or USD against one of the other major currencies: 40%

For AIs which have reasonable methodologies and adequate controls (that **satisfy all the pre-conditions** as set out below) in place for calculating the expected loss of their FX accumulators offered to customers, they may use their methodologies to calculate the "expected exposure" (subject to a minimum of 40% of the notional amount) in assessing customers' asset concentration.

For the avoidance of doubt, exposure in measuring concentration risk of FX accumulators, after applying the expected exposure percentage, will be:

Maximum of the 2 figures: (Notional per fixing x Minimum Expected Exposure Percentage x number of fixings x gearing multiplier (if any)) and expected exposure calculated by AI

<u>Pre-conditions that should be satisfied for using expected exposure (instead of full notional)</u>

(1) Reasonable methodologies and parameters: In order to use expected exposure (instead of full notional) in measuring concentration risk in FX accumulators as described in the table above (except for USDHKD which is linked), AIs should adopt prudent and reasonable methodologies in calculating the expected loss of their customers' FX accumulators based on historical data and/ or other simulations. The methodologies adopted by AIs should observe the guiding principles below:

(i) Reasonable size and coverage of data reference – e.g. where historical data are used, observation period should be reasonably set and should include the most volatile periods; where Monte Carlo simulation is used, there should be meaningful and sufficient number of paths (i.e. at least 5,000 paths);

(ii) If the following parameters are involved in the AI's methodology, the parameters used should fulfil the standards as set out below:

- *the time interval-volatility parameter to be used for calculation (e.g. 30-day volatility, 260-day volatility, etc.) should approximate the duration of the respective fixing from trade date or be more prudent. If there is no exact time interval-volatility matching with the length of a certain fixing, then the time interval-volatility parameter which approximates the duration of the respective fixing or with higher volatility should be used. To illustrate with two examples: the relevant numbers of trading days for the 3rd fixing and for the 12th fixing is around 65 and 260 trading days. Hence, for the 3rd fixing of a monthly fixing accumulator, the 60-day (trading days) volatility should be used (since usually there is no "65-day volatility" data, the "60-day volatility" is close to the actual trading days of 65). Similarly for the 12th fixing, the 260-day (trading days) volatility should be used. AIs should not simply use a 360-day (trading days) volatility for all the respective fixing because the use of 360-day (trading days) volatility would distort the expected exposure;*

- *since holding period used in the calculation would affect the calculated expected exposure, the holding period used for each fixing should be at least measured from the trade date to the respective fixing date. To illustrate with an example: for the 3rd month fixing, the holding period should be at least 3 months. AIs should not simply use one month holding period for all the respective fixing because this would distort the expected exposure; and*

- *a confidence level of at least 99.9% should be adopted.*

(2) On-going calculation of expected loss: AIs should also calculate the expected loss with updated data both on a regular (at least quarterly) basis and when there have been significant changes in the market (e.g. when the market becomes highly volatile) or changes to the structure of FX accumulators. Should an expected loss resulting from the periodic or ad hoc review be higher than the 40% minimum threshold as set out above, AIs should use the higher expected loss for new FX accumulator transactions in assessing asset concentration. Higher expected loss should also be used for existing FX accumulator transactions for the purpose of assessing relevant exposures on an aggregate basis.

(3) Verification of the calculated expected loss: The accuracy and reliability of an AI's expected loss calculation should be verified against the actual results (e.g. daily marked-to-market losses) through regular (at least quarterly) back-testing by independent control units. AIs should also have a process to analyse exceptions identified through the back-testing. This process is intended to uncover any problem with the methodologies used in calculating the expected loss. The methodologies (including the underlying assumptions) in calculating the expected loss of FX accumulators should also be subject to periodic review to reflect changing market conditions.

(4) Policies and controls: Proper policies, procedures and controls should be in place for the measurement of expected exposure for the purpose of concentration risk assessment of FX accumulators.

For AIs which do not have the methodologies and relevant controls satisfying **all** of the above conditions in calculating the expected loss of its FX accumulators offered to customers, full notional should continue to be adopted in measuring concentration risk.

III. For any other currency pairs: Full notional (i.e. 100%)

For other currency pairs, full notional (i.e. 100%) should continue to be adopted in calculating the exposure of FX accumulators in measuring concentration risk.