



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

This module should be read in conjunction with the [Introduction](#) and with the [Glossary](#), which contains an explanation of abbreviations and other terms used in this Manual. If reading on line, click on blue underlined headings to activate hyperlinks to the relevant module.

Purpose

To provide guidance to AIs on the key elements of a sound risk management system for credit risk transfer activities

Classification

A non-statutory guideline issued by the MA as a guidance note

Previous guidelines superseded

Guideline No. 4.6 “Supervisory treatment on asset securitisation and mortgage backed securities”

CR-G-12 “Credit Derivatives”

Application

To all AIs

Structure

1. Introduction
 - 1.1 Terminology
 - 1.2 Background
 - 1.3 Application
 - 1.4 Nature of risks associated with CRT activities
2. Key elements of effective management of CRT activities
 - 2.1 General
 - 2.2 Corporate governance
 - 2.3 Policies, procedures and limits
 - 2.4 Credit assessment and review



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- 2.5 Risk measurement and valuation
 - 2.6 Risk monitoring and control
 - 2.7 Management information system and reporting
 - 2.8 Stress-testing
 - 2.9 Independent reviews and audits
 - 3. Specific risk management topics
 - 3.1 Risk concentration
 - 3.2 Reputation risk
 - 3.3 Liquidity risk
 - 3.4 Special purpose entities
 - 3.5 Legal risk and compliance
 - 4. Supervisory approach to CRT activities
 - 4.1 Risk-based supervision
 - 4.2 Risk retention requirement
 - 4.3 High cost credit protection (for locally incorporated AIs)
 - 4.4 Notification requirements (for locally incorporated AIs)
 - 4.5 Information collection
 - 4.6 Capital adequacy framework (for locally incorporated AIs)
 - 4.7 Liquidity requirements
 - 4.8 Large exposure treatment
 - 4.9 Financial disclosure requirements (for locally incorporated AIs)
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Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

1. Introduction

1.1 Terminology

In this module—

1.1.1 **credit risk transfer activities** means activities associated with securitization or credit derivative contracts, which include—

- (a) acting as the originator of a securitization transaction;
- (b) purchasing or repurchasing securities issued under a securitization transaction;
- (c) retaining an exposure to one or more than one tranche in a securitization transaction;
- (d) providing credit protection or credit enhancement to any of the parties to a securitization transaction;
- (e) providing a liquidity facility or cash advance facility for a securitization transaction;
- (f) undertaking roles such as a servicer or swap counterparty in a securitization transaction;
- (g) selling or buying credit protection through credit derivative contracts; and
- (h) trading or investing in financial instruments or transactions (whether funded or unfunded) that transfer credit risk from one party to another party (e.g. credit default swaps ("CDS"), credit-linked notes, asset-backed securities, collateralized debt obligations, etc.);

1.1.2 **high cost credit protection** means credit protection which has the following features—

- (a) the credit protection was purchased by an authorized institution ("AI") to hedge the credit risk of an exposure;
- (b) there is a delay in recognizing losses in the exposure and the costs of the credit protection in the AI's earnings;



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (c) the AI receives an immediate regulatory capital benefit in the form of a lower risk weight on the exposure; and
 - (d) the premiums or fees and other direct or indirect costs paid for the credit protection, combined with other terms and conditions, call into question the degree of credit risk mitigation or credit risk transfer effected by the protection (for example, where the cost of protection is equal to the recorded value of the exposure or where the terms and conditions of the credit protection ensure that the premiums paid throughout the life of the protection will equal the amount of the realized losses in the exposure);
- 1.1.3 **investor**, in relation to a securitization transaction, means any person, other than the originator in the transaction, who assumes risk exposure to the transaction;
- 1.1.4 **implicit support**, in relation to a securitization transaction, means any direct or indirect support which the originator provides (or has provided) to investors in the transaction in excess of its predetermined contractual obligations;
- 1.1.5 **originator**—
 - (a) means a person who directly or indirectly originates the underlying exposures in a securitization transaction; or
 - (b) in relation to a securitization transaction for which underlying exposures are acquired from third-party entities, means a person who serves as a sponsor of the transaction by establishing, managing and advising on the transaction or by providing any credit enhancement or liquidity facility in respect of the transaction;
- 1.1.6 **reference asset**, in relation to a credit derivative contract, means the asset on whose credit status the contract is based;
- 1.1.7 **reference entity**, in relation to a credit derivative contract, means the entity on whose credit status the contract is based;
- 1.1.8 **securitization exposure**, in relation to an AI, means the AI's risk exposure to a securitization transaction;



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

1.1.9 ***securitization transaction***¹—

- (a) means a transaction—
 - (i) by which the credit risk associated with one or more underlying exposures is transferred, in whole or in part, to one or more investors in the transaction through (A) the selling of the underlying exposures to a special purpose entity; or (B) the use of one or more credit derivatives or guarantees provided by a special purpose entity or one or more investors; and
 - (ii) under which the payments to the investors are solely serviced by the cash flows from, or solely depend on the performance of, the underlying exposures cushioned, where relevant, by any credit enhancement; but
- (b) does not include any bilateral or syndicated asset-based bank loan (and any associated performance / bid bond or similar bank guarantee), or any loan assignment, sub-participation or transfer transaction where the assignee, sub-participant or transferee is an operating entity rather than a special purpose entity established or sponsored by the assignor, original lender or transferor;

1.1.10 ***special purpose entity***, in relation to a securitization transaction, means a company, trust or other entity—

- (a) which is created for the sole purpose of acquiring and holding the underlying exposures in the transaction or assuming credit risk in respect of the underlying exposures in the transaction, and the activities of which are limited to those necessary or incidental to accomplish this purpose (such as issuance of securities to fund the acquisition); and

¹ Since securitization transactions may be structured in many different ways and share many features with other structured finance products, Als should evaluate whether a transaction falls within the scope of this module, or whether a particular piece of guidance set out in this module is applicable to the transaction, on the basis of the economic substance and risk profile of the transaction. Als may consult the HKMA if in doubt as to whether certain types of transaction should be regarded as “securitization” transactions for the purposes of this module.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (b) which is insulated from the effects of default, insolvency or bankruptcy of the originator in the transaction; and

1.1.11 *underlying exposures*—

- (a) in relation to a securitization transaction, means one or more than one on-balance sheet or off-balance sheet financial exposure (which may or may not be held by the originator) in respect of which credit risk is transferred to one or more than one person by the originator in the transaction; or
- (b) in relation to a credit derivative contract, means one or more than one reference asset or reference entity specified in the contract.

1.2 Background

1.2.1 While recognizing their benefits as a useful means for credit risk and balance sheet management, credit risk transfer ("CRT") activities and a variety of weaknesses associated with their use and corresponding risk management, have been identified among the sources contributing to the global financial crisis which began in 2007. Responding to calls for greater regulation and transparency in respect of CRT activities, international standard setters and regulators in major economies have put forward a number of proposals to refine the regulatory regime and strengthen banks' risk management systems and practices.

1.2.2 The HKMA recognizes that the exposures of the Hong Kong banking sector to CRT activities have in general been comparatively insignificant compared to some other financial centres. Nevertheless, the HKMA considers it prudent and opportune to provide further guidance to the banking sector for the purpose of promoting sound risk management principles and practices for CRT activities and bringing its supervisory guidance into line with the latest international standards. In developing this module account has been taken of standards and best practices proposed by international standard setters, including the Financial Stability Board, the Basel Committee on Banking Supervision ("BCBS") and the International Organization of Securities Commissions ("IOSCO"), in light of the lessons learned from the global financial crisis.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- 1.2.3 The HKMA will continue to monitor international regulatory developments and the extent and nature of AIs' participation in CRT activities, and will consider issuing additional supervisory guidance as and when necessary.

1.3 Application

- 1.3.1 It is not the intention of the HKMA to require AIs to develop a CRT risk management framework which is separate from that used for other credit, trading and derivative activities. AIs, however, should review regularly the nature, complexity and risk characteristics of their CRT activities to ensure that the risk management framework they use for such CRT activities is capable of addressing the associated risks. The risk management practices and controls for CRT activities should be integrated into AIs' overall corporate governance frameworks and risk management and control systems.
- 1.3.2 An AI's implementation of the governance, risk management and control processes for CRT activities set out in this module should be commensurate with the nature, significance, complexity and risk profile of the AI's CRT activities as well as the systemic importance of its operations to the Hong Kong financial system. This means that the HKMA will assess the extent of AIs' adoption of the processes set out in this module on a proportionate basis and will allow some flexibility for individual AIs in adopting certain aspects of the guidance.
- 1.3.3 Locally incorporated AIs should apply the guidance in this module both on a legal entity basis² and on a group basis³. This module may also apply to the locally incorporated holding company of an AI where (i) the AI is part of a wider group; and (ii) the majority shareholder controller of the AI is neither a regulated financial institution nor a subsidiary of such an institution. See the paragraphs on approval of controllers in [Chapter 4 of the Guide to Authorization](#) for details.
- 1.3.4 Those AIs which are branches or subsidiaries of foreign banks will normally be expected to apply the guidance to their

² This refers to the head office and branches (local and overseas) of an AI.

³ This refers to a banking group which constitutes a locally incorporated AI and its downstream subsidiaries.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

Hong Kong operations. The HKMA will take into account any group-wide risk management policies, systems and controls for CRT activities that are applicable to the AIs (and whether they have been tailored to suit local circumstances) when considering the extent of the consistency of these AIs' risk management frameworks for CRT activities with this module.

- 1.3.5 This module should be read in conjunction with other relevant guidelines issued by the HKMA on capital adequacy, liquidity ratios, leverage ratio, large exposures, disclosure, valuation of financial instruments, corporate governance, remuneration systems, risk management controls (credit, market, liquidity, operational, reputation risks, etc.), stress-testing, and use of models.

1.4 Nature of risks associated with CRT activities

- 1.4.1 Banks participate in CRT activities for various purposes including portfolio diversification, position taking, trading or arbitrage, risk mitigation (including hedging), funding assets held, and generation of revenues from packaging and distributing CRT products to or for customers. CRT activities can be highly complex and involve various types and forms of risk that require thorough understanding and management by AIs. The following paragraphs provide an overview of some of the major risks.

Credit risk

- 1.4.2 The most fundamental risk associated with CRT products is obviously credit risk. In credit derivative contracts, there are typically two sources of credit risk: counterparty credit risk ("CCR") and the credit risk associated with the reference entity/asset. The interaction between these two sources of credit risk also gives rise to potential wrong-way risk, i.e. the risk that the counterparty's default risk is positively correlated with that of the reference entity/asset. In securitization, the credit risk hinges mainly on the performance of the underlying exposures.
- 1.4.3 The issue of default correlation exists not only in the context of wrong-way risk, but also across different underlying exposures in a portfolio of CRT products, or in a CRT product (e.g. first-to-default CDS and collateralized debt obligations ("CDO")) the payoff of which is linked to the credit



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

performance of a pool of underlying exposures. Assessment of default correlation is critical to evaluating the risk of CRT products. Banks which use CRT products for hedging purposes are also exposed to the risk of imperfect correlation between changes in the value of the hedging instrument and that of the exposure being hedged (viz., a form of “basis risk”).

Market risk

- 1.4.4 Banks with trading portfolios of CRT products are also exposed to credit migration risk, i.e. the risk of direct losses due to changes in the internal/external rating of a CRT product or its reference entity / asset and the risk of indirect losses arising from credit migration events.
- 1.4.5 Although both CRT and non-CRT products are subject to similar market risk management considerations in many aspects, the market risk management of CRT activities is arguably more vulnerable to model risk because both the pricing and valuation of CRT products are strongly driven by models, in particular for illiquid or complex products like CDOs. Therefore, errors or inappropriate assumptions in developing the models may pose a risk to sound risk management.

Liquidity risk

- 1.4.6 Liquidity risk associated with CRT activities can be viewed from two different perspectives. Firstly, originators of securitization transactions may be called upon unexpectedly to provide funding in relation to such transactions, potentially at a time when they are already under stress. This type of liquidity risk could arise from contractual obligations such as liquidity facilities or early amortization built into the securitization structure, or from implicit support stemming from reputational or other considerations. In the case of credit derivative contracts, additional liquidity needs may be due to margin calls or requests for additional collateral, for instance, as a result of a rating downgrade of the reference entities. Secondly, the secondary market liquidity of CRT products can dry up very quickly when certain events occur (e.g. a sudden failure of a large specialty investor or a surprise cluster of corporate defaults). For certain complex CRT products, secondary market liquidity is somewhat



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

limited, making it hard or costly for banks to close or offset positions before the products expire.

Other risks

1.4.7 Other risks that could become unexpectedly damaging in times of market stress or financial crisis include reputation risk and legal risk. For example, the default of a special purpose entity (“SPE”) sponsored by a bank, or any misrepresentation to customers of the level of risk associated with a CRT product, could result in damage to a bank’s reputation. Sources of legal risk include the (generally) complex and lengthy documentation associated with CRT transactions, and issues arising from key parties to transactions (e.g. investors, trustee, swap providers) residing in different jurisdictions (resulting in contractual clauses being interpreted differently).

1.4.8 In addition, structural issues, for example, triggers and payment waterfalls in securitization transactions, may also carry significant risk implications for banks. (See [paragraphs 2.4.13](#) and [2.4.14](#) for more information.)

2. Key elements of effective management of CRT activities

2.1 General

2.1.1 Als should carefully consider and identify the balance of risk and reward before entering into CRT transactions. They should not engage in CRT activities unless they have the expertise and resources to understand and properly manage the credit and other risks⁴ associated with these activities, and are capable of valuing their positions in CRT products in a prudent, consistent and reliable manner. It is also important for Als to assess, before engaging in CRT activities, the availability of the information necessary for their ongoing monitoring of the risks associated with such activities.

2.1.2 Als should be able to identify, aggregate and analyse risks associated with CRT activities on a firm-wide basis. Certain

⁴ These include factors which increase transaction complexity, such as structural features and the roles of parties involved in the transaction.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

complex CRT products may not easily fit into normal risk management processes and therefore may require special provision and attention within AIs' risk management frameworks.

2.1.3 An AI's risk management framework for CRT activities⁵ should (i) be approved by its Board of Directors (or by a designated committee of the Board); (ii) be commensurate with the complexity, level of risk and volume of the AI's CRT activities; and (iii) cover all the AI's CRT activities and the associated risks, including concentration risk, reputation risk and legal risk.

2.1.4 In the case of a locally incorporated AI, the HKMA will expect all risks arising from CRT activities, particularly those that are not fully captured under the [Banking \(Capital\) Rules](#) ("BCR"), to be addressed in the AI's capital adequacy assessment process ("CAAP"). See [CA-G-5](#) "Supervisory Review Process" for the supervisory standards on CAAP.

2.2 Corporate governance

2.2.1 Effective risk management of CRT activities requires a sound corporate governance and remuneration system. General requirements and practices in this regard are set out in [CG-1](#) "Corporate Governance of Locally Incorporated Authorized Institutions", [CG-5](#) "Guideline on a Sound Remuneration System", [IC-1](#) "General Risk Management Controls", [CR-G-1](#) "General Principles of Credit Risk Management" and [CA-S-10](#) "Financial Instrument Fair Value Practices". The paragraphs below focus on corporate governance issues that are regarded as particularly important to CRT activities.

2.2.2 The Board of an AI should provide adequate oversight of senior management in respect of the AI's CRT activities and ensure that the policies and responsibilities governing such CRT activities (including the purposes for which these activities may be conducted) are clearly defined before the AI participates in any CRT activities, and that the policies are subject to review as business and market circumstances change, in particular when the complexity of CRT activities

⁵ As mentioned in [paragraph 1.3.1](#), the risk management framework for CRT activities needs not be a separate framework. It could be part of the AI's overall corporate governance framework and risk management and control systems.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

engaged in by the AI increases. Moreover, the Board should ensure adequate resources for developing in-house expertise to facilitate comprehensive understanding and effective risk management of CRT activities.

- 2.2.3 The Board and senior management of an AI should ensure that CRT activities are included in the firm-wide risk management process. The risks of CRT activities should not be viewed in isolation (e.g. within an organizational silo or a particular risk category) but should be considered from the perspective of interaction with different risk types and different activities undertaken by the AI.
- 2.2.4 Under the direction of the Board, senior management should approve procedures and controls to implement the Board's policies governing CRT activities. Moreover, they should review the AI's CRT activities regularly to ensure that the risks taken are consistent with the risk appetite approved by the Board. All material and fundamental changes to a business model involving CRT activities should be approved by the senior management. The Board's endorsement is warranted if the changes could have a potential negative impact on the risk profile of the AI.
- 2.2.5 Senior management should be sufficiently knowledgeable about any CRT activities in which the AI engages, in order to identify and raise pertinent questions about long term risks posed to the AI by the CRT activities concerned and to participate meaningfully in discussions on CRT related risks and the technical aspects of CRT activities. This would include an adequate understanding of the key assumptions underlying the business models, valuation methodologies and risk models applied to the AI's CRT activities. Senior management should evaluate the potential impact on the AI if any of these assumptions fail.
- 2.2.6 The senior management of originating AIs and AIs which use SPEs in CRT activities should be attentive to regulatory and accounting requirements on significant risk transfer, de-recognition and consolidation.
- 2.2.7 AIs which are both originators and investors should put in place proper systems of control to avoid conflicts of interest between these two roles and any potential distortion of incentives regarding investment strategy. For example, the



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

structuring team and trading team should not be under the same reporting line, and investment advice provided by each team should be independent and free of the influence of the other team.

- 2.2.8 The CRT activities of the Hong Kong branches of foreign banks should be operated within policies and procedures approved by their head office and consistent with those approved by the Board for the bank as a whole. Regular reports on risk exposures and profitability should be submitted to their head office.

2.3 Policies, procedures and limits

General requirements

- 2.3.1 An AI's written policies and procedures should provide for adequate and timely identification, measurement, monitoring, control and mitigation of the risks posed by its CRT activities at both business-line and firm-wide levels. In the case of originating AIs, these policies and procedures should also address significant risk transfer and other risks such as warehousing risk, funding and liquidity risks arising from events such as early amortization, reputation risk and implicit support.
- 2.3.2 The policies and procedures should cover the following aspects—
- (a) the governance and control structure, which defines the roles, responsibilities and lines of authority of the Board, Board committees, other firm-wide committees, senior management, business units, and independent support and control functions involved in the management and risk management of CRT activities and their respective reporting relationships;
 - (b) the categories (including definitions) of approved CRT products and activities (e.g. trading (including position-taking and arbitrage), risk mitigation (such as hedging) and investment). The nature of the products and activities should be carefully defined to ensure, for example, that activities described as arbitrage do not in practice involve the taking of outright positions;



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (c) the AI's strategy, appetite and limits for different types of CRT products and activities, with a description of how the CRT products and activities align with the AI's overall risk management strategies and internal capital allocation;
- (d) the relevant levels of authority for engaging in CRT activities;
- (e) the approach and procedures for identifying, measuring, monitoring, reviewing, reporting and managing the associated risks, which should, inter alia, include the following—
 - (i) detailed requirements for the evaluation and approval of new CRT products or activities (see [paragraphs 2.3.11 to 2.3.12](#) below);
 - (ii) credit policy for CRT activities, including credit underwriting standards, controls and information requirements (e.g. type and nature of information required for credit assessment and review) (see [subsection 2.4](#) below).
 - (iii) methodologies, models and standards used for measuring and valuing risk exposures to CRT activities (see [subsection 2.5](#) below);
 - (iv) limit structures and monitoring of limit usage (including frequency of limit review, method of approval, and authority required to change limits) (see [paragraphs 2.3.6 to 2.3.10](#) below);
 - (v) controls on exceptions to policies, procedures and limits (including procedures to escalate and address breaches of limits);
 - (vi) management reporting system (see [subsection 2.7](#) below); and
 - (vii) stress-testing procedures (see [subsection 2.8](#) below);
- (f) the use of external credit ratings in a manner that does not encourage mechanistic undue reliance on such



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

ratings and is consistent with sound risk management practices;

- (g) the criteria for classifying exposures arising from CRT activities into the trading or the banking book;
- (h) (in the case of locally incorporated originating AIs which intend to recognize, or have recognized, for the purposes of regulatory capital treatment the risk transferring effect of a securitization transaction for underlying exposures under the BCR) the systems and controls to ensure that—
 - (i) any possible reduction in capital requirements in relation to the underlying exposures is justified by a commensurate credit risk transfer to third parties; and
 - (ii) all the applicable requirements set out in the BCR are complied with on an ongoing basis and in line with the associated supervisory guidance⁶, and the methods and procedures used to assess credit risk transfer are appropriate and have taken into account stress scenarios;
- (i) standards or guidelines to ensure that transaction documents and confirmations associated with CRT transactions are executed promptly; and
- (j) internal controls, accounting guidelines, tax treatment and independent audit to ensure effective and efficient operation, reliable financial information, and compliance with relevant laws, regulations, accounting standards and internal policies.

2.3.3 The HKMA would regard it as good practice for an AI to take the *Criteria for identifying simple, transparent and comparable securitisations* (“STC criteria”) issued jointly by the BCBS and IOSCO in July 2015 into account in the AI’s policies and procedures for securitization activities and adopt the criteria wherever it is feasible to do so. In general, it is easier for

⁶ At the time of issuance of this SPM module, the relevant requirements are set out in §229 of, and Schedules 9 and 10 to, the BCR and further guidance can be found in the [Q&As](#) issued by the HKMA in December 2014.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

investors to understand and assess the risks of a securitization transaction that has a simple structure and risk characteristics. Making securitization transactions more transparent and comparable should also contribute to the availability of more useful information to investors, enabling them to more readily assess a transaction's risks and returns, and compare different securitization products. An investing AI may therefore make use of the STC criteria in its due diligence and risk evaluation process to consider, among other things, whether a securitization transaction possesses a level of simplicity, transparency and comparability that could enable the AI to understand, and evaluate on an ongoing basis, the risks and performance of the transaction. In the case of an originating AI, the STC criteria should assist the AI in developing and structuring new securitization transactions that could appeal to less sophisticated investors and contribute to the development of sustainable securitization markets.

- 2.3.4 All staff members engaged in CRT activities or the review of such activities should be fully conversant with the relevant policies, procedures and limits.
- 2.3.5 The policies, procedures and limits (including the underlying assumptions) should be regularly reviewed and updated to reflect changes in the AI's risk strategy and risk appetite, latest regulatory and accounting requirements, and market developments.

Limits

- 2.3.6 AIs should identify the various types of risk associated with their CRT activities and establish a clear and comprehensive set of limits to control these risks.
- 2.3.7 The limits should cover both banking book and trading book exposures (whether on- or off-balance sheet) and, where applicable, contingent commitments and potential future exposures, that could arise from CRT activities. The limits should be designed in such a way as to reflect the characteristics of an AI's CRT activities, including the nature, scale and complexity of the CRT activities and the types of risk to which the AI is exposed.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

2.3.8 Given the complexity of CRT products, AIs should be aware of the limitations of commonly used limit structures in capturing risk exposures to these products. AIs should therefore consider using more than one type of risk measure as the basis of their limits. Limits set by AIs should take into account their risk appetite and stress-testing results.

2.3.9 The limits should also be integrated, to the fullest extent possible, with the firm-wide limits on the same risks as they arise in the course of an AI's other activities. When risks are not quantifiable, an AI should nevertheless demonstrate an awareness of the potential impact.

2.3.10 Examples of limits include—

- (a) Position limits, credit risk limits and market risk limits, which may be computed in various ways (e.g. based on notional or volume, Value-at-Risk ("VaR"), risk sensitivities to risk factors such as interest rates or credit spreads, etc.) depending on the role played by the AI (e.g. originator, swap provider, credit protection provider, etc.) and the volume and complexity of the CRT activities involved;
- (b) Concentration limits, including limits on exposures with similar risk characteristics and on exposures to a particular reference entity or obligor. Limits can be set by product types, geographical regions, economic/industry sectors, types of underlying exposures or by other relevant risk drivers. AIs should also consider the challenges that exist in pricing illiquid, complex instruments when setting portfolio concentration risk limits for CRT products (see also [subsection 3.1](#) below);
- (c) CCR limits, including pre-settlement limits and settlement limits. See also [CR-G-13](#) "Counterparty Credit Risk Management";
- (d) Liquidity risk limits, including limits on the size and nature of liquidity facilities provided to securitization



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

transactions⁷; and

- (e) Limits for volatile or illiquid markets or instruments.

New product evaluation

2.3.11 An AI's new product evaluation process should cover new CRT products and activities. In addition to the general requirements set out in subsection 3.3 of [IC-1](#), the process should—

- (a) take into consideration the performance of a new CRT product or activity under stress scenarios (including both firm-specific and market-wide);
- (b) include reputation risk as a fundamental component of the risk assessment; and
- (c) allow the attachment, where appropriate, of conditions (e.g. limits, performance requirements, and requirements that key assumptions must remain valid) to the approval given to a new CRT product or activity.

2.3.12 The post-implementation evaluation of a new CRT product or activity should assess the extent to which the product/activity has performed as expected and whether the risk characteristics of the product/activity have been consistent with expectations. Furthermore, AIs should review at the earliest opportunity any significant (potentially “outsized”) profitability and market share gains to ensure that they do not reflect a deficiency in the original pricing or risk assessment of the product/activity.

2.4 Credit assessment and review

General principles

2.4.1 When investing in CRT products, AIs should conduct appropriate analysis of the underlying risks and should not rely excessively or solely on the external credit ratings assigned to the products / counterparties and/or the fact that

⁷ AIs providing liquidity facilities to asset-backed commercial paper (“ABCP”) programmes may also set limits on the amount of commercial paper maturing during any one time period (e.g. overnight, 1 week, 2 weeks, 1 month, etc.).



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

the product is marketed or arranged by a well-known financial institution. The analysis should be conducted not only at acquisition but also on an ongoing basis, and should be commensurate with the complexity of the CRT products and the materiality of an AI's holdings in them.

- 2.4.2 Als should make sure that they understand the structure and other important variables which determine (both directly and indirectly) the value of CRT products in both normal and stress scenarios. Moreover, the reasons for differences in yields of CRT products irrespective of external credit ratings and the relevancy of historical data on underlying exposures in the current environment should be taken into consideration. Als which undertake CRT transactions on both the asset and the liability sides of the balance sheet should have the ability to assess the relevant credit risk on a comparable basis regardless of how the transactions appear on the balance sheet.
- 2.4.3 For securitization exposures, Als should, on an ongoing basis and for each of their securitization exposures, have a comprehensive understanding of the risk characteristics of both the securitization exposure (whether on- or off-balance sheet) and the underlying exposures of the securitization exposure. The originating AI of a securitization transaction should assess its exposures to the transaction, including credit enhancement, liquidity facilities, derivative transactions and retained tranches, on an arm's length basis in accordance with its normal credit/risk assessment and approval processes.
- 2.4.4 When originating or acquiring assets that are intended to be securitized in the future, an AI should apply to the assets a due diligence process, credit underwriting criteria and standards of analysis that are as stringent as those for assets originated or acquired by the AI for its own retention. The credit analysis should include a reasonable assessment (supported with sufficient documentation) of a borrower's repayment ability.
- 2.4.5 Als which undertake CRT activities for the purposes of risk mitigation should fully understand the risks to be mitigated, the potential effects of the mitigation and whether or not or the extent to which the mitigation is effective.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- 2.4.6 See also [CR-G-1](#), [CR-G-2](#) “Credit Approval, Review and Records” and [CR-G-3](#) “Credit Administration, Measurement and Monitoring”.

Use of external credit ratings

- 2.4.7 Als may use external credit ratings as a reference tool in their investment policies or risk management processes (e.g. risk measurement, valuation and reporting). The ratings, however, should not replace appropriate risk analysis and management on the part of Als.
- 2.4.8 When using external credit ratings for CRT products, Als are expected to—
- (a) understand the nature and scope of the ratings (particularly those assigned to CDOs) and how these differ from those of the external credit ratings assigned to other types of debt obligation;
 - (b) understand the major differences in the rating methodologies for CRT products used by different credit rating agencies;
 - (c) seek to understand the extent to which the ratings are conveying information on probability of default or expected loss as opposed to information on the potential for loss in unexpected circumstances; and
 - (d) understand the methodology, parameters and basis on which the credit opinion of a credit rating agency is based and assess whether major assumptions made by the credit rating agency are reasonable.
- 2.4.9 Locally incorporated Als using external credit ratings for capital adequacy purposes should, as part of their CAAP, regularly review whether the risk-weights assigned to their CRT exposures are appropriate for the inherent risk of the exposures. Where an AI determines that the inherent risk is significantly higher than that implied by the assigned risk-weight, the AI should reflect this higher degree of credit risk in the evaluation of its overall capital adequacy.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

Credit risk of underlying exposures in securitization transactions

2.4.10 Als should monitor, on an ongoing basis and in a timely manner, performance information on the underlying exposures of their securitization exposures, including, where applicable, the credit quality of the exposures proposed to be added to the pool of underlying exposures by originators. Such information would typically include, where relevant—

- (a) exposure type;
- (b) percentage and value of underlying exposures (e.g. loans) that are more than 30, 60 and 90 days past due;
- (c) default rates, prepayment rates and underlying exposures in foreclosure;
- (d) collateral type and occupancy (in the case of properties);
- (e) distribution of credit scores or other measures of creditworthiness in relation to the underlying exposures;
- (f) distribution of loan-to-value ratios; and
- (g) industry and geographical diversification.

2.4.11 If the underlying exposures are themselves securitization exposures (referred to in this paragraph as “underlying securitization exposures”), Als should have the information set out in [paragraph 2.4.10](#) not only on the underlying securitization exposures, such as the issuer name and credit quality, but also on the characteristics and performance of the underlying exposures of the underlying securitization exposures.

2.4.12 When an AI manages a large portfolio of CRT products (e.g. portfolios of CDS or CDO positions), it should be aware of the correlation among individual instruments, the implications of simultaneous defaults of multiple underlying exposures, and the mechanics of tranche investments. Als should note that the value and returns of CDO tranches (in particular the first-loss pieces), even when the underlying exposures of the tranches are well-diversified, may exhibit high volatility. Products like CDOs of CDOs are even more complex, as the



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

extent of correlation needs to be assessed not just among individual products, but also among the underlying CDO tranches.

Analysis of transaction structure

2.4.13 Als should have a thorough understanding of all structural features of a CRT product that would materially impact on the performance of the Als' exposures to the product, such as contractual payment waterfall and waterfall-related triggers, replenishment mechanisms for replacing exposures in the pool of underlying exposures, credit enhancements, liquidity enhancements, market value triggers, and deal-specific definitions of default.

2.4.14 Als investing in CRT products with dynamic structures⁸ should evaluate carefully the track record of the manager appointed to manage the pools of underlying exposures. It is also important to consider the covenants governing the actions of, and the nature of discretion given to, the manager in order to evaluate the potential for conflict of interest and the possible impact of the manager's actions on the interests of the Als as investors. Key issues in this regard include triggers that call for or prevent certain actions, provisions governing the diversion of cash flows to various tranches, and the ability/right of the manager to substitute underlying exposures.

Credit risk of reference entities / reference assets

2.4.15 Als providing credit protection (whether through a funded CRT instrument (e.g. credit-linked note) or an unfunded CRT instrument (e.g. CDS) should perform sufficient credit analysis of the reference entity or reference asset underlying the CRT instrument concerned.

2.4.16 If the reference entity or reference asset of a CRT instrument used for hedging an exposure is not identical to the obligor of, or the asset giving rise to, that exposure, an AI should evaluate the extent to which the reference entity or reference

⁸ "Dynamic structure" refers to a transaction structure under which the composition of the underlying exposures of the transaction is actively managed and therefore may change, through purchase and sale of individual underlying exposures, over time during the life of the transaction.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

asset is indeed an appropriate proxy for the exposure which the AI intends to hedge.

- 2.4.17 AIs holding a portfolio of long and short positions in CRT instruments should also take into account, in their risk assessment, the risk that payments may have to be made on one side of the positions without being entitled to receive the corresponding payments from the other side if the definition of credit events on the long side is different from that on the short side.

Counterparty credit risk

- 2.4.18 All counterparties in CRT activities, regardless of the extent of collateral support, should be subject to a sound due diligence process. In conducting the due diligence process, AIs should consider not only the CCR exposures arising out of the CRT products but also all other credit exposures to the same counterparty. The analysis should also evaluate, where possible, whether the counterparty is exposed to significant concentration risk arising from credit protection provided by it. AIs may take into consideration legally enforceable netting arrangements in their analyses. CCR exposures should be monitored against approved credit limits on a frequent basis (in most cases, daily).

- 2.4.19 AIs should include in their risk management processes an assessment of wrong-way risk (including the default correlation between a CRT instrument and the exposure hedged by the instrument). Decisions to hedge exposures with counterparties (e.g. monoline insurers) with wrong-way risk should be reviewed and approved by appropriate levels of senior management.

- 2.4.20 See also [CR-G-13](#) for more guidance.

Effectiveness of credit risk transfer mechanism

- 2.4.21 AIs should recognize that CRT transactions, as a tool for hedging / mitigating credit risk, do not remove all credit risk from the exposures being hedged. They should evaluate, at the inception as well as on an ongoing basis until maturity of the transactions, the degree of risk transference (e.g. by reference to the terms of the transaction such as credit events covered, materiality threshold), and the associated impact on



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

capital adequacy in the case of locally incorporated AIs, so as to avoid overestimating the credit protection obtained or the credit risk transferred. The evaluation should consider, among other things, factors listed in paragraph G3.4 of Annex G of [CA-G-5](#) related to high cost credit protection. The economic substance of CRT transactions that may constitute high cost credit protection, or that have unusually high-cost or innovative features should be documented.

2.4.22 In the case of securitization transactions for which the originating AI concerned intends to recognize, or has recognized, for the purposes of regulatory capital treatment the risk transferring effect of a securitization transaction for underlying exposures under the BCR, the evaluation of the degree of risk transference should also cover—

- (a) an assessment of the risks involved in the securitization transaction concerned, including the credit risk of the underlying exposures and the tranches of the securitization transaction (including both tranches transferred and retained);
- (b) the factors mentioned in the relevant supervisory guidance⁹ issued by the HKMA and any other factors that affect the substance of credit risk transfer (e.g. currency or maturity mismatch, any connection between the originating AI and the third parties to which the credit risk is transferred, the thickness of the mezzanine and junior tranches relative to the credit risk profile of the underlying exposures, etc.); and
- (c) an assessment of whether the possible reduction in capital requirements for the underlying exposures is in line with the credit risk transfer achieved.

2.5 Risk measurement and valuation

2.5.1 Aggregation of risks

Firm-wide risk aggregation

- (a) At the firm-wide level, AIs should assess and manage

⁹ At the time of issuance of this SPM module, the relevant factors are set out in Q&A #1 under the subject “Significant credit risk transfer” of the [Q&As](#) issued by the HKMA in December 2014.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

the risks of CRT activities (both for trading and non-trading purposes) together with the risks of other activities undertaken by the AIs, taking into account the interrelationships among these risks in their risk management processes (including stress-testing), on an integrated basis to ensure that sufficient consideration is given to risk correlation and concentration.

- (b) AIs should ensure that their measures of credit exposure to individual obligors are as comprehensive as possible, especially when conducting analyses of concentration risk and CCR. Both direct exposures (e.g. loans, credit derivative contracts and OTC derivative transactions) and indirect exposures (e.g. exposures to guarantors such as monoline insurers and exposures arising from CRT transactions) should be covered.

Special purpose entities

- (c) AIs using SPEs in their CRT activities should have the capability to aggregate, assess and report the risks associated with all their SPEs (whether on- or off-balance sheet) in conjunction with all other firm-wide risks. Since an AI may perform multiple roles (e.g. originator, servicer, swap provider, etc.) in a CRT transaction, the AI should ensure that the exposures to the SPE arising from each of these roles are effectively aggregated, monitored, and reported to the senior management and the Board (or its designated risk management committee).
- (d) An AI should assess risks associated with its SPE(s) (whether on- or off-balance sheet) carefully and include the SPE(s) in its liquidity stress-testing. The assessment should consider how the SPE(s) and associated risk issues (e.g. the effects of covenants and triggers) may affect the financial, liquidity, and capital positions of the AI. Senior management should ensure that the Board is aware of the risks associated with the SPE(s) and understands their implications for the overall risk appetite.
- (e) It is usually difficult for an AI to assess in advance the probability of it providing support (especially as regards “implicit” support) to its SPE(s). AIs, however, should



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

aggregate the activities and risks of an SPE with their own activities and risks for risk management purposes once there is a likelihood or evidence of such support being required (See also [subsection 3.4](#) for other risk management considerations in relation to SPEs).

2.5.2 Risk measures

- (a) Risk measurement methodologies that are applicable to CRT activities may include internal credit risk rating systems (typically for measuring default risk and loss severity), VaR, stress loss and other sensitivity measures (e.g. sensitivity of present value to a basis point movement in credit spreads), and key operational risk indicators or scorecards. Risks that are not well reflected by standard risk measures should be subject to additional controls, which may include pre-approval of transactions and specific risk limits.
- (b) Als should avoid over-reliance on a single risk measurement methodology or specific model. They should seek to use a wide range of risk measures (including notional amounts of gross and net positions or profit and loss) to discuss and challenge views on risks in a disciplined manner. When there is uncertainty about the accuracy of assumptions underlying risk measures (e.g. when markets are unduly volatile), it could be useful to revisit simple risk measures such as notional limits to highlight potential concentration of risks. The main advantage of these simple measures is that they do not depend on assumptions and give a simpler perspective on the potential scale of the risks.
- (c) Als which are active in trading CRT products should assess the extent to which their trading/hedging strategies in CRT products may leave them exposed to risks that are not routinely captured in their risk measurement system (e.g. jump-to-default risk or other issuer-specific risks and basis risk). They should monitor the extent of potential build-up of such risks, incorporate the results of such monitoring into their risk management approach, and regularly evaluate the need to incorporate such risks into their routine risk measurement calculations.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (d) Als should understand the underlying assumptions and constraints of the risk measures chosen. They should also satisfy themselves as to the adequacy and appropriateness of the key assumptions, data sources and procedures used to measure risks. Limitations of risk measures should be addressed by qualitative means, including expert judgment.

Key considerations in VaR

- (e) Als engaged in trading of CRT products may use the same system to manage the market risk of both CRT and non-CRT exposures. Als adopting such an approach should note that market risk methodologies, such as VaR, are not as fully developed for credit risk as they are for equity, interest rate and currency risks. Als are therefore expected to have the ability to recognize the particular risks associated with credit events (e.g. non-normal loss distribution curves) and put in place procedures to address them.
- (f) The following paragraphs highlight certain issues which should be taken into consideration when applying VaR to CRT exposures—
- (i) Als should note that issues such as lack of relevant historical data, inadequate volatility estimates, difficulties in marking-to-market complex or illiquid CRT products, inadequate estimates for basis risk and correlation risk may undermine the accuracy and usefulness of VaR in measuring CRT exposures. These issues should be explicitly addressed by Als when adapting their VaR methodologies to CRT exposures.
- (ii) If securitization exposures or nth-to-default credit derivative contracts are included in the VaR measure, the VaR model must capture nonlinearities inherent in certain CRT exposures (e.g. mortgage-backed securities, tranching exposures or nth-to-default credit derivative contracts), correlation risk and basis risk (e.g. between CDSs and bonds).



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (iii) Als should be able to present the results of the VaR model (e.g. the high, low and average value of VaR at a specified confidence level) with the risks of CRT products separated from the risks of other products such as interest-rate and foreign exchange products.
- (iv) When an AI's position in certain CRT products has become illiquid, or the valuation of the position is subject to considerable uncertainty, the AI should consider whether such position should be excluded from the VaR measure and related limits, and subject to alternative measures and controls which are less dependent on liquidity and valuation.

2.5.3 Valuation

- (a) Certain characteristics of CRT products, especially those of complex products like CDOs, make valuation of these products a highly challenging task. These characteristics include a lack of an active and liquid secondary market, insufficient transparency in the over-the-counter market, complex and unique waterfalls of cash flows, and complex interactions between valuation and underlying risk factors. Als having exposures to complex or illiquid CRT products should apply appropriate expert judgment and discipline in valuing these products, making use of all available modelling techniques and external and internal inputs such as consensus-pricing services while recognizing and managing their limitations. In particular, Als should consider how, under stressed conditions with little or no market liquidity, an informed judgement on the value of their CRT positions will be made.
- (b) Als should avoid excessive reliance on indicative dealer quotes. It should be noted that dealer quotes may not reflect prices at which transactions could occur, especially during periods of low liquidity. Similarly, the transaction prices of small, isolated or dated trades may be misleading in many circumstances. Hence, Als should conduct, at least for material positions, their own analysis to check the valuations made on such bases and make valuation adjustments where appropriate.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (c) For assets in a warehouse or pipeline which are likely to be securitized and are measured at fair value based on their intended use rather than their current quality, there should be additional internal monitoring of the valuation at which they could be disposed of in their current status if securitization is not carried out.
- (d) Als should have procedures in place to ensure that the values used to measure and manage risks in CRT positions are consistently reflected in the accounting process, especially for positions which are reported at fair value.
- (e) Also see [CA-S-10](#) for other relevant supervisory requirements.

2.5.4 Credit model risk

- (a) Als which rely on models to assess the valuation and risks of CRT products should properly understand the assumptions and limitations of those models, and manage their usage appropriately.
- (b) One of the key assumptions in credit risk models for pricing CRT products is correlation of defaults among the exposures in a pool of underlying exposures. The use of these models for valuation and risk management of CRT products should be accompanied by a thorough understanding of the sources and roles of correlation assumptions in these models. Moreover, there should be regular assessments of the impact of changes in correlation assumptions on model outputs (e.g. via stress-testing).
- (c) The accuracy and reliability of a model should be subject to regular validation (e.g. back-testing and review of related fundamental analyses) performed by independent parties, including independent audits conducted by capable internal or external auditors. The model should also be subject to periodic updates to reflect changing market conditions. Als should regularly compare model-based valuations with available market proxies and/or valuations of similar instruments produced by other institutions.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (d) Locally incorporated AIs using internal models for capital adequacy purposes must meet the applicable requirements set out in the BCR (including Schedules 2 and 3 to the BCR), the requirements set out in [CA-G-3](#) “Use of Internal Models Approach to Calculate Market Risk”, [CA-G-4](#) “Validating Risk Rating Systems under the IRB Approaches” or Schedule 2A to the [BCR](#), as the case may be. In the case of AIs incorporated outside Hong Kong, all or part of their models may be centrally developed and monitored on a group basis. The HKMA will generally rely on the home supervisors of the AIs to ensure that models used by the AIs are robust and subject to proper validation procedures unless the HKMA has concern over the scope and approach of the home supervisors’ supervision in this regard.

2.6 Risk monitoring and control

2.6.1 CRT activities should be subject to ongoing monitoring and control performed by a control function which is independent of the business or risk-taking units and resourced in a manner commensurate with the complexity and volume of the CRT activities of the AIs. As mentioned in [paragraph 2.1.2](#), the control function should be able to monitor CRT exposures on a firm-wide basis as well as on aggregate bases (i.e. aggregated, say based on risk categories, with other non-CRT exposures).

2.6.2 The control function typically performs the following functions—

- (a) Independent risk assessment, approval (within delegated authorities) and regular review of CRT activities. In the case of securitization exposures, the review should cover performance of underlying exposures, compliance with covenants and the status of various trigger measurements/ratios (e.g. early amortization trigger, excess spread level and asset quality test);
- (b) Design and implementation of risk management systems for CRT activities, including initial and ongoing valuation, design of scenarios for stress-testing and sensitivity analysis, regular review/validation of valuation methodologies and models (where applicable). In the



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

case of Als incorporated outside Hong Kong, these could be done at head office level where appropriate;

- (c) Regular (or daily where warranted by the nature of the CRT activities concerned) monitoring of CRT activities and exposures, usage of and compliance with established limits, and identification and resolution of exceptions;
- (d) Measurement and valuation of CRT exposures;
- (e) Design and preparation of management reports for monitoring such aspects as composition of CRT portfolios, trend of aggregate CRT exposures relative to defined risk appetite, risk/return information and performance of underlying exposures;
- (f) Conducting of stress tests and sensitivity analyses;
- (g) Regular review of effectiveness of hedges (e.g. changes in the correlation of default risk between the protection seller and the exposure hedged, basis risk); and
- (h) Collateral management (e.g. monitoring of margin level of derivative position).

2.6.3 In particular, Als should review regularly (and not, in any event, less than once a year) all material potential exposures to securitization transactions (including off-balance-sheet SPEs), broken down by—

- (a) product;
- (b) underlying exposures;
- (c) role played by the Als (e.g. originator, servicer, distributor, trustee); and
- (d) exposures held by the Als as investors.

The nature of the exposures should be reflected in the review accurately.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

Monitoring specific to originating AIs

- 2.6.4 An originating AI of a securitization transaction should monitor, on an ongoing basis over the life of the transaction, the quality and performance of the underlying exposures of the transaction, taking into consideration any possible impacts on the risk profile of the AI. The monitoring process should impose duties on relevant business units and the risk management function to identify early-warning signals and ensure prompt management attention to such warnings. Although the ownership rights and control of the underlying exposures may have been sold or the credit risk of the underlying exposures may have been significantly transferred, such monitoring is necessary because the reputation of the AI as an originator or servicer remains exposed. Moreover, if the AI has securitized its highest quality assets or provided support (e.g. liquidity facilities and reserve funds) to the transaction, it may have put itself and its unsecured creditors in a weaker position in relation to the investors in the transaction, and should be alert to any potential impacts on its financial position such as funding costs, credit standing and capital position.
- 2.6.5 For a securitization transaction which requires or permits the originating AI concerned to replenish the underlying exposures when specified conditions are met, the AI should have in place systems to monitor changes in the pool of underlying exposures and other parameters that may trigger replenishment and assess the impact of any proposed replenishment on the quality of the exposures remaining with the originating AI. Such assessment should be conducted with respect to the quality of the AI's remaining exposures at the time of the proposed replenishment, not the quality of the AI's remaining exposures at the inception of the securitization transaction. In general, the replenishment mechanism should not be designed to shore up the quality of underlying exposures of deteriorating credit quality with the addition of new and better quality exposures. Moreover, there should not be any material adverse effects on the credit quality of the originating AI's remaining exposures after any replenishment.
- 2.6.6 The following are examples of items which would be expected to be included in the monitoring reports of originating AIs—



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (a) Reports on securities backed by revolving credit facilities (e.g. credit cards) would typically monitor—
 - (i) portfolio's gross yield;
 - (ii) delinquencies;
 - (iii) charge-off rate;
 - (iv) base rate (i.e. coupon rate paid on investor certificates plus servicing fee);
 - (v) monthly excess spread;
 - (vi) rolling three-month average excess spread; and
 - (vii) monthly payment rate.
- (b) Reports on securities backed by instalment loans (automobiles, mortgages, etc.) would typically monitor—
 - (i) charge-off rate;
 - (ii) net portfolio yield (portfolio yield minus charge-offs);
 - (iii) number and status of restructured accounts;
 - (iv) delinquencies (e.g. by loan ages);
 - (v) loan-to-value ratio (if applicable);
 - (vi) principal prepayment (e.g. the speeds); and
 - (vii) outstanding principal compared to original security size.

2.7 Management information system and reporting

- 2.7.1 The management information system ("MIS") of an AI should provide the Board and senior management with timely and relevant information on the risk profile, volume and nature of the CRT activities undertaken in an accurate, easily understandable and concise manner. This information should include all CRT exposures (whether on- or off-balance sheet)



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

and performance data in respect of underlying exposures. See paragraph 4.3.5 of [CA-G-5](#) for general guidance.

2.7.2 To facilitate review of the credit risk profile of CRT products, the MIS of an AI which has active participation¹⁰ in CRT activities should have the capabilities to provide the following breakdown of information—

- (a) holdings of CRT products by types of product and by credit rating categories. For complex CRT products (e.g. CDOs) with unique risk characteristics, the MIS should allow the AI to distinguish material holdings of these products by spread amounts or other factors that reflect inherent riskiness;
- (b) credit protection sold by the AI by economic sectors of reference entities (in the case of credit derivative contracts) and by types of underlying exposures (in the case of securitization exposures), indicating whether the exposures are gross or net of protection bought against the same underlying exposures;
- (c) credit protection bought by the AI by types of counterparty (e.g. regulated financial institutions (banks, securities firms and insurance companies), mutual and pension funds, unregulated financial institutions, or non-financial enterprises); and
- (d) CRT products by residual maturity. The maturity distributions should preferably be reported based on notional amounts¹¹.

2.7.3 For AIs which are active both as traders and as either hedgers or investors, it could be helpful to distinguish

¹⁰ For the purposes of this module, “active” would usually be assessed by reference to the frequency and turnover / scale of an AI’s CRT activities. AIs acting as originators are deemed to have active participation in CRT activities. AIs which only hold a small amount of credit-linked notes or mortgage / asset backed securities in the banking book with an intention to hold such notes / securities until their maturity, and AIs which hold a small amount of credit derivative contracts solely for the purposes of hedging banking book exposures, would not, in general, be regarded as having active participation in CRT activities.

¹¹ Notional amount is a better measure for maturity distributions (although this of course may depend on the purpose of the maturity analysis). For example, in assessing whether there is any maturity mismatch between loans being hedged and credit protection bought through CDS, using fair value as the basis will be misleading because the fair value of CDS is significantly smaller than the book value of the loans. This will result in a wrong conclusion that there is significant maturity mismatch.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

between trading and non-trading portfolios in making the breakdowns above.

2.8 Stress-testing

2.8.1 Als which have active participation in CRT activities¹² should incorporate a rigorous stress-testing programme into their risk management system for their CRT activities, particularly for capturing risks (including contingent risks) arising from securitization exposures and exposures to off-balance sheet SPEs. General guidance on the use of stress-testing for risk management purposes can be found in [IC-5](#) “Stress-testing”.

2.8.2 The stress scenarios for CRT activities should enable Als to—

- (a) evaluate the impact of systemic shocks or events, including how different CRT market or product structures (e.g. market value triggers in CDOs) and potential reactions of market participants to stress events may lead to or reinforce a systemic event;
- (b) analyse the effects of stresses on CRT exposures to leveraged counterparties (including hedge funds, financial guarantors and derivatives counterparties), including the effects of stresses on potential wrong-way risk;
- (c) examine the impact of variation in credit spreads, credit ratings, default rate correlations (or their proxies), and bid/ask spreads;
- (d) assess the risk of model error and, in general, the uncertainties associated with models and valuation;
- (e) explore the assumptions and identify the limitations of models used for pricing and risk modelling; and
- (f) evaluate concentration risk (see also [subsection 3.1](#) below).

¹² Other Als however are not required to put in place a separate stress-testing programme for CRT activities. They should include any CRT products held in their firm-wide stress-testing programme.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

2.8.3 In the case of AIs which are active originators of securitization transactions, the stress scenarios should also cover—

- (a) pipeline and warehousing risks, including events which might delay, change the terms of, or prevent securitization of pipeline or warehoused exposures (e.g. when an AI is unable to access the securitization market due to either bank specific or market stresses); and
- (b) the risk that SPEs sponsored by the AIs might need to be absorbed into the balance sheet of the AIs, whether for contractual or non-contractual (e.g. reputation) reasons.

2.8.4 AIs should ensure that, when dealing with securitization exposures, sufficient data on the underlying exposures are obtained and incorporated into the stress-testing programme.

2.9 Independent reviews and audits

2.9.1 The risk management system for CRT activities should be frequently reviewed and tested by competent internal, as well as external, auditors. The audit or review should cover, among other things, the following aspects where applicable—

- (a) the scope of risks covered by the risk management system;
- (b) the effectiveness of senior management oversight;
- (c) the adequacy of risk assessments and reviews conducted, including the credit analyses and monitoring of the performance of underlying exposures;
- (d) the appropriateness of the risk measurement system given the nature, scope, and complexity of the CRT activities undertaken;
- (e) the model validation process;
- (f) the governance and control of valuation and price verification procedures;
- (g) in the case of originating AIs, the compliance with deal covenants and triggers, pooling and servicing



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

agreement requirements;

- (h) the accounting procedures, financial disclosure and regulatory reporting for CRT activities, in particular SPEs;
- (i) the accuracy and timeliness of MIS and management reports, including portfolio performance reports issued to external parties such as investors (in the case of originating Als); and
- (j) in the case of locally incorporated Als, the CAAP, and processes and controls for calculating and reporting the capital requirements for CRT exposures.

2.9.2 See also [IC-2](#) “Internal Audit Function” for details of the HKMA’s expectations on the key role, responsibilities and qualities of an AI’s internal audit function.

3. Specific risk management topics

3.1 Risk concentration

- 3.1.1 When defining their risk appetites and associated limits, Als should explicitly take into consideration the prevention of undue risk concentration.
- 3.1.2 Als should identify and avoid undue risk concentration arising from CRT activities. The minimum standards and requirements on controls of risk concentration are stipulated in [CR-G-8](#) “Large Exposures and Risk Concentrations” and Annex F of CA-G-5. The following paragraphs highlight certain aspects of CRT activities to which Als are expected to pay attention when managing concentration risk.
- 3.1.3 Risk concentration should be viewed in the context of a single factor or a set of closely related risk factors. In the case of CRT activities, these risk factors are sometimes more subtle. For example, risk concentration will be unknown ahead of time in the case of certain CRT products because the actual composition of the underlying exposures for the product is known only after the deal is closed and the composition may vary over time. Similarly, there may be a need to look through several layers of e.g. CDOs in order to identify the nature of the actual loans underlying a re-securitization



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

exposure. As a result, Als should, before investing in these products, satisfy themselves that there is adequate transparency and frequent reporting of the products' portfolio composition to enable evaluation and management of the concentration risk.

3.1.4 Als' risk management processes should effectively capture all sources of risk, in particular risks arising from SPEs sponsored by Als and other off-balance sheet risk, non-contractual risk, contingent risk, and underwriting and pipeline risks. Moreover, indirect exposures arising from CRT activities should also be captured. For example, an AI may have a concentration of exposures to a particular class of assets incurred indirectly through investments backed by such assets (e.g. residential mortgage backed securities), or to a particular protection provider (e.g. monoline insurers) which guarantees the repayment of a majority of an AI's securitization exposures, or to a particular entity through different types of CRT product the payoff of which is linked to default events occurring in respect of such entity. Als should also consider risk concentrations in global markets and how the concentrations may affect individual institutions (e.g. by increasing asset volatility or reducing available liquidity), and in turn the Als' own risk position.

3.1.5 The metrics for measuring risk concentration should include, where appropriate, a notional and asset-class view, recognizing that notional measures can help spot concentrations that would otherwise be overlooked if only net measures of risk are analysed. A consolidated view of positions by asset class is essential if the positions are held by different trading desks or business units.

3.2 Reputation risk

Implicit support

3.2.1 Als should have in place processes to assess and control potential reputation risk (the avoidance or mitigation of which might necessitate or mandate the provision of financial or other support) involved in CRT activities. Such processes should include identification of unconsolidated entities¹³ that

¹³ This refers to entities (e.g. SPEs sponsored by an AI in respect of its CRT activities) that are not subject to accounting and/or regulatory consolidation.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

could give rise to significant reputation risk and regular assessments of the circumstances under which such risk may arise. Exposures or activities identified as being susceptible to causing reputation risk should be included in the Als' internal risk management reports (e.g. including a separate line item for sponsored SPEs).

- 3.2.2 Originating Als should have a contingency plan for dealing with either exposures that may come back on balance sheet or the business implications of damage to reputation stemming from their origination activities. Such plan should address anticipated impacts on Als' liquidity, credit rating and capital adequacy. While some implicit support may not lend itself to incorporation into core stress scenarios, originating Als should evaluate how exposures arising from such support will play out in different market environments.

General principles of institutional investor suitability

- 3.2.3 The complexity of certain CRT transactions increases the possibility of disputes between Als involved in introducing or selling CRT products and their counterparties or customers over the failure of the Als to adequately disclose to their counterparties or customers, or advise them on, the nature and risks of the transactions. These disputes may pose credit, reputation and litigation risks to the Als involved. The following paragraphs focus on a range of suitability issues related to institutional clients (i.e. customers or counterparties that are not natural persons), which are intended to supplement, and not to replace, related guidelines issued by the HKMA that are applicable to corporate customers in the context of CRT products and transactions (especially those that are not regulated under the Securities and Futures Ordinance ("SFO")). In the case of customers that are individuals, Als are required to follow the suitability requirements laid down by the HKMA and the Securities and Futures Commission ("SFC").
- 3.2.4 Als which engage in marketing and distribution of high-risk complex CRT products (including CRT transactions in which the Als act as principal rather than agent or advisor) should consider the general appropriateness of the products for specific types of institutional client. As a general principle, high-risk complex CRT products should only be transacted



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

with or sold to sophisticated clients who are capable of evaluating the associated risks independently.

- 3.2.5 Als should not introduce or sell a CRT product to their institutional clients unless the Als have conducted adequate due diligence to understand the features (including the risk and return characteristics) of the product. Als should also seek to foster a complete understanding by their institutional clients of the nature of, and the material terms, conditions and risks involved in, the product. Moreover, Als should not encourage reliance on external credit ratings as a measure of the risk associated with the product.
- 3.2.6 Als should make reasonable efforts to determine that their institutional clients have—
- (a) the capability to understand the risk and return characteristics of the specific type of CRT product under consideration;
 - (b) the capability, or access to the capability, to price and run stress tests on the product;
 - (c) the governance procedures, technology, and internal controls necessary for trading and managing the risks of the product;
 - (d) sufficient financial resources to withstand potential losses associated with the product; and
 - (e) the legal authority or vires to invest, and authorization from the Board or other highest-level management or authorizing body to invest, in CRT products.
- 3.2.7 Als should have processes to ensure that any information on the nature and risks of a CRT product provided to their institutional clients is accurate, and the downside and upside of the product are presented in a fair and balanced manner.
- 3.2.8 Als' sale process should be reviewed regularly to ensure proper consideration of the risk factors associated with products and the risk profiles of their institutional clients at the time of sale.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

3.2.9 If an AI is a registered institution (“RI”) under the SFO, its institutional client is a professional investor (within the meaning of the SFO) and the CRT product or transaction concerned is regulated under the SFO, the AI is exempt from, under Section 15 of the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission (“SFC Code”), certain requirements set out in the SFC Code that are equivalent to [paragraphs 3.2.4 to 3.2.8](#) above. In this regard, if and to the extent that an AI is exempt, the AI may elect not to follow the corresponding standards in [paragraphs 3.2.4 to 3.2.8](#) in respect of the relevant client and the product or transaction concerned. However, the HKMA considers it prudent practice that if the AI has any doubt about the client’s knowledge and expertise in the CRT product/transaction concerned and the suitability of such product/transaction to the client, it should, regardless of the exemption under Section 15 of the SFC Code, follow the guidance above before entering into the CRT transaction with, or selling the CRT product to, the client.

3.2.10 Even if an AI is, or can be regarded as, in compliance with the relevant SFO and SFC requirements, the AI should nevertheless remain mindful of and properly manage potential risk associated with CRT activities (including those transactions with professional investors) that may arise out of reputational concerns (such as the need to provide financial or other support to mitigate reputation risks).

Disclosure of information to investors by originating AIs

3.2.11 An originating AI of a securitization transaction should ensure that investors have readily available access to all materially relevant data concerning the transaction, including, where relevant and appropriate—

- (a) initial and ongoing information about the credit quality and performance of the underlying exposures, including details of the creditworthiness of the parties with direct or indirect liability to the issuer in the securitization transaction (credit worthiness includes the ability of the parties to meet their obligations in respect of



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

representations and warranties made)¹⁴;

- (b) the underwriting standards used to originate the underlying exposures and the results of the due diligence conducted by the originating AI;
- (c) the structure and cash flow waterfall of the transaction and how credit risk has been transformed and allocated among investors;
- (d) all verification and risk assurance practices which have been performed or undertaken by the underwriter and/or the originating AI;
- (e) the amount of risk retention by the originating AI in the transaction and the manner in which the risk is retained;
- (f) the cash flows and collateral in respect of the underlying exposures supporting the securitization transaction, and such information as is necessary to conduct regular, comprehensive and well informed stress tests on the cash flows and collateral values; and
- (g) the roles played by various transaction counterparties (e.g. trustee).

Service providers in securitization transactions

3.2.12 In a securitization transaction, service providers are usually engaged by, or on behalf of, the issuer to provide professional services or opinions to the issuer for the benefit of investors. These service providers typically include accountants (in respect of the accounts of the issuer, and verification and risk assurance practices undertaken on the underlying exposures) and valuers (in respect of valuation of the underlying exposures). Lawyers, sponsors, arrangers, underwriters and dealers and other advisers to an originator, however, are not regarded as service providers for the purposes of this subsection. Credit rating agencies and auditors in respect of audited financial statements are also excluded.

¹⁴ In the case of ABCP programmes, the information also includes the distribution of the underlying exposures of the programmes by exposure type, industry and credit rating.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

3.2.13 As service providers act for the interests of investors, the originating AI of a securitization transaction should have measures to ensure independence of the service providers involved when the opinions or services provided by such service providers may influence an investor's investment decision in respect of the transaction. Moreover, the originating AI should ensure that the service providers are required to maintain the currency of reports, where appropriate, over the life of the transaction.

Relevant SPM modules on reputation risk management

3.2.14 Also see [Annex E](#) of [CA-G-5](#) and [RR-1](#) "Reputation Risk Management" for details of the key elements of effective reputation risk management.

3.3 Liquidity risk

3.3.1 AIs should understand the liquidity characteristics of their CRT activities, including CRT positions held for hedging purposes and contingent commitments (whether contractual or non-contractual), and evaluate carefully their risk appetite for, and ability to assume, the associated liquidity risks.

3.3.2 AIs which have active participation in CRT activities should incorporate the cash flow and funding liquidity risk arising from CRT activities (including off-balance sheet obligations) into their overall liquidity policy, contingency funding plan and liquidity stress tests. In addition, a clear assessment of how practices in relevant markets (e.g. structured investment vehicles and auction rate securities) will affect individual institutions' behaviour should be directly factored into AIs' liquidity planning.

3.3.3 AIs which have provided liquidity facilities to securitization transactions should establish an appropriate strategy, policy, and limits framework to manage the contractual contingent liquidity risks arising from such facilities, taking into consideration the types of assets being securitized and their degree of liquidity¹⁵.

¹⁵ Measures which could be taken include, for example, limits on the size and nature of ABCP facilities offered, limits on the amount of commercial paper maturing during specified time periods (e.g. overnight, 1 week, 2 weeks, 1 month), or the holding of risk-adjusted pools of earmarked liquid assets to mitigate against short-term disruptions.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- 3.3.4 In addition, before participating in CRT activity, AIs should ensure that they understand clearly the implications of the activity for their regulatory liquidity ratios under the [Banking \(Liquidity\) Rules](#) (“BLR”). Also see [LM-2](#) “Sound Systems and Controls for Liquidity Risk Management” for details of the key elements of effective liquidity risk management.

3.4 Special purpose entities

- 3.4.1 AIs using SPEs for securitization or other risk transfer purposes should conduct ongoing assessments of the business purpose for, and all the risks associated with, an SPE throughout its life, recognizing that the risk profile of the SPE and the nature of the risks involved may change over time. Moreover, AIs should assess whether the use of the SPE has transferred risk, transformed risk or increased their risk exposures. For example, if investors have a strong expectation that the originating AI of a securitization transaction will provide implicit support to the transaction, the transaction is merely a transformation (from direct credit risk to indirect credit risk) rather than a transfer of risk. In other words, AIs should focus on the economic risk involved in using SPEs when assessing their capital adequacy and risk exposures to the SPEs used. Regulatory capital relief or liquidity benefit can be taken into account only for CRT transactions which have significant economic risk transfer¹⁶.
- 3.4.2 When establishing an SPE for a CRT transaction, an AI should consider whether the SPE’s governance process (e.g. degree of active intervention by key parties participating in the SPE) is commensurate with the dynamism and complexity of the transaction structure, and whether the process may limit the ability of the AI to address pre-defined triggers, default events or termination events that have negative impacts (e.g. funding obligation) on the AI.
- 3.4.3 AIs, as investors or counterparties in a CRT transaction that involves an SPE, should understand how the SPE’s governance process would play out when the SPE (or the trustee if the SPE is in the form of a trust) is required by

¹⁶ AIs should refer to the regulatory capital and liquidity requirements applicable to them in determining whether the capital relief or liquidity benefit of a CRT transaction can be recognized for regulatory purposes. Also see Section 4 for brief descriptions of the capital adequacy framework (for locally incorporated AIs) and the liquidity requirements (for all AIs) promulgated by the HKMA.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

transaction documents to take pre-specified actions in response to the occurrence of certain events (e.g. trigger events, termination events). For example, whether key parties to the transaction are permitted to intervene in or override the SPE's actions when such actions may initiate or exacerbate a downward spiral in the financial positions of the SPE or the originator of the transaction.

3.5 Legal risk and compliance

3.5.1 Before entering into a CRT transaction with a counterparty or customer, AIs should, wherever applicable—

- (a) clearly identify, based on their role in the transaction, their legal responsibilities to the counterparty or customer;
- (b) determine that the counterparty or customer has the legal authority to enter into the transaction (see also [paragraph 3.2.6\(e\)](#)); and
- (c) understand the terms of the legal documentation of the transaction, in particular in the case of complex structured products (e.g. the range of credit events covered by the products and whether the reference entities are clearly identified in the documentation), and consult their legal advisors about the adequacy and enforceability of the legal documentation.

3.5.2 When marketing structured CRT products, AIs should adopt appropriate investor suitability measures (see [subsection 3.2](#) above) to mitigate litigation risk that may arise.

3.5.3 In order to reduce legal risks arising from CRT transactions, AIs should, wherever possible, seek to adopt standard market documentation for the transactions.

4. Supervisory approach to CRT activities

4.1 Risk-based supervision

4.1.1 As part of its risk-based supervisory process, the HKMA will determine whether an AI engaging in CRT activities has put in place a sound firm-wide risk management framework which, among other things, enables it to define its risk appetite for,



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

and identify all material risks associated with, its CRT activities (whether on- or off-balance sheet).

- 4.1.2 Continuous supervision of AIs' CRT activities will be conducted through a combination of on-site examinations, off-site reviews and prudential meetings. As part of the on-site examination process, the HKMA will evaluate whether an AI's measurement system can identify and quantify adequately exposures arising from its CRT activities. The HKMA will also analyse the integrity and effectiveness of the AI's risk management process to ensure that its practices comply with the objectives, risk appetite and risk limits approved by its Board or an appropriate committee delegated with this authority.
- 4.1.3 In considering whether an AI has appropriate systems for managing risks arising from CRT activities, the HKMA will take into account the size, nature and complexity of the AI's CRT activities and assess its compliance with the standards and sound practices set out in this module and other relevant guidelines on a proportionate basis.
- 4.1.4 In the case of locally incorporated AIs, the holding of mortgage backed securities will also be taken into account when assessing an AI's aggregate property lending. Moreover, the capital adequacy of the AIs relative to the level of their risk exposure to CRT activities and the soundness of the related risk management process will also be assessed as part of the HKMA's supervisory review process. See [CA-G-5](#) for details of the HKMA's framework for assessing the capital adequacy of locally incorporated AIs to cater for risks that are not covered or adequately covered under the [BCR](#).
- 4.1.5 Currently, the use of SPEs by AIs in CRT activities is minimal. Nevertheless, should any significant increase in the use of SPEs by the banking sector be observed, the HKMA is prepared to step up its monitoring of SPE activities where necessary to, among other things—
- (a) determine whether an AI's aggregate use of SPEs may endanger recoveries to unsecured creditors and depositors (e.g. via ring-fencing better quality assets for the benefit of SPEs), and assess the implications for depositor protection and the AI's capital adequacy;



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (b) determine whether an AI's use of SPEs involves redistribution of riskier assets to third parties (via sale to SPEs) as part of the assessment of the systemic implications of risk dispersion by AIs to other players in the local financial sector;
- (c) monitor the extent to which an AI may be repeatedly undertaking financial and non-financial obligations which are skewed in favour of its affiliated SPEs; or
- (d) identify whether an AI's use of SPEs will contribute to developments that can lead to systemic weakness and contagion or exacerbate procyclicality.

4.2 Risk retention requirement

4.2.1 Unless otherwise agreed with the HKMA, AIs should refrain from investing in, or incurring an exposure (e.g. through acting as a derivative counterparty or liquidity facility provider) to, a securitization transaction the originator of which has not disclosed its compliance with applicable risk retention requirements¹⁷ (viz., that requirements imposed by the relevant authority of a jurisdiction, in circumstances where such requirements are applicable to the transaction, will be or have been satisfied (including the level of risk retention and the manner in which the risk retention is or is to be achieved), or that the transaction is eligible for exemption from the risk retention requirements).

4.2.2 [Paragraph 4.2.1](#) will apply to new securitization exposures¹⁸ (whether in the banking or trading book) incurred or to be incurred subsequent to the issuance of this module.

4.3 High cost credit protection (for locally incorporated AIs)

4.3.1 The HKMA may, in its supervisory review process, review the relevant costs (including costs that have not yet been recognized in earnings) of credit protection purchased as part

¹⁷ Risk retention requirements refer to regulatory / supervisory requirements designed to ensure originators in securitization transactions retain economic exposures to the transactions so that there would be better alignment of the interests of the parties (in particular, the interests of the originator with those of the investors) in the securitization value chain.

¹⁸ Securitization exposures to asset-backed securities issued or guaranteed by domestic public sector entities (within the meaning given by section 2(1) of the [BCR](#)) are excluded.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

of its assessment of the capital adequacy of an AI, including, where applicable, whether an AI meets the standards for significant credit risk transference within the securitization framework contained in the [BCR](#) and the associated supervisory guidance¹⁹. See Annex G of [CA-G-5](#) for more information.

4.4 Notification requirements (for locally incorporated AIs)

4.4.1 An AI acting as an originator of a securitization transaction should be prepared to explain to the HKMA the purpose of, and the nature of, its role in the securitization transaction concerned; the possible impacts on its financial position, capital adequacy, liquidity and asset quality, having regard to the risks incurred by it in the structure of the transaction (e.g. through retention of first-loss tranche or provision of liquidity facilities); and the system of controls that are or will be put in place to manage these risks. For example, an AI may undertake the role of servicing the underlying exposures of a securitization transaction which may expose the AI to significant operational risk. In such case, the HKMA will need to be satisfied that the systems of the AI are adequate to meet its obligations as a servicer.

4.4.2 In general, any repurchase of underlying exposures by an originating AI should be done at fair market value and the originating AI should only repurchase exposures if it has taken into account carefully the following factors prior to the repurchase—

- (a) its own capital and liquidity position before and after the repurchase;
- (b) the performance of the underlying exposures or securitization exposures before the repurchase; and
- (c) the expected performance of the underlying exposures or securitization exposures after the repurchase.

¹⁹ For example, the HKMA may consider unrecognized premia as a retained position. These premia could be quantified for the purposes of such an analysis in a number of ways, including through an appropriately conservative present value calculation.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

Where necessary, the HKMA may require the originating AI to provide information to demonstrate that it meets the above requirements.

- 4.4.3 Originating AIs and AIs that have active participation in CRT activities should notify the HKMA of any material and fundamental changes to their business model associated with their CRT activities.
- 4.4.4 AIs should bring to the attention of the HKMA any innovative positions which are considered high cost credit protection to ensure the positions are subject to appropriate supervisory treatment.

4.5 Information collection

- 4.5.1 AIs are required to submit information on their holdings of CRT products through two half-yearly surveys namely “Survey on selected debt securities” and “Survey on off-balance sheet exposures in derivatives and securitization transactions”. The HKMA uses the data collected from these surveys to evaluate the level and trend of CRT activities in the banking sector and the extent of participation of individual AIs in CRT activities. Where necessary, the HKMA may seek additional information from AIs, such as that relating to the SPE activities of the AIs, for supervisory purposes.

4.6 Capital adequacy framework (for locally incorporated AIs)

Securitization exposures

- 4.6.1 AIs should calculate their capital requirements for exposures to securitization transactions (within the meaning given by §227(1) of the [BCR](#)) in accordance with Part 7 (in the case of banking book exposures) and Part 8 (in the case of trading book exposures) of the [BCR](#). Paragraphs 2.4.7 to 2.4.11 and 2.4.13 above provide guidance on how AIs are expected to comply with the operational criteria set out in §230A of the [BCR](#).
- 4.6.2 Exposures to securitization transactions other than those referred to in [paragraph 4.6.1](#) are subject to the capital treatments that are applicable to non-securitization exposures (within the meaning given by §2(1) of the [BCR](#)). An AI should determine whether an exposure falls within the definition of



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

“securitization exposures” in the [BCR](#) on the basis of the economic substance of the transaction concerned rather than its legal form and, where there is any doubt, the HKMA should be consulted.

- 4.6.3 An originating AI that intends to exclude the underlying exposures (in the case of traditional securitizations) from, or recognize the credit risk mitigation effect in respect of the underlying exposures achieved by the securitization concerned (in the case of synthetic securitizations) in, the AI’s capital requirement calculation must comply with the relevant requirements set out in the BCR and in line with the associated supervisory guidance²⁰.

Credit derivative contracts

- 4.6.4 AIs are required to provide capital for their positions (including the CCR associated with the positions) in credit derivative contracts (whether buying or selling protection, in the banking book or trading book) unless otherwise specified in the [BCR](#).

4.7 Liquidity requirements

- 4.7.1 The assets, liabilities, obligations and cash flows associated with an AI’s CRT activities should be reflected in the AI’s liquidity coverage ratio (“LCR”) or liquidity maintenance ratio (“LMR”) in accordance with the BLR and the associated requirements set by the MA.
- 4.7.2 In general, contractual liabilities, obligations and cash flows arising from an AI’s CRT activities should be included in the calculation of the LCR (or the LMR where applicable) if such liabilities, obligations and cash flows are expected to result in any amount payable by the AI within the LCR period (or the LMR period)²¹. An AI should also note that the calculation of the LCR also covers certain types of non-contractual contingent funding obligations that may arise from CRT activities, such as contingent liquidity needs that may arise from market expectations on the AI’s provision of liquidity

²⁰ At the time of issuance of this SPM module, the relevant requirements are set out in §229 of, and Schedules 9 and 10 to, the BCR, and further guidance can be found in the [Q&As](#) issued by the HKMA in December 2014.

²¹ See BLR Rule 2(1) for the definition of “LCR period” and BLR Schedule 5 for the definition of “LMR period”.



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

support to fund early redemption of structured financial instruments.

4.8 Large exposure treatment

4.8.1 Als are required to determine the values and the counterparties of their exposures arising from CRT activities and report the exposures in the Return of Large Exposures – MA(BS)1D in accordance with the requirements under the large exposure regime in force in Hong Kong.

4.9 Financial disclosure requirements (for locally incorporated Als)

4.9.1 In addition to the disclosure requirements set out in the [Banking \(Disclosure\) Rules](#), Als are encouraged to make risk disclosures in line with the latest recommended international best practices (presently including those described in the “Report of the Enhanced Disclosure Task Force” issued in October 2012 and the report entitled “[Leading Practice Disclosures for Selected Exposures](#)” issued by the Senior Supervisors Group in April 2008 (“SSG report”)). For CRT exposures not explicitly covered by the SSG report, Als should consider applying similar principles to those illustrated in the SSG report whenever circumstances warrant (e.g. to address market concerns). The information disclosed should be sufficient for the market to evaluate the type and magnitude of risks associated with the exposures, having regard to what is most relevant to the market conditions, and most useful to investors, at the time of the disclosures. Information that could be useful to investors includes—

- (a) qualitative descriptions of the nature of CRT activities undertaken, including a discussion of the purposes and nature of such activities;
- (b) information that describes how CRT transactions affect or modify the credit risk profile of lending portfolios (e.g. effects on the geographic, industry and credit quality breakdowns of the lending portfolios);
- (c) breakdown of trading risk exposure and revenue arising from trading activities in CRT transactions, which details credit-related risks separately from other risks such as interest rate risk;



Supervisory Policy Manual

CR-G-12

Credit Risk Transfer Activities

V.1 - 30.06.16

- (d) breakdown of holdings in CRT products by types of products and rating categories, shown separately from other non-CRT products such as bonds;
- (e) information on the amount of credit exposures assumed by providing credit protection and the associated provisions.

4.9.2 Als are encouraged to provide in their disclosure statement information on the extent to which they rely on, or use, external credit ratings in their credit assessment processes.

[Contents](#)

[Glossary](#)

[Home](#)

[Introduction](#)