<u>Annex 2</u>

DRAFT

Code of Practice

for the Purposes of Providing Guidance in respect of Division 5 (Calculation of Total Net Cash Outflows) of Part 7 of the Banking (Liquidity) Rules (L.N. [..] of 2014)

I, ____________________, the Monetary Authority, pursuant to section 97M of the Banking Ordinance (Cap. 155), as amended by section 8 of the Banking (Amendment) Ordinance 2012 (No. 3 of 2012), after consultation with the Banking Advisory Committee, the Deposit-taking Companies Advisory Committee, The Hong Kong Association of Banks and The Hong Kong Association of Restricted Licence Banks and Deposit-taking Companies, hereby approve, with effect on and after 1 January 2015, the following code of practice for the purpose of providing guidance in respect of the provisions of Division 5 (Calculation of Total Net Cash Outflows) of Part 7 of the Banking (Liquidity) Rules (L.N. [.] of 2014).

Code of Practice Providing Guidance in Respect of the Provisions of Division 5 (Calculation of Total Net Cash Outflows) of Part 7 of the Banking (Liquidity) Rules (L.N.. [..] of 2014)

20. Calculation of total expected cash outflows – repayment of funding obtained from structured financial instruments issued by a category 1 institution and redeemable within LCR period

21. Calculation of total expected cash outflows – obligations to provide assets or funding in respect of structured financing transactions

22. Calculation of total expected cash outflows – committed facilities

23. Calculation of total expected cash outflows – contractual [lending][1] obligations not otherwise covered in this code of practice

24. Calculation of total expected cash outflows – other contingent funding obligations

25. Calculation of total expected cash outflows – other contractual cash outflows

26. Calculation of total expected cash inflows – secured lending

27. Calculation of total expected cash inflows – other loans

28. Calculation of total expected cash inflows – release of balances in segregated accounts for protection of customer assets

29. Calculation of total expected cash inflows – securities maturing within LCR period

30. Calculation of total expected cash inflows – facilities granted by, or operational deposits held at, other financial institutions

31. Calculation of total expected cash inflows – derivative contracts

32. Calculation of total expected cash inflows – other contractual cash inflows

[1] The HKMA will seek clarification from the Basel Committee on whether this cash outflow item should be confined to "lending" obligations or a broader meaning of "funding" obligations.

1. Citation

This code of practice may be cited as the Banking (Liquidity Coverage Ratio – Calculation of Total Net Cash Outflows) Code.

2. Interpretation

(1) In this code of practice—

customer short position ( ), in relation to a customer of a category 1 institution, means a short position created by the customer when he sells a security he does not own, which is subsequently covered when the institution delivers to the customer, under a securities lending transaction, an equivalent security, acquired from internal or external sources, on the settlement date of the sale;

Liquidity Rules ( ) means the Banking (Liquidity) Rules (L.N. [..] of 2014); and

special purpose entity ( ) means a company, trust or other entity—

(a) created for a specific purpose;

(b) the activities of which are limited to those appropriate to achieving that purpose;

(c) the structure of which is intended to isolate the entity from the credit risk of an originator or seller of exposures; and

(d) that is commonly used as a financing vehicle in which exposures are sold to a company, trust or similar entity in exchange for a sum of money or other assets funded by debt issued by the company, trust or similar entity, as the case may be.

(2) Section 2 of the Banking Ordinance (Cap. 155) applies, with all necessary modifications, to the interpretation of this code of practice as it applies to the interpretation of that Ordinance.

(3) Sections 2 and 40 of the Liquidity Rules apply, with all necessary modifications, to the interpretation of this code of practice as they apply to the interpretation of those Rules.

(4) The Interpretation and General Clauses Ordinance (Cap. 1) applies, with all necessary modifications, to the interpretation of this code of practice as it applies to the interpretation of the Banking Ordinance (Cap. 155).

(5) The "standard calculation methodology templates" referred to in sections 42(8) and 43(3) of the Liquidity Rules are those specified by the Monetary Authority for the purposes of calculating the LCR. Such templates also form

the basis of the return of Liquidity Position of an Authorized Institution (MA(BS)1E) issued by the Monetary Authority under section 63(2) of the Banking Ordinance.

3. Calculation of total expected cash outflows – stable retail deposits

(1) Subject to subclause (2), the expected cash outflow of a category 1 institution arising from stable retail deposits is calculated by multiplying the principal amount of each stable retail deposit by an outflow rate of 5%.

(2) A category 1 institution may calculate its expected cash outflow of stable retail deposits by multiplying the principal amount of each stable retail deposit by an outflow rate of 3% if that outflow rate is not inconsistent with the historical run-off behaviour of the deposits during a period of financial stress and the effective deposit insurance scheme covering the deposits—

(a) is based on a system of prefunding through periodic collection of levies on the members of the scheme;

(b) has an adequate means of ensuring ready access to additional funding in the event of a large call on its reserves, based on an explicit and legally binding guarantee from the relevant government, a standing authority to borrow from the government, or any other similar arrangement; and

(c) is routinely capable of making a payment to depositors in respect of their insured deposits within not more than 7 business days after the scheme is activated.

4. Calculation of total expected cash outflows – less stable retail deposits

The expected cash outflow of a category 1 institution arising from less stable retail deposits is calculated by multiplying the principal amount of each less stable retail deposit by an outflow rate of 10%, unless the Monetary Authority notifies the institution otherwise by issuing a notice under section 97K(1) of the Ordinance to vary the liquidity requirement rule applicable to the institution under section 42(10) of the Liquidity Rules, if he considers that the liquidity risk associated with those deposits is such that it is prudent and reasonable to apply that increase to those deposits.

5. Calculation of total expected cash outflows – retail term deposits

(1) Subject to subclause (2), the expected cash outflow of a category 1 institution arising from retail term deposits is calculated by multiplying the principal amount of each retail term deposit by an outflow rate of 5%.

(2) If a retail term deposit of a category 1 institution–

(a) is subject to section 12(3) of the Banking Ordinance (Cap. 155) at the time the institution makes the calculation referred to in subclause (1), the institution may exclude that deposit from the calculation; and

(b) is not subject to section 12(3) of the Banking Ordinance (Cap. 155) because the Monetary Authority has given a written permission referred to in that section for repayment of the deposit within a period less than the period specified in item 1 of the First Schedule to that Ordinance, the principal amount of that deposit is multiplied by an outflow rate of 100% with effect on and after the date on which the institution receives that permission.

6. Calculation of total expected cash outflows – unsecured wholesale funding

(1) Subject to subclauses (2) and (3), unsecured wholesale funding obtained by a category 1 institution is included in the calculation of the institution’s total expected cash outflows if–

(a) the funding is callable by the fund provider within the LCR period;

(b) the earliest possible contractual maturity date of the funding falls within the LCR period; or

(c) the funding is either payable on demand or does not have a specific maturity date.

(2) However, if–

(a) the unsecured wholesale funding obtained by a category 1 institution is callable at its option within the LCR period; and

(b) there is market expectation that the institution will exercise that option and thus cause that funding to be redeemed before its contractual maturity date,

the funding is included in the calculation of the institution’s total expected cash outflows as if the funding will be redeemed within the LCR period.

(3) Subclause (1) does not apply to unsecured wholesale funding that is callable by the fund provider subject to a contractually defined and legally binding notice period that extends beyond the LCR period, meaning that such funding is not included in the calculation of the institution’s total expected cash outflows.

7. Calculation of total expected cash outflows – small business funding

The expected cash outflow of a category 1 institution arising from small business funding is calculated in accordance with clauses 3, 4 and 5 with all necessary modifications.

8. Calculation of total expected cash outflows – operational deposits

(1) Subject to subclauses (2) to (5), the expected cash outflow of a category 1 institution arising from operational deposits is calculated by multiplying the principal amount of each operational deposit by—

(a) in the case of that portion of the deposit that is fully insured by an effective deposit insurance scheme, the applicable outflow rate under clause 3 as if the deposit were a stable retail deposit; and

(b) in any other case, an outflow rate of 25%.

(2) Operational deposits placed with a category 1 institution by its wholesale customers (other than small business customers) can only be included in the calculation under subclause (1) if –

(a) the customer is reliant on the institution for the provision of operational services as an independent third party in order to fulfil the customer's normal business operations within the LCR period;

(b) the institution is unaware of any adequate back-up arrangements of the customer that the customer could call upon should the institution not be able to provide the operational services referred to in paragraph (a) to the customer;

(c) the operational services referred to in paragraph (a) provided by the institution to the customer are so provided under a legally binding agreement;

(d) the agreement referred to in paragraph (c) is not due for expiry within the LCR period and can only be terminated by the customer by giving the institution notice of not less than 30 calendar days;

(e) any early termination of the agreement referred to in paragraph (c) within the LCR period will result in significant costs being borne by the customer for moving its deposit out of the institution within the LCR period;

(f) the deposit is the by-product of the underlying operational services referred to in paragraph (a) provided by the institution to the customer;

(g) the deposit has not been taken by the institution in the wholesale funding market solely with a view to the institution generating income from the deposit;

(h) the deposit is kept in a specifically designated account and priced at a level, or coupled with other benefits, that does or do not give the customer an economic incentive to maintain excess operational deposit in that account;

(i) the institution has an effective methodology for identifying the amount of excess operational deposit maintained in the customer's operational deposit account, having regard to all relevant factors affecting the risk of withdrawal by the customer of the excess operational deposit when the institution is in financial stress;

(j) that portion of the deposit maintained in the customer's operational deposit account that is identified by the institution to be excess operational deposit is excluded from the calculation under subclause (1); and

(k) the deposits included by the institution in the calculation under subclause (1) are not provided by a small number of customers that may potentially expose the institution to the risk of over-reliance on funding provided by those customers.

(3) A category 1 institution should assess if its deposits meet the criteria under subclause (2) before they are treated as operational deposits, and the institution should be able to provide its assessment to the Monetary Authority for review upon request.

(4) If a category 1 institution is unable to determine the amount of excess operational deposit in an operational deposit account, the entire balance of the deposit in that account is treated as if that deposit were not an operational deposit.

(5) In this clause—

excess operational deposit ( ), in relation to an operational deposit account in which the operational deposit of a wholesale customer (other than a small business customer) of a category 1 institution is kept, means that portion of the operational deposit kept in that account that is in excess of the level of operational deposit that is necessary to be kept in the account in order for the institution to provide operational services to the customer to meet the customer's operational needs;

operational deposit account ( ) means a specifically designated account referred to in subclause (2)(h).

relevant factors ( ), in relation to the risk of withdrawal of excess operational deposit, include—

(a) the likelihood that the customer concerned will have above average balances in the customer's operational deposit account in advance of specific payment needs; and

(b) appropriate indicators to identify those customers that are not actively or efficiently managing their respective balances in their respective operational deposit accounts.

9. Calculation of total expected cash outflows – unsecured wholesale funding (other than operational deposits) provided by corporates (other than small business customers), sovereigns, the Monetary Authority for the account of the Exchange Fund, central banks, multilateral development banks and public sector entities

The expected cash outflow of a category 1 institution arising from unsecured wholesale funding provided to the institution by a corporate (other than a small business customer), sovereign, the Monetary Authority for the account of the Exchange Fund, central bank, multilateral development bank or public sector entity that does not qualify as operational deposits is calculated by multiplying the principal amount of the funding by—

(a) if the entire amount of the funding is fully insured by an effective deposit insurance scheme, an outflow rate of 20%; and

(b) in any other case, an outflow rate of 40%.

10. Calculation of total expected cash outflows – unsecured wholesale funding other than funding covered under clauses 7 to 9

(1) Subject to subclause (2), the expected cash outflow of a category 1 institution arising from unsecured wholesale funding (other than funding covered under clauses 7 to 9) is calculated by multiplying the principal amount of the funding by an outflow rate of 100%.

(2) If the funding referred to in subclause (1) is—

(a) received from customers by a category 1 institution in the course of providing prime brokerage services to those customers; and

(b) withdrawable within the LCR period,

the entire amount of that funding is included in the calculation of the institution's expected cash outflow, irrespective of whether the institution has maintained, or is required to maintain, all or any portion of the funding in segregated accounts for the protection of customer assets.

11. Calculation of total expected cash outflows – debt securities and prescribed instruments issued by a category 1 institution and redeemable within LCR period

The expected cash outflow of a category 1 institution arising from any debt security or prescribed instrument issued by the institution that is redeemable within the LCR period is calculated by multiplying the redeemable amount of the security or instrument, as the case may be, by an outflow rate of 100%.

12. Calculation of total expected cash outflows – secured funding (including liabilities or obligations arising from securities swap transactions)

(1) Subject to subclauses (2) and (3), the expected cash outflow of a category 1 institution arising from secured funding transactions (other than securities swap transactions) which are due for settlement within the LCR period is calculated by multiplying the principal amount of the liability (that is, the sum of money) to be repaid by the institution under each of those transactions within that period by the outflow rate applicable to the transaction concerned as shown in Table 1.

Table 1

Outflow rates for calculation of expected cash outflow of secured funding transactions (other than securities swap transactions)

Item no.	Types of secured funding transaction (other than securities swap transactions) entered into by category 1 institution	Outflow rate
1.	The counterparty of the transaction is— (a) a central bank of the country in which the institution is incorporated or carries on banking business; or (b) the Monetary Authority for the account of the Exchange Fund (if the institution is incorporated in Hong Kong), irrespective of the type of collateral backing the transaction.	0%
2.	The counterparty of the transaction is the sovereign or a qualifying public sector entity of the country in which the institution is incorporated or carries on banking business, or a multilateral development bank, and the transaction is collateralized by—	

Item no.	Types of secured funding transaction (other than securities swap transactions) entered into by category 1 institution	Outflow rate
	(a) level 1 assets;	0%
	(b) level 2A assets;	15%
	(c) approved RMBS;	25%
	(d) level 2B assets that do not fall within paragraph (c); or	25%
	(e) assets that do not fall within any of paragraphs (a) to (d).	25%
3.	The counterparty of the transaction is an entity that does not fall within item no. 1 or 2 and the transaction is collateralized by—	
	(a) level 1 assets;	0%
	(b) level 2A assets;	15%
	(c) approved RMBS;	25%
	(d) level 2B assets that do not fall within paragraph (c); and	50%
	(e) assets that do not fall with any of paragraphs (a) to (d).	100%

(2) A qualifying public sector entity referred to in item no. 2 of Table 1 means a public sector entity that qualifies, in the calculation of credit risk under the standardized (credit risk) approach, for a risk-weight not exceeding 20% under section 57 of the Capital Rules.

(3) For the purposes of item nos. 2 and 3 of Table 1, a secured funding transaction (other than a securities swap transaction) entered into by a category 1 institution is not regarded as collateralized by an asset that falls within level 1 assets, level 2A assets, approved RMBS or other level 2B assets referred to in those items, unless that asset satisfies the requirements set out in section 26(a) and (b) of the Liquidity Rules that are applicable to the asset.

(4) Subject to subclauses (5) and (6), if a category 1 institution enters into a securities swap transaction with a counterparty and receives securities from the counterparty in exchange as collateral and the transaction is due for settlement within the LCR period, the expected cash outflow of the institution arising from the transaction is calculated by multiplying the principal amount of the securities to be delivered by the institution to the counterparty within that period by an outflow rate shown in Table 2.

Table 2

Outflow rates for calculation of expected cash outflow of securities swap transactions

1	2	3
Securities to be delivered by category 1 institution to counterparty within LCR period	**Securities to be received by category 1 institution from counterparty within LCR period**	**Outflow rate**
(a) level 1 assets	level 1 assets	0%
(b) - ditto -	level 2A assets	15%
(c) - ditto -	approved RMBS	25%
(d) - ditto -	level 2B assets that are not approved RMBS	50%
(e) - ditto -	assets that are not level 1 assets, level 2A assets or level 2B assets	100%
(f) level 2A assets	level 2A assets	0%
(g) - ditto -	approved RMBS	10%
(h) - ditto -	level 2B assets that are not approved RMBS	35%
(i) - ditto -	assets that are not level 1 assets, level 2A assets or level 2B assets	85%
(j) approved RMBS	approved RMBS	0%
(k) - ditto -	level 2B assets that are not approved RMBS	25%
(l) - ditto -	assets that are not level 1 assets, level 2A assets or level 2B assets	75%
(m) level 2B assets that are not approved RMBS	level 2B assets that are not approved RMBS	0%

1		2	3
Securities to be delivered by category 1 institution to counterparty within LCR period		**Securities to be received by category 1 institution from counterparty within LCR period**	**Outflow rate**
(n)	- ditto -	assets that are not level 1 assets, level 2A assets or level 2B assets	50%
(o)	assets that are not level 1 assets, level 2A assets or level 2B assets	assets that are not level 1 asses, level 2A assets or level 2B assets	0%

(5) The principal amount of the securities referred to in subclause (4) is—

(a) if the securities are marketable assets, the fair value of the securities; and

(b) in any other case, the book value (including any accrued interest) of the securities.

(6) For the purposes of Table 2, a security to be delivered, or received, by a category 1 institution under a securities swap transaction is not regarded as a level 1 asset, level 2A asset or level 2B asset referred to in that table unless the security satisfies the requirements set out in section 26(a) and (b) of the Liquidity Rules that are applicable to it.

13. Calculation of total expected cash outflows – derivative contracts

(1) Subject to subclauses (2) to (5), a category 1 institution, in calculating its expected cash outflow arising from derivative contracts entered into by the institution—

(a) determines the fair value of the contractual cash outflow to be paid, and the fair value of the contractual cash inflow to be received, by the institution under each of those contracts within the LCR period;

(b) subject to paragraph (c), derives the contractual cash outflow of those contracts on a gross rather than on a net basis (that is, the contractual cash inflow of those contracts is not to be offset against the contractual cash outflow of those contracts within the same period);

(c) in the case of derivative contracts that satisfy the requirements set out in subclauses (3) and (4), may derive the contractual cash outflow of those contracts on a net basis (that is, by offsetting against such outflow the contractual cash inflow of those contracts within the same period); and

(d) aggregates the amounts derived under paragraphs (b) and (c) and applies an outflow rate of 100% to the aggregated amount.

(2) If a category 1 institution has posted an asset to its counterparty as collateral to cover the institution's payment obligations under a derivative contract and—

(a) the asset satisfies all the requirements of section 26(a) and (b) of the Liquidity Rules that are applicable to the asset;

(b) the asset satisfies, or will satisfy when it is returned to the institution, all the requirements referred to in section 26(c) of the Liquidity Rules that are applicable to it; and

(c) the institution satisfies, or will satisfy when the asset is returned to the institution, all the requirements referred to in section 26(d) of the Liquidity Rules that are applicable to it in so far as those requirements relate to the asset,

the institution, for the purposes of calculating its expected cash outflow under the contract, deducts from such outflow the fair value of the asset after applying the post-haircut factor specified in Table 1 in section 36 of the Liquidity Rules that is applicable to the asset.

(3) If a category 1 institution has entered into an exchange rate contract which involves the exchange of cash flow in 2 currencies within the LCR period, the institution may offset the contractual cash outflow in one currency by the contractual cash inflow in another currency under the contract only if the 2 amounts are fully exchanged on a simultaneous basis (or within the same day) upon the settlement of the contract, irrespective of whether the contract is subject to a valid bilateral netting agreement.

(4) The expected cash outflow arising from derivative contracts entered into by a category 1 institution with the same counterparty may be calculated on a net basis (that is, by offsetting the contractual cash inflows against the contractual cash outflows under those contracts within the LCR period) only if those contracts are subject to a valid bilateral netting agreement entered into by the institution with that counterparty.

(5) If a category 1 institution sells an option to a counterparty under a derivative contract, and the option is in-the-money and exercisable by the counterparty within the LCR period, it is assumed that the counterparty will exercise the option and any cash outflow arising from the exercise of the option is therefore included in the calculation of the institution's expected cash outflow under subclause (1).

14. Calculation of total expected cash outflows – derivative contracts or other transactions with specified material adverse event clauses

(1) If a category 1 institution has entered into a derivative contract which contains a material adverse event clause, the institution, in calculating its expected cash outflow arising from that contract—

(a) determines the principal amount of any additional contractual cash outflow arising from that contract, or the fair value of any additional collateral required to be posted to the institution's counterparty in respect of that contract, or both, [as if the material adverse event were to occur within the LCR period][2], and

(b) applies an outflow rate of 100% to the amount derived pursuant to paragraph (a).

(2) A similar process to that in subclause 1 applies to other transactions entered into by a category 1 institution which are not derivative contracts but which are subject to a material adverse event clause.

15. Calculation of total expected cash outflows – potential loss in market value of posted collateral securing derivative contracts or other transactions

(1) If a category 1 institution has posted an asset, other than a level 1 asset, to a counterparty as collateral to cover the counterparty's exposure to the institution under a derivative contract or other transaction (***posted collateral***), the expected cash outflow of the institution calculated in respect of that contract is increased by an amount equal to the [fair value / notional amount][3] of the posted collateral, multiplied by an outflow rate of 20%, to cater for the risk of potential changes in the valuation of the collateral.

(2) For the purposes of calculating the expected cash outflow referred to in subclause (1), a category 1 institution—

(a) applies the 20% outflow rate to the [fair value / notional amount] of the posted collateral after applying any haircut that may be applicable to the collateral as required under the derivative contract or transaction concerned; and

(b) subject to subclause (3), offsets the posted collateral by any collateral received from the same counterparty to which the posted collateral is

[2] The HKMA will seek clarification from the Basel Committee on the intended scope of coverage of this cash outflow item.

[3] The HKMA will seek clarification from the Basel Committee on several issues about the calculation of this cash outflow item, including, for example, whether this outflow should be calculated on a fair value (or notional amount) of the collateral requirement in question.

posted (***received collateral***) if the institution has the right to re-hypothecate the received collateral without restriction.

(3) If the received collateral is kept in a segregated margin account of the counterparty, the collateral can only be used to offset outflows arising from payments that are eligible to be offset from the same account of the counterparty.

16. Calculation of total expected cash outflows – excess non-segregated collateral callable by counterparty under derivative contracts or other transactions

If—

(a) a category 1 institution is holding collateral posted by a counterparty and the fair value of the collateral is in excess of the amount of collateral contractually required to be posted to the institution under a derivative contract or other transaction;

(b) the counterparty has the right to withdraw the excess collateral (being the amount of collateral in excess of the contractual collateral requirement) from the institution any time within the LCR period; and

(c) the collateral is not segregated from other assets held by the institution,

the expected cash outflow of the institution arising from the potential withdrawal of the excess collateral by the counterparty is calculated by multiplying the fair value of the excess collateral by an outflow rate of 100%.

17. Calculation of total expected cash outflows – collateral substitution under derivative contracts or other transactions

(1) If—

(a) a category 1 institution has received assets that qualify for inclusion as HQLA under the LCR as collateral from a counterparty under a derivative contract or other transaction entered into by the institution with the counterparty (***HQLA collateral***);

(b) the HQLA collateral is not segregated from other assets held by the institution; and

(c) the counterparty has a contractual right to substitute the HQLA collateral posted to the institution by one or more than one type of collateral of lower liquidity quality at any time within the LCR period,

it is assumed that the counterparty will exercise that right during the LCR period and the associated expected cash outflow is calculated (as set out in subclause (2)) by multiplying the fair value of the HQLA collateral held by the institution by the applicable outflow rate set out in column 3 of Table 2 in clause 12(4).

(2) The outflow rate referred to in subclause (1) is determined by reference to the particular row in column 2 of Table 2 in which—

(a) column 1 of Table 2 corresponds to the type of HQLA collateral held by the institution; and

(b) column 2 of Table 2 corresponds to the type of collateral of lower liquidity quality assumed to be used by the counterparty to substitute the HQLA collateral held by the institution (after applying the order of collateral substitution determined in accordance with subclause (3)).

(3) For the purposes of subclause (1), it is assumed that the counterparty will substitute the HQLA collateral held by the institution by the type of collateral in the following order (to the extent allowed under the relevant contract) —

(a) first order of substitution: assets that do not qualify as HQLA;

(b) second order of substitution: level 2B assets that are not approved RMBS;

(c) third order of substitution: approved RMBS; and

(d) fourth order of substitution: level 2A assets.

18. Calculation of total expected cash outflows – contractual obligation to post collateral to counterparty under derivative contracts or other transactions

(1) If a category 1 institution has a contractual obligation to provide collateral to its counterparty under a derivative contract or other transaction within the LCR period, the expected cash outflow of the institution arising from the provision of such collateral to the counterparty is calculated by multiplying the fair value of the collateral required to be provided to the counterparty by an outflow rate of 100% unless the expected cash outflow arising from this obligation is already captured in another cash outflow item.

(2) This is the case irrespective of whether the counterparty referred to in subclause (1) has demanded that the institution post the required collateral.

19. Calculation of total expected cash outflows – historical volatility in value of derivative contracts or other transactions

(1) If a category 1 institution is engaged in the business of entering into derivative contracts or other transactions that are subject to collateral requirements, in order to cater for the risk of increased collateral needs arising from adverse changes in the market value of such contracts and transactions, the associated expected cash outflow of the category 1 institution in respect of those

contracts and transactions is calculated by multiplying *Value X*, as determined in accordance with subclause (2), by an outflow rate of 100%.

(2) *Value X*, being the largest absolute value of the total cumulative amount of net collateral flow of a category 1 institution realized in any period of 30 calendar days during the 24 months preceding the day on which the LCR is calculated, is determined by applying Formula 1 (unless the institution is unable to use Formula 1 due to data insufficiency or other reasons, in which event the institution should agree with the Monetary Authority on an alternative calculation method).

Formula 1

Calculation of *Value X*

"Value X" =

$$\text{Max}\ \{\left|\sum_{n=1}^{30}(\text{daily net collateral flow})_n\right|,\ \left|\sum_{n=2}^{31}(\text{daily net collateral flow})_n\right|, \ldots, \left|\sum_{n=701}^{730}(\text{daily net collateral flow})_n\right|\}\ ;$$

where —

(a) $(\text{daily net collateral flow})_n$ means net amount of collateral inflows or outflows on day "n" caused by changes in the fair value of derivative contracts or other transactions subject to collateral requirements; and

(b) it is assumed that 24 months consist of 730 calendar days.

20. Calculation of total expected cash outflows – repayment of funding obtained from structured financial instrument issued by a category 1 institution and redeemable within LCR period

If a category 1 institution has issued any structured financing instrument which will mature within the LCR period, the expected cash outflow of the institution arising from the repayment of funding obtained from the issue of the instrument is calculated by multiplying the principal amount of the funding repayable by the institution within the LCR period by an outflow rate of 100%.

21. Calculation of total expected cash outflows – obligations to provide assets or funding in respect of structured financing transactions

(1) If a category 1 institution has any obligations under a structured financing transaction to repay any debt maturing within the LCR period, or to provide any funding or asset that may arise from any embedded option in the transaction, the expected cash outflow of the institution arising from such obligations is calculated by applying an outflow rate of 100% to—

(a) the principal amount of any debt maturing within the LCR period; and

(b) the principal amount of any funding or asset that may need to be provided by the institution under the embedded option in the transaction.

(2) A similar process applies in the case of any special purpose entity through which the structured financing transaction is conducted as if that entity were a part of the category 1 institution concerned irrespective of whether the entity is a specified associated entity of the institution.

22. Calculation of total expected cash outflows – committed facilities

(1) Subject to subclauses (2) to (5), the expected cash outflow of a category 1 institution arising from the estimated drawdown of committed facilities (whether committed credit facilities or committed liquidity facilities) within the LCR period is calculated by multiplying the principal amount of the undrawn portion of those facilities by the applicable outflow rate shown in Table 3.

Table 3

Outflow rates for calculation of expected cash outflow arising from estimated drawdown of committed facilities

Item no.	Committed facility	Outflow rate
1.	Committed credit facilities granted to –	
	(a) retail customers;	5%
	(b) small business customers;	5%
	(c) corporates (other than small business customers), sovereigns, the Monetary Authority for the account of the Exchange Fund, central banks, public sector entities or multilateral development banks;	10%
	(d) banks or other financial institutions; or	40%
	(e) any entities that do not fall within any of paragraphs (a) to (d).	100%
2.	Committed liquidity facilities granted to –	
	(a) retail customers;	5%

Item no.	Committed facility	Outflow rate
	(b) small business customers;	5%
	(c) corporates (other than small business customers), sovereigns, the Monetary Authority for the account of the Exchange Fund, central banks, public sector entities or multilateral development banks;	30%
	(d) banks; or	40%
	(e) financial institutions (other than banks) or entities that do not fall within any of paragraphs (a) to (d).	100%

(2) If a committed facility granted by a category 1 institution to its customer is collateralized by an asset that satisfies all the requirements referred to in section 26 of the Liquidity Rules that are applicable to the asset and the institution satisfies all the requirements referred to in section 26(d) of the Liquidity Rules that are applicable to it in so far as those requirements relate to the asset, the institution may, in calculating the principal amount of the undrawn portion of the facility for the purposes of subclause (1), deduct the fair value of the asset (adjusted for any haircut applicable to the asset as specified in Table 1 in section 36 of the Liquidity Rules) if—

(a) the customer—

(i) has posted the asset to the institution as collateral; or

(ii) is legally obligated to post the asset to the institution as collateral upon the drawdown of the facility;

(b) the institution is legally entitled and operationally capable of re-hypothecating the asset to obtain funding once the facility is drawn;

(c) the institution has no obligation to return the asset—

(i) to the customer or to any third party upon demand; or

(ii) at any time within the LCR period;

(d) the institution does not count the asset as HQLA for the purposes of calculating the LCR; and

(e) there is no undue correlation between the probability of drawing on the facility and any potential decline in the fair value of the asset.

(3) Subject to subclause (5), if a committed facility is granted by a category 1 institution to its customer to provide standby liquidity support for the customer's debt obligations—

(a) in any case where the facility (or a portion of it) is to be treated as a committed liquidity facility for the purposes of the calculation under subclause (1), only the principal amount of those obligations that will mature within the LCR period is included in the calculation;

(b) in any case where the facility (or a portion of it) covers the customer's debt obligations that will mature beyond the LCR period, the facility (or that portion of it) is excluded from the calculation under subclause (1); and

(c) in any case where the facility (or a portion of it) is granted for other purposes, the facility (or that portion of it) is treated as if it were a committed credit facility.

(4) Subject to subclause (5), a committed facility is treated as a committed credit facility if the facility is granted by a category 1 institution to a corporate for the purposes of financing the corporate's general working capital or import or export activities.

(5) Subject to subclause (6), an outflow rate of 100% is applied to a committed facility granted by a category 1 institution to a hedge fund, money market fund or special purpose entity (including any special purpose funding vehicle), entirely as if the facility were a committed liquidity facility.

(6) If a category 1 institution has entered into—

(a) structured financing transactions that fall within clause 20 or 21 or both clauses; and

(b) committed liquidity facilities associated with such transactions,

the expected cash outflow of the institution arising from those liquidity facilities is not calculated for so long as the institution has calculated its expected cash outflow arising from those structured financing transactions in the manner set out in clause 20 or 21, as the case may be.

23. Calculation of total expected cash outflows – contractual [lending] obligations not otherwise covered in this code of practice

(1) The total expected cash outflows of a category 1 institution include—

(a) the expected cash outflow of the institution arising from contractual [lending] obligations to the Monetary Authority for the account of the Exchange Fund, central banks and financial institutions that will fall due within the LCR period and that are not otherwise included in the calculation of the institution's total expected cash outflows; and

(b) the expected cash outflow of the institution arising from contractual [lending] obligations to the institution's retail customers, small business customers, and other customers (not being customers that are the Monetary Authority for the account of the Exchange Fund, central banks or financial institutions)

(i) that will fall due within the LCR period;

(ii) that are not otherwise included in the calculation of the institution's total expected cash outflows; and

(iii) the principal amount ***(first-mentioned principal amount)*** of which exceeds 50% of the principal amount ***(second-mentioned principal amount)*** of the contractual payment obligations from its retail customers, small business customers, and other customers (not being customers that are the Monetary Authority for the account of the Exchange Fund, central banks or financial institutions) corresponding with items 3(b) and (c) of Table 7 in clause 27 that will fall due within the LCR period.

(2) The expected cash outflow of a category 1 institution that falls within subclause (1)(a) is calculated by applying an outflow rate of 100% to the principal amount of those obligations.

(3) The expected cash outflow of a category 1 institution that falls within subclause (1)(b) is calculated by applying an outflow rate of 100% to the difference between the first-mentioned principal amount referred to in sub-paragraph (iii) in that subclause and 50% of the second-mentioned principal amount referred to in that sub-paragraph.

(4) In this clause—

other customers ( ) include customers that are sovereigns, public sector entities, multilateral development banks and wholesale customers.

24. Calculation of total expected cash outflows – other contingent funding obligations

(1) Subject to subclause (2), the expected cash outflow of a category 1 institution arising from other contingent funding obligations is calculated by multiplying the principal amount of the obligations, by the applicable outflow rate specified in Table 4.

Table 4

Outflow rates for calculation of expected cash outflow arising from other contingent funding obligations

Item no.	Other contingent funding obligations	Outflow rate

Item no.	Other contingent funding obligations	Outflow rate
1.	Trade-related contingencies (other than trade-related contingencies arising from the provision of committed credit facilities to corporates for import or export financing purposes).	3% of contracted amount
2.	Guarantees and letters of credit unrelated to trade-related contingencies.	10% of contracted amount
3.	Uncommitted facilities.	0% of undrawn portion of facility
4.	Non-contractual contingent funding obligations arising from debt securities or structured financial instruments with a maturity date beyond the LCR period , in respect of which a category 1 institution (or its associated entity) is the issuer, a market maker or a dealer, or has been involved as an originator, sponsor, marketing agent or seller, where there is a reasonable expectation that the obligations will be materialized within the LCR period.	100% of book value of debt securities or structured financial instruments that fall within this item
5.	Non-contractual contingent funding obligations arising from money market funds or other types of collective investment funds marketed by a category 1 institution (or its associated entity) where there is a reasonable expectation that the obligations will be materialized within the LCR period.	100% of fair value of funds that fall within this item
6.	Non-contractual contingent funding obligations arising from situations in which customer short positions in relation to customers of a category 1 institution are covered by assets that are not HQLA qualifying assets received by the institution from its other customers as collateral, in respect of which the institution has the right of re-hypothecation, such that the institution may be obligated to provide funding to cover uncovered customer short positions in the event of withdrawal of the collateral by its other customers.	50% of fair value of customer collateral used to cover customer short positions

Item no.	Other contingent funding obligations	Outflow rate
7.	Non-contractual contingent funding obligations related to potential liquidity draws by a joint venture or by an entity in which the institution has a minority interest that is not consolidated for the purposes of section 12(1) of the Liquidity Rules, where there is a reasonable expectation that the institution will be the main liquidity provider when the joint venture or entity concerned is in need of liquidity.	See subclause (2)

(2) A category 1 institution calculates its expected cash outflow arising from non-contractual contingent funding obligations that fall within item 7 of Table 4 by applying an outflow rate to those obligations as agreed with the Monetary Authority on a case by case basis (after the institution has notified the Monetary Authority of the existence of such contingent funding obligations and the circumstances giving rise to those obligations).

25. Calculation of total expected cash outflows – other contractual cash outflows

The total expected cash outflows of a category 1 institution include the expected cash outflow of the institution arising from other contractual cash outflows (as defined in section 40 of the Liquidity Rules, which is calculated by multiplying the principal amount of the outflows by an outflow rate of 100%.

26. Calculation of total expected cash inflows – secured lending

(1) Subject to subclauses (2) to (7), the expected cash inflow of a category 1 institution arising from secured lending transactions (other than securities swap transactions), which are due for settlement within the LCR period, is calculated by multiplying the principal amount of the liability (that is, the sum of money) to be repaid by the counterparty under each of those transactions to the institution within that period by the inflow rate applicable to the transaction concerned as shown in Table 5.

Table 5

Inflow rates for calculation of expected cash inflow of

secured lending transactions (other than securities swap transactions)

Item no.	Type of asset collateralizing transaction	Inflow rate
1.	Level 1 assets.	0%
2.	Level 2A assets.	15%
3.	Approved RMBS.	25%
4.	Level 2B assets that do not fall within item no. 3.	50%
5.	Assets that do not fall within any of item nos. 1 to 4 that are—	
	(a) margin lending transactions; or	50%
	(b) other secured lending transactions.	100%

(2) For the purposes of Table 5, a secured lending transaction entered into by a category 1 institution is not regarded as collateralized by an asset that falls within level 1 assets, level 2A assets, approved RMBS or other level 2B assets referred to in that table unless that asset satisfies the requirements set out in section 26(a) and (b) of the Liquidity Rules that are applicable to it.

(3) Subject to subclauses (4) to (7), if a category 1 institution enters into a securities swap transaction with a counterparty which is due for settlement within the LCR period, the expected cash inflow of the institution arising from the transaction is calculated by multiplying the principal amount of the securities to be received by the institution from the counterparty within that period by an inflow rate determined in accordance with Table 6.

Table 6

Inflow rates for calculation of expected cash inflow of securities swap transactions

Securities to be received by category 1 institution from counterparty within LCR period	Securities to be delivered by category 1 institution to counterparty within LCR period	Inflow rate
(a) level 1 assets	level 1 assets	0%
(b) -ditto-	level 2A assets	15%
(c) -ditto-	approved RMBS	25%
(d) -ditto-	level 2B assets that are not approved RMBS	50%
(e) -ditto-	assets that are not level 1 assets,	100%

Securities to be received by category 1 institution from counterparty within LCR period		Securities to be delivered by category 1 institution to counterparty within LCR period	Inflow rate
		level 2A assets or level 2B assets	
(f)	level 2A assets	level 2A assets	0%
(g)	-ditto-	approved RMBS	10%
(h)	-ditto-	level 2B assets that are not approved RMBS	35%
(i)	-ditto-	assets that are not level 1 assets, level 2A assets or level 2B assets	85%
(j)	approved RMBS	approved RMBS	0%
(k)	-ditto-	level 2B assets that are not approved RMBS	25%
(l)	-ditto-	assets that are not level 1 assets, level 2A assets or level 2B assets	75%
(m)	level 2B assets that are not approved RMBS	level 2B assets that are not approved RMBS	0%
(n)	-ditto-	assets that are not level 1 assets, level 2A assets or level 2B assets	50%
(o)	assets that are not level 1 assets, level 2A assets or level 2B assets	assets that are not level 1 assets, level 2A assets or level 2B assets	0%

(4) For the purposes of Table 6, a security to be received, or delivered, by a category 1 institution under a securities swap transaction is not regarded as a level 1 asset, level 2A asset or level 2B asset referred to in that table unless the security satisfies the requirements set out in section 26(a) and (b) of the Liquidity Rules that are applicable to it.

(5) The principal amount of the securities referred to in subclause (3) is—

(a) if the securities are marketable assets, the fair value of the securities; and

(b) in any other case, the book value (including any accrued interest) of the securities.

(6) An inflow rate of 0% is applied to any secured lending transaction entered into by a category 1 institution with a counterparty in the calculation of the institution's expected cash inflow under subclause (1) or (3), as the case requires, if the institution has re-hypothecated any security obtained from the

counterparty as collateral under that transaction to cover the institution's short position in that security.

(7) In subclause (6)—

short position ( ), in relation to a category 1 institution, means a short position created by the institution when it—

(a) sells a security it does not own for trading or hedging purposes; or

(b) borrows a security for a period of time and lends the security out for a longer period of time.

27. Calculation of total expected cash inflows – other loans

(1) The expected cash inflow of a category 1 institution arising from secured or unsecured loans granted by the institution (other than those that fall within clause 26(1) or (3)) is calculated by multiplying the principal amount of the loan repayments (including interest payments and instalments) that are contractually due within the LCR period by the applicable inflow rates determined in accordance with Table 7.

Table 7

Inflow rates for calculation of expected cash inflow of other loans

Item no.	Type of loan repayment due within LCR period	Inflow rate
1.	Contractual cash inflows from revolving loans.	0%
2.	Contractual cash inflows from loans without specific maturity date (excluding minimum payments of principal, fee or interest associated with the loans).	0%
3.	Contractual cash inflows from loans that do not fall within item no. 1 or 2 (including minimum payments of principal, fee or interest associated with loans without specific maturity date) that are extended to—	
	(a) the Monetary Authority for the account of the Exchange Fund, central banks or financial institutions;	100%
	(b) retail customers or small business customers; or	50%

Item no.	Type of loan repayment due within LCR period	Inflow rate
	(c) sovereigns, public sector entities, multilateral development banks, wholesale customers (excluding small business customers), or any other person who does not fall within paragraph (a) or (b).	50%

(2) In this clause—

revolving ( ), in relation to a credit facility granted by a category 1 institution to a borrower, means that the borrower's outstanding balance is permitted to fluctuate based on the borrower's decisions to borrow and repay, up to a limit established by the institution.

28. Calculation of total expected cash inflows – release of balances in segregated accounts for protection of customer assets

The total expected cash inflows of a category 1 institution may include any expected cash inflow of the institution within the LCR period arising from the release of balances (whether in cash or other assets) maintained by the institution in segregated accounts, in accordance with any requirements for the protection of customer assets, which is calculated by multiplying the principal amount of the balances to be released to the institution within the LCR period (provided that the balances are HQLA qualifying assets) by the inflow rate applicable to the type of customer as specified in item no. 3 of Table 7 in clause 27.

29. Calculation of total expected cash inflows – securities maturing within LCR period

If a category 1 institution is holding a security that does not qualify for inclusion in its HQLA and is due for redemption within the LCR period, the expected cash inflow of the institution arising from the security is calculated by multiplying the contracted amount of the security by an inflow rate of 100%.

30. Calculation of total expected cash inflows – facilities granted by, or operational deposits held at, other financial institutions

An inflow rate of 0% is applied to—

(a) the undrawn portion of any credit, liquidity or other facility granted to a category 1 institution by another financial institution, irrespective of whether the facility is a committed facility; and

(b) the principal amount of operational deposits placed by the category 1 institution at other financial institutions;

in calculating the category 1 institution's total expected cash inflows.

31. Calculation of total expected cash inflows – derivative contracts

(1) Subject to subclauses (2) to (4), the expected cash inflow of a category 1 institution arising from derivative contracts entered into by the institution is calculated by—

(a) determining the fair value of the contractual cash inflow to be received, and the fair value of the contractual cash outflow to be paid, by the institution under each of those contracts within the LCR period;

(b) subject to paragraph (c), deriving the contractual cash inflow of those contracts on a gross rather than a net basis (that is, the contractual cash outflow of the contracts is not to be offset against the contractual cash inflow of the contracts within the same period);

(c) in the case of derivative contracts that satisfy the requirements of subclauses (3) and (4) applicable to them, may derive the contractual cash inflow of those contracts on a net basis (that is, by offsetting against that inflow the contractual cash outflow of the contracts within the same period); and

(d) aggregating the amounts derived under paragraphs (b) and (c) and applying an inflow rate of 100% to the aggregated amount.

(2) If a category 1 institution has received an asset from its counterparty as collateral to cover the counterparty's payment obligations under a derivative contract and—

(a) the asset satisfies all the requirements of section 26(a) to (c) of the Liquidity Rules that are applicable to it; and

(b) the institution satisfies all the requirements referred to in section 26(d) of the Liquidity Rules that are applicable to it in so far as those requirements relate to the asset,

the institution, for the purposes of calculating its expected cash inflow under the contract, deducts from that inflow the fair value of the asset after applying the post-haircut factor specified in Table 1 in section 36 of the Liquidity Rules that is applicable to the asset.

(3) If a category 1 institution has entered into an exchange rate contract which involves the exchange of cash flow in 2 currencies within the LCR period, the institution may offset the contractual cash inflow in one currency by the contractual cash outflow in another currency under the contract only if the 2 amounts are fully exchanged on a simultaneous basis (or within the same day) upon the settlement of the contract, irrespective of whether the contract is subject to a valid bilateral netting agreement.

(4) A category 1 institution may calculate its expected cash inflow arising from derivative contracts entered into by the institution with the same counterparty on a net basis (that is, by offsetting the contractual cash outflows against the contractual cash inflows under those contracts within the LCR period) only if the contracts are subject to a valid bilateral netting agreement entered into by the institution with that counterparty.

32. Calculation of total expected cash inflows – other contractual cash inflows

The total expected cash inflows of a category 1 institution do not include any contractual cash inflow of the institution arising from transactions or activities that do not fall within any of clauses 26 to 31 unless—

(a) the contractual cash inflow is generated from a relevant financial activity conducted by the institution and does not relate to revenues sourced from non-financial activities;

(b) the expected cash inflow is calculated by multiplying the principal amount of that inflow by the applicable inflow rate determined in accordance with item no. 3 of Table 7 in clause 27; and

(c) the institution has in place and maintains adequate systems and processes to determine the principal amount of the contractual cash inflow to be received from those classes of counterparties specified in item no. 3 of Table 7 within the LCR period in respect of the conduct of any relevant financial activity that does not otherwise fall within any of clauses 26 to 31.

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