Completion Instructions

Return of Interest Rate Risk Exposures (Form MA(BS)12)

Introduction

1. This return collects information on the interest rate risk exposures of authorized institutions and will be used to help assess the potential impact of movements in interest rates on institutions' earnings and economic value.

2. The Completion Instructions contain three sections. Section A describes the general reporting requirements. Section B provides definitions and clarification of certain items. Section C explains the specific reporting requirements for each item in the return form, with an illustration at Annex 1.

Section A : General Instructions

3. All authorized institutions (AIs) that are exempted from the local IRRBB framework[1] are required to complete this return showing their positions of their Hong Kong operations as at the last calendar day of each quarter and submit the return to the HKMA not later than one month after the end of each quarter. If the submission deadline falls on a public holiday, it will be deferred to the next working day.

4. This return captures both on- and off-balance sheet positions. Overseas incorporated AIs that are exempted from the local IRRBB framework should report aggregate positions of the banking book and trading book.

5. The interest rate risk positions for each selected currency should be reported separately using the same four-page return form. Transactions denominated in gold or composite currencies such as the SDR should be reported as separate currencies. Positions in the Euro and the national currencies, if any, of the Euro-participating countries are to be treated as positions in the Euro. Institutions should report all these positions in aggregate on one return form. As a basic requirement, institutions should complete at least two return forms, showing their interest rate risk exposures arising from assets and liabilities denominated in Hong Kong dollars and in US dollars respectively (nil returns are required for these two currencies). Institutions which have significant positions in other currencies should report such positions on separate return forms (see paragraph 8 below). The submitted forms should be sequentially numbered.

6. All the positions captured by this return should be slotted into the appropriate time bands according to the earliest interest repricing date (see paragraph 11 below). Institutions that meet the criteria set out in Annex 2 may, subject to the HKMA's approval, slot their positions into different time bands based on their estimation of the respective behavioural maturity. Institutions are allowed to phase in the use of behavioural maturity on a product-by-product basis.

[1] Details of the IRRBB exemption are set out in the circular to all AIs dated 31 August 2018.

7. Unless otherwise stated, book value should be used for reporting purposes. Amounts are to be shown to the nearest million, in Hong Kong dollars or Hong Kong dollar equivalent in the case of foreign currencies. The middle market T/T rates ruling as at the close of business on the reporting date should be adopted for conversion of foreign currencies to Hong Kong dollars.

Section B : Definitions and Clarification

8. An institution would be regarded as having a significant position in a currency if the sum of its on-balance sheet assets or liabilities, whichever is the larger, in that currency and its off-balance sheet positions (see paragraph 9 below) in the same currency is more than 5% of its total on-balance sheet assets in all currencies (i.e. total amount of "Total assets" reported under item 23 of the Return of Assets and Liabilities (Form MA(BS)1) or item 22 of the Combined Return of Assets and Liabilities (Form MA(BS)1B), as the case may be).

9. The off-balance sheet positions are defined as the sum of the notional principal of each off-balance sheet contract that is to be included under items 10 to 15 of this return. For the avoidance of doubt, a foreign exchange contract which involves the simultaneous buying and selling of two currencies should be regarded as one contract under each of the currencies concerned while a single currency interest rate swap which involves both the receipt and payment of interest in the same currency is counted once in the relevant currency.

10. All on-balance sheet interest bearing assets and liabilities are to be classified into fixed rate items, variable rate items and managed rate items. Fixed rate items are those assets and liabilities with interest rates fixed up to their final maturities. Variable rate items are those which will automatically be repriced at the next repricing date during the life of the items in accordance with movements in the relevant "reference rates" (such as HIBOR) and include those items for which the interest rates can be varied at the discretion of the counterparty (see also the definition of managed rate that follows). Managed rate items are those variable rate items for which there are no fixed repricing dates and the interest rates can be adjusted at any time at the discretion of the reporting institution. These would include, for example, savings deposits and mortgage loans.

11. In respect of different interest bearing assets and liabilities, the earliest interest repricing date means:

(a) for fixed rate items, the maturity dates of the assets or liabilities concerned;

(b) for variable rate items, the next repricing date of the assets and liabilities concerned; in the case of those items for which the interest rates can be varied at the discretion of the counterparty, the earliest date, based on past experience, on which the interest rates would be repriced assuming that the reference rates on which the interest rates are based are adjusted on the business day immediately following the reporting date; and

(c) for managed rate items, the earliest date on which it would be possible for the interest rates of the assets and liabilities concerned to be adjusted assuming that the reference rates (e.g. prime or standard savings rate) on which the interest rates are based are adjusted on the business day immediately following the reporting date.

12. For the purpose of this return, interest bearing assets and liabilities include those which do not involve any formal payment of interest but the values of which are sensitive to interest rate movements. Typically, these include financial instruments which are sold at a discount such as Exchange Fund Bills and zero coupon bonds. They should be reported as fixed rate items according to residual maturity.

13. In respect of on-balance sheet interest bearing assets, institutions should report under items 1b to 4b a breakdown of the amount of residential mortgage loans pertaining to those items. Residential mortgage loans are loans to professional and private individuals for the purchase of residential properties, as defined under item H5b of the Quarterly Analysis of Loans and Advances and Provisions (Form MA(BS)2A). In respect of on-balance sheet interest bearing liabilities, institutions should report under items 5b to 8b a breakdown of the amount of deposits pertaining to those items. Deposits are deposit liabilities due to non-bank customers, as defined under item 6 of Form MA(BS)1.

14. In respect of assets or liabilities with embedded options, institutions should decompose them into embedded options and underlying assets or liabilities. The embedded options should be reported under off-balance sheet positions (see paragraphs 37-38 below) and the underlying assets or liabilities should be slotted into the appropriate time bands according to their earliest interest repricing date (see paragraph 11 above). In the case of assets or liabilities with an early redemption option (by either the reporting institution or its counterparty), and the institutions concerned cannot decompose them into the embedded option and underlying assets or liabilities, the reporting may be based on the institution's expectation of whether an early redemption will occur. Such assets or liabilities should then be slotted into the appropriate time bands according to their earliest interest rate repricing date or the redemption date, whichever is the earlier.

15. Assets and liabilities which are repayable by instalments rather than by one lump sum at maturity should be broken down into individual tranches and slotted into the appropriate time bands according to the repricing date of each tranche. For example, a fixed rate loan of HKD 100 million repayable by two semi-annual instalments of HKD 50 million each should be regarded as two separate loans, one repayable in six months and the other one year, and slotted into the appropriate time bands according to their residual maturities. In the case of a variable rate loan of HKD 100 million repayable by two semi-annual instalments of HKD 50 million each, it should also be regarded as two separate loans and be slotted into the appropriate time bands according to the next repricing date of each tranche.

16. In the case of a managed rate mortgage loan, the entire amount of such loan, less the amount of principal repayable before the earliest repricing date (see paragraph 11(c) above), should be reported in the appropriate time bands into which the repricing date falls. The principal amount repayable between the reporting date and the earliest repricing date should be slotted into the appropriate time bands according to the payment dates contracted for. For example, if a mortgage loan of HKD 5 million can be repriced in two months' time, the principal amount repayable between eight days and one month (say HKD 0.02 million)

should be reported in row (C) of item 4 and the balance of the loan (i.e. HKD 4.98 million) should be reported in row (D) of the same item.

17. Institutions which have the practice of raising internal deals to record positions passed from one unit to another (e.g. Money Market Department to Foreign Exchange Department) within the same institution should not report these internal deals. However, this rule does not apply to an institution incorporated overseas that is exempted from the local IRRBB framework, if the deals in question were executed between the institution's Hong Kong office and its overseas head office or branches.

Section C : Specific Instructions

18. Item 1 rows (A) to (O) – Total interest bearing assets

Report the sum of items 2a, 3a and 4a under item 1a of the same row. Regarding residential mortgage loans, report the sum of items 2b, 3b and 4b under item 1b of the same row. Report the sum of items 1a and 1b for all time bands in Total (A to O) under the respective items.

Report the weighted average yield of total interest bearing assets and residential mortgage loans under items 1c and 1d respectively of the same row. All the rates reported should be rounded to 2 decimal places. An example showing the method of calculation is given at Annex 3. Interest rates applicable at the reporting date should be used for the purpose of calculation.

19. Item 2 - Fixed rate assets

These assets, such as fixed rate CDs or fixed rate term loans, should be slotted into the appropriate time bands according to their residual maturities.

20. Item 3 - Variable rate assets

These should be slotted into the appropriate time bands according to the next interest rate fixing date. Such assets include, for example, floating rate CDs/notes, and other loans which are automatically priced in accordance with movements in the relevant reference rates. During the period between the final repricing date and final maturity, these assets should continue to be reported as variable rate assets and slotted into the appropriate time bands according to their residual maturities.

21. Item 4 - Managed rate assets

These assets are those for which the interest rate does not change automatically in line with the movement in the reference rate but may be varied at the discretion of the reporting institution. Mortgage loans priced on prime are examples of managed rate assets. These assets should be slotted into the appropriate time bands according to the earliest date on which their interest rates can be adjusted assuming that the reference rate (e.g. prime) is adjusted on the business day immediately following the reporting date.

22. Item 1 row (P) – Non-interest bearing assets

These include, for example, properties, shares, fixed assets and other receivables which are non-interest bearing. Non-accruing assets on which interest is being placed in suspense or interest accrual has ceased should also be included. Properties and fixed assets should be reported net of depreciation.

23. Item 1 Total (A to P) – Total assets

Report the sum of total interest bearing and non-interest bearing assets. The amount reported may not necessarily be the same as the amount of "Total liabilities" reported under item 5 Total (A to Q). Overseas incorporated institutions that are exempted from the local IRRBB framework should note that the amounts reported under this item, in respect of the positions for Hong Kong dollars and US dollars, should be consistent with the amount of "Total assets" reported under the relevant columns of item 23 of Form MA(BS)1.

24. Item 5 rows (A) to (O) – Total interest bearing liabilities

Report the sum of items 6a, 7a and 8a under item 5a of the same row. Regarding deposits, report the sum of items 6b, 7b and 8b under item 5b of the same row. Report the sum of items 5a and 5b for all time bands in Total (A to O) under the respective items.

Report the weighted average costs of total interest bearing liabilities and deposits under items 5c and 5d respectively of the same row. All the rates reported should be rounded to 2 decimal places. An example showing the method of calculation is given at Annex 3. Interest rates applicable at the reporting date should be used for the purpose of calculation.

25. Item 6 - Fixed rate liabilities

These liabilities, such as fixed rate CDs, money market deposits and term deposits are to be slotted into the appropriate time bands according to their residual maturities.

26. Item 7 - Variable rate liabilities

These liabilities should be slotted into the appropriate time bands according to the next interest rate fixing date. They include, for example, floating rate debt instruments issued by the reporting institution where the interest rate is adjusted automatically on the repricing date in accordance with movements in the relevant reference rates. As with variable rate assets, these liabilities should continue to be classified as variable rate liabilities according to their residual maturities during the period between the final repricing date and the maturity date.

27. Item 8 - Managed rate liabilities

Such liabilities include, for example, deposits for which interest rates can be adjusted at the discretion of the deposit-taking institution. They should be slotted into the appropriate time bands according to the earliest date on which their interest rates can be adjusted assuming that the reference rates (e.g. standard savings rates) are adjusted on the business day immediately following the reporting date.

28. Item 5 (P)+(Q) – Non-interest bearing liabilities

Report the sum of equity capital and others.

29. Item 5 row (P) – Equity capital

These include the capital, reserves (including retained earnings) and profit and loss accounts of the reporting institution. They should be reported in the base currency of the reporting institution or in the currency in which the capital is denominated. Interest-bearing capital items (e.g. preference shares and subordinated debts) should be reported under items 6a, 7a or 8a as appropriate.

30. Item 5 row (Q) - Others

These include, for example, deposits in current accounts and other payables / liabilities which are non-interest bearing, and loan loss provisions etc.

General provisions should be reported in the base currency of the reporting institution. Other provisions should be reported in the currency of the underlying assets.

31. Item 5 Total (A to Q) - Total liabilities

Report the sum of total interest bearing and non-interest bearing liabilities. The amount reported may not necessarily be the same as the amount of "Total assets" reported under item 1 Total (A to P). Overseas incorporated institutions that are exempted from the local IRRBB framework should note that the amounts reported under this item, in respect of the positions for Hong Kong dollars and US dollars, should be consistent with the sum of the amounts of "Total liabilities" and "Provisions" reported under the relevant columns of item 11 and item 24 of Form MA(BS)1 respectively.

32. Item 9 – Total off-balance sheet positions

Report in item 9a, the sum of all long positions reported under items 10a to 15a of the same row.

Report in item 9b, the sum of all short positions reported under items 10b to 15b of the same row.

33. Item 10 - Forward foreign exchange contracts

Forward foreign exchange contracts include unmatured spot contracts that are for value not more than two business days after the transactions are contracted. They should be reported in the relevant page of the return for the currencies concerned and should be slotted into the appropriate time bands according to the residual maturity of the individual contracts. For example, a five-month forward contract to sell Hong Kong dollars for US dollars should be slotted in the return for the Hong Kong currency as a short position under item 10b of row (E) and in the return for the US currency as a long position under item 10a of row (E).

34. Item 11 - Interest rate swaps

An interest rate swap contract obligates an institution to both receive and remit interest payments that are based on the notional amount of the swap contract. Depending on the contract, the institution may receive fixed rate and pay floating rate interest on the notional principal or vice versa. For example, an interest rate swap under which an institution is receiving floating rate interest and paying fixed rate would be treated as a long position in a floating rate instrument of maturity equivalent to the period until the next interest fixing date and a short position in a fixed rate instrument of maturity equivalent to the residual life of the swap. The two positions should then be slotted into the appropriate time bands according to their respective maturities.

35. Item 12 - Cross currency swaps

The reporting treatment of a cross currency swap is similar to that of an interest rate swap, except for the fact that its long and short positions should be reported in the relevant time bands of the currencies concerned.

36. Item 13 - Futures / Forward rate agreements (FRAs)

These should be treated in the same way as a combination of a long and a short position in government securities. The maturity of a future or an FRA would be the period until delivery or exercise of the contract, plus – where applicable – the life of the underlying instruments. For example, a long position in a June three-month interest rate future should be reported in April in the same way as a long position in a government security with a maturity of five months and a short position in a government security with a maturity of two months. Similarly, a seller of a 2 x 5 months FRA should report the transaction as a long position in a government security with a maturity of five months and a short position in a government security with a maturity of two months. In respect of a futures contract, where a range of deliverable instruments may be delivered to fulfil the contract, the institution would be free to elect which deliverable security goes into the maturity ladder.

37. Item 14 - Options

Report option contracts that are related to interest rate instruments and currencies. Option contracts should be reported by using the delta equivalent value of these contracts, which is calculated by multiplying the principal value of the underlying by the delta or, in the case of options on debt instruments, the market value of such debt instruments by the delta. (Such deltas are to be calculated according to the reporting institution’s proprietary options pricing model.)

In slotting deltas into the time bands, a two-legged approach should be used as for other derivatives - one entry at the time the underlying contract takes effect and the other at the time the underlying contract matures. For instance, a bought call option on a June three-month interest rate future would in April be considered, on the basis of its “delta” equivalent value, to be a long position with a maturity of five months and a short position with a maturity of two months. A written option would be similarly included as a long position with a maturity of two months and a short position with a maturity of five months.

The two-legged approach also applies to reporting positions of interest rate swaptions. For example, a bought swaption of receiving (paying) fixed rate with an option maturity of two months and an underlying interest rate swap of three years is reported as a long (short) position with a maturity of three years and two months and a short (long) position with a maturity of two months. Similarly, a written swaption of receiving (paying) fixed rate with an option maturity of two months and an underlying interest rate swap of three years is reported as a short (long) position with a maturity of three years and two months and a long (short) position with a maturity of two months. The amounts of the positions are the deltas of the notional amount of the underlying interest rate swap in respect of the type of the swaption.

In the case of an option that gives rise to foreign currency exposures (e.g. currency option), the delta equivalent value of both the long and short positions should be reported in the time band corresponding to the exercise date of the contract. Report a long position in respect of the currency that the institution intends to take and a short position of the currency that the institution intends to deliver.

An institution purchasing options to a limited extent for the purposes of hedging may report only those option contracts that are in-the-money. Instead of reporting their delta equivalent values, it may report the notional value of the option contracts in rows (A) to (O) using the two-legged approach as mentioned above.

As the methods of reporting some option instruments (e.g. digital options and barrier options) are rather complicated, institutions with such transactions should discuss with the HKMA the reporting method concerned.

38. Item 15 - Others

Report, by using the two-legged approach, any other debt derivatives and off-balance sheet items the values of which are sensitive to changes in interest rates. This include forward arrangements for fixed rate loans and fixed rate deposits which have been contracted but remain undrawn as at the reporting date. A forward loan should be reported as a long position at the time the loan matures and as a short position at the time when the loan is to be drawn. For forward deposits, the reporting method is the reverse.

Where securities are sold subject to a repurchase agreement, the terms of which transfer substantially all risks and rewards of ownership to the buyer, the transaction should be separately accounted for as an outright sale plus a commitment to repurchase. The securities sold under such an agreement should not be reported in this return but the commitment to repurchase should be reported as a forward purchase of the securities. Where the price for the commitment to repurchase has not been determined, the fair value (i.e. current market price) as of the reporting date should be used.

Where securities are purchased subject to a resale agreement, the terms of which transfer substantially all risks and rewards of ownership to the reporting institution, the transaction should be separately accounted for as an outright purchase plus a commitment to sell back. The securities purchased under such an agreement should be reported as an asset and the commitment to sell back as a forward sale of the securities. Where the price for the commitment to sell back has not been determined, the fair value (i.e. current market price) as of the reporting date should be used.

39. Item 16 - Net positions

This is the net amount of items 1a, 5a, 9a and 9b. Show figures in brackets to indicate a short position in any of the time bands.

40. Item 17 – Earnings perspective (impact / scenario analysis)

The time weight on earnings under item 17a is used to measure the impact of an interest rate increase of 200 basis points on the earnings of the reporting institution in a period of 12 months. For example, if an institution has a positive position of $10 million in the fourth (1 to 3 months) time band, an increase in interest rates of 200 basis points would produce additional interest income of approximately $166,667 ($10,000,000 x 2% x 10/12) during the 12-month period. This assumes that all positions are repriced at the mid-point of each time band. The time weights of individual time bands are thus computed as follows:

Next day or less:	(364.5 / 365) x 2%	= 1.997%
2 to 7 days:	(360.5 / 365) x 2%	= 1.975%
8 days to 1 month:	(346 / 365) x 2%	= 1.896%
1 to 3 months:	(10 / 12) x 2%	= 1.667%
3 to 6 months:	(7.5 / 12) x 2%	= 1.250%
6 to 12 months:	(3 / 12) x 2%	= 0.500%

The total impact on earnings over the next 12 months should be calculated by summing the weighted positions in different time bands up to 12 months, as computed by multiplying the net position in each time band reported under item 16 by the corresponding time weight specified under item 17a. The amounts reported, with short positions shown in brackets, should be rounded to the nearest HKD million without decimal place.

41. Item 18 – Economic value perspective (impact / scenario analysis)

The HKMA applies a standardised 200-basis-point parallel rate shock to institutions' interest rate risk exposures to measure the economic value impact of the shock. The impact of the shock is calculated as follows:

- multiply the net position reported under item 16 by the corresponding weighting factor[2] under item 18a to obtain a weighted position in each time band;
- report the amount (with short positions shown in brackets) under item 18b of each time band and round the amount to the nearest HKD million without decimal place;

[2] Adopted from the Basel Committee's consultative paper on "Principles for the Management and Supervision of Interest Rate Risk" issued in January 2001, the weighting factors are designed to reflect the sensitivity of positions in different time bands to an assumed parallel shift of 200 basis points throughout the time spectrum. The factors are based on a proxy of modified duration of positions situated at the middle of each time band and yielding 5%, and have been found to be in line with the term structure of Hong Kong dollar interest rates.

- report the sum of the weighted positions of all time bands in Total (A to O) under item 18b;

- ***report the total capital base of the overseas incorporated institution's head office at the reporting date in row (P) under item 18b; and***

- express the impact on economic value as a percentage of total capital base under item 18b.

42. Item 19 – Basis risk (impact / scenario analysis)

Impact on earnings of an institution due to basis risk is measured by the following two scenarios:

(i) all rates except for fixed and managed rates on interest bearing assets rise by 200 basis points; and

(ii) managed rates on interest bearing assets drop by 200 basis points while other rates remain unchanged.

The impact on earnings is calculated under item 19 by assuming that the changes in interest rates last for different periods of time (one month, three months, six months and 12 months) under both scenarios. The calculation is similar to that under the earnings perspective (see item 17 above) except that different types of interest rates are subject to different changes.

For example, if an institution has total managed rate assets of $50 million and $950 million respectively in the second (2 to 7 days) and the fourth (1 to 3 months) time bands, a drop of 200 basis points in managed rates for three months (assuming 90 days) would reduce interest income from the assets by approximately HKD 1.817 million during the period. The computation (assuming that all positions are repriced at the mid-point of each time band) is as follows:

Time Band	Time Weight (for a drop of 90 days)	Position HKD million	Impact on earnings HKD million
Next day or less:	(89.5 / 365) x -2% = -0.490%	0	0
2 to 7 days:	(85.5 / 365) x -2% = -0.468%	50	-0.234
8 days to 1 month:	(71 / 365) x -2% = -0.389%	0	0
1 to 3 months:	(1 / 12) x -2% = -0.167%	950	-1.583
3 to 6 months:	NA	0	NA
6 to 12 months:	NA	0	NA
		Total =	-1.817

Annex 1

EXAMPLE BANK (non-exempted institution) Position as at Day 0

(The following on- and off-balance sheet items in the banking book will be shown in pages 1 to 8 of the sample return forms that follow.)

A. BALANCE SHEET

Ref	Particulars	HKD	USD	Total
	ASSETS			
(a)	5-month fixed rate loans		300	300
(b)	2-year fixed rate loans	500		500
(c)	1-year fixed rate mortgage loans	200		200
(d)	4-month fixed rate mortgage loans	100		100
(e)	2-month variable rate loans	400		400
(f)	15-year fixed rate bonds		200	200
(g)	3-month fixed rate loans		250	250
(h)	Other non-interest bearing assets	180		180
(i)	3-year fixed rate mortgage loans	800		800
(j)	20-year managed rate mortgage loans (to be repriced in 2 months' time and 5% repayable within 7 days)	1000		1000
		3180	750	3930
	LIABILITIES			
(aa)	5-month fixed rate deposits	300		300
(bb)	2-year variable rate deposits (to be repriced in 3 months' time)	500		500
(cc)	1-year fixed rate deposits		200	200
(dd)	10-month fixed rate deposits	100		100
(ee)	18-month fixed rate deposits	400		400
(ff)	2-month fixed rate deposits		200	200
(gg)	6-month fixed rate deposits		250	250
(hh)	Capital	180		180
(ii)	4-year fixed rate CDs	400	400	800
(jj)	Savings deposits	1000		1000
		2880	1050	3930

B. OFF-BALANCE SHEET POSITIONS

Ref.	Type	Notional Principal	Particulars
(a)/(aa)	Forward FX contracts	300	Buy HKD sell USD in 5 months' time.
(b)/(bb)	Interest Rate Swaps	500	Final maturity of the HKD interest rate swap is 2 years. The bank pays fixed and receives floating rate. The floating rate is to be repriced in 3 months' time.
(c)/(cc)	Currency Swaps	200	This being a 1-year HKD/USD swap. During the life of the swap, the bank pays HKD interest and receives USD interest. At maturity, the bank pays the principal in HKD and receives the principal in USD.
(d)/(dd)	Interest Rate Futures	100	The bank takes a long position in a 6-month interest rate future contract delivery of which will take effect in 4 months' time.
(e)/(ee)	Forward Rate Agreements	400	The bank writes a 2 against 18 forward rate agreement on HKD interest rates.
(f)/(ff)	Put options	200*	An option has been bought to sell the USD straight bond which is now held by the bank and which will mature in 15 years' time. The option may be exercised in 2 months' time.
(g)/(gg)	Call options	250*	A call option on 3-month US Treasury Bill has been bought. The option may be exercised in 3 months' time.

(* Delta equivalent values.)

Currency Code
(For Official Use Only)

Interest Rate Risk Exposures

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): HONG KONG DOLLAR

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		INTEREST BEARING ASSETS (Note (3))									
		1. Total interest bearing assets				2. Fixed rate assets		3. Variable rate assets		4. Managed rate assets	
		a. Total 2a+3a+4a	**b. Residential mortgage loans** 2b+3b+4b	**c. Total weighted average yield**	**d. Weighted average yield (Residential mortgage loans)**	a. Total	b. Residential mortgage loans	a. Total	b. Residential mortgage loans	a. Total	b. Residential mortgage loans
Next day or less	(A)			%	%						
2 to 7 days	(B)	**50**	**50**	%	%					(j) 50	(j) 50
8 days to 1 month	(C)			%	%						
1 to 3 months	(D)	**1,350**	**950**	%	%			(e) 400		(j) 950	(j) 950
3 to 6 months	(E)	**100**	**100**	%	%	(d) 100	(d) 100				
6 to 12 months	(F)	**200**	**200**	%	%	(c) 200	(c) 200				
1 to 2 years	(G)	**500**		%	%	(b) 500					
2 to 3 years	(H)	**800**	**800**	%	%	(i) 800	(i) 800				
3 to 4 years	(I)			%	%						
4 to 5 years	(J)			%	%						
5 to 7 years	(K)			%	%						
7 to 10 years	(L)			%	%						
10 to 15 years	(M)			%	%						
15 to 20 years	(N)			%	%						
More than 20 years	(O)			%	%						
Total book value	Total (A to O)	**3,000**	**2,100**			1,600	1,100	400		1,000	1,000
Non-interest bearing assets	(P)	(h) 180									
Total assets	Total (A to P)	**3,180**									

Notes:

(1) Locally incorporated authorized institutions subject to the market risk capital adequacy regime are required to report positions in the banking book only. Other locally incorporated institutions exempted from the market risk capital adequacy regime and overseas incorporated institutions are required to report aggregate positions in the banking book and trading book.

(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report items under different time bands based on the earliest interest repricing date as specified in the Completion Instructions. Subject to the HKMA's approval, reporting based on behavioural maturity may be allowed for authorized institutions that can meet the criteria set out in the Completion Instructions.

Currency Code
(For Official Use Only)

Interest Rate Risk Exposures

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): HONG KONG DOLLAR

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		INTEREST BEARING LIABILITIES (Note (3))									
		5. Total interest bearing liabilities				6. Fixed rate liabilities		7. Variable rate liabilities		8. Managed rate liabilities	
		a. Total 6a+7a+8a	b. Deposits 6b+7b+8b	c. Total weighted average interest costs	d. Weighted average interest costs (Deposits)	a. Total	b. Deposits	a. Total	b. Deposits	a. Total	b. Deposits
Next day or less	(A)	1,000	1,000	%	%					(ii) 1000	(ii) 1000
2 to 7 days	(B)			%	%						
8 days to 1 month	(C)			%	%						
1 to 3 months	(D)	500	500	%	%			(bb) 500	(bb) 500		
3 to 6 months	(E)	300	300	%	%	(aa) 300	(aa) 300				
6 to 12 months	(F)	100	100	%	%	(dd) 100	(dd) 100				
1 to 2 years	(G)	400	400	%	%	(ee) 400	(ee) 400				
2 to 3 years	(H)			%	%						
3 to 4 years	(I)	400	400	%	%	(ii) 400	(ii) 400				
4 to 5 years	(J)			%	%						
5 to 7 years	(K)			%	%						
7 to 10 years	(L)			%	%						
10 to 15 years	(M)			%	%						
15 to 20 years	(N)			%	%						
More than 20 years	(O)			%	%						
Total book value	Total (A to O)	2,700	2,700			1,200	1,200	500	500	1,000	1,000
Non-interest bearing liabilities	(P)+(Q)	180									
Equity capital	(P)	(hh) 180									
Others	(Q)										
Total liabilities	Total (A to Q)	2,880									

Notes:

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(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report items under different time bands based on the earliest interest repricing date as specified in the Completion Instructions. Subject to the HKMA's approval, reporting based on behavioural maturity may be allowed for authorized institutions that can meet the criteria set out in the Completion Instructions.

Currency Code
(For Official Use Only)

Interest Rate Risk Exposures

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): HONG KONG DOLLAR

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		OFF-BALANCE SHEET POSITIONS (Note (3))													
		9. Total		10. Forward foreign exchange contracts		11. Interest rate swaps		12. Cross currency swaps		13. Futures / FRAs		14. Options		15. Others	
		a. Long 10a+11a+12a+13a+14a+15a	**b. Short** 10b+11b+12b+13b+14b+15b	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short
Next day or less	(A)														
2 to 7 days	(B)														
8 days to 1 month	(C)														
1 to 3 months	(D)	**500**	**400**			(b) 500					(ee) 400				
3 to 6 months	(E)	**300**	**100**	(a) 300							(dd) 100				
6 to 12 months	(F)	**100**	**200**						(cc) 200	(d) 100					
1 to 2 years	(G)	**400**	**500**				(bb) 500			(e) 400					
2 to 3 years	(H)														
3 to 4 years	(I)														
4 to 5 years	(J)														
5 to 7 years	(K)														
7 to 10 years	(L)														
10 to 15 years	(M)														
15 to 20 years	(N)														
More than 20 years	(O)														
Total off-balance sheet positions	Total (A to O)	**1,300**	**1,200**	300		500	500		200	500	500				

Notes:

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(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report items under different time bands based on the earliest interest repricing date as specified in the Completion Instructions. Subject to the HKMA's approval, reporting based on behavioural maturity may be allowed for authorized institutions that can meet the criteria set out in the Completion Instructions.

Currency Code
(For Official Use Only)

~~Interest Rate Risk Exposures~~

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): ~~HONG KONG DOLLAR~~

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		IMPACT / SCENARIO ANALYSIS							
		16. Net positions	17. Earnings perspective		18. Economic value perspective		19. Basis risk (for both on- and off-balance sheet positions)		
			a. Time weight on earnings	b. Impact on earnings over the next 12 months if interest rates rise by 200 basis points (rounded to the nearest HK$ Million)	a. Weighting factor for standardised interest rate shock	b. Impact on economic value if interest rates rise by 200 basis points (rounded to the nearest HK$ Million)	Period for which changes in interest rates last	Impact on earnings: Scenario (i) All rates except for fixed and managed rates on interest bearing assets rise by 200 basis points (rounded to the nearest HK$ Million)	Impact on earnings: Scenario (ii) Managed rates on interest bearing assets drop by 200 basis points while other rates remain unchanged (rounded to the nearest HK$ Million)
		1a-5a +9a-9b		16 x 17a		16 x 18a			
Next day or less	(A)	(1,000)	1.997%	(20)	0.00%	0	1 month	(2)	(0)
2 to 7 days	(B)	50	1.975%	1	0.02%	0	3 months	(5)	(2)
8 days to 1 month	(C)	0	1.896%	0	0.10%	0	6 months	(10)	(7)
1 to 3 months	(D)	950	1.667%	16	0.32%	3	12 months	(22)	(17)
3 to 6 months	(E)	0	1.250%	0	0.72%	0			
6 to 12 months	(F)	0	0.500%	0	1.43%	0			
1 to 2 years	(G)	0			2.77%	0			
2 to 3 years	(H)	800			4.49%	36			
3 to 4 years	(I)	(400)			6.14%	(25)			
4 to 5 years	(J)	0			7.71%	0			
5 to 7 years	(K)	0			10.15%	0			
7 to 10 years	(L)	0			13.26%	0			
10 to 15 years	(M)	0			17.84%	0			
15 to 20 years	(N)	0			22.43%	0			
More than 20 years	(O)	0			26.03%	0			
			Total (A to F)	(3)	Total (A to O)	**14**			
Total capital base at reporting date (Note (3))					(P)	**180**			
Impact on economic value as % of total capital base					[Total (A to O)] / (P)	**7.78%**			

Notes:

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(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report the total capital base for all currencies. Overseas incorporated institutions should refer to the total capital base of their head office.

Interest Rate Risk Exposures

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): U. S. DOLLAR

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		INTEREST BEARING ASSETS (Note (3))									
		1. Total interest bearing assets				2. Fixed rate assets		3. Variable rate assets		4. Managed rate assets	
		a. Total 2a+3a+4a	b. Residential mortgage loans 2b+3b+4b	c. Total weighted average yield	d. Weighted average yield (Residential mortgage loans)	a. Total	b. Residential mortgage loans	a. Total	b. Residential mortgage loans	a. Total	b. Residential mortgage loans
Next day or less	(A)			%	%						
2 to 7 days	(B)			%	%						
8 days to 1 month	(C)			%	%						
1 to 3 months	(D)	**250**		%	%	(g) 250					
3 to 6 months	(E)	**300**		%	%	(a) 300					
6 to 12 months	(F)			%	%						
1 to 2 years	(G)			%	%						
2 to 3 years	(H)			%	%						
3 to 4 years	(I)			%	%						
4 to 5 years	(J)			%	%						
5 to 7 years	(K)			%	%						
7 to 10 years	(L)			%	%						
10 to 15 years	(M)	**200**		%	%	(f) 200					
15 to 20 years	(N)			%	%						
More than 20 years	(O)			%	%						
Total book value	Total (A to O)	**750**	**0**			750					
Non-interest bearing assets	(P)										
Total assets	Total (A to P)	**750**									

Notes:

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(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report items under different time bands based on the earliest interest repricing date as specified in the Completion Instructions. Subject to the HKMA's approval, reporting based on behavioural maturity may be allowed for authorized institutions that can meet the criteria set out in the Completion Instructions.

Currency Code
(For Official Use Only)

Interest Rate Risk Exposures

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): U. S. DOLLAR

Page 6 of 8

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		INTEREST BEARING LIABILITIES (Note (3))									
		5. Total interest bearing liabilities				6. Fixed rate liabilities		7. Variable rate liabilities		8. Managed rate liabilities	
		a. Total 6a+7a+8a	**b. Deposits** 6b+7b+8b	**c. Total weighted average interest costs**	**d. Weighted average interest costs (Deposits)**	a. Total	b. Deposits	a. Total	b. Deposits	a. Total	b. Deposits
Next day or less	(A)			%	%						
2 to 7 days	(B)			%	%						
8 days to 1 month	(C)			%	%						
1 to 3 months	(D)	**200**	**200**	%	%	(ff) 200	(ff) 200				
3 to 6 months	(E)	**250**	**250**	%	%	(gg) 250	(gg) 250				
6 to 12 months	(F)	**200**	**200**	%	%	(cc) 200	(cc) 200				
1 to 2 years	(G)			%	%						
2 to 3 years	(H)			%	%						
3 to 4 years	(I)	**400**	**400**	%	%	(ii) 400	(ii) 400				
4 to 5 years	(J)			%	%						
5 to 7 years	(K)			%	%						
7 to 10 years	(L)			%	%						
10 to 15 years	(M)			%	%						
15 to 20 years	(N)			%	%						
More than 20 years	(O)			%	%						
Total book value	Total (A to O)	**1,050**	**1,050**			1,050	1,050				
Non-interest bearing liabilities	(P)+(Q)										
Equity capital	(P)										
Others	(Q)										
Total liabilities	Total (A to Q)	**1,050**									

Notes:

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(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report items under different time bands based on the earliest interest repricing date as specified in the Completion Instructions. Subject to the HKMA's approval, reporting based on behavioural maturity may be allowed for authorized institutions that can meet the criteria set out in the Completion Instructions.

Currency Code
(For Official Use Only)

Interest Rate Risk Exposures

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): U. S. DOLLAR

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		OFF-BALANCE SHEET POSITIONS (Note (3))													
		9. Total		10. Forward foreign exchange contracts		11. Interest rate swaps		12. Cross currency swaps		13. Futures / FRAs		14. Options		15. Others	
		a. Long 10a+11a+12a+13a+14a+15a	**b. Short** 10b+11b+12b+13b+14b+15b	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short	a. Long	b. Short
Next day or less	(A)														
2 to 7 days	(B)														
8 days to 1 month	(C)														
1 to 3 months	(D)	**200**	**250**									(f) 200	(gg) 250		
3 to 6 months	(E)	**250**	**300**		(aa) 300							(g) 250			
6 to 12 months	(F)	**200**						(c) 200							
1 to 2 years	(G)														
2 to 3 years	(H)														
3 to 4 years	(I)														
4 to 5 years	(J)														
5 to 7 years	(K)														
7 to 10 years	(L)														
10 to 15 years	(M)		**200**										(ff) 200		
15 to 20 years	(N)														
More than 20 years	(O)														
Total off-balance sheet positions	Total (A to O)	**650**	**750**		300			200				450	450		

Notes:

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(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report items under different time bands based on the earliest interest repricing date as specified in the Completion Instructions. Subject to the HKMA's approval, reporting based on behavioural maturity may be allowed for authorized institutions that can meet the criteria set out in the Completion Instructions.

Interest Rate Risk Exposures

Position of * Banking Book / ~~Trading Book and Banking Book~~ (Note (1))
Currency (Note (2)): U. S. DOLLAR

* Delete where inappropriate.

(In HK$ Million or equivalent)

TIME BAND		IMPACT / SCENARIO ANALYSIS							
		16. Net positions	17. Earnings perspective		18. Economic value perspective		19. Basis risk (for both on- and off-balance sheet positions)		
			a. Time weight on earnings	b. Impact on earnings over the next 12 months if interest rates rise by 200 basis points (rounded to the nearest HK$ Million)	a. Weighting factor for standardised interest rate shock	b. Impact on economic value if interest rates rise by 200 basis points (rounded to the nearest HK$ Million)	Period for which changes in interest rates last	Impact on earnings	
								Scenario (i) All rates except for fixed and managed rates on interest bearing assets rise by 200 basis points (rounded to the nearest HK$ Million)	Scenario (ii) Managed rates on interest bearing assets drop by 200 basis points while other rates remain unchanged (rounded to the nearest HK$ Million)
		1a-5a +9a-9b		16 x 17a		16 x 18a			
Next day or less	(A)	0	1.997%	0	0.00%	0	1 month		
2 to 7 days	(B)	0	1.975%	0	0.02%	0	3 months	(0)	
8 days to 1 month	(C)	0	1.896%	0	0.10%	0	6 months	(2)	
1 to 3 months	(D)	0	1.667%	0	0.32%	0	12 months	(8)	
3 to 6 months	(E)	0	1.250%	0	0.72%	0			
6 to 12 months	(F)	0	0.500%	0	1.43%	0			
1 to 2 years	(G)	0			2.77%	0			
2 to 3 years	(H)	0			4.49%	0			
3 to 4 years	(I)	(400)			6.14%	(25)			
4 to 5 years	(J)	0			7.71%	0			
5 to 7 years	(K)	0			10.15%	0			
7 to 10 years	(L)	0			13.26%	0			
10 to 15 years	(M)	0			17.84%	0			
15 to 20 years	(N)	0			22.43%	0			
More than 20 years	(O)	0			26.03%	0			
			Total (A to F)	0	Total (A to O)	**(25)**			
Total capital base at reporting date (Note (3))					(P)	**180**			
Impact on economic value as % of total capital base					[Total (A to O)] / (P)	**-13.89%**			

Notes:

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(2) Report interest rate risk exposures in major currencies as defined in the Completion Instructions, including at least Hong Kong dollar and US dollar (nil returns are required for these two currencies). Use the same return form for each currency.

(3) Report the total capital base for all currencies. Overseas incorporated institutions should refer to the total capital base of their head office.

Use of behavioural maturity for reporting interest rate risks

This Annex sets out the minimum criteria that authorized institutions are required to meet in order to use behavioural maturity for reporting interest rate risks in the Return of Interest Rate Risk Exposures (Form MA(BS)12). The HKMA may request additional information on those positions where the behavioural maturity is different from the contractual maturity. It may also review the institutions' internal processes and assumptions for determining the behavioural maturity of interest rate risk positions in their portfolios.

The following are the minimum criteria for using behavioural maturity in the reporting of interest rate risks:

1. An institution's assumptions need to be consistent and reasonable for each interest rate scenario used. For example, assumptions about mortgage prepayments should vary with the rate scenario and reflect a customer's economic incentives to prepay the mortgage in that interest rate (or market mortgage rate) environment.

2. An institution should avoid selecting assumptions that are arbitrary and not verified by experience and performance. Typical information sources that can be used to help formulate assumptions include:

   - historical trend econometric or statistical analysis of past portfolio and individual account behaviour in response to past interest rate movement. Such analysis is particularly useful for assessing the likely behaviour of non-maturing deposits, which can be influenced by bank-specific factors such as the profile of customers and local market conditions;

   - bank- or vendor- developed prepayment models to generate mortgage-related cash flows;

   - managerial and business unit input about business and pricing strategies, since planned changes to business or repricing strategies could affect the behaviour of future cash flows of positions with uncertain maturities.

3. The length of the underlying historical observation period used for the analyses and models must be at least one year.

4. Senior management should ensure that key assumptions are evaluated at least annually for reasonableness. Market conditions, competitive environments and strategies that change over time would cause assumptions to lose their validity. For example, if the institution's competitive market has changed such that customers now face lower transaction costs for refinancing their residential mortgages, prepayments may be triggered by smaller reductions in market mortgage rate than in the past.

5. An institution's key assumptions and their impact should be reviewed by the Board of Directors, or a committee thereof, at least annually. The review of key assumptions should include an assessment of the impact of those assumptions on the institution's measured exposure. This type of assessment can be done by performing "what-if" or sensitivity

analyses that examine what the institution's exposure would be under a different set of assumptions. By conducting such analyses, management can determine which assumptions are most critical and deserve more frequent monitoring or more rigorous methods to ensure their reasonableness. These analyses also serve as a type of stress test that can help management ensure that the institution's safety and soundness would not be impaired if future events vary from management's expectations.

6. The types of analyses underlying key assumptions should be documented. Such documents, which usually briefly describe the types of analyses, facilitate the periodic review of assumptions. It also helps ensure that more than one person in the institution understands how assumptions are derived. The details of that documentation should be consistent with the significance of the risk and complexity of analysis. For a small institution, the documentation typically will include an analysis of historical account behaviour and comments about pricing strategies, competitor considerations, and relevant economic factors. Larger institutions often use more rigorous and statistically based analyses.

Computation of weighted average yield / weighted average interest costs

The following is an example showing the method of calculating the weighted average yield / interest costs: (Please note that the rates used are for illustration only. Reporting institutions should use the actual rates that are applicable to their interest bearing assets and liabilities.)

Items 1a, 1b / Items 5a, 5b	Amount reported	Of which
Row (A)	100	20 are priced at 2% per month and 80 are priced at 8% per annum
Row (B)	350	200 are priced at 10% and 150 are priced at 9% per annum
Row (C)	50	50 are priced at 12% per annum
Row (D)	0	
Row (E)	0	
Row (F)	0	
Row (G)	0	
Row (H)	0	
Row (I)	500	200 are priced at 13% and 300 are priced at 14% per annum
Row (J)	0	
Row (K)	0	
Row (L)	0	
Row (M)	0	
Row (N)	0	
Row (O)	0	
Total (A to O)	1000	

Weighted average yield / interest costs to be reported in items 1c, 1d / items 5c, 5d are calculated as follows:

(i) for row (A)
(20 x 2% x 12 + 80 x 8%) ÷ 100 x 100% = 11.20%

(ii) for row (B)
(200 x 10% + 150 x 9%) ÷ 350 x 100% = 9.57%

(iii) for row (C)
(50 x 12%) ÷ 50 x 100% = 12.00%

(iv) for row (I)
(200 x 13%+ 300 x 14%) ÷500 x 100% = 13.60%