0004

# UNAUDITED SUPPLEMENTARY FINANCIAL INFORMATION

The following information is disclosed as part of the accompanying information to the accounts and does not form part of the audited accounts.

# (A) CAPITAL BASE AND CAPITAL ADEQUACY RATIO

	2001
Capital adequacy ratio as at 31 December	14.38%
Adjusted capital adequacy ratio incorporating market risk exposure as at 31 December	14.57%

The unadjusted capital adequacy ratio is computed on the consolidated basis which comprises the positions of the Bank and eighteen subsidiaries, including Nanyang, Chiyu and BOC-CC, its three principal operating subsidiaries, as required by the HKMA for its regulatory purposes, and is in accordance with the Third Schedule to the Banking Ordinance.

The adjusted capital adequacy ratio taking into account market risk exposure as at the balance sheet date is computed in accordance with the guideline on "Maintenance of Adequate Capital Against Market Risks" under the Supervisory Policy Manual issued by the HKMA and on the same basis as for the unadjusted capital adequacy ratio.

Details of the consolidated capital base of the Bank as at 31 December 2001 are as follows:

	2001 HK\$'m
Core capital:	
Paid up ordinary share capital	43,043
Reserves	9,541
Total core capital	52,584
Eligible supplementary capital:	
General provisions for bad and doubtful debts	4,943
Total capital base before deductions	57,527
Deductions from total capital base	(979)
Total capital base after deductions	56,548

On 1 October 2001, the Bank underwent the Reorganisation. Prior to the Reorganisation, the Merging Branches were not required to maintain a minimum capital adequacy ratio. After the Reorganisation, a consolidated capital adequacy ratio, including the businesses which were part of the Merging Branches, was calculated and maintained. Therefore, the 2000 comparative capital adequacy ratio and capital base are not meaningful and hence not presented.

# **(B) LIQUIDITY RATIO**

	2001
Average liquidity ratio	39.88%

The average liquidity ratio is calculated as the simple average of each calendar month's average liquidity ratio of the Bank for the 3 months from 1 October 2001 (the date of the Reorganisation) to 31 December 2001.

The liquidity ratio for the Bank is computed on the solo basis (the Hong Kong offices only) and is in accordance with the Fourth Schedule of the Banking Ordinance.

Prior to the Reorganisation, the liquidity ratio of each of the Predecessor Entities was managed on an individual basis. As a result, the average liquidity ratios of the Bank for the periods prior to the Reorganisation are not comparable and hence not presented.

# **UNAUDITED SUPPLEMENTARY FINANCIAL INFORMATION (continued)**

# (C) OVERDUE AND RESCHEDULED ADVANCES

# (i) Overdue and non-performing advances to customers

	2001		2000		
	Amount HK\$'m	% of total advances to customers %	Amount HK\$'m	% of total advances to customers %	
Gross advances overdue for					
- 6 months or less but over 3 months	4,212	1.30%	3,960	1.16%	
- 1 year or less but over 6 months	5,427	1.68%	7,030	2.07%	
- Over 1 year	15,659	4.85%	18,233	5.36%	
Advances overdue for more than 3 months	25,298	7.83%	29,223	8.59%	
<ul><li>Less: Amount overdue for more than 3 months and on which interest is still being accrued</li><li>Add: Amount overdue 3 months or less and on which interest is being placed in suspense or on which interest accrual has ceased</li></ul>	(1,786)	(0.55%)	(2,488)	(0.73%)	
- included in rescheduled advances	1,315	0.41%	4,006	1.18%	
- others	10,685	3.30%	3,908	1.15%	
Gross non-performing advances	35,512	10.99%	34,649	10.19%	

# (ii) Other overdue assets

	2001 HK\$'m	2000 HK\$'m
Other assets overdue for		
- 6 months or less but over 3 months	9	19
- 1 year or less but over 6 months	5	14
- Over 1 year	4	-
	18	33

# (C) OVERDUE AND RESCHEDULED ADVANCES (continued)

### (iii) Rescheduled advances to customers

	200	2001		)
		% of total advances to		% of total advances to
	Amount HK\$'m	customers %	Amount HK\$'m	customers %
Rescheduled advances	1,814	0.56%	6,809	2.00%

Advances with a specific repayment date are classified as overdue when the principal or interest is overdue and remains unpaid. Advances repayable by regular instalments are classified as overdue when an instalment payment is overdue and remains unpaid. Advances repayable on demand are classified as overdue either when a demand for repayment has been served on the borrower but repayment has not been made in accordance with the instruction or when the advances have remained continuously outside the approved limit that was advised to the borrower.

Rescheduled advances are those advances that have been restructured or renegotiated because of a deterioration in the financial position of the borrower or of the inability of the borrower to meet the original repayment schedule and for which the revised repayment terms, either of interest or of repayment period, are non-commercial. Rescheduled advances which have been overdue for more than three months under the revised repayment terms are included under overdue advances. Rescheduled advances are stated after deduction of accrued interest that has been charged to customers but accrued to a suspense account and before deduction of specific provisions.

# (D) CURRENCY RISK

The following is a summary of the major foreign currency exposures arising from trading, non-trading and structural positions. The net option position is calculated based on the worst case approach set out in the prudential return "Foreign Currency Position" by the HKMA.

	As at 31 December 2001 Equivalent in millions of HK\$						
	US Dollars	Pound Sterling	New Zealand Dollars	Australian Dollars	Japanese Yen	Others	Total
Spot assets	197,497	15,996	14,167	28,316	3,428	22,113	281,517
Spot liabilities	(134,348)	(17,971)	(14,550)	(27,380)	(2,081)	(18,859)	(215,189)
Forward purchases	70,500	5,230	1,211	1,623	10,834	12,726	102,124
Forward sales	(124,606)	(3,233)	(794)	(2,538)	(12,190)	(15,807)	(159,168)
Net option position	4,277	14	43	135	(7)	22	4,484
Net long/(short) position	13,320	36	77	156	(16)	195	13,768

	US Dollars	Pound Sterling	New Zealand Dollars	Australian Dollars	Japanese Yen	Other	Total
Spot assets	251,702	14,357	9,595	19,926	6,097	17,348	319,025
Spot liabilities	(153,783)	(20,110)	(13,313)	(29,306)	(6,163)	(18,869)	(241,544)
Forward purchases	67,257	8,989	5,154	12,606	13,549	10,625	118,180
Forward sales	(158,528)	(3,228)	(1,404)	(3,200)	(13,477)	(9,051)	(188,888)
Net option position	1,908	7	11	19	1	9	1,955
Net long position	8,556	15	43	45	7	62	8,728

There were no net structural positions for the Group as at 31 December 2001 and 2000.

## As at 31 December 2000 Equivalent in millions of HK\$

# (E) SEGMENTAL INFORMATION

# (i) Sectoral analysis of advances to customers

The information concerning advances to customers has been analysed into loans used inside or outside Hong Kong by industry sectors of the borrowers, as follows:

	2001	2000
	HK\$'m	HK\$'m
Loans for use in Hong Kong		
Industrial, commercial and financial		
- Property development	28,300	26,129
- Property investment	47,758	54,571
- Financial concerns	7,314	7,765
- Stockbrokers	108	97
- Wholesale and retail trade	24,091	29,558
- Manufacturing	11,477	14,581
- Transport and transport equipment	8,778	5,886
- Others	51,054	49,278
Individuals		
- Loans for the purchase of flats in the Home Ownership Scheme, Private Sector		
Participation Scheme and Tenants Purchase Schemes	20,273	13,291
- Loans for the purchase of other residential properties	82,513	84,729
- Credit card advances	3,019	2,699
- Others	9,735	14,598
Trade finance	10,487	14,386
Total loans for use in Hong Kong	304,907	317,568
Loans for use outside Hong Kong		
Loans for use outside Hong Kong Industrial, commercial and financial		
	2,176	2,759
Industrial, commercial and financial	2,176 1,427	2,759 1,280
Industrial, commercial and financial - Property development		-
Industrial, commercial and financial - Property development - Property investment	1,427	1,280
Industrial, commercial and financial - Property development - Property investment - Financial concerns	1,427 489	1,280 593
Industrial, commercial and financial - Property development - Property investment - Financial concerns - Wholesale and retail trade	1,427 489 331	1,280 593 578
Industrial, commercial and financial - Property development - Property investment - Financial concerns - Wholesale and retail trade - Manufacturing	1,427 489 331 1,656	1,280 593 578 2,605
Industrial, commercial and financial - Property development - Property investment - Financial concerns - Wholesale and retail trade - Manufacturing - Transport and transport equipment	1,427 489 331 1,656 2,418	1,280 593 578 2,605 3,482
Industrial, commercial and financial - Property development - Property investment - Financial concerns - Wholesale and retail trade - Manufacturing - Transport and transport equipment - Others	1,427 489 331 1,656 2,418	1,280 593 578 2,605 3,482
Industrial, commercial and financial - Property development - Property investment - Financial concerns - Wholesale and retail trade - Manufacturing - Transport and transport equipment - Others Individuals	1,427 489 331 1,656 2,418 8,430	1,280 593 578 2,605 3,482 9,045
Industrial, commercial and financial <ul> <li>Property development</li> <li>Property investment</li> <li>Financial concerns</li> <li>Wholesale and retail trade</li> <li>Manufacturing</li> <li>Transport and transport equipment</li> <li>Others</li> </ul> Individuals <ul> <li>Loans for the purchase of other residential properties</li> </ul>	1,427 489 331 1,656 2,418 8,430 824	1,280 593 578 2,605 3,482 9,045 1,214
Industrial, commercial and financial <ul> <li>Property development</li> <li>Property investment</li> <li>Financial concerns</li> <li>Wholesale and retail trade</li> <li>Manufacturing</li> <li>Transport and transport equipment</li> <li>Others</li> </ul> Individuals <ul> <li>Loans for the purchase of other residential properties</li> <li>Others</li> </ul>	1,427 489 331 1,656 2,418 8,430 824 301	1,280 593 578 2,605 3,482 9,045 1,214 846

# **UNAUDITED SUPPLEMENTARY FINANCIAL INFORMATION (continued)**

# (E) SEGMENTAL INFORMATION (continued)

# (ii) Analysis of advances to customers by geographical areas:

	2001 HK\$'m	2000 HK\$'m
Hong Kong Mainland China Others	310,953 7,753 4,332	321,340 11,103 7,596
	323,038	340,039

# (iii) Analysis of advances overdue for more than 3 months by geographical areas:

		2001 K\$'m	2000 HK\$'m
Hong Kong Mainland China Others		,713 ,465 120	23,578 4,725 920
	25	,298	29,223

# (iv) Analysis of non-performing advances by geographical areas:

	2001 HK\$'m	2000 HK\$'m
Hong Kong Mainland China Others	30,043 5,130 339	28,020 5,614 1,015
	35,512	34,649

# (F) CROSS-BORDER CLAIMS

The information on cross-border claims discloses exposures to foreign counterparties on which the ultimate risk lies, and is derived according to the location of the counterparties after taking into account any transfer of risk. In general, such transfer of risk takes place if the claims are guaranteed by a party in a country which is different from that of the counterparty or if the claims are on an overseas branch of a bank whose head office is located in another country. Only regions constituting 10% or more of the aggregate cross-border claims are disclosed.

		2001			
	Banks and other financial institutions HK\$'m	Public entities HK\$'m	Others HK\$'m	Total HK\$'m	
Asia, other than Hong Kong	133,805	15,771	10,337	159,913	
North America	34,303	18,526	8,725	61,554	
Western Europe	143,297	3,172	3,934	150,403	
Caribbean	-	-	3,105	3,105	
	311,405	37,469	26,101	374,975	

		2000				
	Banks and other financial institutions HK\$'m	Public entities HK\$'m	Others HK\$'m	Total HK\$'m		
Asia, other than Hong Kong	230,716	13,568	15,566	259,850		
North America	36,021	4,971	957	41,949		
Western Europe	152,905	3,078	3,137	159,120		
Caribbean	12	-	4,312	4,324		
	419,654	21,617	23,972	465,243		

### **UNAUDITED SUPPLEMENTARY FINANCIAL INFORMATION (continued)**

#### (G) RISK MANAGEMENT

#### **Overview**

The principal types of risk inherent in the Group's business include credit risk, market risk (including interest rate and exchange rate risk), liquidity risk and operational risk. The Group's risk management goal is to maximise its return on capital while maintaining risk exposure within acceptable parameters.

#### **Risk Management Structure**

The Bank's risk management policies are designed to identify and analyse credit risk, market risk, liquidity risk and operational risk, to set appropriate risk limits, and to continually monitor these risks and limits by means of administrative procedures and information systems. The Bank continually modifies and enhances its risk management policies and procedures to reflect changes in markets and products.

To achieve the Bank's risk management goals, the Bank established, in connection with its reorganisation, a more centralised, independent and comprehensive risk management structure that involves the following elements:

- a standardised corporate governance structure to provide active oversight and participation by the Board of Directors, committees and senior management;
- reporting lines that are independent of the Bank's Strategic Business Units ("SBUs");
- uniform risk management policies, procedures and limits by which the Bank identifies, measures, monitors and controls inherent risks;
- improved risk measurement, monitoring and management information systems to support business activities and risk management; and
- clearly defined risk management responsibilities and accountability.

The Bank's principal banking subsidiaries, Nanyang and Chiyu, also face the same types of inherent business risks and they adopt consistent risk management strategies and policies as the Bank. These subsidiaries execute their risk management strategy independently and report to the Bank's management on a regular basis.

# **Credit Risk Management**

Credit risk is the risk that a customer or counterparty will be unable or unwilling to meet a commitment that it has entered into with the Bank. Credit risk arises principally from the Bank's lending, trade finance and treasury operations.

The Bank's primary goal in credit risk management is to maximise return on capital while maintaining its credit risk exposure within acceptable parameters. In particular, the Bank has developed and implemented comprehensive policies and procedures to identify, measure, monitor and control credit risk across the organisation. The Bank's Board of Directors, with the assistance of the risk management committee, sets the Group's overall risk management strategy and policies, and the Group's overall risk limits and credit authorisation guidelines. The risk management committee is responsible for reviewing and approving the Group's risk management policies and procedures as well as modifications to these policies and procedures. The Bank's credit risk management structure seeks to meet its primary goal by:

- establishing an appropriate credit risk environment;
- enforcing prudent procedures for approving credits;
- · maintaining an appropriate credit administration, measurement and monitoring process; and
- ensuring adequate independent oversight and control over credit risk.

Consistent with the Bank's overall risk management objectives, the key principles that ensure effective implementation of the Bank's credit risk management strategy are:

- balancing the Bank's tolerance for risk with the level of expected returns;
- diversifying the Bank's loan portfolio by geographic regions, industries, products, customers, maturities and currencies;
- maintaining the independence of the credit review process to ensure risk assessment and monitoring are conducted in an objective, fair and comprehensive manner;
- emphasising the importance of cash flow as an essential factor in assessing applicants' repayment ability;
- compliance with legal and regulatory requirements;
- assigning clearly defined credit risk management responsibilities and accountability to each relevant operating unit and people involved in the risk management process;
- avoiding over-reliance on collateral and guarantees;
- accurate measurement and full disclosure of credit risk exposure; and
- maintenance of consistent credit policy.

# (G) RISK MANAGEMENT (continued)

#### **Credit Risk Management Structure**

The Bank's Board of Directors, representing the shareholder's overall interests, is responsible for determining its credit risk management strategic objectives and principles. The Board, with the aim of maximising the Bank's risk-adjusted returns as well as shareholder's wealth, holds ultimate responsibility for the Bank's overall credit risk management process.

The Risk Management Committee is a board level committee that has the responsibility of determining and revising the Bank's credit risk management policies and procedures.

The Bank believes that independence and proper checks-and-balances are of critical importance in effective risk management. To this purpose, in the Bank's managerial/organisational structure, the Risk Management Department ("RMD") and the Audit Department are placed in a hierarchical position in which they directly report to the Risk Management Committee and Audit Committees respectively. All these committees and departments form an independent line of control.

In addition, respective responsibilities, accountabilities and authorities related to credit risk management are clearly defined throughout the Bank.

The Chief Executive is responsible for, among other things, implementing the credit risk management strategy and significant policies approved by the Board. The Chief Executive is also charged with balancing the Bank's goal of generating a high yield on its assets with the need to maintain risk exposure within the shareholder's tolerance level.

The credit committee has primary responsibility for reviewing and approving loans exceeding the credit extension limit of the deputy chief executives of credit initiation unit, loans exceeding the credit extension limit of the head of the Special Assets Management Department in the course of restructuring classified loans, loans exceeding the veto right of the chief risk officer and loan applications which have been vetoed by our chief risk officer and in respect of which an appeal has been lodged with the credit committee.

The Bank's credit initiation units, such as Corporate Banking, Retail Banking and Mainland Branches Business Departments, act as the first line of risk control. They are required to conduct business activities within the limits of delegated authority and in accordance with the Bank's credit risk management strategy, policies and procedures.

The RMD, being structurally independent of the credit initiation units, reports to the Risk Management Committee and assists the Chief Executive in managing credit risk based on the credit risk management strategies and policies. It also provides independent due diligence relating to identifying, measuring, monitoring and controlling credit risk.

To avoid any potential conflicts of interest, the credit review functions are independent of the business development units. The Group employs a multi-level credit approval process that requires loan approvals to be granted at successively higher levels of our organisation, depending primarily on the principal amount of the proposed loan, responsibilities and authorities of our credit initiation officers. All credit approval and review authorities originate from the Bank's Board of Directors.

The Special Assets Management Department is responsible for the collection of non-performing loans ("NPLs"). Other departments, though not specified above, are also charged with relevant matters in relation to credit risk management.

### **UNAUDITED SUPPLEMENTARY FINANCIAL INFORMATION (continued)**

### (G) RISK MANAGEMENT (continued)

#### **Credit Approval Procedures**

The Bank employs discriminatory approval procedures for high-risk loans and low risk loans.

Low risk credit transactions that fulfil certain requirements relating to credit types, loan purposes, loan amount, collateral coverage and security adequacy are processed using low risk loan approval procedures. Under these procedures, authorised credit officers in credit initiation units may approve this type of credit applications without prior review by the RMD. The corresponding loan review officer in the RMD should conduct independent post-approval reviews of such pre-approved low risk credit transactions and assess if initial credit decisions have been made in accordance with the established procedures.

For high-risk loans, credit officers in credit initiation units can only accept and review loan applications and make the initial lending decisions. These credit applications are then independently evaluated by loan review officers in the RMD in respect of compliance with policies and procedures, adequacy of credit risk assessment, and information sufficiency. The RMD is authorised to exercise the right of veto or concurrence based on the review conclusions.

Significant loans include loans exceeding the credit extension limit of the deputy chief executives of the Group's credit initiation units, loans exceeding the credit extension limit of the head of the Special Assets Management Department in the course of restructuring classified loans, loans exceeding the approval right of the chief risk officer and loan applications which have been vetoed by our chief risk officer and in respect of which an appeal has been lodged with the credit committee. Significant loans are reviewed and approved by the credit committee.

### **Credit Risk Assessment**

The result of credit risk assessments is a critical factor in making credit decisions. The Bank's credit assessment emphasises a thorough understanding of the purpose and structure of the loan, the borrower's financial status, cash flow position and repayment ability as well as business management. The Bank also evaluates the industry risk associated with corporate borrowers. When assessing an individual loan application, the Bank considers overall credit risk at the portfolio level.

# **Loan Monitoring**

The Bank monitors the performance of both individual loans and the overall loan portfolio on a timely basis to keep itself adequately informed of:

- each borrower's financial position;
- early signs of delinquency to facilitate prompt remedial action;
- the performance and repayment status of each of the Bank's individual loans;
- the credit exposure of the Bank's overall loan portfolio;

and to enable the Credit Committee and Risk Management Committee to monitor the quality of the Bank's overall credit portfolio, identify significant trends and assess the appropriateness of the Bank's credit risk strategy and policy.

The Bank performs its risk monitoring process at multiple levels. The monitoring frequency may increase if signs of irregularity have emerged. Moreover, the Bank continuously monitors its lending activities to ensure that the credit policies are complied with throughout the credit approval process.

#### **Impaired loans and NPL Management**

To improve the quality of credit portfolio and control the NPL ratio, the Bank has introduced a comprehensive plan to resolve the impaired loans and ring fence the new emerging NPLs. This includes:

- developing a working plan on closely monitoring "special-mention" loans;
- taking into account asset quality as a performance evaluation criterion;
- appropriately restructuring the impaired loans through indepth review;
- supporting the Special Assets Management Department in NPL collection and other methods of recovery.

# (G) RISK MANAGEMENT (continued)

#### **Credit Risk Reporting**

For the purposes of information disclosure and credit risk management, an integrated credit risk reporting system has been established, which generates statistical data sheets and loan portfolio analysis reports on a monthly basis, providing risk management information to various levels of management. An analysis is prepared, taking into account economic changes and strategic and performance of peer banks. Under the current credit risk reporting system, the risk position and performance of the loan portfolio can be measured on a timely basis.

The main areas covered by the credit risk management reporting system are as follows:

- (1) Risk concentration analysis of our loan portfolio measured in terms of loan product types, customer types, time to maturity, loan uses, loan classification, industry types and other relevant data;
- (2) Credit policy and regulations compliance;
- (3) Asset quality of the Group, including the performance of the Bank's subsidiaries such as Nanyang, Chiyu and BOC-CC.

#### **Market Risk Management**

Market risk is the risk that the movements in interest rates or market prices will result in losses in on- and off-balance sheet positions. The Bank's market risk arises from customer-related business and from position taking.

Market risk is managed within risk limits approved by the Risk Management Committee. The overall risk limits are set into sub-limits by reference to different risk factors, which are interest rate, foreign exchange, commodity and equity prices. Considering the different nature of the products involved, limits are set using a combination of risk measurement techniques, including position limits and sensitivity limits.

Having set up the monitoring limits and supervisory procedures, the Market Risk Division in the RMD is responsible for the management of market risk and reports to the Risk Management Committee and the Chief Executive. Through the daily risk monitoring process, the RMD measures actual risk exposures against approved limits and initiates specific action to ensure that the overall and individual market risks are managed within an acceptable level.

Value at Risk ("VaR") is a statistical technique which estimates the potential losses that could occur on risk positions taken due to movements in foreign exchange, interest rates, commodity and equity prices over a specified time horizon and to a given level of confidence. The model used by the Bank to calculate portfolio and individual VaR on a variance/covariance basis, uses historical movements in market rates and prices, a 99 percent confidence level and a 1-day holding period and generally takes account of correlations between different markets and rates.

The VaR for all trading market risk exposure of the Bank at 31 December 2001 was HK\$1.6 million, the VaR for all trading interest rate risk exposure was HK\$1.5 million and the VaR for all trading foreign exchange risk exposure was HK\$1.2 million.

For the year ended 31 December 2001, the average daily revenue of the Bank earned from market risk-related trading activities was HK\$2.0 million (2000: HK\$1.9 million). The standard deviation of these daily trading revenues was HK\$1.1 million (2000: HK\$1.2 million). An analysis of the frequency distribution of daily trading revenues shows that out of 243 (2000: 247) trading days in 2001, losses were recorded on only three (2000: four) days and the maximum daily loss was HK\$2.8 million (2000: HK\$1.7 million). The most frequent result was a daily trading revenue of between HK\$1.5 million to HK\$2.0 million). The highest daily trading revenue was HK\$5.4 million (2000: HK\$1.1 million).

# **UNAUDITED SUPPLEMENTARY FINANCIAL INFORMATION (continued)**

# (G) RISK MANAGEMENT (continued)

# Market Risk Management (continued)

The following histograms show the frequency of daily revenues related to trading market-risk activities:



Daily Distribution of Trading Market Risk Revenues For The Year Ended 31 December 2001



Daily Distribution of Trading Market Risk Revenues For The Year Ended 31 December 2001

REVENUE (HK\$M)

### (G) RISK MANAGEMENT (continued)

#### Foreign Exchange Risk Management

The Bank provides foreign exchange deposit, margin trading and forward transaction services to its customers. The Bank's trading activities in the foreign currency markets expose it to exchange rate risk. The Bank manages exchange rate risks through its interbank market activities. In particular the Bank mitigates exchange rate risks by establishing, position limits and limits on the loss of the whole foreign exchange trading floor. All these limits are approved by the risk management committee. The RMD is responsible for monitoring foreign exchange exposure and related stop-loss limits on a day-to-day basis as well as controlling the Bank's credit risk exposure arising from foreign exchange transactions.

The VaR relating to foreign exchange positions was HK\$1.2 million at 31 December 2001.

#### **Interest Rate Risk Management**

The Bank's balance sheet consists predominantly of Hong Kong dollar denominated interest rate sensitive assets and liabilities. The Bank's primary sources of interest rate risk are mismatches in the maturities or re-pricing periods of these assets and liabilities and movements in interest rates. In addition, different pricing bases for different transactions may also lead to interest rate risk for the Bank's assets and liabilities within the same re-pricing period.

The Bank uses gap analysis to measure its exposure to interest rate risk. Gap analysis measures the difference between the amount of interest-earning assets and interest-bearing liabilities that mature or must be re-priced within certain time bands. It provides the Bank with a static view of the maturity and re-pricing characteristics of its balance sheet positions. The Bank conducts its gap analysis by classifying all assets, liabilities and off-balance sheet items into various time period categories according to contracted maturities or anticipated re-pricing dates. The difference in the amount of assets, liabilities and off-balance sheet items maturing or being re-priced within each time period indicates the extent to which the Bank is exposed to the risk of potential changes in the margins on new or re-priced assets and liabilities.

### **Derivatives Exposure**

Derivatives are financial contracts whose characteristics are derived from other underlying instruments, and whose value changes in response to changes in interest rate, exchange rate, security price, indices or other similar variable. They mainly include futures, forwards, swaps and options in foreign exchange, interest rate, equity and equity indices and commodities. Derivative positions arise from transactions with customers as well as the Bank's own dealing and asset and liability management activities.

Derivative instruments are subject to interest rate and other market risks. Market risk from derivative positions resulting from customer-oriented positions and proprietary positions are controlled individually and in combination with on-balance sheet market risk positions within the Bank's market risk limit regime as described above. Positions arising from asset and liability management activities are monitored by the Treasurer under the guidance from the Asset and Liability Management Committee ("ALCO").

### **Liquidity Risk Management**

Liquidity risk arises in the funding of lending, trading and investment activities and in the management of trading positions. Liquidity risk includes both the risk of unexpected increase in the cost of funding the Bank's asset portfolio at appropriate maturities and the risk of being unable to liquidate a position in a timely manner and/or at a reasonable price. The goal of liquidity management is for the Bank to be able, even under adverse market conditions, to meet all its maturing repayment obligations on time and fund all of its investment opportunities.

The Bank maintains flexibility in meeting its funding requirements by maintaining diverse sources of liquidity. The Bank funds its operations principally by accepting deposits from retail and corporate depositors. The Bank may also borrow in the short-term interbank markets, although it is typically a net lender of funds. In addition, the Bank may from time to time raise funds through the sale of investments.

The Bank uses the majority of funds raised to extend loans, make investments in debt securities or conduct interbank placements. Generally, deposits are of shorter average maturity than that of loans or investments and are of longer average maturity compared to interbank placements.

The Bank maintains a portfolio of liquid, high quality securities that are managed by the Bank's Treasurer. These securities may generally be sold at any time at market prices to meet the Bank's emergent liquidity needs. The Bank may also manage its liquidity by borrowing in the interbank markets on a short-term basis. The interbank markets generally provide an adequate amount of liquidity, at borrowing rates which are subject to market conditions.

# **UNAUDITED SUPPLEMENTARY FINANCIAL INFORMATION (continued)**

# (G) RISK MANAGEMENT (continued)

### Liquidity Risk Management (continued)

The primary goal of the Bank's asset and liability management strategy is to achieve an optimal return while ensuring adequate levels of liquidity and capital, effective interest rate and foreign exchange rate risk management, and the lowest possible cost of funding. The Bank's ALCO is responsible for establishing these policy directives. The Bank's Treasurer's role is to ensure that the Bank maintains adequate levels of liquidity and secures the lowest possible cost of funding, while closely planning and monitoring the Bank's on- and off-balance sheet assets and liabilities according to the risk incurred. ALCO also attempts to optimise the Bank's risk adjusted returns within the risk limits set by the Bank's risk management committee. The Treasurer adjusts, as necessary, the Bank's liquidity and foreign exchange positions in line with the policies of ALCO, and also provides reporting and analytical services to ALCO with respect to current and planned positions taken for investment, funding and foreign exchange management purposes. In particular, the Bank has implemented various measures to:

- improve its asset management information system to provide timely information on the movement of its liquid assets on a daily, weekly and monthly basis;
- monitor liquidity ratios in compliance with the HKMA's requirements;
- prepare regular maturity gap analyses to enable management to review and monitor the Bank's liquidity position on a timely basis;
- establish a range of factors to be monitored and a liquidity risk warning index system to detect early signs of any
  irregularities; and
- create a three-tier response system to effectively deal with any emergencies.

### **Operational Risk Management**

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

All departments have primary responsibility in managing operational risk within their own business functions. The Operational Risk Division of the RMD, which is newly formed and directly reports to the chief risk officer, is responsible for managing the overall operational risk in a systematic and effective way. The Internal Audit Department reviews the business operations to ensure that they are conducted in accordance with internal control principles, and the Bank's policies and procedures.

The internal control system is being strengthened to achieve the following objectives:

- (1) To ensure all operations are conducted effectively;
- (2) To protect the safety and integrity of the Bank's assets;
- (3) To prevent, detect and rectify any mistakes and fraud; and
- (4) To ensure the genuineness, lawfulness and completeness of data.

Ensuring business continuity plan is an important objective of the Bank. The Bank is enhancing its business continuity plan to enable it to recover the operation of critical functions within a short time frame and minimise the impact to customers in the event of a disaster.

The Bank will further enhance its management methodologies in identifying, measuring, monitoring and controlling operational risk, to be in line with international best practices.