HONG KONG DOLLAR INTERBANK MARKET: AN ANALYSIS OF ITS ROLE IN FINANCIAL INTERMEDIATION

The HK dollar interbank market plays a central role in the financial intermediation process. A considerable proportion of funds maturing within one year are channelled from depositors via retail banks through the interbank market to those foreign banks without a branch network, and finally to the ultimate borrowers. Negotiable certificates of deposit (NCDs) complement the interbank market by channelling longer term funds. The NCDs market is expected to continue to develop as the size and liquidity of these instruments increased in 1994.

Introduction

The HK dollar interbank market is a sizable and active money market where wholesale HK dollar funds are transacted between authorised institutions (AIs) in Hong Kong and also with banks outside Hong Kong. In September 1994, the daily gross transactions amounted to $125 bn, equivalent to almost half the clearing house turnover and over 20 times the local stock exchange turnover.

Interbank funds have always been a major source of HK dollar funding for Hong Kong's banking system. At present, it accounts for about one-third of total HK dollar liabilities of all AIs, which is a high proportion by international standards.

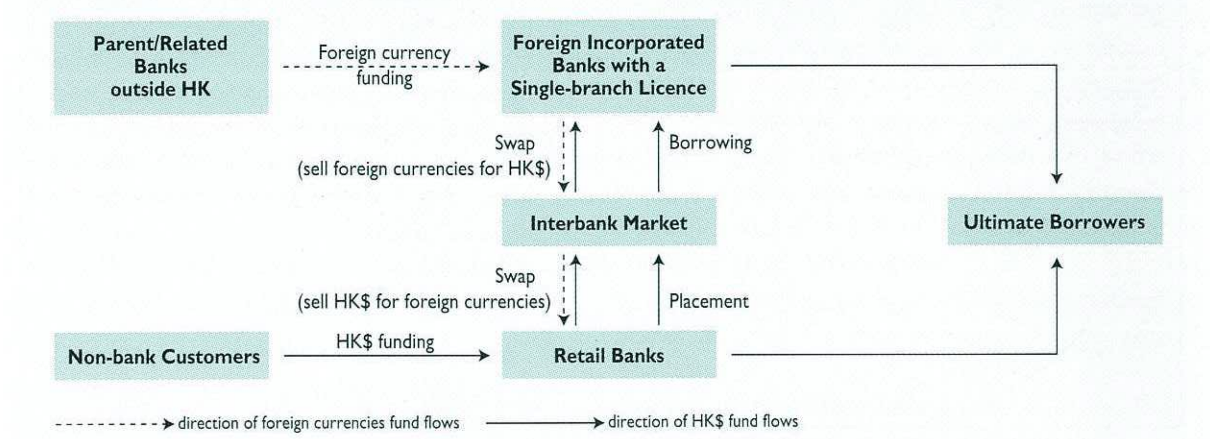
With expansion in the size of the banking sector accompanying the continuous economic growth, the interbank market has developed rapidly in recent years. The size of the interbank market in terms of transaction value grew at a rate of nearly 30% per annum in the past three years, which is commensurate with the general performance of other financial markets in Hong Kong.

This article analyses the role of the HK dollar interbank market in channelling funds to ultimate borrowers and highlights some of its salient features. It draws on the Survey on HK Dollar Interbank Market Transactions, which has been conducted monthly since December 1993.[1]

The Role of the HK dollar interbank market

The HK dollar interbank market plays a key role in the process of financial intermediation in Hong Kong. A substantial proportion of HK dollar funds deposited into the retail banks is channelled through the interbank market to those banks without an extensive branch network (Chart 1).

Chart 1
The Role of Financial Intermediation of the HK Dollar Interbank Market



1 The HKMA's Monthly Statistical Bulletin incorporates a table summarising the findings of the monthly survey together with the month-end interbank liabilities statistics.

The HK dollar interbank market has two basic modes of transaction. Some two-thirds of the gross transactions take the form of placements/ borrowings (i.e. interbank deposits) while foreign exchange swaps make up the remaining one-third.

Market participants

Locally incorporated banks are the major suppliers of HK dollar funds in the interbank market. They account for almost two-thirds of the total net lending and are particularly active in supplying funds in the form of placements. On the other hand, the demand for interbank HK dollar funds comes mainly from the foreign incorporated banks, especially those with a single branch licence[2] (Table 1).

When market participants are analysed by the geographical source of beneficial ownership, AIs owned by HK, China, and UK are the net suppliers while those owned by US, Japan and other countries are the net takers of HK dollar funds (Table 2).

Out of 374 AIs in September 1994, the top 20 net lenders (of which 13 are locally incorporated banks) accounted for almost 80% of total net lending; the top 20 net borrowers (of which 14 are foreign incorporated banks with a single branch licence) make up over 60% of total net borrowing.

In the absence of a customer deposit base, many foreign banks having a single branch licence have to rely on the interbank market to acquire the necessary funding to meet the demand for HK dollar credit by their customers. They have a market share of only 3.5% in terms of HK dollar deposits but a significant share of 14% in terms of HK dollar loans (Table 1). On the aggregate balance sheet of single-branch foreign banks, interbank funds having a term to maturity from over one day to three months constitute 78% of total HK dollar liabilities, which was equivalent to some 60% of total HK dollar assets. Funding from the interbank market is, therefore, the most important source of finance for their HK dollar assets (Table 3C).

The demand for interbank funds is readily met by banks having a widespread retail network, especially the locally incorporated banks having many branch offices that secure substantial HK dollar funds in the form of non-bank customers' deposits. They find the interbank market an efficient channel to invest their funds within one year. Although the interest margin derived from interbank lending is normally lower than that from

Table 1
Market Share of HK Dollar Interbank Market Transactions by type of AIs (September 1994)

	Interbank Net Lending										HK$ customer deposits	HK$ loans
	Placements and Swaps*					Foreign Exchange Swaps						
	Total	Net lender		Net borrower		Total	Net seller of HK$		Net buyer of HK$			
	$ Mn	$ Mn	(%)	$ Mn	(%)	$ Mn	$ Mn	(%)	$ Mn	(%)	(%)	(%)
Licenced Banks												
Multi-branch licence												
Locally incorporated	26699	27181	66.4	-482	1.0	3984	4074	28.4	-91	1.3	62.7	41.0
Foreign incorporated	-2820	8633	21.1	-11453	24.1	1694	5092	35.5	-3398	48.3	32.0	34.7
Single-branch licence												
Foreign incorporated	-30314	2091	5.1	-32405	68.0	1368	4454	31.1	-3085	43.8	3.5	14.2
Restricted Licence Banks	36	2448	6.0	-2412	5.1	170	609	4.3	-439	6.2	0.7	6.2
Deposit-taking Companies	-339	575	1.4	-914	1.9	72	97	0.7	-24	0.3	1.1	3.9
Total	-6738	40928	100.0	-47666	100.0	7288	14326	100.0	-7037	100.0	100.0	100.0

*Figures include both placements/borrowings and foreign exchange swaps transactions

Source: HKMA

2 Banks incorporated outside Hong Kong that obtained a full banking licence after 1978 are allowed to maintain banking offices in only one building. This effectively restricts them to having no more than one branch office.

Table 2
Market Share of Interbank Transactions by Country of Beneficial Ownership (September 1994)

	Gross Transactions		Net Lending	
	Placements and Swaps	Foreign Exchange Swaps	Placements and Swaps	Foreign Exchange Swaps
	(%)	(%)	(HK$Mn)	(HK$Mn)
HK	13.2	8.7	15125	3119
China	20.4	5.5	7698	2067
UK	7.9	8.3	1827	1652
Japan	18.1	31.0	-5588	4470
US	14.4	28.7	-8461	-2584
Others	25.9	17.7	-17339	-1436
Total	100.0	100.0	-21863	7288

Source: HKMA

customer loans, which are usually prime-based, the interbank market offers smaller counterparty risk and administrative overheads, and higher liquidity.

Maturity profile of transactions

Concern over liquidity arises from the maturity mismatch between customer deposits and customer loans in the balance sheets of retail banks. At end September 1994, for licenced banks with a multi-branch licence, 46% of HK dollar customer deposits were demand and savings deposits whereas 59% of HK dollar customer loans had a maturity of longer than one year. Notwithstanding the comparatively higher return derived from customer loans, these banks prefer to lend out part of the deposit funds in the interbank market, in the maturity range of say from one month to three months, in order to limit their maturity mismatch to reasonable levels on the balance sheets (Table 3).

Liquidity management also explains the apparently high transaction value at the very short end (Table 4), which reflects the very high turnover frequency of overnight lending in the interbank market. Day-to-day settlement of cheques and other means of payment render it a usual practice for all types of banks to engage frequently in overnight borrowing in order to cover their potential short position in their clearing accounts. However, in spite of the high proportion of overnight borrowing and lending in the value of transactions, the amount outstanding constitutes only a very small part of AIs' overall HK dollar liabilities.

When analysing the interbank transactions (Table 4), one has to bear in mind that the transaction volume in terms of value is affected by the maturity range of the interbank deposits. This is because overnight funds, which usually require daily rollover, will produce a much higher total turnover than interbank deposits with longer maturities. One way to adjust for this transaction frequency factor would be for the gross monthly transactions to be weighted by the average time period covered in each specific maturity range to arrive at total transaction value for the period. That is to say, a single transaction with one-month maturity will be equivalent to the rollover of the same amount of overnight funds for 30 days.

After the interbank transctions have been time-weighted, it becomes clear that interbank transactions are concentrated in the region between

Table 3
Major Balance Sheet Items of Licensed Banks Analysed by Maturity

(A) Multi-Branch Status, Locally Incorporated

HK$ Liabilities

(% of total HK$ assets)

Maturity	Deposits	Due to Banks in H.K.	Due to Banks Outside H.K.	NCDs & Other Negotiable Debt Instruments	Sub-Total
O/N – Call	31.10	0.60	0.80	–	32.50
<1M	24.50	2.80	0.80	0.20	28.30
1M – 3M	7.50	1.50	0.20	–	9.20
3M – 1Y	2.40*	0.50*	0.10*	0.30*	3.30
>1Y	–	–	–	1.70	1.70
Total	65.50	5.40	1.90	2.20	75.00

HK$ Assets

(% of total HK$ assets)

Maturity	Loans & Advances	Due from Banks in H.K.	Due from Banks Outside H.K.	NCDs & Other Negotiable Debt Instruments	Sub-Total
O/N – Demand	8.10	1.00	0.70	–	9.80
<1M	2.80	11.30	0.40	1.40	15.90
1M – 3M	3.70	12.10	0.40	2.20	18.40
3M – 1Y	5.50	0.50*	0.50*	2.50*	9.00
>1Y	33.00	–	–	0.20	33.20
Total	53.10	24.90	2.00	6.30	86.30

(B) Multi-Branch Status, Foreign Incorporated

HK$ Liabilities

(% of total HK$ assets)

Maturity	Deposits	Due to Banks in H.K.	Due to Banks Outside H.K.	NCDs & Other Negotiable Debt Instruments	Sub-Total
O/N – Call	18.20	0.70	1.40	–	20.30
<1M	14.90	8.20	8.90	–	32.00
1M – 3M	7.30	6.60	6.80	0.10	20.80
3M – 1Y	2.30*	1.00*	2.0*	0.30	5.60
>1Y	–	–	–	2.60	2.60
Total	42.70	16.50	19.10	3.00	81.30

HK$ Assets

(% of total HK$ assets)

Maturity	Loans & Advances	Due from Banks in H.K.	Due from Banks Outside H.K.	NCDs & Other Negotiable Debt Instruments	Sub-Total
O/N – Demand	8.80	0.60	5.00	–	14.40
<1M	6.90	10.20	2.70	0.70	20.50
1M – 3M	6.10	9.20	2.40	1.10	18.80
3M – 1Y	4.40	1.80*	0.30*	2.20*	8.70
>1Y	31.00	–	–	0.40	31.40
Total	57.20	21.80	10.40	4.40	93.80

* : Figures refer to maturity >3M

Source: HKMA

Table 3

Major Balance Sheet Items of Licensed Banks Analysed by Maturity

(C) Single-Branch Status, Foreign Incorporated

HK$ Liabilities

(% of total HK$ assets)

Maturity	Deposits	Due to Banks in H.K.	Due to Banks Outside H.K.	NCDs & Other Negotiable Debt Instruments	Sub-Total
O/N – Call	1.50	1.30	0.40	–	3.20
<1M	5.20	37.20	5.60	0.10	48.10
1M – 3M	4.10	22.90	2.30	0.20	29.50
3M – 1Y	1.10*	3.10*	0.80*	0.60	5.60
>1Y	–	–	–	2.30	2.30
Total	11.90	64.50	9.10	3.20	88.70

HK$ Assets

(% of total HK$ assets)

Maturity	Loans & Advances	Due from Banks in H.K.	Due from Banks Outside H.K.	NCDs & Other Negotiable Debt Instruments	Sub-Total
O/N – Demand	1.70	1.00	0.10	–	2.80
<1M	15.10	6.20	2.00	2.00	25.30
1M – 3M	10.90	7.10	1.60	1.60	21.20
3M – 1Y	8.40	3.60*	0.90*	5.3*	18.20
>1Y	23.10	–	–	3.50	26.60
Total	59.20	17.90	4.60	12.40	94.10

* : Figures refer to maturity >3M

Source: HKMA

Table 4

Maturity Profile of Monthly Interbank Transactions (September 1994)

Maturity	**Placements/Borrowing (HK$ Mn)**	**(%)**	**Foreign Exchange Swaps (HK$ Mn)**	**(%)**	**Total (HK$ Mn)**	**(%)**
O/N	62398	73.0	21768	54.4	84166	67.1
1D – 1W	9237	10.8	7733	19.3	16970	13.5
1W – 1M	6548	7.7	3597	9.0	10145	8.1
1M – 3M	6374	7.5	4228	10.6	10602	8.5
3M – 6M	748	0.9	1909	4.8	2657	2.1
> 6M	126	0.1	759	1.9	885	0.7
Total	85431	100.0	39994	100.0	125425	100.0

Source: HKMA

one month to three months, mainly effected in the form of placements. Beyond this maturity range, swap transactions become the main mode of transaction, particularly in the region from three months to six months (Chart 2).

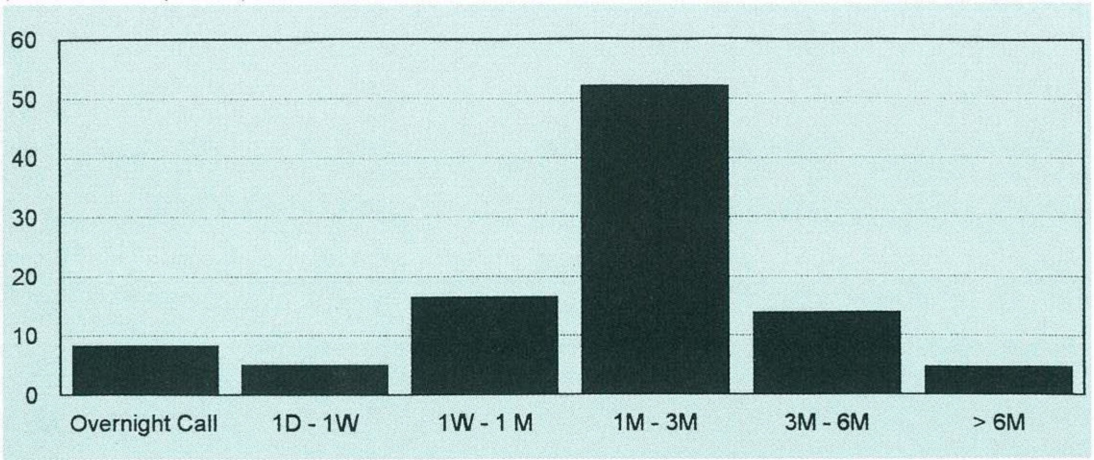
Foreign Currency Swaps

To the lenders in the interbank market, the lower counterparty credit risk involved renders swaps a more popular method than traditionally unsecured placement/borrowing in providing money beyond three months. Most interbank foreign exchange swaps involve the buying/selling of HK dollar against US dollar in which counterparties undertake to reverse the transaction at the end of the contracted period at an agreed exchange rate.

Chart 2
Maturity Profile of Time-weighted Interbank Market Transactions (September 1994)

(a) Interbank Placement/borrowing

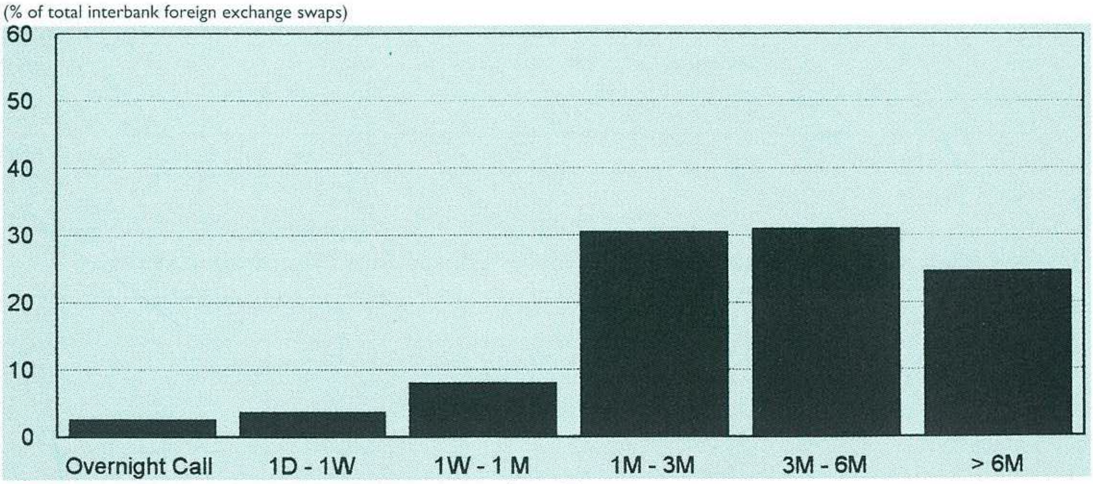
(% of total interbank placement)



(maturity)

(b) Foreign Exchange Swaps

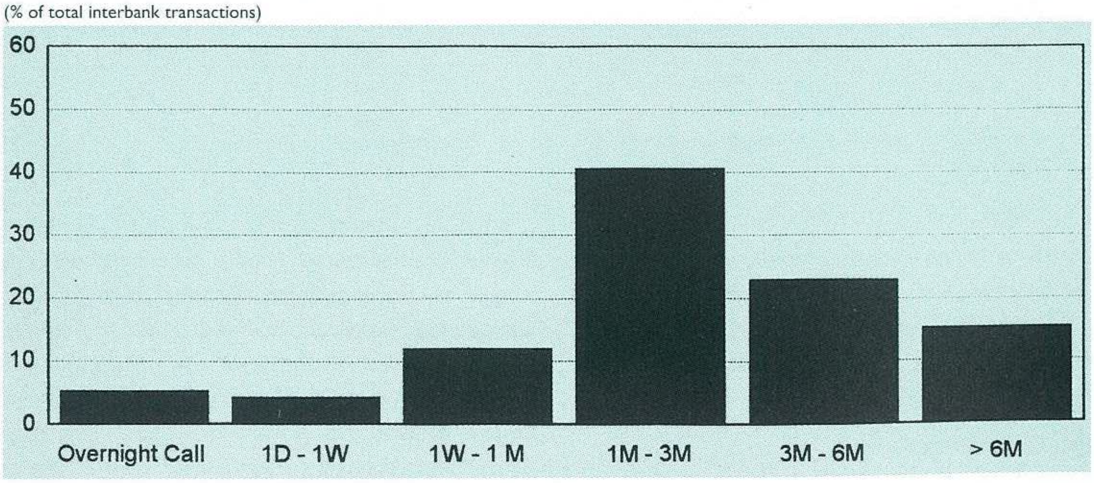
(% of total interbank foreign exchange swaps)



(maturity)

(c) Total Interbank Transactions

(% of total interbank transactions)



(maturity)

Such arrangement requires the exchange of principal between the counterparties with the result that counterparty credit risk can be substantially reduced.

Foreign incorporated banks are the most active players in swap transactions; they account for nearly two-thirds of net selling and over 90% of net buying of HK dollars. Banks beneficially owned by Japan and US are the most active groups in swap transactions, taking up a market share of 31% and 29% of gross transactions respectively in September 1994 (Table 2). Among the Japanese and US banks, there are active players on both legs of the swap transactions.

While locally incorporated banks are the most active lenders in placements transactions, those foreign banks having a relatively stable source of HK dollar funding are even more active than local banks in selling HK dollars in swaps (Table 1). Some of these foreign banks have a well established branch network while others are prominent banks in their respective home countries so that HK dollar funds can be easily accessed through the substantial credit lines available to them in the HK dollar interbank market. Through borrowing short from customer deposits or interbank placements and selling long in swaps, banks riding on a positively sloping yield curve therefore obtain a profit. Besides, there are also occasional arbitrage opportunities in the Euro-dollar market that provide a motive for banks to obtain foreign currencies through swaps.

The foreign incorporated banks which have easy access to foreign currency funding also find foreign exchange swaps a most useful way to obtain HK dollar funds in the interbank market. Currently, around 80% of the foreign currency liabilities of foreign incorporated banks are due to banks outside HK, of which a large part is actually provided by overseas parent banks or related banks. While foreign banks would prefer unsecured borrowings given the comparatively easier management (Table 5), lending banks would set limits on credit lines unless funds are provided on a swap basis. Credit quota may be less of a problem for some prominent foreign banks with a high credit rating. However, it can cause great difficulties for other banks which have limited access to customer deposits; foreign exchange swaps is therefore a viable means for them to secure HK dollar funds.

Interbank funds from China

With the increasing economic integration between China and Hong Kong, many trade and investment transactions in mainland China are settled in HK dollar. These HK dollars are then placed with banks in China and channelled back to Hong Kong through the interbank market. By October 1994, HK dollar liabilities due to banks in China amounted to $99.9 bn, accounting for 56% of total HK dollar external liabilities of all AIs. At the same time, claims by AIs in Hong Kong on banks in China amounted to $46.2 bn, bringing the net liabilities due to banks in China to $53.7 bn.

Those AIs beneficially owned by China are most active in dealing with banks outside Hong Kong; they take up around 30% of total interbank transactions with counterparties outside HK. The substantial HK dollar interbank funds available from

Table 5
Segmentation of Interbank Funding

Mode	Placements/Borrowing	Foreign Exchange Swaps	Negotiable Certificate of Deposits (NCDs)
Credit risk	Unsecured Lending.	Secured by foreign currencies principal	Depend on credit rating of the issue concerned.
Cost	HIBOR	HIBOR (implied rate)	(HIBOR + liquidity premium) + arrangement fees
Maturity Profile	Dominating in the 1-month to 3-month region.	Progressively more important towards 3-month to 1-year region.	Exclusive in the 1-year and above region.

China has enhanced their capacity to become the major net lenders in the HK dollar interbank market.

Negotiable Certificate of Deposits – an extension of the interbank market

The interbank market is quite thin in respect of funds that mature beyond one year. Negotiable Certificate of Deposits (NCDs), essentially large size deposits[3] sold to institutional investors, including banks, find a niche in the raising of longer term interbank funds (Table 5). Currently, over half of NCDs issued by AIs in HK are held within the local banking sector. Most NCDs are priced above one month-, three month- or six month- Hong Kong Interbank Offered Rate (HIBOR), reflecting the liquidity premium attached to longer term funds. There are also additional costs relating to services provided by underwriters, manager banks and arrangers which in total can amount to some 50 to 100 basis points of the issue value (Table 5). Issuing an NCD requires legal documentation that spells out the details of the instrument, including the issue amount, maturity, coupon rate, the facility type (e.g. floating rate vs fixed rate) and security conditions. In addition, it is not uncommon for the process to involve several banks acting as lead manager and co-managers, arranger and co-arrangers.

Although NCDs still account for a very small part (less than 3%) of total HK dollar liabilities of all AIs, they are almost the exclusive item that provides funding in the maturity region of 1 to 10 years, matching the longer term assets on AIs' balance sheets. Most of the NCDs issued in 1994 have terms of three years or beyond. In the past, issuance of NCDs had not been particularly popular because of higher issue costs and the lack of liquidity given a relatively inactive secondary market. However, with the initiatives of the HKMA in improving the market infrastructure, such as the Central Moneymarkets Unit (CMU) which provides an efficient and low cost clearing service for HK dollar debt instruments and the extension of eligible securities for access to the Liquidity Adjustment Facility (LAF), the liquidity of the NCD market has improved significantly. The need for a stable source of long term funds to finance infrastructure projects both locally in HK and abroad in Asia helped to spur the growth of NCDs in 1994. In the year to end November 1994, a growth of 81.4% was recorded in the outstanding amount of NCDs issued by AIs in Hong Kong. Currently, 135 issues of NCDs amounting to HK$26 bn are cleared through the CMU. Up to end-1994, two NCD issues, the $3.2 bn floating rate certificate of deposits by the Hong Kong and Shanghai Banking Corporation and the $2.5 bn floating rate NCDs by the Standard Chartered Bank, had received a Moody's credit rating of "A2". They are eligible securities for access to LAF. With the added advantage of being discountable instruments, the secondary market for eligible NCDs will become much more active, making it easier for banks to manage their liquidity.

Transmission of interest rates

Given the key position of the interbank market in the financial intermediation process, interbank interest rates are also central to the pricing of other HK dollar credits[4].

For lenders in the interbank market, HIBOR represents the rate of return on part of their funds. The higher the interbank interest rates, the greater the incentive to offer higher interest to attract customers' deposits in general. For borrowers, HIBOR represents the cost of funds that finance part of their HK dollar businesses. They tend to adjust their lending rates in accordance with movements of interbank rates. Furthermore, other marketable instruments such as the NCDs are usually tied closely to HIBOR as well.

The monetary reform measures that have been introduced in the last few years have greatly strengthened the HKMA's ability to influence the interbank interest rates[5] for the purpose of achieving exchange rate stability. Movements in the cost of interbank funds are swiftly transmitted to domestic retail interest rates.

– Prepared by the Monetary Management Department

3 Most NCDs are sized within the range of several hundred million to a few billion HK dollars.
4 See the article on "The Interest Rate Structure in Hong Kong" in the November 1994 issue of the Quarterly Bulletin.
5 See the article on "Management of Interbank Liquidity" in the November 1994 issue of the Quarterly Bulletin.