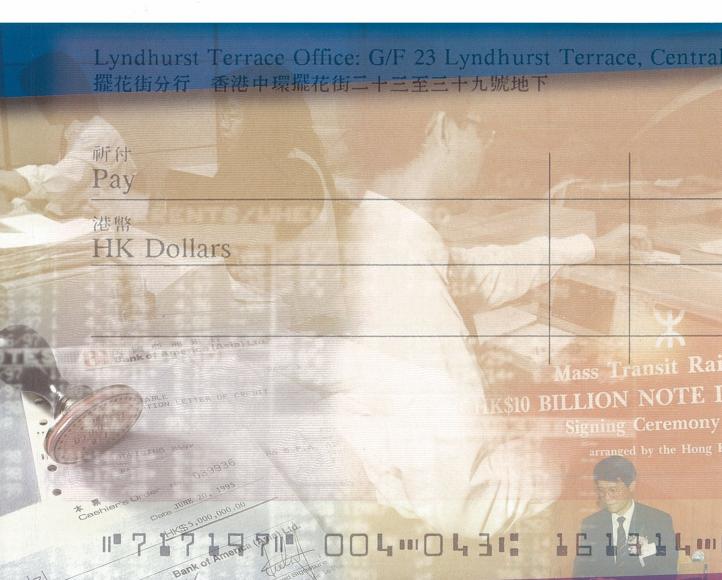
### DEVELOPMENT OF MARKET INFRASTRUCTURE

IN RECOGNITION OF THE IMPORTANCE OF MARKET INFRASTRUCTURE IN FOSTERING THE EFFICIENCY, INTEGRITY AND DEVELOPMENT OF THE FINANCIAL SYSTEM IN HONG KONG, THE MONETARY AUTHORITY HAS BEEN PURSUING A SERIES OF REFORM MEASURES TO UPGRADE THE INTERBANK PAYMENT AND SETTLEMENT SYSTEMS. EFFORTS HAVE ALSO BEEN MADE TO PROMOTE THE LOCAL DEBT MARKET THROUGH A FURTHER EXPANSION OF THE EXCHANGE FUND BILLS AND NOTES PROGRAMME AND THE UPGRADING OF MARKET INFRASTRUCTURE. AN IN-DEPTH STUDY IS BEING CONDUCTED BY THE HKMA ON THE MORTGAGE CORPORATION PROPOSAL.

## INTERBANK PAYMENT AND SETTLEMENT SYSTEMS

Significant progress was made in 1995 in the reform of the interbank payment system. The Committee on Payment System chaired by the HKMA, which gives policy steer to the payment system reform, agreed to move full steam ahead with the implementation of the Real Time Gross Settlement (RTGS) System scheduled for the end of 1996. By then, final settlement of interbank fund transfers will be across the books of the HKMA. The HKMA has also secured the full support of the banking industry for this important reform. The commitment on the part



of both the HKMA and the banking community to this tight timetable reflects the desire of all parties concerned to move Hong Kong's interbank payment system to a more robust system in full compliance with international standards as soon as possible. The HKMA has also reached agreement in principle with the People's Bank of China to establish a PvP (Payment versus Payment) link between the HK dollar payment system and China's National Automated Payment System (CNAPS) when both have gone live on the RTGS system. A PvP link will reduce the settlement risk in foreign exchange transactions arising from the difference in timing in the final

settlement of the two currencies involved. RTGS is expected to be implemented in Hong Kong by end 1996 and the CNAPS is scheduled to go live on RTGS in 1997.

The HKMA has set up a task force in January 1995 to work on the RTGS project. The following milestones were achieved in 1995:

### (a) setting up of the Hong Kong Interbank Clearing Limited (HKICL)

The HKICL, which will take over in phases the clearing services presently provided by the Management Bank of the Clearing House, was set up in May 1995. It is jointly owned in equal shares by the HKMA and the HKAB. The set up

and other costs of HKICL are financed by loans from the HKMA and the three Continuing Members of the HKAB. Upon the appointment of the General Manager of HKICL in October 1995, staff recruitment and the setting up of office premises at the Bank of America Tower commenced immediately. Before the implementation of the RTGS system in December 1996, the HKICL will take over CHATS (the existing large value electronic payment system between banks) and the ECG (the bulk electronic clearing items) system in the second half of 1996 while paper cheques clearing will be taken up in April 1997.

#### (b) software development

The HKMA's task force has been working closely with the HongkongBank and the Banking Computer Services Information Systems Private Limited (BCSIS) on the development of the RTGS software. Software programming work on interbank fund transfer and settlement had been completed and testing commenced in December 1995. Good progress has also been made in redesigning the Central Moneymarkets Unit (CMU) computer software using mainframe technology. The CMU will become an integral part of the RTGS system and will have real time Delivery versus Payment (DvP) capability. This would, among other things, enable banks to obtain liquidity to facilitate payment flows through intraday repo of Exchange Fund Bills and Notes.



TABLE 1: OUTSTANDING AMOUNT OF HK\$ DEBT ISSUES

as at 31 December 1995 (HK\$bn)				
EXCHANGE FUND BILLS AND NOTES				58.73
PRIVATE SECTOR DE of which :	BT ISSUES			138.22
Floating Rate			89.68	
FRCD		61.43		
FRN		25.04		
MBS		3.21		
Fixed Rate			48.54	
FXCD		22.56		
Straight	Bonds	25.98		
TOTAL				196.95

#### (c) banks' participation

The HKMA and HKAB have kept all the banks in Hong Kong closely involved in the development of the RTGS project. The banks are consulted on the various technical and business issues arising from the implementation of the RTGS project. The HKAB, HKMA and HKICL jointly organised a number of seminars between June and August 1995 to give banks an overview of the RTGS system design, the implementation plan, as well as the interface of RTGS with the CMU. Under the new RTGS system, all banks must become members of CHATS. The number of CHATS member banks increased from 72 at the beginning of 1995 to 90 by the year end. All other banks will become members of CHATS in the first half of 1996 so as to prepare themselves for the full operation of RTGS in December 1996. The existing CHATS members access CHATS via a mini-computer (AS400). A tailor-made PC version of

the CHATS terminal has been developed to reduce the entry cost for those banks with low payment volume.

The HKMA organised a Seminar on Global Payment Systems on 2-3 November 1995. Speakers at the seminar included the top payment experts from central banks and the private sector. This seminar was very well received by the financial industry.

## DEBT MARKET DEVELOPMENT IN HONG KONG

According to the first comprehensive survey on the HK dollar debt market conducted by the HKMA in collaboration with the Hong Kong Capital Markets Association, the size of the market, as measured by the outstanding amount of HK dollar debt securities, was nearly \$197 bn as at end 1995. Of this, Exchange Fund Bills and Notes amounted to \$58.7 bn while private sector debt

securities amounted to \$138.2 bn (Table 1). In respect of private sector debt issues, Hong Kong is one of the largest markets in the Asian Region (Table 2).

# (a) Exchange Fund Bills and Notes Programme

The Exchange Fund Bills and Notes Programme was further expanded in 1995 with the introduction of the seven-year Exchange Fund Notes by HKMA in November. The tender results for the inaugural issue were encouraging. The issue was 6.65 times over-subscribed, with an average accepted yield 106 bp above the corresponding US Treasuries. There is now a smooth HK dollar benchmark yield curve running up to the seven-year area, which tracks closely the yield curve of US Treasuries.

Exchange Fund paper of other maturities continued to be well received by the market, with oversubscription rates of between 2 to 5 times. Daily turnover of the Exchange Fund Bills and Notes averaged \$17.2 bn in 1995, compared with \$23.4 bn in 1994. The lower turnover partly reflected the preference of some authorised institutions to hold the paper for liquidity management rather than for trading. Nevertheless, with about 30% of the outstanding paper changing hands every day, the Exchange Fund Bills and Notes market remains one of the most actively traded government debt securities markets in the world.

### (b) private sector debt issues

Gross issue of HK dollar debt securities, other than the Exchange Fund Bills and Notes, amounted to \$59.9 bn in 1995, representing an increase of 12.4% over 1994 (Table 3). Floating rate paper accounted for three quarters of the total issue activity in 1995, probably reflecting the uncertainty in interest rate movements. Analysed by product type, while the amount of HK dollar NCD issues increased marginally over the 1994 figure, a substantial growth of 33% was recorded for bonds and notes. Among the latter were two asset-backed securities, one by the mortgage of a single apartment building and one by car

loans. Floating rate notes and straight bonds issued by commercial corporations recorded more than 50% growth over 1994.

There was healthy growth at the longer end of the local debt market, helped in part by efforts of the HKMA to extend the benchmark yield curve for the HK dollar. 56% of private debt issues launched in 1995 were of a maturity of five years or more, compared with 48% in 1994. Of the fixed rate HK dollar issues, the relative share of debt issues with a maturity of five years or more increased to 21% in 1995, from 18% in 1994.

Starting from September 1994, private sector debt issues which are lodged with the CMU and which meet the rating, issue size and marketability requirements are accepted as eligible securities for Repo under LAF. By end 1995, a total of 14 private debt issues involving an amount of \$26.3 bn was accepted for such purpose (Table 4).

The Council of Europe Social Development Fund was added to the list of multilateral agencies having profit tax exempt status in 1995. During 1995, a total of 13 medium to long-term HK dollar paper was issued by these multilateral agencies. The issue size ranged from \$100 mn to \$500 mn.

TABLE 2: OUTSTANDING SIZE OF ASIAN BOND MARKET

(US\$bn)	HONG KONG (end 1995)	HONG KONG (end 1994)	SINGAPORE (end 1994)	MALAYSIA (end 1994)	THAILAND (end 1994)	PHILIPPINES (end 1994)	INDONESIA (end 1994)
GOVERNMENT	7.59	6.84	42.3	41.61	10.23	25.1	8.37
National and Local Government	0	0.08	42.3	32.66	10.23	24.90	1.53
Central Bank/ Monetary Authority	7.59	6.76	0	8.95	0	0.2	6.84
PRIVATE SECTOR	17.87	12.94	2.53	9.33	3.82	0	0.70
Corporate	7.01	4.65	2.53	4.88	3.51	0	0.70
NCDs	10.86	8.29	N/A	4.45	0.31	N/A	N/A
TOTAL	25.46	19.78	44.83	50.94	14.05	25.10	9.07

N/A: Not Available

Notes:

Sources of data on other Asian bond markets:

The Emerging Asian Bond Market, World Bank.

Asia's Bond Markets: The Real Story, HSBC Markets.

The 1995 figures on Hong Kong are results of the Survey on the Hong Kong Dollar Debt Market. The 1994 figures on Hong Kong are estimated from various

In addition to HK dollar debt issues, over 300 issues of foreign currency debt securities were reported to have been arranged in Hong Kong in 1995. The majority of them were denominated in US dollar, while the others were denominated in Australian dollar, Deutschmark and other currencies. In addition, a total of 79 issues of debt securities, including HK dollar and foreign currency debt paper, were listed on the Stock Exchange of Hong Kong.

## NEW INITIATIVES TO PROMOTE MARKET DEVELOPMENT

## (a) further upgrading of the CMU service

The CMU Service provides an electronic computer book entry clearing and settlement system for the Exchange Fund Bills and Notes and private sector debt issues. As at end 1995, 260 private debt issues, with a total nominal value of \$73 bn were lodged with the CMU, an increase of nearly 100% compared with end 1994. Of the \$59.9 bn new issue of private sector debt papers in 1995, around three quarters were lodged with and cleared through the CMU. Starting from December 1995, the CMU has further enhanced its services by introducing end-of-day DvP facility for CMU instruments. More than 70 active market participants, accounting for about 80% of the daily turnover in CMU instruments, have signed up as DvP users.

TABLE 3: ISSUE ACTIVITY OF HK\$ DEBT SECURITIES IN 1994 AND 1995

(	(HK\$bn)	1994	1995
E	EXCHANGE FUND BILLS AND NOTES (Net Issue Size)	24.28	6.39
F	PRIVATE SECTOR DEBT ISSUES	53.29	59.89
	(no of issues) of which:	(168)	(179)
	NCDs	36.35	37.36
	Other Bonds and Notes	16.94	22.53

# (b) extension of market making system to MTRC paper

The market making system designed to promote secondary market liquidity of Exchange Fund paper has been extended to cover paper issued by the Mass Transit Railway Corporation (MTRC) under its \$10 bn Note Issuance Facility. Two tranches of 5-year MTRC Notes, each of \$500 mn, were launched in May and November. Under the Programme, the HKMA acts as the arranger, custodian, agent and operator of the issues. This arrangement helps increase secondary market liquidity of MTRC paper and enables the MTRC to lower its HK dollar funding costs.

### (c) secondary mortgage market

To facilitate the development of the secondary mortgage market in Hong Kong, an Informal Group on Secondary Mortgage Market, convened by the HKMA and comprising representatives from authorised institutions and other market participants, was formed in

1994 to discuss various issues relating to mortgage securitisation. A study report which put forward a number of recommendations for market development was published in July 1995.

One of the recommendations from the private sector members of the Informal Group is that the Government should consider setting up a government-supported mortgage corporation to develop the secondary mortgage market. To follow up on this recommendation, the HKMA initiated a study on the mortgage corporation proposal, taking into account wider issues including its implications for banking and monetary stability, the local debt market development and the property market. The HKMA engaged the Federal National Mortgage Association (Fannie Mae) in the USA to assist in studying the business and technical issues involved in setting up a mortgage corporation in Hong Kong.

TABLE 4: LIST OF ELIGIBLE REPO SECURITIES FOR LAF

ISSUER	ISSUE SIZE (HK\$BN)	ТҮРЕ	DEPOSIT DATE	MATURITY DATE
The Hongkong and Shanghai Banking Corporation Limited	3.2	FRCD	23-Sep-94	23-Sep-97
Wharf Treasury (1994) Limited	2.3	FRN	6-Dec-94	6-Dec-99
Standard Chartered Bank	2.5	FRCD	9-Dec-94	9-Dec-99
Sun Hung Kai Properties International Treasury Limited	3.0	FRN	10-Jan-95	10-Jan-00
Bangkok Bank Public Company Limited	1.0	FRCD	19-Apr-95	19-Apr-00
The Hongkong and Shanghai Banking Corporation Limited	2.0	FRCD	12-May-95	12-May-98
Standard Chartered Bank	1.5	FRCD	21-Jun-95	22-Jun-98
Wharf Treasury (1995) Limited	3.0	FRN	14-Jul-95	15-Jul-02
Bank of America (Asia) Limited	1.5	FRCD	18-Jul-95	20-Jul-98
The Bank of Tokyo Limited	1.2	FRCD	7-Sep-95	7-Sep-98
Merrill Lynch & Company Incorporation	1.0	FRN	11-Sep-95	11-Sep-00
The Hongkong and Shanghai Banking Corporation Limited	2.0	FRCD	4-0ct-95	4-0ct-00
ABN AMRO Bank N.V.	1.0	FRCD	17-Nov-95	17-Nov-00
Korea Exchange Bank	1.1	FRN	21-Dec-95	21-Dec-98