

THE CURRENCY BOARD ACCOUNT AND OTHER FINE-TUNING MEASURES TO STRENGTHEN THE CURRENCY BOARD ARRANGEMENTS IN HONG KONG

To enhance further the transparency of the currency board operations, the HKMA published the first Currency Board Account on 1 March 1999. This was followed in April by the implementation of several measures to fine-tune the currency board operations.

Introduction

Following the introduction of the package of technical measures to strengthen the currency board arrangements in early September 1998¹, the HKMA implemented further fine-tuning measures in the first four months of 1999. With the approval of the Exchange Fund Advisory Committee (EFAC), the HKMA started to publish the Currency Board Account on a monthly basis from 1 March 1999 onwards. Three other fine-tuning measures were implemented on 1 April, namely: the start of the shift of the exchange rate under the Convertibility Undertaking in respect of the Aggregate Balance from 7.75 to 7.80; the provision of an explicit backing mechanism for the issuance of coins in circulation; and allowing interest payments on Exchange Fund Bills and Notes to expand the monetary base.

Currency Board Account

To promote a better understanding of Hong Kong's currency board operations, the HKMA published the first Currency Board Account on 1 March 1999, with releases scheduled on a monthly basis thereafter. The Currency Board Account shows those items on the assets and liabilities sides of the Exchange Fund Balance Sheet which are related to the operations of the currency board arrangements. It demonstrates HKMA's strict adherence to the discipline of the currency board system, which requires any change in the monetary base to be fully matched by a corresponding change in foreign reserves backing the monetary base.

The Currency Board Account shows the monetary base on the liabilities side, and the backing assets on the assets side. Both are valued

on a marked-to-market basis. The backing assets represent the specific portfolio of US dollar assets designated for backing the monetary base (the backing portfolio). When the backing portfolio was established in October 1998, sufficient US dollar assets were earmarked to it to provide 105% backing for the monetary base (the backing ratio). The excess of assets in the backing portfolio over the monetary base is intended to provide a prudent cushion against possible fluctuations in the backing ratio due to changes in the monetary base and the backing assets.

Several factors can lead to fluctuations in the backing ratio. These include:

- (a) Autonomous changes in the monetary base. A change in the monetary base, which will be fully matched by a corresponding change in backing assets, will alter the average backing ratio. This is because the backing portfolio will change on a one-to-one basis, whereas the existing backing ratio will generally be somewhat greater than one. Thus, other things being equal, when the monetary base expands, the backing ratio will fall. Conversely, the backing ratio will rise when monetary base contracts. Rather substantial changes in the monetary base, however, would be required to have a significant impact on the backing ratio. For example, a HK\$10 bn (about 5% of monetary base) increase/decrease in both the monetary base and the backing assets, at end-April position, would imply a mere 0.5 percentage point decrease/increase in the backing ratio.
- (b) Revaluation effects arising from interest rate changes. Changes in HK dollar and/or US dollar interest rates will affect the marked-to-

¹ See the article "Strengthening of Currency Board Arrangements in Hong Kong" in the November 1998 issue of the HKMA Quarterly Bulletin.

market value of the backing assets and the Exchange Fund paper in the monetary base. If HK dollar interest rates fall relative to US dollar interest rates, for instance, the market value of Exchange Fund paper will rise, leading to a decline in the backing ratio. In the other direction, the backing ratio will generally rise if HK dollar interest rates increase relative to US dollar interest rates. Nevertheless, given that a substantial proportion of the monetary base and backing portfolio are short-term assets, the sensitivity of backing ratio to interest rate movements is fairly low.

- (c) Net interest earnings retained in the backing portfolio. Interest payments on Exchange Fund paper and earnings from backing assets will expand the monetary base and the backing assets respectively. To the extent that interest income arising from the backing portfolio exceeds interest payments on Exchange Fund paper, the backing ratio will rise over time. Conversely, the backing ratio will fall if net interest income is negative.

As at end-April 1999, the monetary base stood at HK\$198.3 bn, while the backing assets amounted to HK\$217.1 bn (Table 1). As a result, the backing ratio, which is the ratio between the backing assets and the monetary base, stood at 109.5%. The increase in the ratio compared with the October 1998 position was largely attributable to the excess of interest earnings on backing assets over interest payments on Exchange Fund paper.

Notwithstanding that specific assets of the Exchange Fund have been earmarked to back the monetary base, the whole of the Exchange Fund, not just the backing portfolio, will continue to be available for the purpose of supporting the exchange value of the HK dollar. As at end-April 1999, the total foreign currency assets of the Exchange Fund amounted to US\$89.5 bn, representing over three times the monetary base.

Exchange Rate under the Convertibility Undertaking

When the Convertibility Undertaking in respect of the Aggregate Balance was introduced in early September 1998, the rate of 7.7500 (the convertibility rate) was chosen because it was close to the then prevailing market exchange rate and the rate at which the HKMA had previously established its presence in the foreign exchange market. To enable a smooth convergence of the convertibility rate to the exchange rate applicable to the issue and redemption of the Certificates of Indebtedness (for backing the banknotes), the HKMA announced on 26 November 1998 a plan to move the convertibility rate gradually to 7.8000 over a 500 calendar day period. In accordance with the plan, the convertibility rate started to move from the level of 7.7500 by 1 pip (i.e. HK\$0.0001) per calendar day from 1 April 1999. The rate is scheduled to converge to 7.8000 on 12 August 2000, where it is intended to remain. The implementation of the scheme had no significant impact on the HK dollar exchange market, other than that the market rate drifted down on balance, to reflect part of the movement of the convertibility rate.

Backing for Coins in Circulation

As from 1 April, the issue and withdrawal of coins in circulation have been settled against US dollars at a fixed exchange rate of HK\$7.80 to US\$1, consistent with the framework for banknote issuance. This move provides a more explicit backing arrangement for coins compared with the previous practice. Under the previous backing mechanism, coins were issued against HK dollars and such HK dollar proceeds were switched over time into foreign currencies.

The new arrangement only affects coin transactions between the HKMA and the agent bank, i.e. the Hongkong and Shanghai Banking Corporation Ltd (HSBC). Transactions between HSBC and other banks continue to be conducted against HK dollar value, as is the case for banknotes.

Table 1

| Exchange Fund Currency Board Account as at 30 April 1999 (Expressed in millions of Hong Kong dollars) | | | |
|--|--------------|---|---|
| | Notes | 30 April 1999 (Market Value) | 31 March 1999 (Market Value) |
| MONETARY BASE | | | |
| Certificates of Indebtedness | | 89,745 | 92,595 |
| Coins in Circulation | | 5,733 | 5,789 |
| Exchange Fund Bills and Notes issued | 3,4 | 98,404 | 97,546 |
| Interest payable on Exchange Fund Notes | | 593 | 596 |
| Balance of the banking system | | 4,325 | 3,472 |
| Net accounts (receivable)/payable | 3 | (544) | (565) |
| Total | 1,3 | 198,256 | 199,433 (b) |
| BACKING ASSETS | | | |
| Investment in designated US dollar assets | | 215,810 | 218,411 |
| Interest receivable on investments | | 1,334 | 1,516 |
| Net accounts receivable/(payable) | 5 | 1 | (1,511) |
| Total | 2 | 217,145 | 218,416 (a) |
| BACKING RATIO [(a)/(b)] *100% | 6 | 109.53% | 109.52% |

Notes :

1. Movements in the monetary base during the period were as follows :

| | HK\$ million |
|--|----------------|
| Balance brought forward | 199,433 |
| Increase/(Decrease) in Certificates of Indebtedness | (2,850) |
| Increase/(Decrease) in Coins in Circulation | (56) |
| Net issue/(Net redemption) of Exchange Fund Bills and Notes | 85 |
| Accrued interest on Exchange Fund Notes | 205 |
| Settlement of accrued interest on Exchange Fund Notes | (208) |
| Amortised discount/(premium) on Exchange Fund Bills and Notes | 306 |
| Revaluation losses/(gains) relating to Exchange Fund Bills and Notes | 467 |
| Increase/(Decrease) in balance of banking system (other than due to Discount Window Operations) | 874 |
| Balance carried forward | <u>198,256</u> |

2. Movements in backing assets during the period were as follows :

| | HK\$ million |
|---|----------------|
| Balance brought forward | 218,416 |
| Increase/(Decrease) on issue/(redemption) of Certificates of Indebtedness | (2,850) |
| Increase/(Decrease) on issue/(redemption) of Coins in Circulation | (56) |
| Increase/(Decrease) in balance of banking system (other than due to Discount Window Operations and interest payment/(issuance) of Exchange Fund paper) | 752 |
| Income from investments | 557 |
| Revaluation gains/(losses) relating to investments | 326 |
| Balance carried forward | <u>217,145</u> |

3. Discount Window Operations:
 - (i) Discount Window Operations involve Hong Kong dollar overnight advances made to banks by way of crediting their accounts maintained with the HKMA (which is part of the balance of the banking system) on discounting Exchange Fund Bills and Notes and other eligible paper. In accordance with generally accepted accounting practice, the Exchange Fund Bills and Notes discounted with the HKMA are not accounted for as reductions in the liabilities of the HKMA but are regarded as securities held against the advances so made.
 - (ii) For the purpose of this Account, the advances to banks secured on Exchange Fund Bills and Notes amounting to HK\$544 million at 30 April 1999 (\$565 million at 31 March 1999) are shown as deductions in arriving at the monetary base.
4. Interest Payments on Exchange Fund Bills and Notes
 - (i) Starting from 1 April 1999, interest payments on Exchange Fund Bills and Notes have been allowed to increase the amount of outstanding Exchange Fund paper.
 - (ii) During April, the nominal value of Exchange Fund Bills and Notes increased from HK\$97.45 bn to HK\$97.78 bn
5. This represents the net amount of receivables and payables for unsettled transactions in respect of investments and redemption/issuance of Certificates of Indebtedness.
6. It should be noted that the whole of the Exchange Fund assets, not just the backing assets, are available for the purpose of defending the linked exchange rate.

Treatment of Interest Payments on Exchange Fund Paper

Also commencing 1 April, interest payments on Exchange Fund paper have been allowed to expand the monetary base. Under the previous arrangement, when interest was paid to holders of Exchange Fund paper, the HKMA credited the respective clearing accounts of the banks concerned and neutralized the effect of such interest payments on the Aggregate Balance, either by uplifting HK dollar deposits or borrowing HK dollars in the interbank market. Starting from 1 April, instead of carrying out HK dollar operations to neutralize the effect of interest payments on the Aggregate Balance, the HKMA has allowed the Aggregate Balance to increase along with such interest payments. Additional Exchange Fund paper is then issued to absorb the increase in the Aggregate Balance. Therefore, an amount approximately equivalent to interest payments will be added to the regular issue of Exchange Fund paper from time to time.


This new measure is consistent with the currency board discipline, as interest payments on Exchange Fund paper are backed by interest income on the US dollar assets backing the monetary base. In the long run, the Exchange Fund Bills and Notes programme will grow in a non-discretionary manner to accommodate growing demand for liquidity along with growth in economic

activity and financial assets. The increase in supply of high quality debt issues will also be conducive to the development of Hong Kong's overall debt market. In April, a total of HK\$0.45 bn interest payments on Exchange Fund paper were made, of which HK\$0.33 bn was absorbed by subsequent issuance of Exchange Fund paper. The remaining amount was carried forward in the Aggregate Balance until they would be mopped up by the next issue of Exchange Fund paper (Table 2).

Table 2
Interest Payments on Exchange Fund Paper and Issuance of Exchange Fund Paper to Absorb Them
(April 1999)

| Date | Interest Payments | Issuance of Exchange Fund paper (market value) |
|--------------|-------------------|--|
| | HK\$ mn | HK\$ mn |
| 7 April | 69 | - |
| 14 April | 92 | 68 |
| 15 April | 38 | - |
| 21 April | 92 | 129 |
| 23 April | 16 | - |
| 26 April | 21 | - |
| 28 April | 79 | 131 |
| 29 April | 44 | - |
| Total | 452 | 328 |

Modifications to HKMA Pages on News Services

Accompanying the implementation of the above measures, the HKMA pages on the news-wire services have been revised. Starting from 1 April, to reflect the impact of the interest payments on Exchange Fund paper and subsequent issuance of Exchange Fund paper on the Aggregate Balance, actual and forecast changes in the Aggregate Balance attributable to such activities are posted on the news screen (HKMAOOB and HKMAOOC pages on Reuters. See Table 3(a) and (b) for illustration). These figures show the net impact on the Aggregate Balance resulting from (a) the crediting of the clearing accounts of banks by the coupon payments on Exchange Fund Notes and redemption value of Exchange Fund paper; and (b) the debiting of the clearing accounts of banks by the issue amount of the Exchange Fund paper on the issue day. While the actual change of Aggregate Balance is published by the end of the day, forecast changes are provided on an almost real time basis. 

- Prepared by the Economic Research Division

Table 3(a)

| HONG KONG MONETARY AUTHORITY | | | HKMAOOB |
|--|-----------|------------------------------|--|
| INTERBANK LIQUIDITY | | | |
| 30 APR 1999 | | | |
| CONVERTIBILITY UNDERTAKING | | | |
| USD/HKD OFFER | 7.7530 | (30 APR 99) | |
| DISCOUNT WINDOW | | | |
| BASE RATE | 6.25 % | TWI 134.5 (+0.1) 30 APR 1999 | |
| TODAY'S O/N HIBOR | 4.5 % | | |
| HKAB 1M HIBOR FIXING: | 4.79241 % | | |
| | | TIME | AGGREGATE BALANCE OF SETTLEMENT ACCOUNTS |
| OPENING AGGREGATE BALANCE | 3,792 MN | 09:00HR | 6,137 MN |
| CLOSING AGGREGATE BALANCE | 4,325 MN | 10:00HR | 10,078 MN |
| CHANGE ATTRIBUTABLE TO: | | 11:00HR | 18,189 MN |
| MARKET ACTIVITIES | +0 MN | 12:00HR | 29,601 MN |
| INTEREST PAYMENT/ISSUANCE OF | | 15:00HR | 34,518 MN |
| EXCHANGE FUND PAPER# | +0 MN | 16:00HR | 34,454 MN |
| DISCOUNT WINDOW REVERSAL | -11 MN | | |
| DISCOUNT WINDOW TODAY | +544 MN | | |
| THE FIGURES ABOVE MAY NOT ADD UP DUE TO ROUNDING | | | |
| # THIS REFERS TO THE INCREASE IN THE AGGREGATE BALANCE DUE TO INTEREST PAYMENTS ON EXCHANGE FUND PAPER. THE EARLIEST OPPORTUNITY WILL BE TAKEN TO ISSUE NEW EXCHANGE FUND PAPER TO ABSORB SUCH INCREASE IN THE AGGREGATE BALANCE | | | |

Table 3(b)

| HONG KONG MONETARY AUTHORITY | | | | | HKMAOOC | |
|--|--------------------|----|--|----|---|----|
| FORECAST CHANGE IN AGGREGATE BALANCE | | | | | | |
| ATTRIBUTABLE TO: | | | | | | |
| (AS AT 18:00HR 30 APR 99) | FOREX TRANSACTIONS | | INTEREST PAYMENT/ISSUANCE OF EXCHANGE FUND PAPER | | FORECAST AGGREGATE BALANCE BEFORE DISCOUNT WINDOW OPENS | |
| 3 MAY 99 | +0 | MN | +0 | MN | 3,781 | MN |
| 4 MAY 99 | +0 | MN | +0 | MN | 3,781 | MN |
| 5 MAY 99 | +0 | MN | -60 | MN | 3,721 | MN |
| AFTER 5 MAY 99 | +0 | MN | -63 | MN | 3,658 | MN |
| THE FIGURES ABOVE MAY NOT ADD UP DUE TO ROUNDING | | | | | | |