

# A RECORD OF DISCUSSION OF THE EXCHANGE FUND ADVISORY COMMITTEE SUB-COMMITTEE ON CURRENCY BOARD OPERATIONS ON 7 MAY 1999

(Approved for Issue by the Exchange Fund Advisory Committee on 27 May 1999)

## Currency Board Operations for the Period 29 March - 28 April 1999

The Sub-Committee noted that changes in the monetary base during the review period from 29 March to 28 April 1999 had been fully matched by corresponding changes in foreign reserves in accordance with the rules of the Currency Board arrangements. The Sub-Committee also noted that the markets had adapted well to the movement of the convertibility rate by 1 pip per calendar day, which had commenced on 1 April 1999 in order to gradually bring the rate for the Aggregate Balance (originally at 7.75) in line with that applicable to Certificates of Indebtedness (fixed at 7.80). There had been some selling of Hong Kong dollars ahead of the Easter holidays, reflecting market expectations of a slight weakening of the exchange rate along with the movement of the convertibility rate. But the exchange rate strengthened soon after the Easter holidays and had remained firm for much of the rest of the month, despite a slight weakening towards the end of the reporting period. The report on Currency Board operations for the period under review is at Annex A.

## Convertibility Undertaking in Respect of Banknotes

The Sub-Committee examined the desirability and feasibility of providing a convertibility undertaking through opening a facility to the general public, operated by the HKMA, for converting Hong Kong dollar banknotes into US dollar notes at a fixed rate of 7.80. Members considered that, while such a facility might be attractive in principle, a number of practical issues would be likely to arise were it to be implemented. These included the need to draw up new arrangements with the note-issuing banks to enable the HKMA to dispose of the Hong Kong dollar banknotes acquired through the facility in a way that would be consistent with the Currency Board arrangements. Additional problems would arise from the costs and problems associated with holding sufficient US dollar notes to accommodate any demands that might be made on such a facility. The Sub-Committee also noted that, in offering a direct exchange facility, the HKMA might be seen to be competing with banks for retail currency exchange business, particularly as the convertibility rate for banks' clearing balances approached 7.80.

The Sub-Committee concluded that the existing route for converting Hong Kong dollar banknotes

through retail banks already supplied the general public with a convenient currency exchange service. The Sub-Committee further concluded that, given the high level of confidence in the existing arrangements for backing Hong Kong dollar banknotes with Certificates of Indebtedness, any additional assurance that might result from a direct convertibility undertaking for banknotes would probably be very limited. The Sub-Committee therefore agreed that the establishment of such a facility was not necessary.

## Banks' Management of Clearing Balances


The Sub-Committee considered an analysis of banks' management of their clearing balances. The analysis found that the major determinants of banks' demand for clearing balance were the anticipated demand for liquidity to manage scheduled interbank transactions and the precautionary demand for liquidity to provide for unexpected events. The latter included late transfers of funds, a drawing down of overdrafts, or a sudden liquidity shortage in the money market arising from an outflow of funds from the Hong Kong dollar. Members noted that, while all banks sought to maintain as small a positive clearing balance as possible, since such a balance was non-interest bearing, the average clearing balance varied according to type of bank. For example, foreign banks generally kept much smaller clearing balances because their lack of extensive retail networks made their liquidity less vulnerable to unpredictable swings, and because their dependence on interbank funding implied a higher opportunity cost in holding surplus liquidity than was faced by banks with a sizeable retail deposit base. Members also noted that institutional changes over time (such as implementation of the Real Time Gross Settlement System in December 1996, the restrictions on repeated borrowers from the Liquidity Adjustment Facility between November 1997 and September 1998, and the introduction of the Discount Window in September 1998) had had important influences on the ways in which banks developed their liquidity management strategies.

Members noted that discrepancies between the target and actual levels of clearing balance occurred from time to time and that, at the close of market, banks sometimes found themselves sitting on idle clearing balances: they were generally unable to switch out into foreign currency assets because spot foreign exchange transactions were settled on a T+2 basis. Members considered whether there was a need to introduce a

facility, such as reverse repo or special tap issues of Exchange Fund paper, to absorb excess transient liquidity of this kind. Such a facility, if introduced, could be on the basis of discretionary offers by the HKMA rather than a continuous facility. Members observed that any such transient increases in liquidity would be unlikely to undermine the normal functioning of the interest rate adjustment mechanism. They also expressed concern that any discretionary element in a facility of the kind under consideration might be seen as an attempt by the HKMA to control interest rates or as a policy of remunerating banks for holding clearing balances.

Members further considered that the various measures introduced since last September (such as the Discount Window, the Convertibility Undertaking in respect of the Aggregate Balance, and the movement of the convertibility rate for the Aggregate Balance by 1 pip per calendar day from 1 April 1999) had already stabilised the monetary system. To reduce further the scope for variability in the overnight interest rate could have the effect of making the system too rigid. The Sub-Committee therefore concluded that a facility for absorbing transient capital inflows was not necessary at present, but agreed that the matter should be kept under review.

### **Maturity Structure of Exchange Fund Paper Issuance**

The Sub-Committee noted an information paper on the Maturity Structure of Exchange Fund Paper issuance. 

## REPORT ON CURRENCY BOARD OPERATIONS

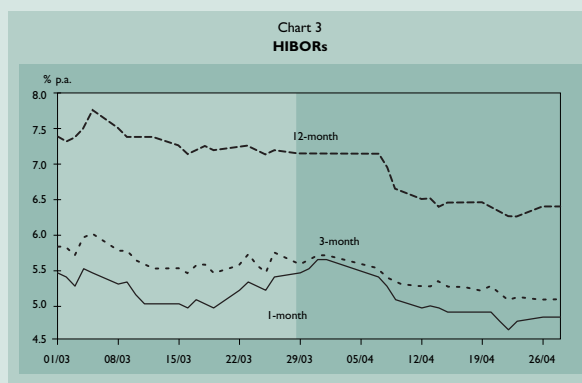
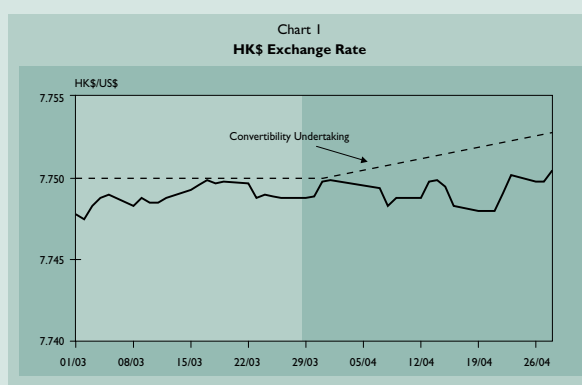
*During the reporting period, the HK dollar exchange rate traded within a narrow range of 7.7480-7.7505. Interest rate spreads narrowed further from March levels, amid signs of capital inflows driven by buoyant equity market conditions. The monetary base decreased marginally from HK\$196.6 bn to HK\$195.6 bn. Changes in the monetary base were fully matched by corresponding changes in the foreign reserves in accordance with the rules of the Currency Board arrangements.*

### Hong Kong dollar exchange rate

The Hong Kong dollar exchange rate remained stable during the reporting period, trading within a narrow range between 7.7480 and 7.7505. The convertibility rate for the Aggregate Balance began to move by 1 pip per calendar day from 7.7500 with effect from 1 April. There was some selling of HK dollars ahead of the Easter holidays reflecting market expectations of a slight weakening of exchange rate along with the movement of the convertibility rate. As a result, the exchange rate weakened briefly to 7.7500 and the HKMA sold US dollars under the Convertibility Undertaking. After the Easter holidays, the flows of funds reversed and there was reportedly a sizeable inflow of funds to Asian stock markets, including Hong Kong. In response to offers from a few banks, the HKMA sold HK dollars for US dollars. In mid-April, when the exchange rate further strengthened to 7.7480, the HKMA again sold HK dollars for US dollars. Toward the end of the reporting period, the exchange rate weakened marginally and closed at 7.7505 on 28 April (Chart 1 and Chart 2).

### Interest rates

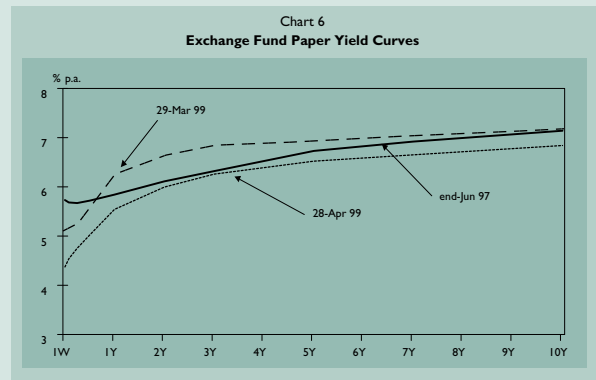
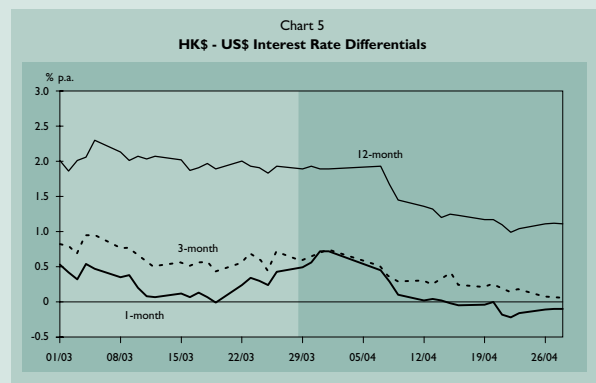
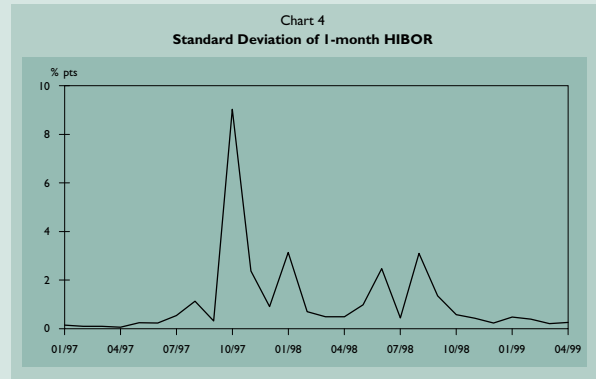
Affected by month-end effects and an outflow of funds, interbank interest rates firmed moderately in end-March and early April. Along with an increase in the Aggregate Balance after the Easter holidays, interbank interest rates eased gradually. 1-month HIBOR eased to 4.63% on 22 April. In late April, mainly affected by month-end effects and market concerns over a correction in the stock market, interbank interest rates firmed up slightly. 1-month HIBOR closed at 4.81% on 28 April, still 63 bp lower than the level at the beginning of the reporting period. 12-month HIBOR also declined from 7.13% to 6.38% during the reporting period (Chart 3).



Reflecting these movements, **interest rate volatility**, measured in terms of the standard deviation of 1-month HIBOR, **rose marginally** from 0.20 percentage points in March to 0.25 percentage points in April (up to 28 April) (Chart 4).

**The differential between Hong Kong dollar and US dollar interest rates widened moderately in end-March and early April.** Thereafter, as interbank interest rates eased in response to an increase in the Aggregate Balance, **the spread narrowed gradually.** HIBORs with a term of one month or below stayed at levels below the corresponding US interest rates during the second half of April. At the end of the reporting period, the spread in terms of the 1-month rate was -10 bp, much lower than +49 bp at the beginning of the period (Chart 5).

**Longer-term interest rates**, represented by yields on Exchange Fund paper, **declined significantly during the period under review.** The entire yield curve shifted down below the pre-crisis levels. The yields on 5-year and 10-year Exchange Fund Notes fell to 6.52% and 6.84% respectively on 28 April, around 20-30 bp lower than their pre-crisis levels (Chart 6). Yield spreads of Exchange Fund paper over US Treasuries also narrowed significantly for all tenors. Yield spreads between 5-year and 10-year Exchange Fund paper and their US counterparts fell from 176 bp and 191 bp to 128 bp and 154 bp respectively during the reporting period (Table 1).



**Table 1**  
**Yield Spreads between Exchange Fund Paper and US Treasuries (basis points)**

|         | 27-Jun-97 | 29-Mar-99 | 28-Apr-99 |
|---------|-----------|-----------|-----------|
| 3-month | 56        | 75        | 19        |
| 1-year  | 21        | 155       | 81        |
| 3-year  | 3         | 168       | 113       |
| 5-year  | 27        | 176       | 128       |
| 10-year | 54        | 191       | 154       |

Alongside the easing in interbank interest rates, the HKAB reduced the savings rate under the Interest Rate Rules on two occasions in April by a total of 50 bp, to 3.50% effective on 3 May. Concurrently, the best lending rate offered by major banks was also reduced by 50 bp to 8.25%. The weighted average deposit rate offered by 44 major authorised institutions for 1-month time deposits (which are outside the Interest Rate Rules) rose marginally from 5.9% on 26 March to 6.2% on 1 April, before declining to 5.6% on 16 April. The effective deposit rate (measured as the average of deposit rates weighted by type and maturity of deposits) continued to fall, from 5.01% in February to 4.85% in March (Chart 7).

#### Base Rate

The Base Rate remained unchanged at 6.25% (150 basis points above the US Fed Funds Target Rate) throughout the reporting period (Chart 8).

#### Monetary Base

The Monetary Base, which comprises the outstanding amount of Certificates of Indebtedness, coins in circulation, the Aggregate Balance and the outstanding amount of Exchange Fund Bills and Notes, decreased from HK\$196.62 bn on 29 March to HK\$195.59 bn on 28 April (Table 2). Movements of individual components are discussed below.

#### Certificates of Indebtedness

Ahead of the Easter holidays, the three Note Issuing Banks (NIBs) submitted to the Exchange Fund a total of US\$0.79 bn from 29 March to 1 April in exchange for an increase in Certificates of Indebtedness, from HK\$89.52 bn to HK\$95.68 bn. As the public returned surplus bank notes to the banking system after the Easter holidays, a total of HK\$8.78bn of CIs was redeemed in exchange for US\$1.13 bn during the rest of the reporting period. As a result, the outstanding amount of CIs stood at HK\$86.89 bn on 28 April (Chart 9).

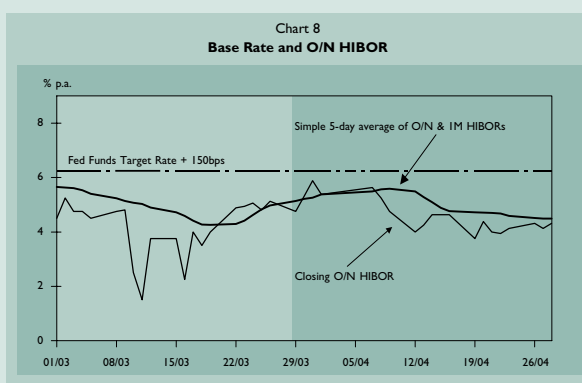
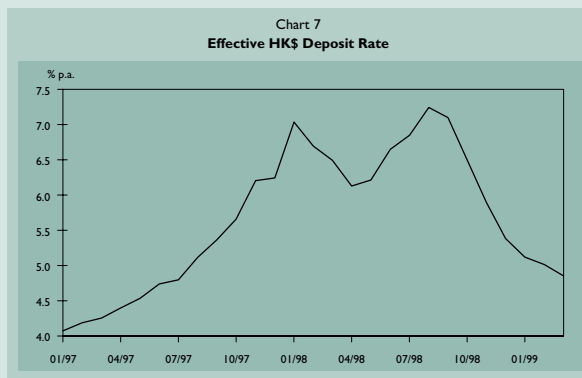
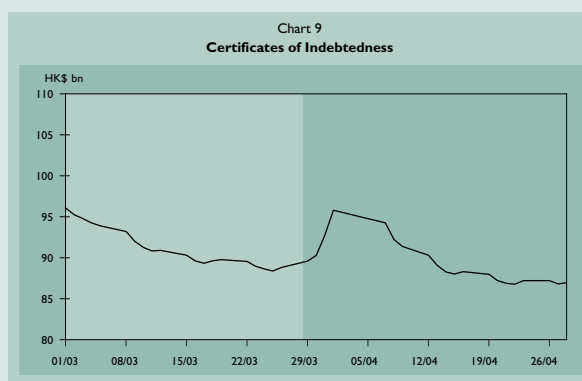


Table 2  
Monetary Base

| (HK\$ bn)            | 29-Mar | 28-Apr |
|----------------------|--------|--------|
| CIs                  | 89.52  | 86.89  |
| Coins in Circulation | 6.05   | 5.99   |
| Aggregate Balance    | 2.91   | 3.74   |
| Outstanding EFBNs    | 98.14  | 98.97  |
| Monetary Base        | 196.62 | 195.59 |



## Coins

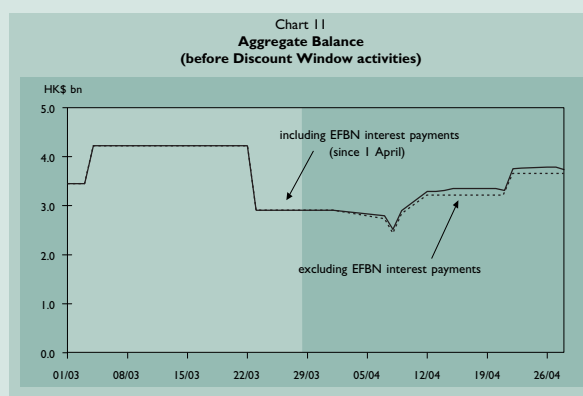
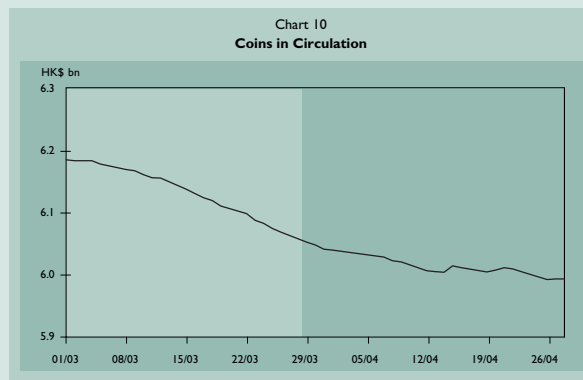
The total amount of **coins in circulation** decreased slightly from HK\$6.05 bn on 29 March to HK\$5.99 bn on 28 April (Chart 10).

## Aggregate Balance

Reflecting mainly an inflow of funds, the **Aggregate Balance (before Discount Window activities)** increased from HK\$2.91 bn on 29 March to HK\$3.74 bn on 28 April (Chart 11).

In response to some outflow of funds in early April, the **HKMA bought HK\$2.02 bn under the Convertibility Undertaking during 31 March - 5 April**. Subsequently, as the funds returned after the Easter holidays, the **HKMA sold HK\$2.32 bn on 7-9 April**. With continued inflows of funds in mid-April, the **HKMA further sold HK\$0.44 bn on 20 April**. In net terms, these foreign exchange transactions expanded the **Aggregate Balance by HK\$0.75 bn during the reporting period (Table 3)**.

Starting from 1 April, interest payments on Exchange Fund paper are allowed to expand the Aggregate Balance temporarily before the increase is subsequently absorbed by issuance of additional Exchange Fund paper. During the reporting period, a **total of HK\$0.41 bn interest payments** were made, while an **additional HK\$0.33 bn (market value) Exchange Fund paper was issued to absorb the interest payments**. The remaining amount was carried forward in the Aggregate Balance until the next issue (Table 4).



**Table 3**  
**HKMA HK\$/US\$ FX Transactions\***  
**(29 Mar – 28 Apr)**

| Trade Date   | Net HK\$ purchase (+) / sale (-)<br>(HK\$ mn) |
|--------------|---|
| 31 Mar       | 1,348   |
| 1 Apr        | 628   |
| 5 Apr        | 39  |
| 7 Apr        | -1,163  |
| 8 Apr        | -774  |
| 9 Apr        | -387  |
| 20 Apr       | -442  |
| <b>Total</b> | <b>-751</b>                                   |

\* FX transactions may be due for settlement today, on the next business day, or the day after, at which point it would affect the Aggregate Balance.

**Table 4**  
**Interest Payments on EF Paper**  
**and Issuance of EF Paper to absorb them**  
**(29 Mar – 28 Apr)**

| Date         | Interest Payments<br>HK\$ mn | Issuance of EF Paper<br>HK\$ mn |
|--------------|------------------------------|---------------------------------|
| 7 Apr        | 69                           | –                               |
| 14 Apr       | 92                           | 68                              |
| 15 Apr       | 38                           | –                               |
| 21 Apr       | 92                           | 129                             |
| 23 Apr       | 16                           | –                               |
| 26 Apr       | 21                           | –                               |
| 28 Apr       | 79                           | 131                             |
| <b>Total</b> | <b>407</b>                   | <b>328</b>                      |

### Outstanding Exchange Fund Bills and Notes

During the period under review, **the market value of outstanding Exchange Fund paper increased from HK\$98.14 bn to HK\$98.97 bn**. The increase was partly due to the additional issue referred to the previous paragraph. All issues of Exchange Fund Bills and Notes were well received by the market (Table 5). Holdings of Exchange Fund paper by the banking sector (in terms of market value) remained broadly unchanged (at HK\$79.72 bn or 80.6% of total on 28 April).

### Discount Window Activities

The Discount Window provides banks access to overnight liquidity to facilitate their cash flow management, and hence helps to ensure the smooth functioning of the interbank payment system. Banks' access is unrestricted in respect of borrowings collateralised against Exchange Fund paper. During the reporting period, **banks borrowed a total of HK\$5.25 bn** from the HKMA through the Discount Window. The daily amount involved was generally less than HK\$500 mn (Chart 12).

A total of 22 banks borrowed overnight liquidity through the Discount Window (Table 6). Most banks used the Discount Window facility only infrequently and only two of them borrowed more than four times.

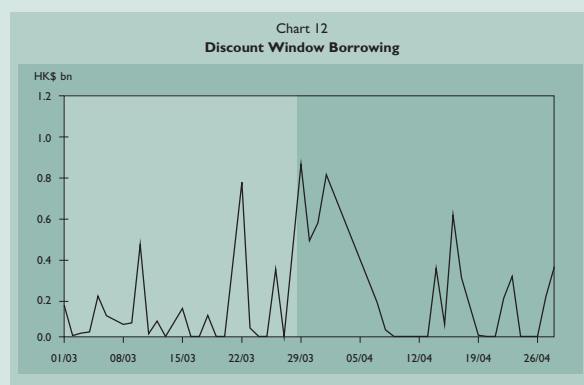
An overwhelming majority (HK\$4.97 bn or 94.6%) of the borrowings made during the period were collateralised against Exchange Fund Bills and Notes. There were four occasions in which banks borrowed an amount exceeding 50% of their holdings of Exchange Fund paper.

### Backing Portfolio

As the monetary base decreased, mainly due to the redemption of Certificates of Indebtedness in April, **the backing ratio increased from 109.5% at end-March to 109.8% on 28 April**. Under the linked exchange rate system, although specific Exchange Fund assets have been designated for the Backing Portfolio, all Exchange Fund assets are available to support the HK dollar exchange rate. 🌀

**Table 5**  
**Issuance of EF paper**  
**(29 Mar – 28 Apr)**

|             | No. of issues launched | Over-subscription ratio |
|-------------|------------------------|-------------------------|
| 1-month EFB | 4                      | 2.33-3.24               |
| 3-month EFB | 5                      | 1.68-2.45               |
| 6-month EFB | 2                      | 3.18-4.36               |
| 1-year EFB  | 1                      | 3.91                    |
| 3-year EFN  | 1                      | 4.92                    |



**Table 6**  
**Frequency of Individual Banks**  
**Access to the Discount Window**  
**(29 Mar – 28 Apr)**

| Frequency of using Discount Window | No. of banks |
|------------------------------------|--------------|
| 1                                  | 16           |
| 2                                  | 3            |
| 3                                  | 0            |
| 4                                  | 1            |
| >4                                 | 2            |
| <b>Total</b>                       | <b>22</b>    |

# A RECORD OF DISCUSSION OF THE EXCHANGE FUND ADVISORY COMMITTEE SUB-COMMITTEE ON CURRENCY BOARD OPERATIONS ON 2 JULY 1999

(Approved for Issue by the Exchange Fund Advisory Committee on 22 July 1999)

## Currency Board Operations for the Period 1 - 23 June 1999

The Sub-Committee noted that the period under review had seen some outflows from the Hong Kong dollar, as a result of which the Aggregate Balance declined from a level of HK\$3.83 bn on 1 June to a negative level of HK\$1.73 bn on 23 June. These outflows might be attributable to relatively low short-term Hong Kong dollar interest rates, combined with expectations that short-term rates in the US would rise in the period ahead. The market response to the negative Aggregate Balance had been very smooth and had demonstrated that the Currency Board system was working efficiently. In accordance with the automatic adjustment mechanism under the Currency Board system, the reduction in the Aggregate Balance had led to a moderate increase in interbank interest rates, following which an inflow of funds restored the Aggregate Balance to a positive level on 24 June. The Sub-Committee observed that market participants seemed to have been well prepared for the implications of a negative Aggregate Balance, and that the Currency Board operations during the month had provided an interesting and useful test of the system. The Sub-Committee noted that changes in the Monetary Base throughout the review period had been fully matched by corresponding changes in foreign reserves in accordance with the rules of the Currency Board system. The report on Currency Board operations for the period under review is at [Annex A](#).

## Year 2000 Contingency Arrangements for the Money Market

The Sub-Committee examined a paper on the broad contingency arrangements for the money market in the event of pressures arising from the Year 2000 problem. Among the main potential sources of pressure were liquidity problems by individual banks, increased public demand for holding currency, and outflows from the Hong Kong dollar. The Sub-Committee considered that, given the many uncertainties surrounding the issue, it was impossible to predict with any accuracy to what extent, and in what ways, the money market would be affected by the Year 2000 issue. It was therefore important that a flexible approach should be adopted. At the same time, the Sub-Committee advised that, while unusual or extreme conditions might render it necessary for the HKMA to temporarily relax the Currency Board rules in responding to certain situations, this should only

be done as a last resort, after other options had been exhausted. The Sub-Committee noted that the HKMA's lender of last resort policy, which had recently been clarified and elaborated, provided a suitable framework for further liquidity support by the HKMA to individual institutions and to the system as a whole.


## Dollarisation

The Sub-Committee considered an analysis of the feasibility and desirability of pursuing dollarisation in Hong Kong. The analysis had been prepared in the light of international interest in the subject, particularly in the context of the Argentinian proposal for dollarisation. The Sub-Committee noted that the main advantage of dollarisation was that it would help eliminate the possibility of speculative attack on the currency. It concluded, however, that the benefits of dollarisation were outweighed by the considerable technical and legal difficulties and by the costs involved, and also by the uncertainties that would accompany the transition from a domestic currency. The Sub-Committee further noted that there were, in any event, no restrictions on the use of foreign currencies in conducting transactions in Hong Kong. In connection with this topic, the Sub-Committee considered that it would be productive to pursue initiatives for the development of a US-dollar-based clearing system in Hong Kong: this would help further promote Hong Kong as an international financial centre, and would bring benefits quite separate from any consideration of the question of dollarisation.

## Legal Frameworks of Currency Board Systems

The Sub-Committee noted an information paper comparing the legal frameworks of six currency board systems throughout the world.

## Real Interest Rates in Hong Kong

The Sub-Committee noted an information paper on the calculation and interpretation of real interest rates in Hong Kong. 



## REPORT ON CURRENCY BOARD OPERATIONS

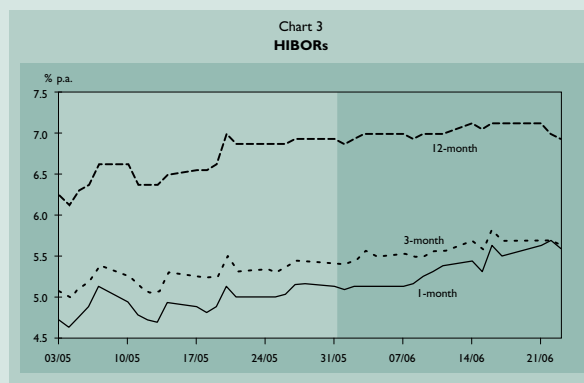
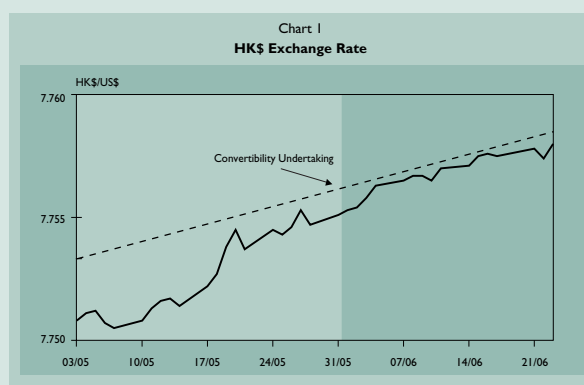
During the reporting period, the market exchange rate for the HK dollar eased from 7.7553 to 7.7580, in parallel to the movement of the convertibility rate in respect of the Aggregate Balance. There were some outflows of funds as a result of the relatively low short-term Hong Kong dollar interest rates during the month. Consequently, interbank liquidity tightened and interest rates in money markets edged up. The monetary base decreased from HK\$197.23 bn to HK\$190.76 bn. Changes in the monetary base were fully matched by corresponding changes in foreign reserves in accordance with the Currency Board arrangements.

## Hong Kong dollar exchange rate

Along with the movement of the convertibility rate in respect of the Aggregate Balance, **the HK dollar exchange rate eased from 7.7553 to 7.7580** during the reporting period. Relatively low short-term HK dollar interest rates induced some commercial selling of HK dollars from 3 June to 17 June. In response, the HKMA sold some US dollars at the convertibility rate. In late June, following the shrinkage of the Aggregate Balance and a firming up of the interbank interest rates, the flow of funds reversed and the exchange rate strengthened marginally. The HK dollar exchange rate closed at 7.7580 on 23 June, 4 pips stronger than the convertibility rate of 7.7584 (Chart 1 and Chart 2).

## Interest rates

Interbank interest rates moved on a gradual uptrend from the second week of June on, as interbank liquidity began to shrink. **1-month HIBOR firmed from 5.09% on 1 June to a peak of 5.69% on 22 June** as the Aggregate Balance fell into negative territory on 21 June. As the forecast Aggregate Balance on 24 June returned to a positive level after a reversal of fund flows, **1-month HIBOR eased moderately to 5.59% on 23 June**. 12-month HIBOR edged up less rapidly during the period under review, from 6.88% to a peak of around 7.1% during 14-21 June, before falling back to 6.94% at the end of the review period (Chart 3).

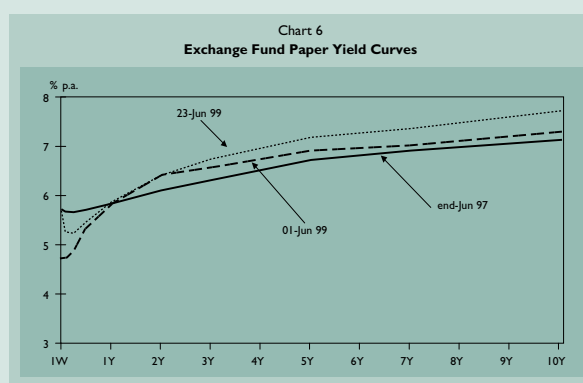
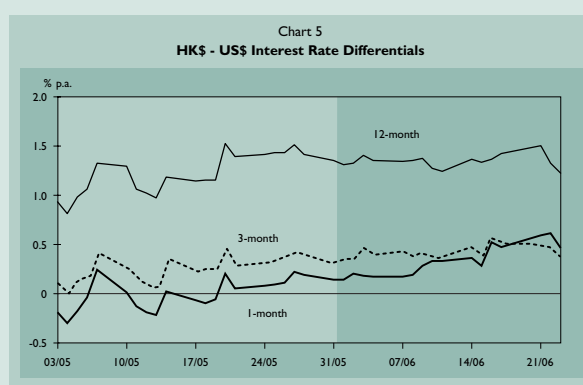
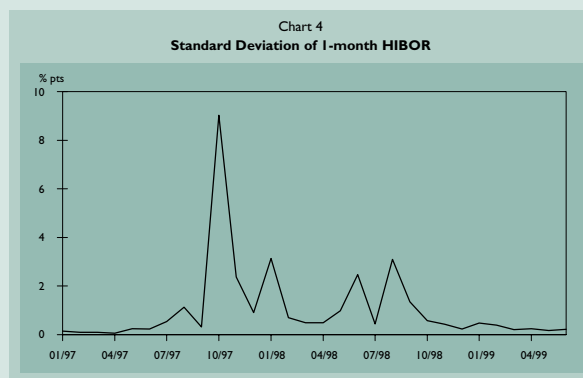


Reflecting these movements, **interest rate volatility**, measured in terms of the standard deviation of 1-month HIBOR, **increased slightly** from 0.17 percentage points in May to 0.21 percentage points in June (up to 23 June) (Chart 4).

The differential between HK dollar and US dollar interest rates started to widen from the second week of June on, reflecting rising HK dollar interest rates. **The spread in terms of the one-month rate rose from 15 bp on 1 June to 62 bp on 22 June.** Towards the end of the period under review, as interbank interest rates eased in response to an anticipated increase in the Aggregate Balance, **the spread narrowed moderately to 47 bp on 23 June** (Chart 5).

**Longer-term interest rates**, represented by yields on Exchange Fund paper, **edged up moderately** during the period under review. The yields on 5-year and 10-year Exchange Fund Notes rose to 7.19% and 7.72% respectively on 23 June, 26 bp and 42 bp higher than their respective levels at the beginning of the reporting period (Chart 6). Yield spreads between 5-year and 10-year Exchange Fund paper and their US counterparts widened marginally from 126 bp and 160 bp to 131 bp and 170 bp respectively during the reporting period (Table 1).

During the reporting period, **the savings rate under HKAB's Interest Rate Rules remained unchanged at 3.5%.** **The best lending rate offered by major banks was also constant at 8.25%.** The weighted average deposit rate offered by 44 major authorised institutions for 1-month time deposits (which are outside the Interest Rate Rules) remained stable at



**Table 1**  
**Yield Spreads between Exchange Fund Paper and US Treasuries (basis points)**

|         | 27-Jun 97 | 01-Jun 99 | 23-Jun 99 |
|---------|-----------|-----------|-----------|
| 3-month | 56        | 19        | 55        |
| 1-year  | 21        | 82        | 102       |
| 3-year  | 3         | 114       | 89        |
| 5-year  | 27        | 126       | 131       |
| 10-year | 54        | 160       | 170       |

around 5.5% from 28 May to 4 June. The effective deposit rate (measured as the average of deposit rates weighted by type and maturity of deposits) fell from 4.7% in April to 4.4% in May (Chart 7).

#### Base Rate

The Base Rate remained unchanged at 6.25% (150 basis points above the US Fed Funds Target Rate) throughout the reporting period (Chart 8).

#### Monetary Base

The monetary base, which comprises the outstanding amount of Certificates of Indebtedness, coins in circulation, the Aggregate Balance and the outstanding amount of Exchange Fund Bills and Notes, decreased from HK\$197.23 bn on 1 June to HK\$190.76 bn on 23 June (Table 2). Movements of individual components are discussed below.

#### Certificates of Indebtedness

In the first half of the reporting period, the three Note Issuing Banks (NIBs) redeemed a total of HK\$0.67 bn of Certificates of Indebtedness (CIs) in exchange for US\$0.09 bn. Ahead of the long week-end in mid-June, the NIBs submitted to the Exchange Fund a total of US\$0.19 bn in exchange for an increase in CIs, from HK\$87.80 bn to HK\$89.26 bn. Thereafter, the NIBs redeemed HK\$1.96 bn CIs for US\$0.25 bn. As a result of these transactions, the outstanding amount of CIs declined to HK\$87.30 bn on 23 June (Chart 9).

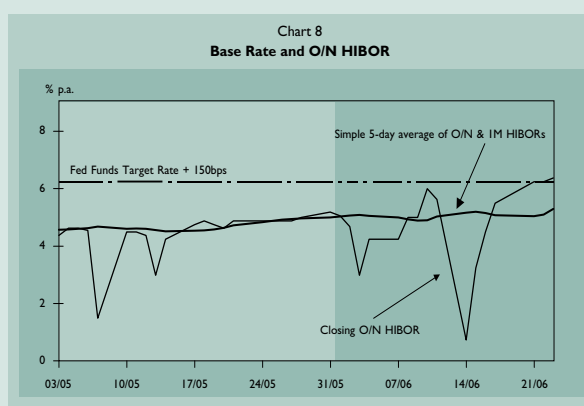
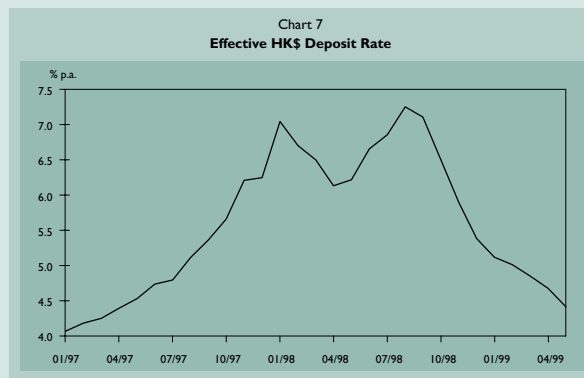
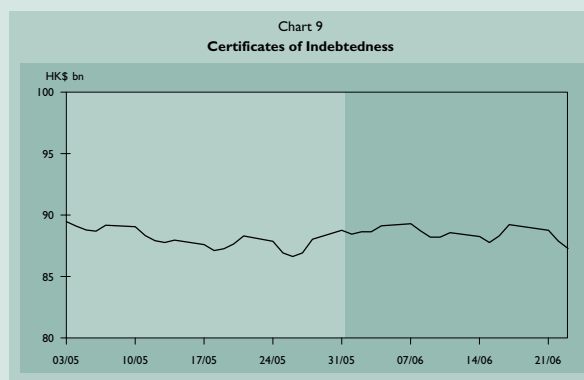


Table 2  
Monetary Base

| (HK\$ bn)            | 01-Jun | 23-Jun |
|----------------------|--------|--------|
| CIs                  | 88.47  | 87.30  |
| Coins in Circulation | 5.96   | 5.96   |
| Aggregate Balance    | 3.83   | -1.73  |
| Outstanding EFBNs    | 98.97  | 99.23  |
| Monetary Base        | 197.23 | 190.76 |



## Coins

The total amount of **coins in circulation** remained broadly stable, ending the period under review at HK\$5.96 bn (Chart 10).

## Aggregate Balance

Mainly reflecting the outflows of funds, the **Aggregate Balance (before Discount Window activities)** decreased from HK\$3.83 bn on 1 June to a negative level of HK\$1.73 bn on 23 June (Chart 11).

In response to some outflows of funds induced by relatively low short-term HK dollar interest rates, the **HKMA bought a total of HK\$3.61 bn under the Convertibility Undertaking during 3-9 June**. As the Aggregate Balance shrank and interbank interest rates edged up moderately, the **HKMA sold HK\$1.16 bn on 10 June** in response to bank offers. Thereafter, some outflows of funds re-appeared and the **HKMA bought HK\$2.99 bn under the Convertibility Undertaking on 16-17 June**. As a result of these foreign exchange transactions, the **Aggregate Balance was reduced to the negative level of HK\$1.56 bn on 22 June**. The resultant rise in interbank interest rates induced some buying interest in the HK dollars. In response, the **HKMA sold HK\$2.25 bn on 22 June and the forecast Aggregate Balance on 24 June returned to the positive level of HK\$0.5 bn** correspondingly (Table 3).

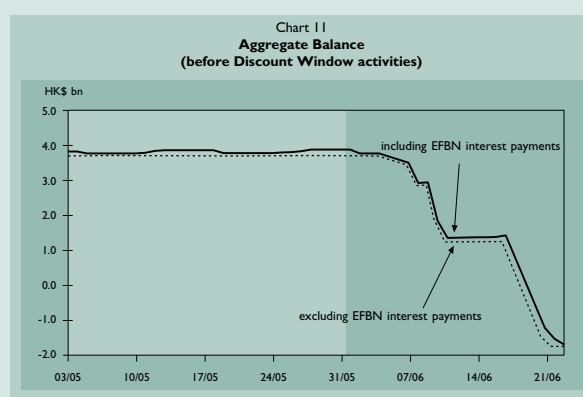
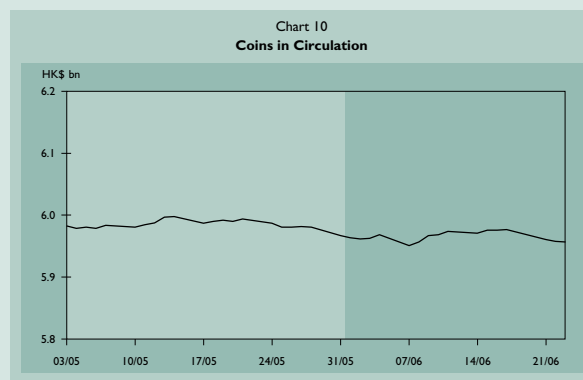


Table 3  
HKMA HK\$/US\$ FX Transactions\*  
(1 June – 23 June)

| Trade Date   | Net HK\$ purchase (+) / sale (-)<br>(HK\$ mn) |
|--------------|---|
| 3 June       | 271   |
| 4 June       | 566   |
| 8 June       | 2,265   |
| 9 June       | 504   |
| 10 June      | -1,163  |
| 16 June      | 2,676   |
| 17 June      | 310   |
| 22 June      | -2,250  |
| <b>Total</b> | <b>3,180</b>                                  |

\* FX transactions may be due for settlement today, on the next business day, or the day after, at which point it would affect the Aggregate Balance.

During the reporting period, a total of **HK\$0.43 bn interest payments on Exchange Fund Paper** were made, while an additional **HK\$0.56 bn (market value) of Exchange Fund paper** was issued to absorb the interest payments (Table 4).

#### Outstanding Exchange Fund Bills and Notes

During the reporting period, **the market value of outstanding Exchange Fund paper increased slightly from HK\$98.97 bn on 1 June to HK\$99.23 bn on 23 June**. The increase due to the additional issue (referred to in paragraph 13 above) was partly offset by valuation effects due to a firming up of interest rates. All issues of Exchange Fund Bills and Notes were well received by the market (Table 5). Holdings of Exchange Fund paper by the banking sector before Discount Window activities (in terms of market value) decreased moderately from HK\$79.84 (or 80.7% of total) on 1 June to HK\$77.14 bn (or 77.7% of total) on 23 June.

#### Discount Window Activities

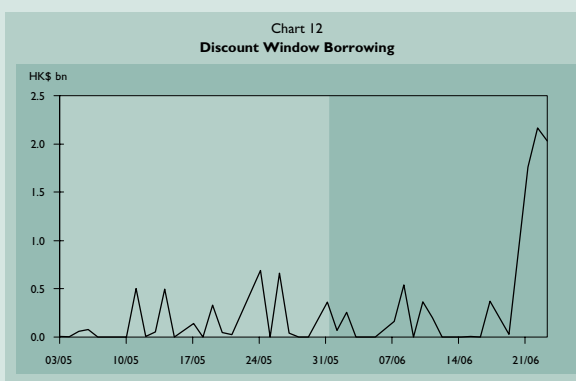
The Discount Window provides banks access to overnight liquidity to facilitate their cash flow management, and hence helps to ensure the smooth functioning of the interbank payment system. Bank's access is unrestricted in respect of borrowings collateralized against Exchange Fund paper. For the period under review, **banks borrowed a total of HK\$7.96 bn from the HKMA through the Discount Window**. Of the total, some HK\$6.0 bn was borrowed by banks during 21-23 June when the Aggregate Balance fell into negative territory. Other than this period, the daily amount of Discount Window borrowing was generally less than HK\$500 mn (Chart 12).

**Table 4**  
**Interest Payments on EF Paper**  
**and New Issuance of EF Paper**  
**(1 June – 23 June)**

| Date         | Interest Payments<br>HK\$ mn | Issuance of EF Paper<br>HK\$ mn |
|--------------|------------------------------|---------------------------------|
| 2 June       | 64                           | 169                             |
| 9 June       | 79                           | 65                              |
| 11 June      | 22                           | –                               |
| 14 June      | 20                           | –                               |
| 16 June      | 126                          | 119                             |
| 17 June      | 39                           | –                               |
| 21 June      | 43                           | –                               |
| 23 June      | 40                           | 207                             |
| <b>Total</b> | <b>433</b>                   | <b>561</b>                      |

**Table 5**  
**Issuance of EF paper**  
**(1 June – 23 June)**

|              | No. of issues<br>launched | Over-<br>subscription ratio |
|--------------|---------------------------|-----------------------------|
| 1-month EFB  | 3                         | 2.51-3.97                   |
| 3-month EFB  | 4                         | 1.11-1.89                   |
| 6-month EFB  | 2                         | 2.41-2.92                   |
| 12-month EFB | 1                         | 4.06                        |
| 10-year EFN  | 1                         | 1.51                        |



A total of 21 banks borrowed overnight liquidity through the Discount Window (Table 6). Most banks used the Discount Window facility only infrequently and only one of them borrowed more than 4 times.

An overwhelming majority (HK\$7.88 bn or 99.0%) of the borrowings made during the period were collateralized against Exchange Fund Bills and Notes. There were 2 occasions on which banks borrowed an amount exceeding 50% of their holdings of Exchange Fund paper.

### Backing Portfolio

As the decrease in the value of the backing assets associated with the decline in the monetary base is partly offset by the investment earnings during the reporting period, **the backing ratio rose from 109.57% on 1 June to 110.30% on 23 June**. Under the linked exchange rate system, although specific Exchange Fund assets have been designated for the Backing Portfolio, all Exchange Fund assets are available to support the HK dollar exchange rate. 🌀

**Table 6**  
**Frequency of Individual Banks**  
**Access to the Discount Window**  
**(1 June – 23 June)**

| Frequency of using Discount Window | No. of banks |
|------------------------------------|--------------|
| 1                                  | 11           |
| 2                                  | 6            |
| 3                                  | 1            |
| 4                                  | 2            |
| >4                                 | 1            |
| <b>Total</b>                       | <b>21</b>    |