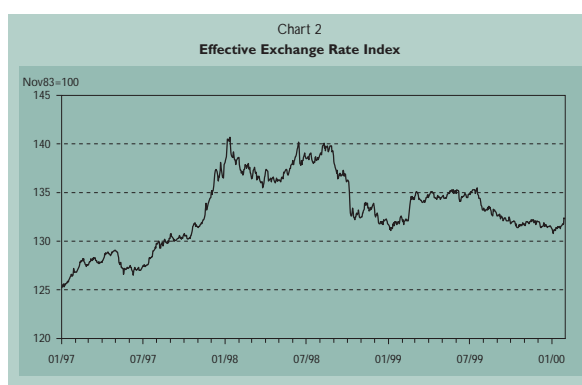
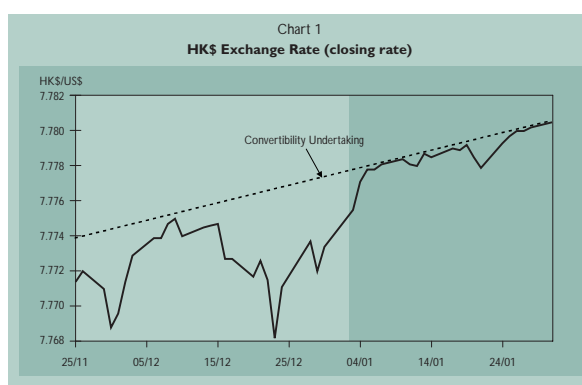


# REPORT ON CURRENCY BOARD OPERATIONS (3 - 31 JANUARY 2000)<sup>1</sup>

The market exchange rate for the Hong Kong dollar eased slightly during the period alongside the movement of the convertibility rate in respect of the Aggregate Balance, and as soft interest rates at the short end reduced the demand for Hong Kong dollar assets. The Convertibility Undertaking was triggered on five occasions, and the resultant shrinkage in interbank liquidity, coupled with market expectations of a US interest rate hike at the February FOMC meeting, led to a firming of local interest rates in the second half of January. The monetary base decreased from HK\$231.5 bn to HK\$223.9 bn during the period, due to reductions in the outstanding amount of Certificates of Indebtedness and the Aggregate Balance. These declines reflected a reversal of the high demand for banknotes and interbank liquidity associated with seasonal and Year 2000 related factors. 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

Following the uneventful rollover into the new millennium, the **Hong Kong dollar exchange rate eased** as soft interest rates at the short end and the correction in the stock market in early January reduced investors' demand for Hong Kong dollar assets. The **Convertibility Undertaking was triggered on four occasions** between 10-14 January, with the HKMA buying a total of HK\$5.56 bn from banks. The Aggregate Balance shrank accordingly and Hong Kong dollar interest rates firmed up from mid-January on. Some buying interest in Hong Kong dollars resurfaced and, as a result, the **Hong Kong dollar exchange rate briefly strengthened to 7.7779 on 21 January**. Reflecting increased purchases of US dollars before the Chinese New Year, partly by the note issuing banks to provide backing for additional banknote issuance, **the exchange rate weakened again in late January**. **The Convertibility Undertaking was triggered again on 28 January** and the HKMA bought a total of HK\$0.16 bn from banks. The exchange rate closed at 7.7805 at the end of the reporting period, 1 pip stronger than the convertibility rate of 7.7806 (Chart 1 and Chart 2).



<sup>1</sup> Since the Sub-Committee on Currency Board Operations did not meet in February, there is no Sub-Committee record of discussion published in February.

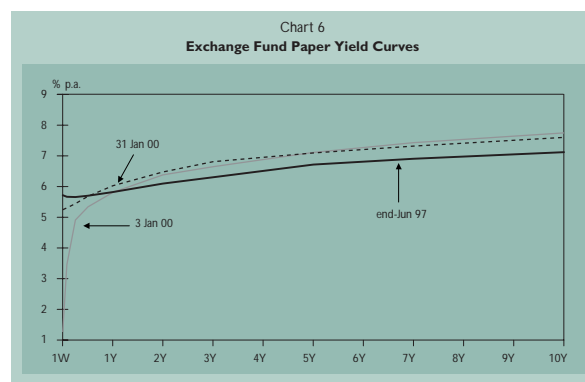
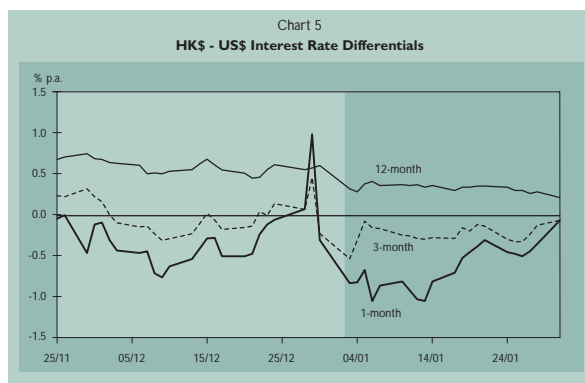
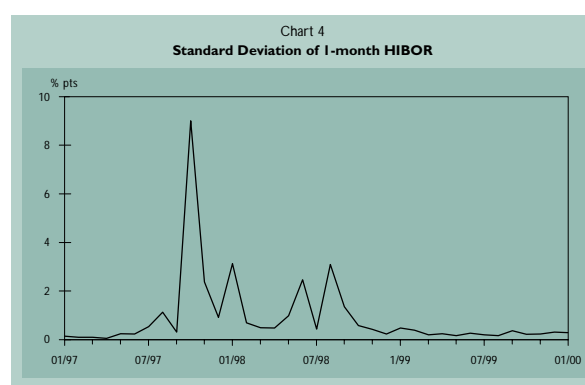
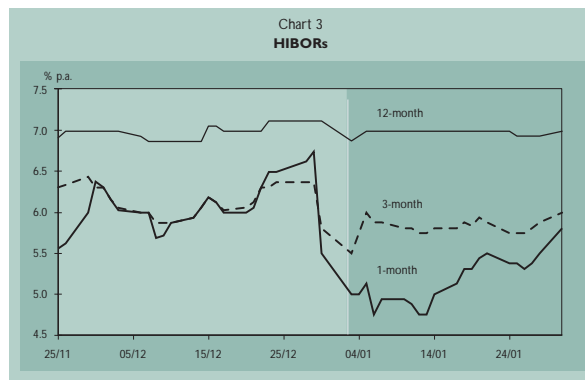
## Interest Rates

Interbank interest rates eased in the first half of the reporting period, on the back of ample interbank liquidity. 1-month HIBOR fell from 5.50% at the end of the preceding period to 4.75% on 13 January. Thereafter, following a shrinkage in the Aggregate Balance, 1-month HIBOR moved on an up-trend to reach 5.81% on 31 January. 3-month HIBOR followed a similar pattern, within the range of 5.5% - 6%. 12-month HIBOR remained stable at around 7.00% throughout the period (Chart 3).

Interest rate volatility, measured in terms of the standard deviation of 1-month HIBOR (Chart 4), decreased from 0.31 percentage points in December to 0.29 percentage points in January.

Short-term Hong Kong dollar interest rates continued to stay below their US dollar counterparts throughout the reporting period. The spread between 1-month Hong Kong dollar and US dollar interest rates widened to as much as -105 bp on 13 January. It then narrowed alongside a firming of Hong Kong dollar interest rates, to around -6 bp on 31 January (Chart 5).

The Exchange Fund paper yield curve flattened in the latter part of January, as short-term yields picked up alongside the firming of short-term interbank interest rates. Longer-term yields, on the other hand, remained relatively stable (Chart 6). The yield spreads between 5-year and 10-year Exchange Fund paper and US



Treasuries narrowed by 35 bp and 33 bp respectively, to 32 bp and 87 bp on 31 January (Table 1).

The **savings rate** under the Interest Rate Rules and the **best lending rate** offered by major **banks remained unchanged** during the period. The weighted average deposit rate offered by 44 major authorized institutions for 1-month time deposits (which are outside the Interest Rate Rules) decreased from 5.91% on 30 December to 5.35% on 21 January. Meanwhile, the effective deposit rate (taking into account the maturity of deposits) fell slightly from 4.38% in November to 4.33% in December (Chart 7).

#### Base Rate

The **Base Rate remained unchanged at 7.0%** during the period (150 basis points above the US Fed Funds Target Rate) (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\$231.53 bn on 3 January to HK\$223.91 bn on 31 January** (Table 2). Movements of the individual components are discussed below.

#### Certificates of Indebtedness

As seasonal and Year 2000 related demand for banknotes subsided upon the calm rollover into the new millennium, surplus banknotes were returned to the note issuing banks (NIBs) in early January. A total of HK\$15.8 bn of CIs was redeemed by NIBs in exchange for US\$2.03 bn. As a result, the total amount of **outstanding Certificates of Indebtedness (CIs) decreased** from HK\$115.05 bn on 3 January to HK\$99.25 bn on 12 January. Thereafter, in anticipation of

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

|         | 27-Jun-97 | 3-Jan-00 | 31-Jan-00 |
|---------|-----------|----------|-----------|
| 3-month | 56        | -35      | -34       |
| 1-year  | 21        | -25      | -31       |
| 3-year  | 3         | 21       | 5         |
| 5-year  | 27        | 67       | 32        |
| 10-year | 54        | 120      | 87        |

Chart 7  
**Effective HK\$ Deposit Rate**

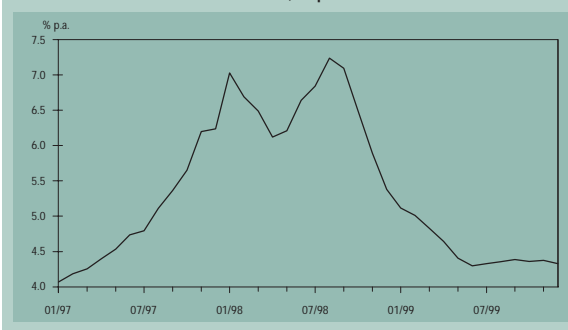
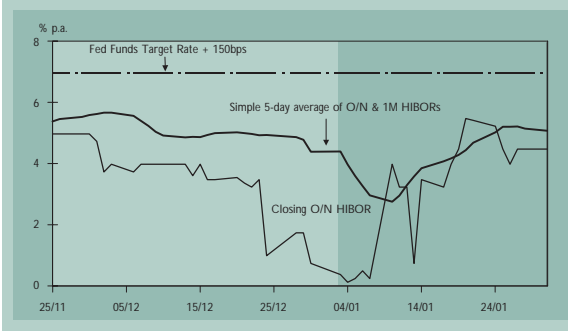


Chart 8  
**Base Rate and O/N HIBOR**



**Table 2**  
**Monetary Base**

| (HK\$ bn)            | 3-Jan  | 31-Jan |
|----------------------|--------|--------|
| CIs                  | 115.05 | 112.47 |
| Coins in Circulation | 6.05   | 6.27   |
| Aggregate Balance    | 7.96   | 2.50   |
| Outstanding EFBNs    | 102.48 | 102.68 |
| Monetary Base        | 231.53 | 223.91 |

a resurgence in public demand for cash ahead of the Chinese New Year holidays, the three NIBs submitted to the Exchange Fund a total of US\$1.69 bn during the rest of the reporting period in exchange for HK\$13.22 bn worth of CIs. The total amount of outstanding CIs stood at HK\$112.47 bn on 31 January (Chart 9).

#### Coins

The total amount of **coins in circulation** increased from HK\$6.05 bn to HK\$6.27 bn during the period (Chart 10).

#### Aggregate Balance

The HKMA bought a total of **HK\$5.72 bn under the Convertibility Undertaking** during the reporting period, of which HK\$0.16 bn was for settlement on 1 February (Table 3). As a result, the **Aggregate Balance** (before Discount Window activities) **decreased** from HK\$7.96 bn in early January to HK\$2.50 bn on 31 January (Chart 11).

During the period, a total of **HK\$0.5 bn of interest payments on Exchange Fund paper were made, while an additional HK\$0.40 bn (market value) of Exchange Fund paper was issued to absorb these interest payments.** The remaining amount was carried forward in the Aggregate Balance.

#### Outstanding Exchange Fund Bills and Notes

During the reporting period, **the market value of outstanding Exchange Fund paper increased marginally from HK\$102.48 bn to HK\$102.68 bn.** The increase was mainly a result of the additional net issue (referred to in paragraph 12 above). All issues of

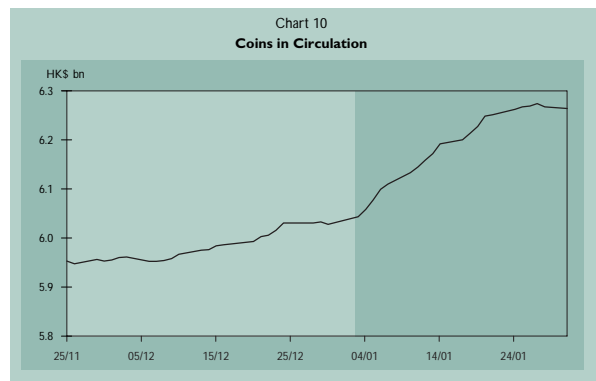
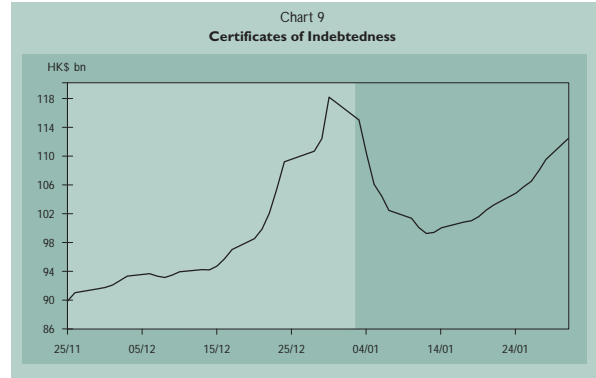
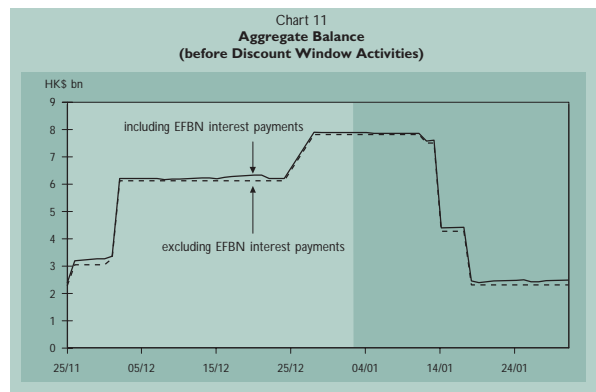


Table 3  
HKMA HK\$/US\$ FX Transactions\*  
(3–31 January)

| Trade Date   | Net HK\$ purchase (+) / sale (-)<br>(HK\$ mn) |
|--------------|---|
| 10 Jan       | +311  |
| 12 Jan       | +3,267  |
| 14 Jan       | +1,984  |
| 28 Jan       | +156  |
| <b>Total</b> | <b>+5,718</b>                                 |

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



Exchange Fund Bills and Notes were well received by the market (Table 4). **Holdings of Exchange Fund paper by the banking sector before discount window activities decreased slightly during the period**, from HK\$88.13 bn (or 86% of total) on 3 January to HK\$87.84 bn (or 85.5% of total) on 31 January (Chart 12).

### 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. As interbank liquidity shrank in the second half of January, Discount Window borrowing became more active. For the period as a whole, **banks in total borrowed HK\$2.28 bn** from the HKMA. All except one of the borrowings used Exchange Fund paper as collateral (Chart 13).

**A total of 12 banks borrowed overnight liquidity through the Discount Window** (Table 5). Most banks used the Discount Window facility only infrequently.

**The enlarged Discount Window**, through which licensed banks might obtain liquidity support using a wider spectrum of Hong Kong dollar debt paper in the Year 2000 critical periods, **and the Term Repo facility were terminated on 31 January**. These had not been invoked given the relatively calm conditions in money markets over the year-end period.

### Backing Portfolio

Along with the decreases in CIs outstanding and the Aggregate Balance, the backing assets fell correspondingly. **The backing ratio stood at 110.20% on 31 January, compared with 109.49% on 31 December**. 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 Hong Kong dollar exchange rate. 🌐

**Table 4**  
**Issuance of EF Paper**  
**(3–31 January)**

|              | No. of issues launched | Over-subscription ratio |
|--------------|------------------------|-------------------------|
| 1-month EFB  | 3                      | 1.55-3.98               |
| 3-month EFB  | 4                      | 2.07-2.22               |
| 6-month EFB  | 2                      | 2.23-3.58               |
| 12-month EFB | 1                      | 5.27                    |
| 3-year EFN   | 1                      | 3.67                    |

Chart 12  
**EF Paper Held by Licensed Banks**

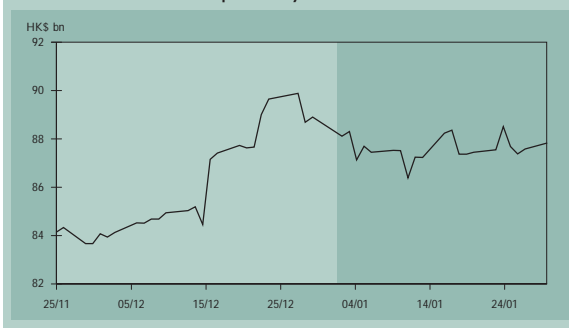
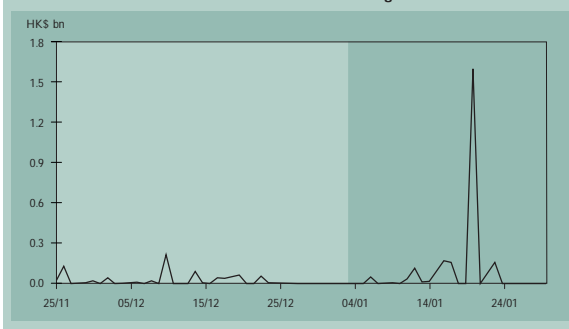


Chart 13  
**Discount Window Borrowing**



**Table 5**  
**Frequency of Individual Bank's**  
**Access to the Discount Window**  
**(3–31 January)**

| Frequency of using Discount Window | No. of banks |
|------------------------------------|--------------|
| 1                                  | 10           |
| 2                                  | 1            |
| 3                                  | 1            |
| 4                                  | 0            |
| <b>Total</b>                       | <b>12</b>    |

# RECORD OF DISCUSSION OF THE EXCHANGE FUND ADVISORY COMMITTEE SUB-COMMITTEE ON CURRENCY BOARD OPERATIONS ON 3 MARCH 2000

(Approved for Issue by the Exchange Fund Advisory Committee on 23 March 2000)

## Currency Board Operations for the Period 1 February - 25 February 2000

The Sub-Committee noted that during the period under review the Hong Kong dollar exchange rate had eased slightly prior to the Chinese New Year, partly as a result of increased purchases of US dollars by note-issuing banks as backing for additional banknote issuance over the New Year period. The Convertibility Undertaking had been triggered on a number of occasions in the first half of the period: the resulting shrinkage in interbank liquidity had led to a firming of local interest rates, and, with the sale of US dollars by note-issuing banks following the Chinese New Year period, the exchange rate of the Hong Kong dollar had strengthened slightly relative to the convertibility rate in respect of the Aggregate Balance. Members noted that these adjustments under the Currency Board system had proceeded smoothly and that changes in the Monetary Base had been fully matched by corresponding changes in foreign reserves in accordance with the Currency Board arrangements.

The report on Currency Board operations for the period under review is at [Annex A](#).

## Model Simulations of the Currency Board Arrangements


The Sub-Committee was invited to consider the preliminary findings and possible further uses of a model-based analysis of the operations of the Currency Board system. Members were briefed on the principles and mechanics of the model, which analysed four key relationships influencing the workings of the Currency Board system: banks' liquidity demand, private sector demand for Hong Kong dollar assets, Discount Window borrowing demand, and currency market operations by the HKMA. Members noted that the model addressed the day-to-day workings of the currency and money markets and therefore did not take account of variables in the longer-term macro-economic background.

Members considered the results of a number of simulations under the model and observed that, while they were not a perfect substitute for historical experience, simulations offered two main advantages: they allowed operations to be tested under extreme conditions; and they provided opportunities to experiment with the design of the system. Members noted, in particular, from the findings of the simulations

provided in the paper that the Discount Window facility, introduced in September 1998, would have supplied a more effective buffer against the speculative pressures earlier in 1998 than did the Liquidity Adjustment Facility then in place. Members also noted that the stochastic simulations in the paper suggested that the introduction of a Discount Window "bid" facility of the kind considered, but not pursued, at the Sub-Committee's meeting of 7 May 1999, could significantly raise reserve volatility in some circumstances.

Members considered that model simulations of the kind presented in the paper were valuable in facilitating a better understanding of the Currency Board arrangements. Members noted that the model under consideration was very much work in progress and agreed that there were complexities and imponderables in actual experience that could not be fully replicated in any model, however sophisticated. They advised, however, that the model should be developed and applied further to the HKMA's research into the workings of the Currency Board system.

## Dollarisation Plan in Ecuador

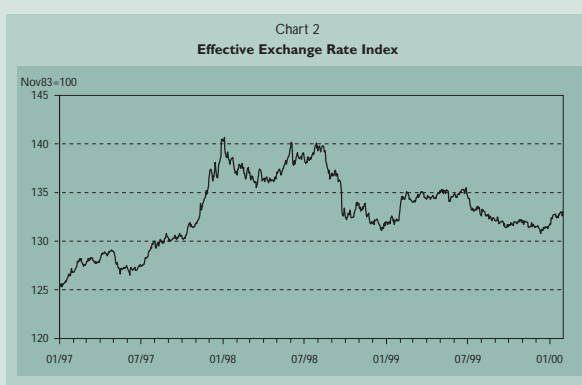
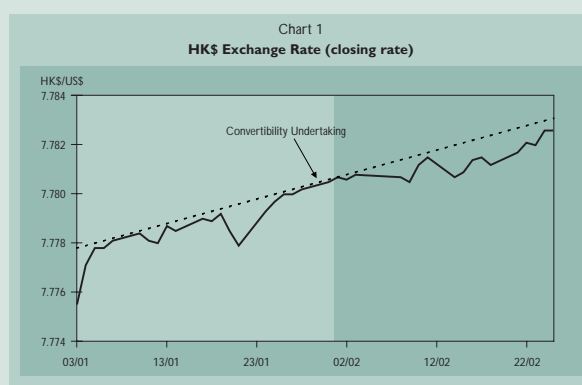
The Sub-Committee noted an information paper on the latest developments in the Ecuadorian dollarisation plan. 

## REPORT ON CURRENCY BOARD OPERATIONS (1 FEBRUARY - 25 FEBRUARY 2000)

The market exchange rate for the Hong Kong dollar eased slightly before the Chinese New Year holidays on the back of soft Hong Kong dollar interest rates and increased purchases of US dollars by note issuing banks (NIBs) as backing for additional banknote issuance. The Convertibility Undertaking was triggered on several occasions. The resultant shrinkage in interbank liquidity led to a firming of local interest rates. Coupled with the sale of US dollars by NIBs upon the redemption of Certificates of Indebtedness after the Chinese New Year holidays, the exchange rate strengthened slightly relative to the convertibility rate in respect of the Aggregate Balance. The monetary base decreased from HK\$225.77 bn to HK\$210.44 bn during the period, mainly due to reductions in the outstanding amount of Certificates of Indebtedness and the Aggregate Balance. 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

The Hong Kong dollar exchange rate eased slightly alongside the convertibility rate in respect of the Aggregate Balance **before the Chinese New Year**, partly due to increased purchases of US dollars by NIBs to provide backing for additional banknote issuance, and partly due to soft Hong Kong dollar interest rates, particularly at the short end. **The HKMA bought a total of HK\$2.54 bn for US\$327 mn under the Convertibility Undertaking between 1-7 February and another HK\$2.88 bn on 11 February.** The Aggregate Balance shrank accordingly and Hong Kong dollar interest rates firmed up moderately from early February on. Some buying interest in Hong Kong dollars resurfaced in mid-February as the NIBs redeemed Certificates of Indebtedness and sold the US dollars so obtained. **The Hong Kong dollar exchange rate strengthened** and the HKMA sold a total of HK\$3.35 bn in response to bank offers between 15-18 February. The exchange rate then eased slightly alongside the convertibility rate and closed at 7.7826 at the end of the reporting period, 5 pips stronger than the convertibility rate of 7.7831 (Chart 1 and Chart 2).



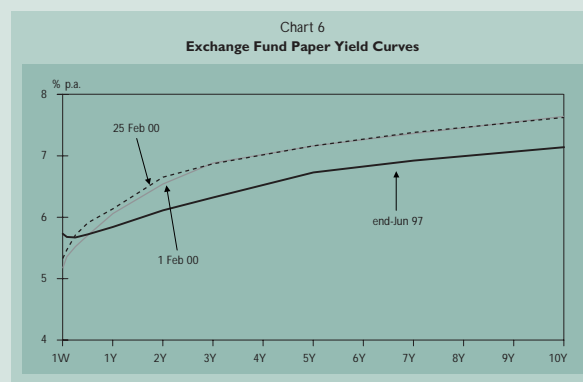
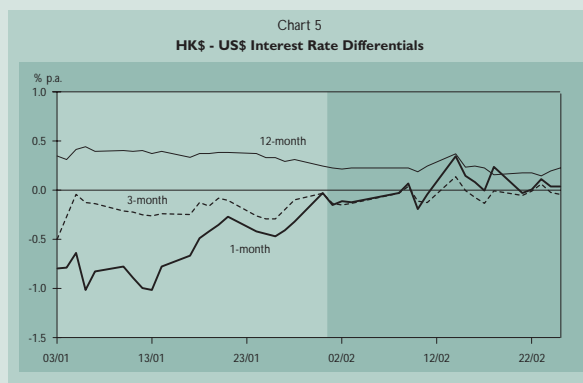
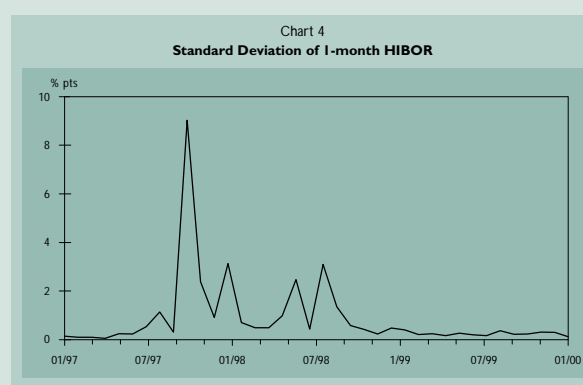
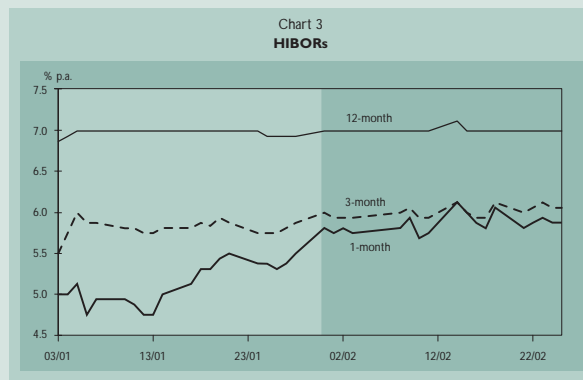
## Interest Rates

Interbank interest rates moved on a gradual uptrend in the first half of the reporting period amid a tightening in interbank liquidity. 1-month HIBOR rose from 5.75% on 1 February and peaked at 6.13% on 14 February, when the Aggregate Balance was at one time forecast to fall into negative territory of HK\$2.5 bn on 15 February. Subsequently, as interbank liquidity was restored to a positive level, 1-month HIBOR eased gradually from mid-February to close at 5.88% at the end of the period. Money market conditions remained stable amid the enthusiastic response to the IPO of tom.com in the last week of the reporting period. 3-month HIBOR followed a similar pattern, moving within a range of 5.94% - 6.13%. **12-month HIBOR remained stable at around 7.00%** throughout the period (Chart 3).

**Interest rate volatility**, measured in terms of the standard deviation of 1-month HIBOR (Chart 4), **decreased** from 0.29 percentage points in January to 0.12 percentage points in February (up to 25 February).

Along with the firming of Hong Kong dollar interbank interest rates, **the negative spread between 1-month HIBOR and the corresponding US dollar rate gradually diminished, and was completely closed in early February**. 1-month HIBOR then rose above its US dollar counterpart, and the gap at one time widened to 32 bp on 14 February, before narrowing to 1 bp on 25 February (Chart 5).

The Exchange Fund paper yield curve flattened slightly in the latter part of February. Consistent with the firming of short-term interbank interest rates, yields on short-term Exchange Fund paper increased slightly during the period, while longer-term yields remained stable (Chart 6). **The yield spreads** between 5-year and 10-year Exchange Fund paper and US Treasuries





widened by 13 bp and 30 bp respectively, to 49 bp and 119 bp on 25 February (Table 1).

Alongside the 25bp increase in the US Fed Funds Target Rate in early February, **the HKAB raised the savings rate under the Interest Rate Rules by 25bp, to 4.0%**, effective on 14 February. Concurrently, **the best lending rate offered by major banks was also raised by 25bp to 8.75%**. The weighted average deposit rate offered by 44 major authorized institutions for 1-month time deposits (which are outside the Interest Rate Rules) increased from 5.39% on 28 January to 5.60% on 11 February. Meanwhile, the effective deposit rate<sup>1</sup> remained unchanged at 4.33% in January (Chart 7).

#### Base Rate

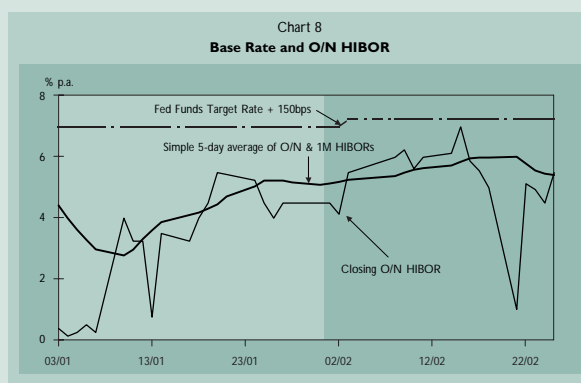
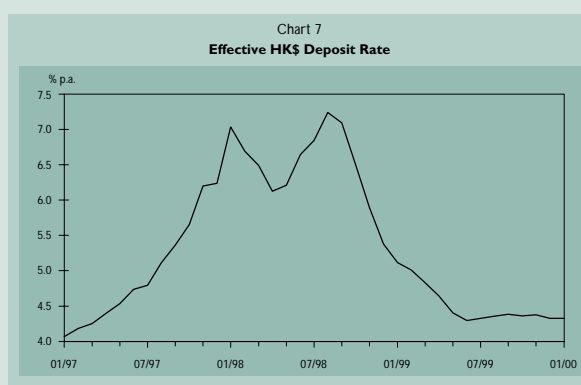
Following the 25bp rise in the US Fed Funds Target Rate on 2 February, **the Base Rate was adjusted upwards on 3 February by 25bp to 7.25%** (150 basis points above the US Fed Funds Target Rate) and remained at that level for the rest of the period (Chart 8).

#### 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\$225.77 bn on 1 February to HK\$210.44 bn on 25 February** (Table 2). Movements of the individual components are discussed below.

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

|         | 27-Jun-97 | 1-Feb-00 | 25-Feb-00 |
|---------|-----------|----------|-----------|
| 3-month | 56        | -30      | -18       |
| 1-year  | 21        | -28      | -14       |
| 3-year  | 3         | 13       | 23        |
| 5-year  | 27        | 36       | 49        |
| 10-year | 54        | 89       | 119       |



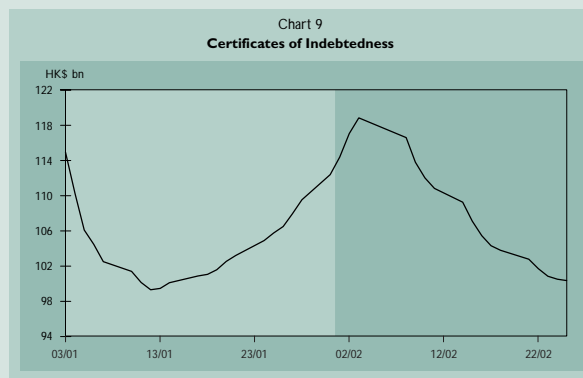
**Table 2**  
**Monetary Base**

| (HK\$ bn)            | 1-Feb  | 25-Feb |
|----------------------|--------|--------|
| CIs                  | 114.48 | 100.31 |
| Coins in Circulation | 6.26   | 6.17   |
| Aggregate Balance    | 2.35   | 0.88   |
| Outstanding EFBNs    | 102.69 | 103.09 |
| Monetary Base        | 225.77 | 210.44 |

<sup>1</sup> This is the weighted average of the interest rates on demand deposits, savings and time deposits. As the banking statistics classify deposits by remaining maturities, we have used certain assumptions regarding the maturity distribution to compute the effective deposit rate.

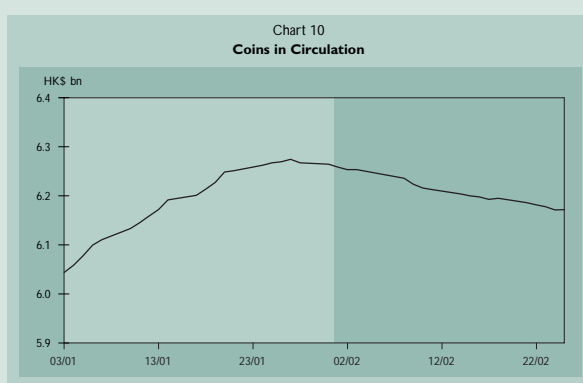
### Certificates of Indebtedness

In anticipation of a rise in public demand for cash ahead of the Chinese New Year holidays, the three NIBs further submitted to the Exchange Fund a total of US\$0.58 bn during 1-3 February, in exchange for HK\$4.49 bn worth of Certificates of Indebtedness (CIs). The NIBs redeemed a total of HK\$18.66 bn of CIs in exchange for US\$2.39 bn during the rest of reporting period. As a result, the **outstanding amount of CIs decreased** from HK\$114.48 bn on 1 February to HK\$100.31 bn on 25 February (Chart 9).



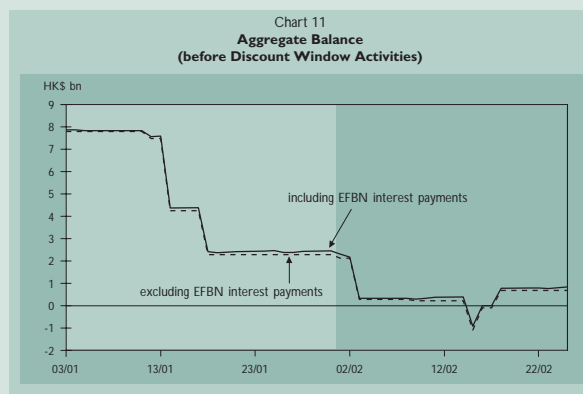
### Coins

The total amount of **coins in circulation decreased** from HK\$6.26 bn to HK\$6.17 bn during the period (Chart 10).



### Aggregate Balance

The **Aggregate Balance** (before Discount Window activities) **decreased** from HK\$2.35 bn to HK\$0.88 bn during the reporting period (Chart 11). As the exchange rate eased to touch the convertibility rate on a few occasions in early February, the HKMA bought a total of HK\$5.42 bn under the Convertibility Undertaking during 1-11 February. The Aggregate Balance shrank from HK\$2.35 bn on 1 February to a negative level of HK\$0.90 bn on 15 February. Consequently, interbank interest rates firmed up and the outflows of funds reversed. The HKMA sold a total of HK\$3.35 bn in response to bank offers during 15-18 February, and the Aggregate Balance rebounded to HK\$0.88 bn at the end of the reporting period (Table 3).



During the period, a **total of HK\$0.49 bn of interest payments on Exchange Fund paper were made**. Taking into account the interest payments carried forward from the last reporting period, **an additional HK\$0.50 bn (market value) of Exchange Fund paper was issued to absorb these interest payments**.

**Table 3**  
**HKMA HK\$/US\$ FX Transactions\***  
**(1–25 February)**

| Trade Date   | Net HK\$ purchase (+) / sale (-)<br>(HK\$ mn) |
|--------------|---|
| 1 Feb        | +1,859  |
| 4 Feb        | +584  |
| 7 Feb        | +101  |
| 9 Feb        | -622  |
| 11 Feb       | +2,879  |
| 15 Feb       | -1,556  |
| 16 Feb       | -1,011  |
| 18 Feb       | -778  |
| <b>Total</b> | <b>+1,456</b>                                 |

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

### Outstanding Exchange Fund Bills and Notes

During the reporting period, **the market value of outstanding Exchange Fund paper increased slightly from HK\$102.69 bn to HK\$103.09 bn.** The increase was mainly a result of the additional net issue (referred to in paragraph 12 above). All issues of Exchange Fund Bills and Notes were well received by the market (Table 4). **Holdings of Exchange Fund paper by the banking sector before discount window activities increased during the period,** from HK\$87.39 bn (or 85.1% of total) on 1 February to HK\$91.35 bn (or 88.6% of total) on 25 February (Chart 12).

### 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 collateralized against Exchange Fund paper. Given the shrinkage in interbank liquidity during the period, Discount Window borrowing became more active. For the period as a whole, **banks in total borrowed HK\$4.73 bn** from the HKMA, compared with HK\$2.28 bn in the preceding period. All except four of the borrowings used Exchange Fund paper as collateral (Chart 13).

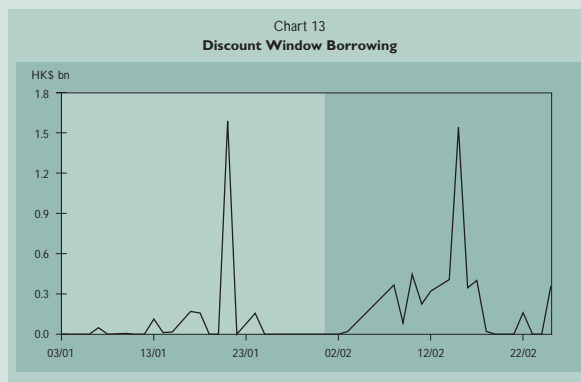
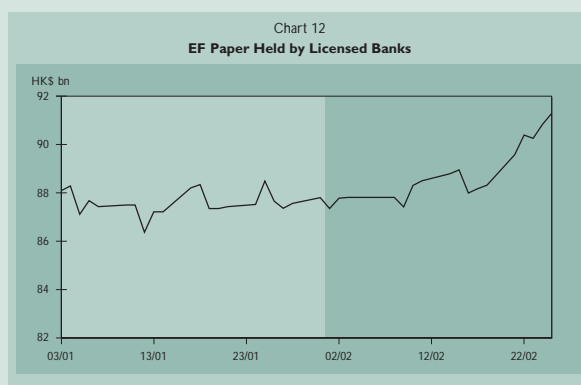
**A total of 28 banks borrowed overnight funds through the Discount Window** (Table 5). Most banks used the Discount Window facility only infrequently.

### Backing Portfolio

Along with decreases in CIs outstanding and the Aggregate Balance, backing assets fell accordingly. Nevertheless, as the decline in backing assets was less than that of the monetary base, partly due to positive net investment income effect, **the backing ratio increased from 110.1% on 1 February to 111.3% on 25 February.** 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 Hong Kong dollar exchange rate. 🌀

**Table 4**  
**Issuance of EF Paper**  
**(1–25 February)**

|              | No. of issues launched | Over-subscription ratio |
|--------------|------------------------|-------------------------|
| 1-month EFB  | 3                      | 2.60-3.87               |
| 3-month EFB  | 4                      | 1.38-2.47               |
| 6-month EFB  | 2                      | 2.23-2.73               |
| 12-month EFB | 1                      | 4.00                    |
| 3-year EFN   | 1                      | 5.11                    |



**Table 5**  
**Frequency of Individual Bank's**  
**Access to the Discount Window**  
**(1–25 February)**

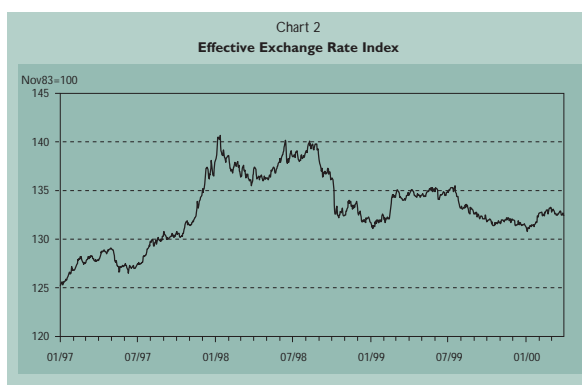
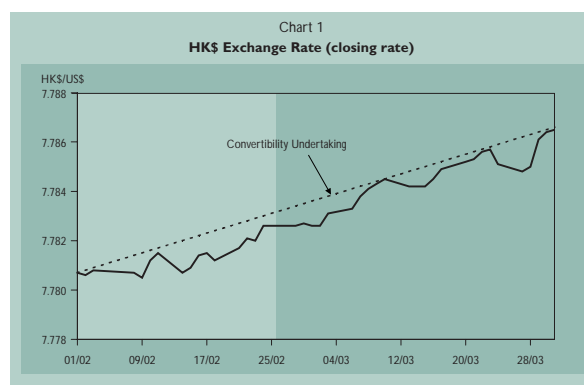
| Frequency of using Discount Window | No. of banks |
|------------------------------------|--------------|
| 1                                  | 21           |
| 2                                  | 4            |
| 3                                  | 1            |
| 4                                  | 1            |
| >4                                 | 1            |
| <b>Total</b>                       | <b>28</b>    |

## REPORT ON CURRENCY BOARD OPERATIONS (26 FEBRUARY - 31 MARCH 2000)<sup>1</sup>

During the reporting period, the market exchange rate for the Hong Kong dollar eased from 7.7826 to 7.7865, broadly in line with the movement of the convertibility rate in respect of the Aggregate Balance. The heightening tension across the Taiwan Strait in early March had no significant impact on foreign exchange and money markets. Some volatility in funds flows was seen in the latter half of March and the Convertibility Undertaking was triggered on several occasions, bringing the forecast Aggregate Balance in early April to a negative level. The monetary base decreased from HK\$210.44 bn to HK\$208.42 bn during the period, due to a reduction in the outstanding amount of Certificates of Indebtedness. 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

The Hong Kong dollar exchange rate eased slightly alongside the convertibility rate in respect of the Aggregate Balance in early March on the back of soft Hong Kong dollar interest rates relative to the US rates, particularly at the short end, and the correction in the local stock market. Further outflows of funds occurred in the fourth week of March, and the **HKMA bought a total of HK\$630 mn under the Convertibility Undertaking on 20 and 22 March**. As a result, the Aggregate Balance shrank and Hong Kong dollar interest rates firmed up. As demand for Hong Kong dollar assets revived, **the exchange rate strengthened** during the last week of March. In response to bank offers, the HKMA sold a total of HK\$780 mn for US\$100 mn on 29 March. As demand for Hong Kong dollars subsided at the end of the month, the exchange rate weakened to touch the convertibility rate again on 31 March, and the HKMA bought a total of HK\$1.25 bn for US\$160 mn under the Convertibility Undertaking. The exchange rate closed at 7.7865 on 31 March, 1 pip stronger than the convertibility rate of 7.7866 (Chart 1 and Chart 2).



<sup>1</sup> Since the Sub-Committee on Currency Board Operations did not meet in April, there is no Sub-Committee record of discussion published in April 2000.

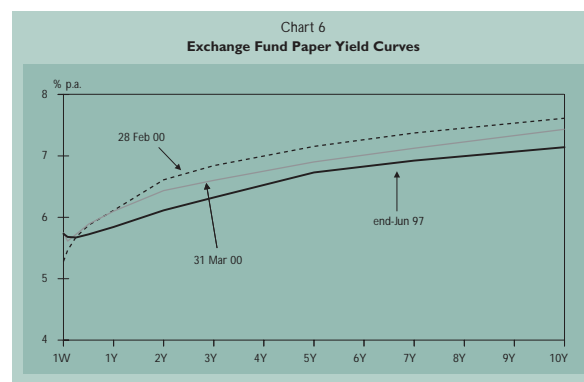
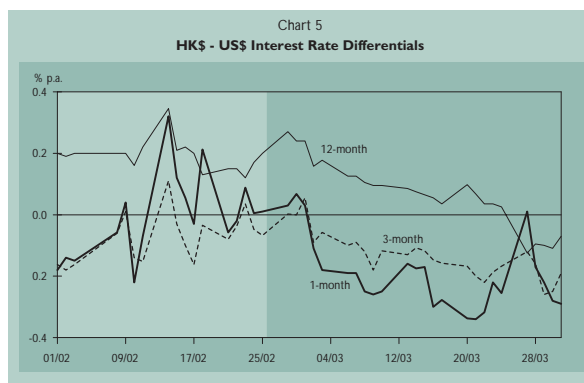
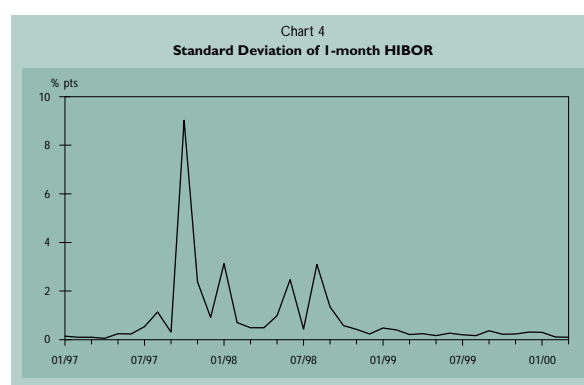
## Interest Interest Rates

Interbank interest rates eased slightly during the first half of the reporting period despite heightened tension across the Taiwan Strait. 1-month HIBOR eased moderately from 5.88% on 28 February to a low of 5.75% on 8 March. Thereafter, the soft Hong Kong dollar interest rates relative to their US counterparts induced some outflows of funds. Amid a shrinkage in interbank liquidity, interbank term rates moved on a general uptrend in the fourth week of March. 1-month HIBOR firmed and peaked at 6.13% on 27 March, before easing back to 5.88% at the end of the reporting period. 3-month HIBOR followed a similar pattern, moving within a range of 6.00% to 6.16%. 12-month HIBOR eased slightly, from 7.00% to 6.88% (Chart 3).

Interest rate volatility, measured in terms of the standard deviation of 1-month HIBOR (Chart 4), decreased from 0.11 percentage points in February to 0.09 percentage points in March.

As Hong Kong dollar interest rates eased relative to their US dollar counterparts during the first half of the reporting period, the negative spread between Hong Kong dollar and US dollar rates widened. The differential in terms of 1-month HIBOR and the corresponding US dollar rate once widened to -34 bp on 21 March. It then narrowed alongside a decrease in demand for Hong Kong dollar assets and a tightening in Hong Kong dollar interbank liquidity. The gap was once closed in late March but widened again to -29 bp by the end of the reporting period. Likewise, the spread between the 12-month Hong Kong dollar and US dollar interbank rates gradually diminished and even moved into negative territory in late March (Chart 5).

In line with the firming of short-term interbank interest rates in late March, yields on short-term Exchange Fund paper increased slightly during the reporting period. However, yields on longer-term paper declined (Chart 6). The yield spread between 5-year Exchange Fund paper and US Treasuries



narrowed by 30 bp to 27 bp, while the yield spread between 10-year Exchange Fund paper and US Treasuries widened by 13 bp to 127 bp on 31 March (Table 1).

Alongside the 25 bp increase in the US Fed Funds Target Rate on 21 March, **the HKAB raised the savings rate under the Interest Rate Rules by 25 bp, to 4.25%**, effective on 27 March. Concurrently, **the best lending rate offered by major banks was also raised by 25 bp to 9%**. The weighted average deposit rate offered by 44 major authorized institutions for 1-month time deposits (which are outside the Interest Rate Rules) increased from 5.60% on 11 February to 5.79% on 17 March. The effective deposit rate<sup>2</sup> rose from 4.12% in January to 4.19 in February (Chart 7).

#### Base Rate

Following the 25 bp rise in the US Fed Funds Target Rate on 21 March, **the Base Rate was adjusted upwards on 22 March by 25 bp to 7.50%** (150 basis points above the US Fed Funds Target Rate) and remained at that level for the rest of the period (Chart 8).

#### Monetary Base

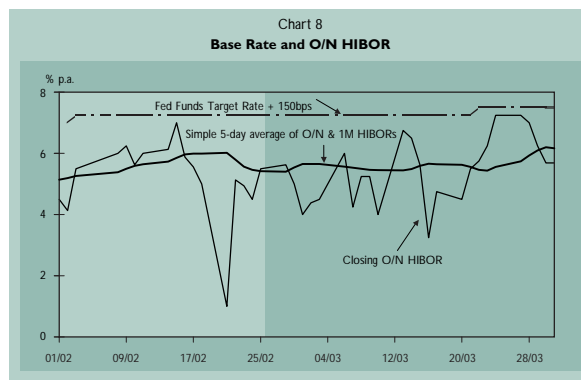
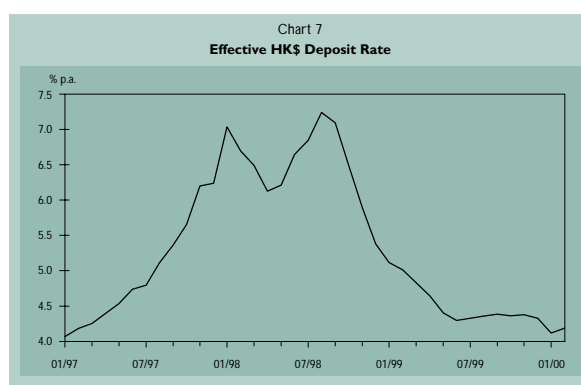
**The monetary base**, which comprises the outstanding amount of Certificates of Indebtedness, coins in circulation, the Aggregate Balance and the outstanding amount of Exchange Fund Bills and Notes, decreased from **HK\$211.31 bn on 28 February to HK\$208.42 bn on 31 March** (Table 2). Movements of the individual components are discussed below.

#### Certificates of Indebtedness

Reflecting a seasonal subsidence in the demand for cash after the Chinese New Year holidays, the outstanding amount of CIs continued to move on a general downtrend in the reporting period until end-March. The three NIBs redeemed a total of HK\$5.87 bn of CIs in exchange for US\$0.75 bn from 28 February to 28 March. Thereafter, probably reflecting an increase

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

|         | 27-Jun-97 | 28-Feb-00 | 31-Mar-00 |
|---------|-----------|-----------|-----------|
| 3-month | 56        | -18       | -25       |
| 1-year  | 21        | -10       | -24       |
| 3-year  | 3         | 24        | -20       |
| 5-year  | 27        | 27        | 27        |
| 10-year | 54        | 114       | 127       |



**Table 2**  
**Monetary Base**

| (HK\$ bn)            | 28-Feb | 31-Mar |
|----------------------|--------|--------|
| CIs                  | 101.12 | 97.46  |
| Coins in Circulation | 6.16   | 6.07   |
| Aggregate Balance    | 0.92   | 0.91   |
| Outstanding EFBNs    | 103.12 | 103.99 |
| Monetary Base        | 211.31 | 208.42 |

<sup>2</sup> This is the weighted average of the interest rates on demand deposits, savings and time deposits. As the banking statistics classify deposits by remaining maturities, we have used certain assumptions regarding the maturity distribution to compute the effective deposit rate.

in demand for banknotes by the public during the month-end period, the NIBs submitted to the HKMA a total of US\$0.28 bn during 29-31 March in exchange for HK\$2.21 bn worth of CIs. Reflecting these developments, the **outstanding amount of CIs decreased** from HK\$101.12 bn on 28 February to HK\$97.46 bn on 31 March (Chart 9).

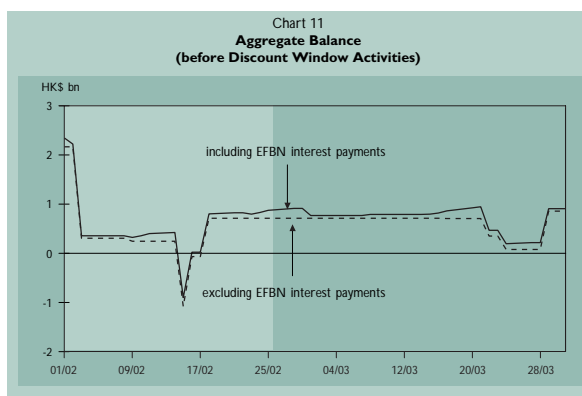
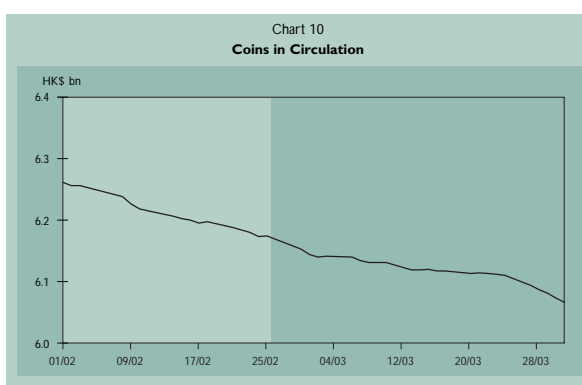
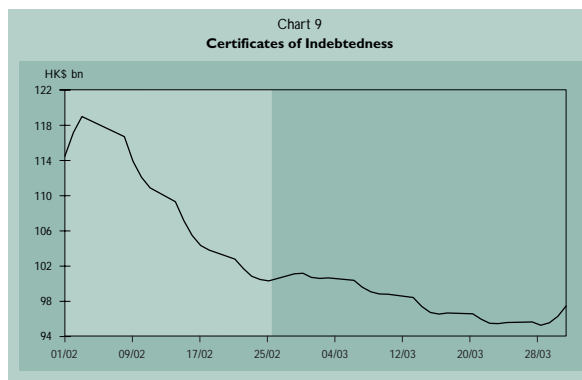
#### Coins

The total amount of **coins in circulation decreased** from HK\$6.16 bn to HK\$6.07 bn during the period (Chart 10).

#### Aggregate Balance

Reflecting the HKMA purchase of a total of HK\$630 mn under the Convertibility Undertaking during 20-22 March and the subsequent sale of HK\$780 mn in response to bank offers on 29 March, **the Aggregate Balance shrank slightly from HK\$0.92 bn on 28 February to HK\$0.91 bn on 31 March** (Table 3 and Chart 11). Taking into account the HK\$1.25 bn purchased by the HKMA under the Convertibility Undertaking on 31 March for settlement on 5 April, the forecast Aggregate Balance on 5 April shrank to -HK\$307 mn.

During the period, **a total of HK\$0.55 bn of interest payments on Exchange Fund paper were made**. Taking into account the interest payments carried forward from the last reporting period, **an additional HK\$0.66 bn (market value) of Exchange Fund paper was issued to absorb these interest payments**.



**Table 3**  
**HKMA HK\$/US\$ FX Transactions\***  
**(26 February – 31 March)**

| Trade Date   | Net HK\$ purchase (+) / sale (-)<br>(HK\$ mn) |
|--------------|---|
| 20 Mar       | +358  |
| 22 Mar       | +272  |
| 29 Mar       | -778  |
| 31 Mar       | +1,246  |
| <b>Total</b> | <b>+1,098</b>                                 |

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

### Outstanding Exchange Fund Bills and Notes

During the reporting period, **the market value of outstanding Exchange Fund paper increased slightly from HK\$103.12 bn to HK\$103.99 bn.** The increase was mainly a result of the additional net issue (referred to in paragraph 12 above). All issues of Exchange Fund Bills and Notes were well received by the market (Table 4). **Holdings of Exchange Fund paper by the banking sector before discount window activities decreased during the period,** from HK\$91.64 bn (or 88.9% of total) on 28 February to HK\$87.85 bn (or 84.5% of total) on 31 March (Chart 12). This may reflect reduced demand by banks for a liquidity buffer following active initial public offering activity in the equity market during March.

### 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 collateralized against Exchange Fund paper. For the period as a whole, **banks in total borrowed HK\$3.13 bn from the HKMA, compared with HK\$4.73 bn** in the preceding period. All of the borrowings used Exchange Fund paper as collateral (Chart 13).

**A total of 19 banks borrowed overnight funds through the Discount Window** (Table 5). Most banks used the Discount Window facility only infrequently.

### Backing Portfolio

Along with the decrease in CIs outstanding, backing assets fell accordingly. Nevertheless, as the decline in backing assets was less than that of the monetary base, partly due to positive net investment income effect, **the backing ratio increased from 111.3% on 25 February to 111.9% on 31 March.** 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 Hong Kong dollar exchange rate. 🌐

**Table 4**  
**Issuance of EF Paper**  
**(26 February - 31 March)**

|              | No. of issues launched | Over-subscription ratio |
|--------------|------------------------|-------------------------|
| 1-month EFB  | 4                      | 1.92-5.13               |
| 3-month EFB  | 5                      | 1.71-2.72               |
| 6-month EFB  | 2                      | 2.99-3.31               |
| 12-month EFB | 1                      | 6.62                    |
| 5-year EFN   | 1                      | 4.54                    |

Chart 12  
**EF Paper Held by Licensed Banks**

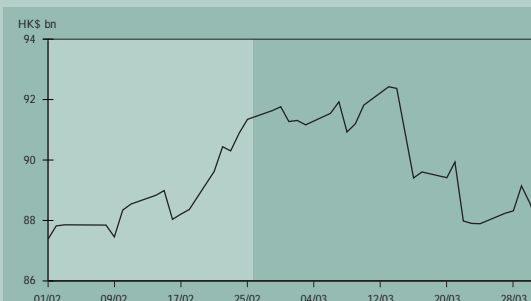
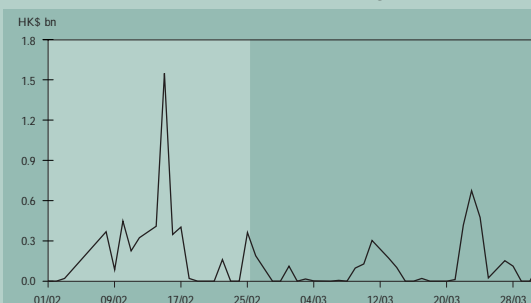


Chart 13  
**Discount Window Borrowing**



**Table 5**  
**Frequency of Individual Bank's**  
**Access to the Discount Window**  
**(26 February - 31 March)**

| Frequency of using Discount Window | No. of banks |
|------------------------------------|--------------|
| 1                                  | 11           |
| 2                                  | 3            |
| 3                                  | 3            |
| 4                                  | 1            |
| >4                                 | 1            |
| <b>Total</b>                       | <b>19</b>    |