

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

(Approved for Issue by the Exchange Fund Advisory Committee on 25 February 1999)

Operations of the Currency Board Arrangements

The Sub-Committee noted that, during the period from 4 to 26 January 1999, changes in the size of the monetary base were fully matched by corresponding changes in the foreign reserves, in accordance with the Currency Board arrangements. It was also noted that the HKMA had sold US\$10 mn for HK\$77.5 mn under the Convertibility Undertaking on 25 January 1999, causing the forecast Aggregate Balance on 27 January 1999 to decline to HK\$2.44 bn. The HK\$ exchange rate had remained stable during the review period.

The Sub-Committee noted that the total asset value of the Backing Portfolio in the Exchange Fund was around 108% of the monetary base as at the end of December 1998. Although specific US\$ Exchange Fund assets had been designated for the Backing Portfolio, all Exchange Fund assets were available to support the HK\$ exchange rate.

The report on currency board operations for the period under review is at Annex A.

Investment Strategy for the Backing Portfolio

The Sub-Committee noted that the Backing Portfolio was established in October 1998 by designating certain asset and liability items in the Exchange Fund balance sheet as those specifically related to currency board operations. It was also noted that the overall investment strategy for the Backing Portfolio was to match as closely as possible the duration of the asset and liability sides. The majority of the assets in the portfolio are invested in interest-bearing securities with high liquidity and credit quality, such as US Treasuries.

The Sub-Committee agreed that the ratio of assets to liabilities in the Backing Portfolio would fluctuate in the short run but would tend to rise in the long run as interest earned on the asset side out-paced interest paid

on the liability side. The question of whether there should be any asset transfers into or out of the Backing Portfolio when the backing ratio reached certain pre-determined or formula-based benchmarks should be explored further. This will be the subject of a further submission to the Sub-Committee.

Currency Board Accounts

The Sub-Committee considered a proposal to prepare a statement of the Currency Board Accounts presented in the form of a management report, to be included as a supplement to the annual statutory accounts of the Exchange Fund as well as the abridged Exchange Fund Balance Sheet to be published each month. In preparing the Currency Board Accounts, all financial assets and liabilities would be marked to market. To ensure that the monetary base and the backing ratio would not be affected by the trade date accounting approach, amounts of accounts receivables and accounts payable arising from unsettled transactions would be shown in HK\$ and US\$ separately and on a net basis. Furthermore, the Sub-Committee noted that repos would be treated as collateralised lending, which was in line with the accounting policy adopted in preparing the Exchange Fund Balance Sheet. In other words, an increase in the Aggregate Balance due to repo transactions under the Discount Window would be matched, in accounting terms, by an increase in HK\$ lending rather than a reduction in outstanding Exchange Fund paper. To avoid confusion that the monetary base had been expanded on the back of HK\$ lending, such lending would be presented as a "HK\$ accounts receivable" item on the liability side (i.e. the monetary base) of the Currency Board Accounts.

The Sub-Committee endorsed the proposed approach, but also suggested a number of improvements, such as providing month-to-month comparative figures. It was agreed that a revised format would be prepared for Members' consideration before the issue was finalised. (2)

Hong Kong Dollar Exchange Rate and Interest Rate Movements

Hong Kong dollar exchange rate

The Hong Kong dollar exchange rate

Reflecting improved confidence in the HK dollar, **HK\$ and US\$ interest rate spreads continued to narrow in early January.** The differential in terms of the 1-month interbank rate became negative for a short period of time in early January. As interbank interest rates edged up in mid-January, the gaps for 1-month and 3-month rates rose to 112 bp and 159 bp respectively on 13 January, but then narrowed quickly to 30 bp and 101 bp on 18 January. Upon renewed concerns on Brazil's financial situation, however, **interest rate spreads widened again.** On 25 January, due to rumours about RMB devaluation, the spreads of 1-month and 3-month HIBORs over their respective US counterparts climbed to 160 bp and 235 bp, but then quickly narrowed to 95 bp and 141 bp respectively on the following day (Chart 4).

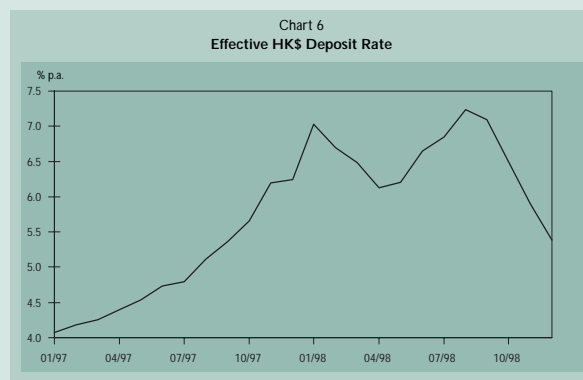
Longer-term interest rates, represented by yields on Exchange Fund paper, fell further in the early part of the reporting period. But **the entire yield curve shifted upwards** on the back of the news of the Brazilian crisis and RMB rumours. Yields on 5-year and 10-year Exchange Fund paper rose by 125 bp and 105 bp during the reporting period to 7.32% and 7.31% respectively on 26 January (Chart 5).

As yields on Exchange Fund paper surged in mid-January, **yield spreads over US Treasuries widened for all maturities.** On the longer end of the yield curve, the yield differentials in respect of 5-year and 10-year paper increased from 155 bp and 162 bp to 274 bp and 259 bp respectively during the reporting period (Table 1).

In the retail market, **the HKAB lowered the savings rate under the Interest Rate Rules by 25 bp** to 4%, effective on 11 January 1999. On the same day, **the best lending rate offered by major banks also fell by 25 bp** to 8.75%. The weighted average deposit rate offered by 44 major authorised institutions for 1-month time deposits (which are outside the Interest Rate Rules) dropped further by 53 bp from end-December 1998 to 5.8% on 8 January, before rising to 6.3% on 15 January. The effective deposit rate (measured as the average of deposit rates weighted by type and maturity of deposits) fell from 5.90% in November to 5.38 % in December 1998 (Chart 6).

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

	27-Jun-97	4-Jan-99	26-Jan-99
3-month	56		



Base Rate

The Base Rate remained at 6.25%, 150 basis points above the US Fed Funds Target Rate, throughout the reporting period (Chart 7).

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\$192.56 bn on 4 January to HK\$192.12 bn on 26 January (Table 2). Movements of individual components are discussed below.

Certificates of Indebtedness

The outstanding amount of Certificates of Indebtedness fell slightly during the reporting period to stand at HK\$85.87 bn on 26 January (Chart 8). During the reporting period, the three note-issuing banks returned to the Exchange Fund a total of HK\$0.69 bn worth of Certificates of Indebtedness (CIs) in exchange for US\$88.46 mn.

Coins

The total amount of coins in circulation increased from HK\$6.04 bn on 4 January to HK\$6.29 bn on 26 January, representing a marginal increase of HK\$0.25 bn (Chart 9).

Aggregate Balance

During the reporting period, despite market tensions over the Brazilian financial crisis and the GITIC liquidation, there was no significant outflow of funds from the Hong Kong dollar. The Aggregate Balance remained stable at HK\$2.52 bn throughout the

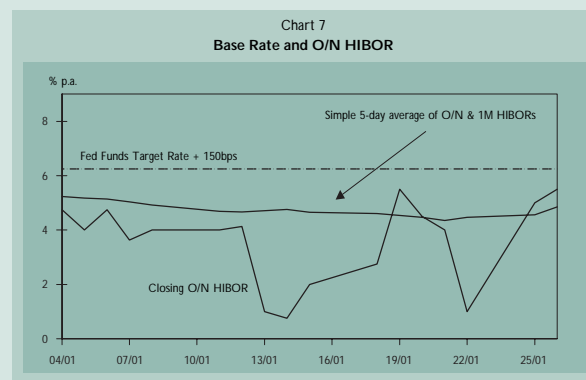
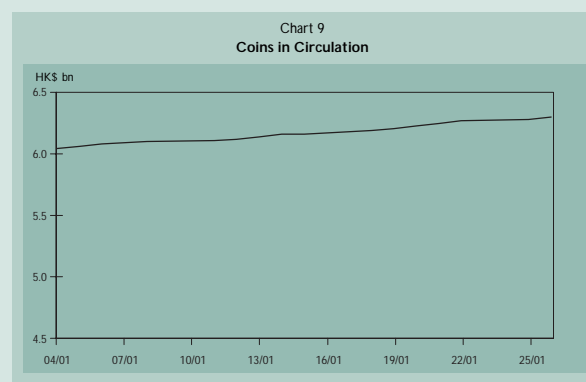
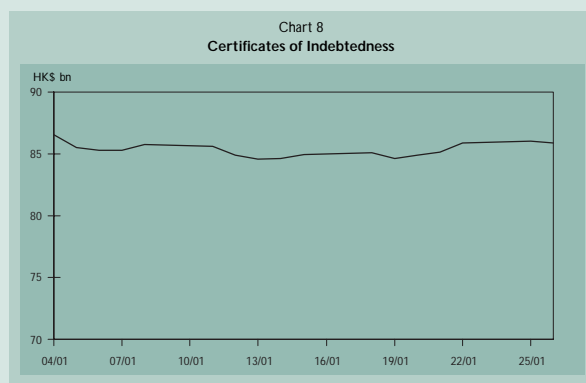


Table 2
Monetary Base

(HK\$ bn)	4-Jan	26-Jan
CIs	86.56	85.87
Coins in Circulation	6.04	6.29
Aggregate Balance	2.52	2.52
Outstanding EFBNs	97.45*	97.45*
Monetary Base	192.56	192.12

* The marked to market values of outstanding EFBNs were HK\$98.37 bn and HK\$98.34 bn respectively on 4 January and 26 January.



reporting period (Chart 10). However, on 25 January, amidst the rumours about RMB devaluation, the HKMA sold US\$10 mn for HK\$77.5 mn under the Convertibility Undertaking, causing the forecast Aggregate Balance on 27 January to decline slightly to HK\$2.44 bn.

Outstanding Exchange Fund Bills and Notes

During the period under review, **no additional issue of Exchange Fund paper was launched**. The total outstanding amount of the Exchange Fund paper remained at HK\$97.45 bn. During the review period, 7 maturing issues of Exchange Fund Bills and 1 maturing issue of Exchange Fund Notes were rolled over. These issues were well received by the market (Table 3). The banking sector decreased moderately its holding of Exchange Fund paper from HK\$81.16 bn (83.3% of the total outstanding amount) on 4 January to HK\$79.30 bn (81.4% of the total) on 26 January.

Discount Window Activities

Banks borrowed a total of around HK\$3.92 bn from the HKMA through the Discount Window from 4 January to 26 January. The usual daily amount involved was less than HK\$500 mn (Chart 11).

An overwhelming majority (HK\$3.87 bn or 98.7% of total) of the borrowings made during the period were collateralized against Exchange Fund Bills and Notes. There were only 4 occasions (HK\$220 mn) on which banks borrowed an amount exceeding 50% of their holdings of Exchange Fund paper and therefore were charged the Base Rate plus 5%.

During the period under review, a total of 17 banks borrowed overnight liquidity through the Discount Window (Table 4). Most banks used the Discount Window facility only infrequently and five of them borrowed more than once.

Backing Portfolio

Starting from 1 October 1998, specific US dollar assets of the Exchange Fund have been designated to back the monetary base. Although specific Exchange Fund assets have been designated for the backing portfolio, all Exchange Fund assets remain available to support the HK\$ exchange rate. **At end-December 1998, the total asset value of the backing portfolio was around 108% of the monetary base.** ☞

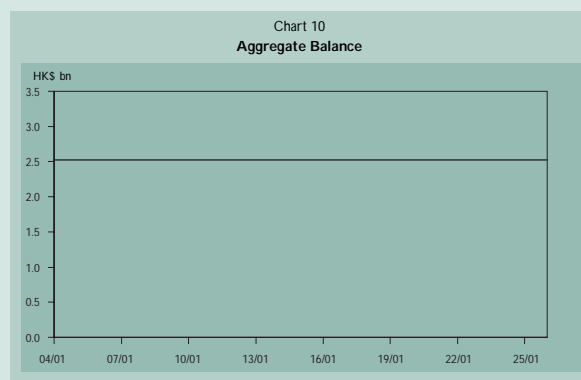


Table 3
Tender Results of EF paper
(4 Jan – 26 Jan)

	No. of issues launched	Over-subscription ratio
1-month EFB	2	2.07-2.93
3-month EFB	3	0.95-1.69
6-month EFB	1	2.15
1-year EFB	1	2.15
3-year EFN	1	0.07

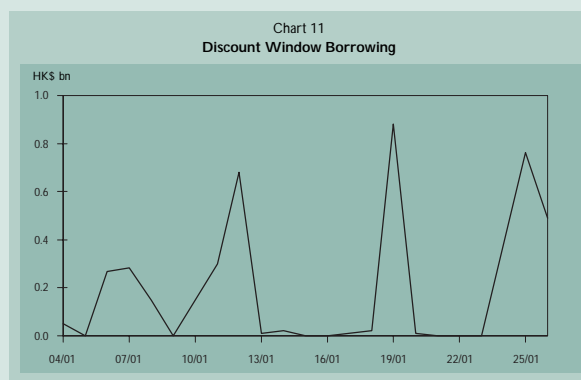


Table 4
Frequency of Individual Banks
Access to Discount Window

Frequency of using Discount Window (4/1-26/1)	No. of banks
1	12
>1	5
Total	17

A RECORD OF DISCUSSION OF THE EXCHANGE FUND ADVISORY COMMITTEE SUB-COMMITTEE ON CURRENCY BOARD OPERATIONS ON 5 MARCH 1999

(Approved for Issue by the Exchange Fund Advisory Committee on 19 March 1999)

Operations of the Currency Board Arrangements

The Sub-Committee noted that during the period from 27 January to 26 February 1999, changes in the size of the monetary base were fully matched by corresponding changes in the foreign reserves in accordance with the rules of the Currency Board arrangements. It was further noted that, before the Chinese New Year, the exchange rate weakened briefly to touch the Convertibility rate of 7.75 in mid-February partly due to the Note Issuing Banks having to provide backing for additional banknote issuance. The HKMA bought a total of HK\$3.41 bn for US\$440 mn under the Convertibility Undertaking. The Aggregate Balance shrank correspondingly and was at one point forecasted to drop to a negative level of HK\$0.97 bn on 22 February. In response, 1-month HIBOR firmed up moderately to 6.38% on 19 February. The situation was however quickly reversed after the Chinese New Year holidays, with the HKMA selling HK\$3.64 bn for US\$ on 19 February. As a result, the Aggregate Balance rose to HK\$2.68 billion on 22 February. 1-month HIBOR also quickly eased to 5.88% on 25 February. The Sub-Committee further noted that, as liquidity conditions tightened towards the end of the month and the exchange rate strengthened, the HKMA sold HK\$775 mn for US\$ during 25-26 February.

The report on currency board operations for the period under review is at Annex A.

Extending the Convertibility Undertaking to Exchange Fund Bills and Notes

The Sub-Committee noted that of the four components of the monetary base, separate Convertibility Undertakings ("CUs") already covered Certificates of Indebtedness ("CIs") and the Aggregate Balance of the banking system. The CU rate applicable to the latter would be gradually realigned with that for the former starting from 1 April 1999. With effect from 1 April 1999, the issue and withdrawal of coins would also be conducted against US\$ at a fixed rate of 7.80. It was therefore for consideration whether Exchange Fund Bills and Notes should also be covered by an explicit CU.

Members noted that, as far as Exchange Fund paper was concerned, licensed banks in Hong Kong already enjoyed an indirect CU. At the maturity of such paper, the HKMA would credit the clearing accounts of banks either as holder of such paper or as agent banks for investors. Banks could then convert the proceeds into US\$ under the CU in respect of the Aggregate Balance.

Members considered that to extend the CU arrangement to Exchange Fund paper would not strengthen significantly the Currency Board arrangements. At the same time, practical issues had to be addressed such as the determination of an appropriate CU rate applicable to Exchange Fund paper before the rates in respect of the Aggregate Balance and CIs converged in August 2000. Furthermore, with Exchange Fund paper settled in HK\$ only at issue, to provide a CU at maturity for such paper would result in an asymmetric arrangement.

Members agreed that, since the benefits that could be derived from introducing a CU for Exchange Fund paper were not obvious, it would be prudent to maintain the status quo and to review the matter later in the light of more experience.

Movements in the Backing Ratio: Various Scenarios

The Sub-Committee noted that when the Backing Portfolio was set up in October 1998, the amount of US\$ assets transferred into the Portfolio was 105% of the monetary base. The backing ratio subsequently rose to the current level of slightly above 108%. The ratio was expected to fluctuate over time as circumstances changed, and it was appropriate to consider whether assets should be transferred into or out of the Backing Portfolio if the ratio reached certain pre-determined trigger points.

Members noted that three factors could lead to movements in the backing ratio: incremental changes in the monetary base; revaluation effects from changes in market interest rates; and net interest earnings. Under the monetary rule of the currency board operations, incremental changes in the monetary base would be

100% backed by changes in foreign currency assets. Thus, in situations when the monetary base expanded, the backing ratio would drop, since the backing ratio for marginal changes was 100% while the backing ratio for the whole portfolio was over 108%. Conversely, the backing ratio would rise when the monetary base contracted, other things being equal. As for the second factor, interest rate movements would affect the backing ratio via their impact on the market valuation of backing assets and the Exchange Fund paper component of the monetary base. Nevertheless, the impact that HK\$ and/or US\$ interest rate fluctuations would have on the backing ratio should be small, since the duration of the Backing Portfolio was relatively short. The third factor that would affect the backing ratio was net interest earnings. To the extent that interest income arising from the US\$ assets in the Backing Portfolio exceeded interest payments on Exchange Fund paper, the backing ratio would rise over time.

It was agreed that a rising backing ratio would generally cause less concern than a falling one, although too high a backing ratio might give rise to a perception that additional base money could be created. It could also be argued that excess assets in the Backing Portfolio should be transferred out of the portfolio and invested in higher return instruments. Members were of the view, however, that with the Backing Portfolio having only been established for about six months, it was too early to consider the question of asset transfers. It was agreed that evolution of the ratio should be monitored closely and the question of asset transfers reviewed in the light of more experience.

Exchange Rate under the Convertibility Undertaking and the Market Exchange Rate

The Sub-Committee noted that under the Convertibility Undertaking ("CU") in respect of the Aggregate Balance, the CU rate had been set at 7.75 initially and would be moved by 1 pip per calendar day from HK\$7.75 to HK\$7.80 per US\$ over a period of 500 days starting on 1 April 1999. With the market exchange rate trading on the strong side of the CU rate, the Sub-Committee considered it necessary to remind the market about the imminent change in order to avoid any confusion on or after 1 April, and to facilitate the market in planning for the gradual move.

Papers Tabled for Information

Members noted two papers tabled for information. They dealt with an analysis of currency board regimes outside of Hong Kong, and the effects of the Brazilian crisis on Argentina. ☒

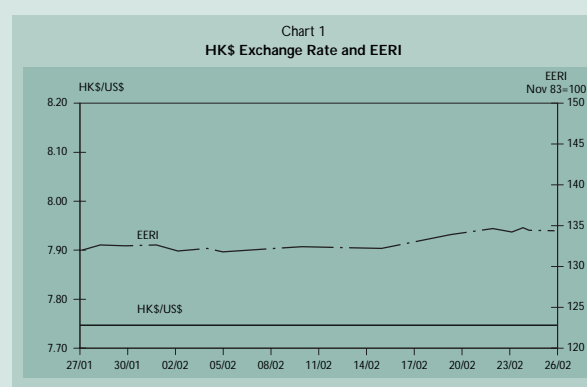
REPORT ON CURRENCY BOARD OPERATIONS

This report covers the period from 27 January to 26 February 1999. During the reporting period, changes in the size of 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 and Interest Rate Movements

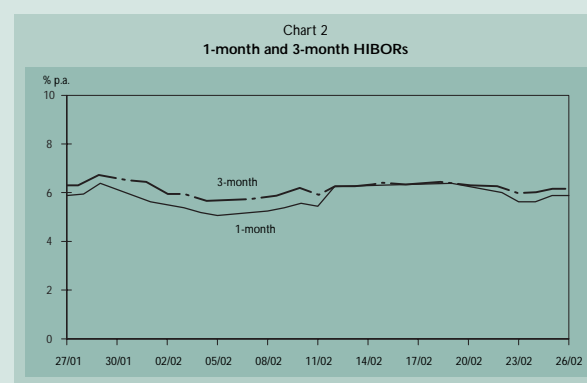
Hong Kong dollar exchange rate

The Hong Kong dollar exchange rate remained stable during the reporting period, trading within a narrow range between 7.748 and 7.750 (Chart 1). 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 briefly weakened and touched the Convertibility rate of 7.75 in mid-February. The HKMA bought a total of HK\$3.41 bn for US\$440 mn under the Convertibility Undertaking from 12 February to 15 February. The Aggregate Balance shrank correspondingly and the exchange rate strengthened slightly to 7.748 on 19 February. The outflow of funds was quickly reversed after the Chinese New Year holidays. To replenish the Aggregate Balance, the HKMA sold HK\$3.64 bn for US dollars on 19 February. As liquidity conditions tightened towards the end of the month and the exchange rate strengthened, the HKMA sold HK\$775 mn for US\$ during 25-26 February.



Interest rates

Following a brief firming due to month-end effects in late January, interbank interest rates eased in the early part of February. 1-month HIBOR, for instance, softened from 6.38% on 29 January to 5.06% on 5 February. The supply of interbank liquidity was substantially reduced in mid-February as a result of the outflow of funds. Reflecting the future settlement of the spot purchase of US dollars on 15 February, partly by the Note Issuing Banks to provide backing for additional banknote issuance, the Aggregate Balance for 22 February was at one point forecast to drop to a negative level of HK\$0.97 bn. The market reacted calmly to the shrinkage of interbank liquidity, as it largely reflected seasonal factors. 1-month HIBOR firmed moderately, to 6.38% on 19 February. With the Aggregate Balance returning to a positive level immediately after the Chinese New Year holidays, 1-month HIBOR quickly eased to 5.88% on 25 February and remained around that level at the end of the reporting period (Chart 2).



Notwithstanding the movements in the Aggregate Balance, interest rates were generally stable during the reporting period. **Interest rate volatility** measured in terms of the standard **deviation** of 1-month HIBOR declined marginally from 0.48 percentage points in January to 0.39 percentage points in February (Chart 3).

With US interest rates remaining generally stable during the reporting period, the differential between Hong Kong dollar and US dollar interest rates was mainly affected by the movements in the former. During the period under review, there were two occasions during which the spread widened - in late January due to month-end effects, and in mid-February when the Aggregate Balance declined. On both occasions, the spread in terms of the 1-month rate widened to around 150 bp. As the outflow of funds reversed after the Chinese New Year holidays, **the interest rate gap narrowed to around 100 bp** (in terms of 1-month rate) **by late February** (Chart 4).

As the changes in liquidity conditions were largely due to seasonal factors, **longer-term interest rates were left relatively unaffected**. During the period under review, the yield on 5-year Exchange Fund Notes eased by 3 bp to 7.10% on 26 February, while the yield on 10-year paper edged up slightly by 15 bp to 7.30% (Chart 5). Yield spreads between 5-year and 10-year Exchange Fund paper and their corresponding US Treasuries narrowed slightly by 73 bp and 50 bp to 176 bp and 190 bp on 26 February respectively (Table 1).

In the retail market, **the savings rate under the Interest Rate Rules of the HKAB remained unchanged** at 4% during the reporting period. The weighted average deposit rate offered by 44 major authorised institutions for 1-month time deposits (which are outside the Interest Rate Rules) declined marginally from 6.3% on 15 January to 6.2% on 5 February, before rising to 6.7% on 19 February. The effective deposit rate (measured as the average of deposit rates weighted

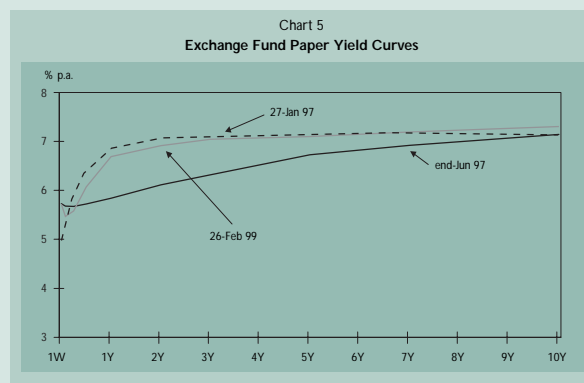
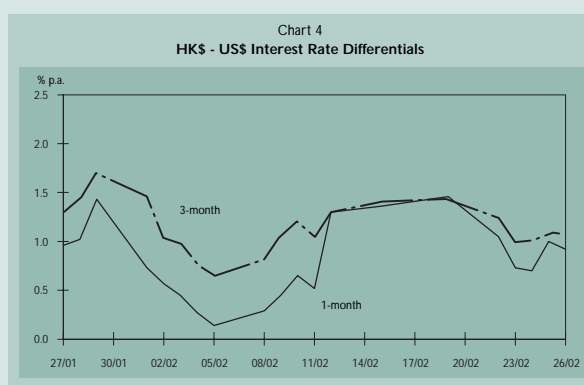
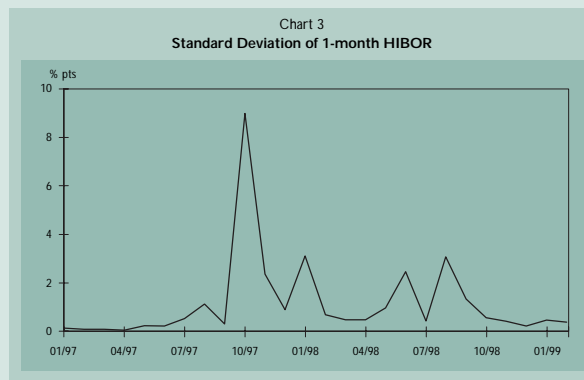


Table 1
Yield Spreads between Exchange Fund Paper
and US Treasuries (basis points)

	27-Jun-97	27-Jan-99	26-Feb-99
3-month	56	140	91
1-year	21	237	177
3-year	3	238	171
5-year	27	249	176
10-year	54	240	190

by type and maturity of deposits) continued to fall, from 5.38% in December 1998 to 5.12% in January 1999 (Chart 6).

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 7).

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, increased from HK\$193.34 bn on 27 January to HK\$202.81 bn on 26 February¹. Certificates of Indebtedness accounted for almost the entire increase, reflecting the seasonal demand for banknotes associated with the Chinese New Year (Table 2). Movements of individual components are discussed below.

Certificates of Indebtedness

The three Note Issuing Banks (NIBs) submitted to the Exchange Fund a total of US\$2.61 bn from 27 January to 15 February in exchange for an increase in Certificates of Indebtedness, from HK\$86.33 bn to HK\$106.71 bn. As the public returned surplus bank notes to the banking system after the Chinese New Year holidays, the NIBs redeemed a total of HK\$10.45 bn of CIs in exchange for US\$1.3 bn during 15-26 February. The outstanding amount of CIs stood at HK\$96.26 bn at the end of the reporting period (Chart 8).

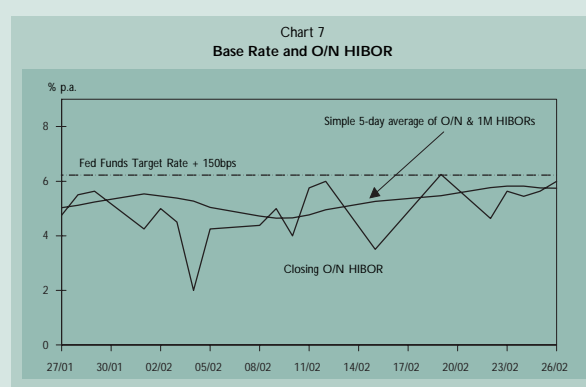
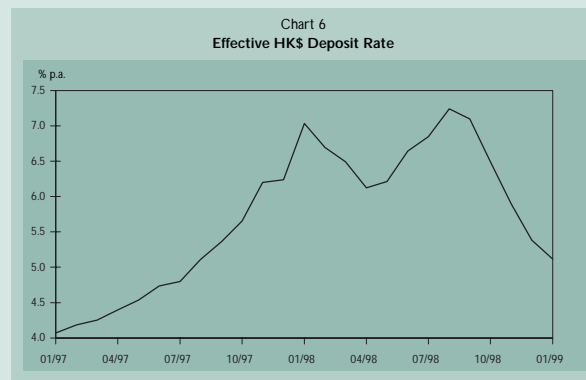
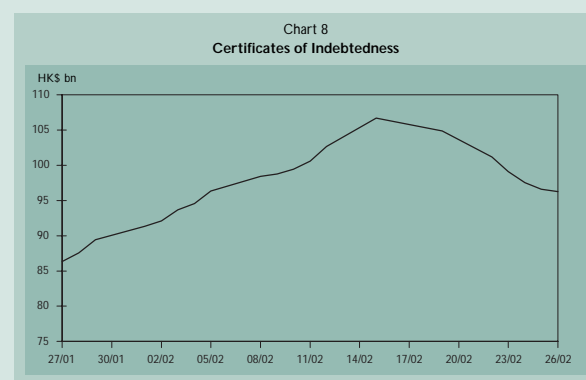


Table 2
Monetary Base

(HK\$ bn)	27-Jan	26-Feb
CIs	86.33	96.26
Coins in Circulation	6.31	6.21
Aggregate Balance	2.44	3.06
Outstanding EFBNs*	98.26	97.28
Monetary Base	193.34	202.81

* The nominal value of outstanding EFBNs remained unchanged at HK\$97.45 bn.



¹ To be consistent with the Currency Board Accounts, starting from this report, the market value, rather than the nominal value, of the monetary base is presented.

Coins

The total amount of coins in circulation decreased slightly from HK\$6.31 bn on 27 January to HK\$6.21bn on 26 February, representing a marginal decrease of HK\$0.10 bn (Chart 9).

The HKMA announced on 1 February the new backing arrangements for coins in circulation, under which the issue and withdrawal of coins in circulation will be settled against US dollar value at the fixed exchange rate of HK\$7.80 to US\$1. The new arrangement is scheduled to take effect on 1 April.

Aggregate Balance

On the back of the rumours about RMB devaluation, the exchange rate briefly weakened to 7.75 and the HKMA sold US\$10 mn for HK\$77.5 mn under the Convertibility Undertaking on 25 January. As a result, the Aggregate Balance declined slightly from HK\$2.52bn on 26 January to HK\$2.44bn on 27 January. It remained at that level until mid-February (Chart 10).

In response to some outflow of funds ahead of the Chinese New Year, the HKMA sold US\$220 mn for HK\$1.71 bn under the Convertibility Undertaking on 12 February, which in turn caused the Aggregate Balance to shrink to HK\$0.74 bn on 19 February. Due to the purchase of US dollars by the Note Issuing Banks to provide backing for additional bank notes, the HKMA further sold US\$220 mn for HK\$1.71 bn under the Convertibility Undertaking on 15 February. The forecast announced at the end of that day indicated that the Aggregate Balance would shrink to a negative HK\$0.97 bn on 22 February. While the Aggregate Balance was forecast to dip into negative territory, the magnitude of the decline was much smaller than the increase in CIs. The monetary base as a whole still registered a considerable increase, suggesting that the NIBs had funded the US dollar backing for additional banknote issue partly through their US dollar holdings and partly through purchases of US dollars from market sources other than the HKMA.

The tightening of interbank liquidity and the redemption of CIs after the Chinese New Year holidays tended to reverse the outflow of funds. With the exchange rate strengthening to around 7.748, the HKMA sold HK\$3.64 bn on 19 February to replenish the Aggregate Balance, which returned to a positive

Chart 9
Coins in Circulation

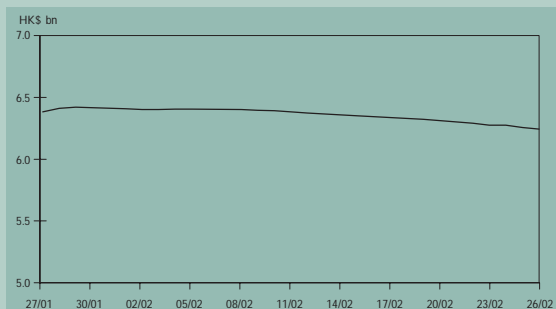
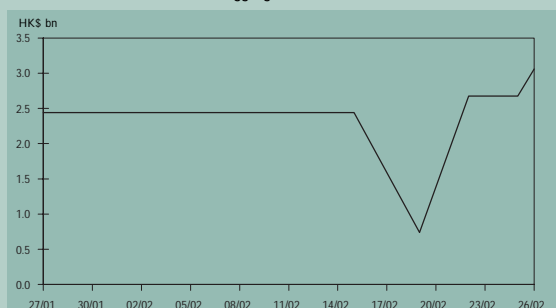


Chart 10
Aggregate Balance



HK\$2.68 bn on 22 February. As liquidity conditions tightened towards the end of the month and the exchange rate strengthened, the HKMA sold HK\$775 mn for US\$ during 25-26 February.

Outstanding Exchange Fund Bills and Notes

During the period under review, **no additional issue of Exchange Fund paper was launched.** The total outstanding value of Exchange Fund paper decreased moderately from HK\$98.26 bn to HK\$97.28 bn during the reporting period due to valuation effects. During the review period, 13 maturing issues of Exchange Fund Bills and 1 maturing issue of Exchange Fund Notes were rolled over. These issues were all well received by the market (Table 3). Holding of Exchange Fund paper by the banking sector in terms of nominal value decreased from HK\$80.38 bn (82.5% of the total outstanding amount) on 27 January to HK\$78.47 bn (80.5% of the total) on 26 February.

The HKMA announced on 1 February the new arrangement to allow the outstanding size of the Exchange Fund Bills and Notes to rise in line with interest payments on the Exchange Fund paper. The new arrangement is expected to commence on 1 April.

Discount Window Activities

Banks borrowed a total of HK\$7.09 bn from the HKMA through the Discount Window from 27 January to 26 February. The daily amount involved was generally less than HK\$500 mn. There was only one occasion when the amount exceeded HK\$1 bn and it was related to tightened liquidity ahead of the Chinese New Year holidays (Chart 11).

An overwhelming majority (HK\$7.05 bn or 99.4% of total) of the borrowings made during the period were collateralized against Exchange Fund Bills and Notes. There were only 4 occasions (HK\$129 mn) on which banks borrowed an amount exceeding 50% of their holdings of Exchange Fund paper and therefore were charged the Base Rate plus 5%.

During the period under review, a total of 31 banks borrowed overnight liquidity through the Discount Window (Table 4). Most banks used the Discount Window facility only infrequently and four of them borrowed more than 3 times.

Table 3
Issuance of EF paper
(27 Jan – 26 Feb)

	No. of issues launched	Over-subscription ratio
1-month EFB	4	1.97-3.93
3-month EFB	5	0.90-2.75
6-month EFB	3	2.32-3.59
1-year EFB	1	4.25
2-year EFN	1	4.83

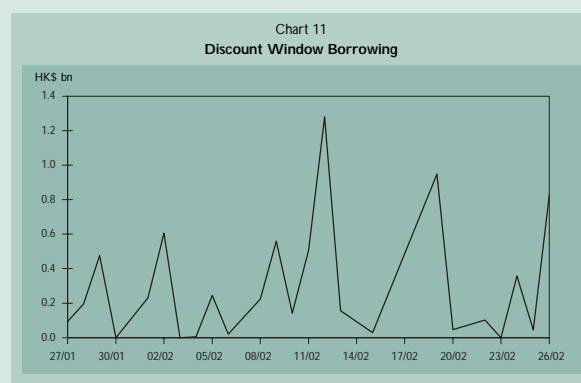


Table 4
Frequency of Individual Banks
Access to Discount Window

Frequency of using Discount Window (27/1-26/2)	No. of banks
1	21
2	4
3	2
4	2
5	1
>5	1
Total	31

Backing Portfolio

At end-January, the total asset value of the backing portfolio was around 109% of the monetary base. 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. ④

A RECORD OF DISCUSSION OF THE EXCHANGE FUND ADVISORY COMMITTEE SUB-COMMITTEE ON CURRENCY BOARD OPERATIONS ON 9 APRIL 1999

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

Operations of the Currency Board Arrangements

The Sub-Committee noted that during the review period from 1 to 26 March 1999, changes in the size of the monetary base were fully matched by corresponding changes in the foreign reserves in accordance with the rules of the Currency Board arrangements. It was also noted that the HK dollar exchange rate strengthened slightly in early March, and the HKMA sold some HK dollars for US dollars in response to offers by a few banks. This increased the Aggregate Balance, which in turn led to an easing in interbank interest rates. The exchange rate weakened briefly in mid-March to touch the convertibility rate of 7.7500 and the HKMA bought HK dollars under the Convertibility Undertaking, after which the exchange rate strengthened to 7.7490 and stayed around that level until the end of the review period. The report on currency board operations for the period under review is at Annex A.

Members further noted that the convertibility rate in respect of the Aggregate Balance began to move by 1 pip per calendar day with effect from 1 April 1999 in order to gradually bring the rate, originally at 7.75, in line with that applicable to Certificates of Indebtedness which was fixed at 7.80. In the first few days of April, there had been some selling of HK dollars in the market in an attempt to exploit short-term arbitrage opportunities, and the HKMA sold some US dollars under the Convertibility Undertaking. Thereafter, there had been some capital inflows that contributed to an increase in interbank liquidity and a drop in interbank interest rates. HK\$ interest rate spreads over US\$ rates had narrowed accordingly.

Transferability between Certificates of Indebtedness and Aggregate Balance

The Sub-Committee noted that under the existing system, Certificates of Indebtedness ("CIs") were issued and redeemed against US\$ at the rate of US\$1 to HK\$ 7.80. The system did not allow direct transferability between CIs and the Aggregate Balance and the feasibility and desirability of allowing such a transferability had to be examined. It was nevertheless noted that the convertibility rates applicable to CIs and the Aggregate Balance were different at present, and the two rates would only be aligned in August 2000. So long as the rates remained different, allowing transferability between CIs and the Aggregate Balance would give the note

issuing banks an option to convert the two components into US dollars at different convertibility rates, leading to arbitrage opportunities. Such arbitrage opportunities, however, would not close the gap between the market exchange rate and the linked rate of 7.80, since the HKMA would stand ready to convert the Aggregate Balance at a rate stronger than 7.80 until the convertibility rate converged to 7.80. If, on the other hand, CIs were only issued and redeemed against the Aggregate Balance in HK\$, the convertibility rate for CIs would effectively become that applicable to the Aggregate Balance, which would remain stronger than 7.80 prior to August 2000. In other words, before the convertibility rates for CIs and the Aggregate Balance were aligned, there would not be scope for considering transferability between CIs and the Aggregate Balance.

In the circumstances, the Sub-Committee agreed that the existing arrangements should continue, although such transferability was considered as a desirable long-run goal. This issue should be revisited when the convertibility rate for the Aggregate Balance converged to 7.80.

Provision of Lender of Last Resort under the Currency Board System

The Sub-Committee noted that the Banking Sector Consultancy Study had raised, among other issues, the need to clarify the role of the HKMA as the Lender of Last Resort. The rules of the currency board arrangements required that any increment to the monetary base be fully backed by an increase in foreign currency reserves. This imposed a constraint on the ability of the HKMA to accommodate a demand for short-term liquidity by banks through increasing the monetary base. Members nevertheless noted that there were a number of channels through which Lender of Last Resort support could be effected in a manner consistent with the rules of the currency board arrangements. For example, the HKMA might fund liquidity support to banks through borrowing in the interbank market, uplifting its HK dollar deposits/selling HK dollar assets, or selling foreign currency assets outside those earmarked for the Backing Portfolio. These operations would leave the Aggregate Balance unchanged. The HKMA could also provide liquidity support through repos involving Exchange Fund paper or US\$ denominated assets as collateral, or extend US dollar loans to the banks concerned.

The Sub-Committee further noted that, under extreme market conditions not directly related to pressure on the exchange rate, there might be justification for the HKMA to inject liquidity into the interbank market temporarily to ensure systemic stability. Nevertheless, adequate checks and balances would need to be put in place to ensure that the extension of liquidity support in this manner would enhance rather than undermine the resilience and credibility of the currency board arrangements.

Members agreed that all these options for providing Lender of Last Resort support to banks facing short-term liquidity problems should be left open. It was noted that, for practical reasons, the need for currency board systems to perform the role of Lender of Last Resort was gaining increasing acceptance. 🌐

REPORT ON CURRENCY BOARD OPERATIONS

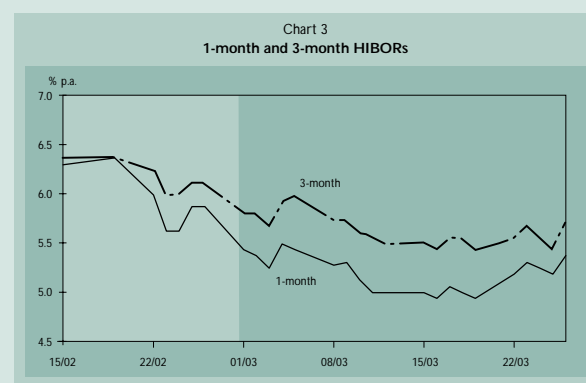
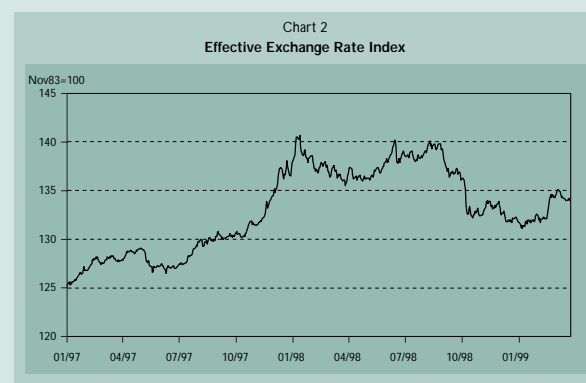
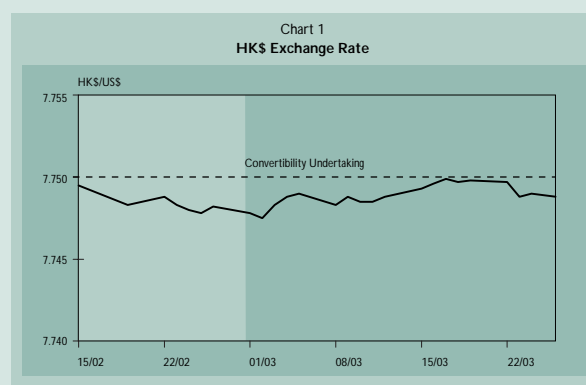
This report covers the period from 1 March to 26 March 1999. During the reporting period, the HK dollar exchange traded within a narrow range of 7.748-7.750. Interest rate spreads narrowed further from mid-February levels. Mainly due to the redemption of Certificates of Indebtedness after the Chinese New Year, the monetary base decreased from HK\$ 203.64 bn to HK\$ 195.85 bn. The changes in the size of 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 7.748 and 7.750. There was a slight strengthening of the exchange rate in early March; in response to offers from a few banks, the HKMA sold some HK dollars for US dollars. The resultant increase in the Aggregate Balance led to an easing in interbank interest rates. In mid-March, the exchange rate weakened briefly to the convertibility rate of 7.75. Interbank liquidity tightened as the HKMA bought HK dollars under the Convertibility Undertaking, after which the exchange rate strengthened to 7.749 and stayed near that level until the end of the reporting period (Chart 1 and Chart 2).

Interest rates

Along with an increase in the Aggregate Balance in late February and early March, interbank interest rates eased gradually. 1-month and 3-month HIBORs softened to 4.94% and 5.44% respectively by mid-March. Relatively low short-term interest rates induced some outflow of funds on 19 March, as a result of which interbank liquidity tightened and interbank interest rates edged up. On 26 March, affected by month-end effects and an expected increase in the movement of funds among banks associated with the tax rebate, liquidity conditions tightened. 1-month HIBOR closed at 5.38%, marginally lower than the 5.44% level on 1 March (Chart 3).



Notwithstanding these minor movements, interbank interest rates remained relatively stable during the reporting period. **Interest rate volatility** measured in terms of the standard deviation of 1-month HIBOR **further declined** from 0.39 percentage points in February to 0.18 percentage points in March (up to 26 March) (Chart 4).

The differential between Hong Kong dollar and US dollar interest rates narrowed gradually in the first half of March. The interest rate gap in terms of 1-month HIBOR was completely closed in mid-March. However, as interbank interest rates edged up in response to the shrinkage of the Aggregate Balance on 23 March, **the spread in terms of 1-month rate widened briefly.** When HK dollar interest rates edged up again on the back of tightened liquidity on 26 March, the 1-month interest spread rose to 43 bp. This was still lower than the 53 bp spread at the beginning of the reporting period (Chart 5).

Longer-term interest rates remained almost unchanged during the review period. The yields on 5-year and 10-year Exchange Fund Notes stood at 6.95% and 7.18% respectively on 26 March, similar to those at the beginning of the reporting period (Chart 6). Yield spreads of 5-year and 10-year Exchange Fund paper over US Treasuries stood at 174 bp and 188 bp respectively, roughly the same as the levels on 1 March (Table 1).

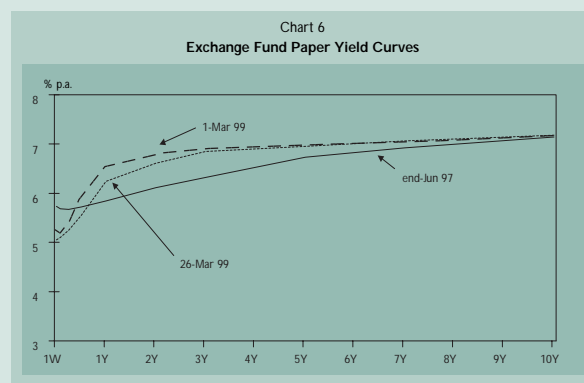
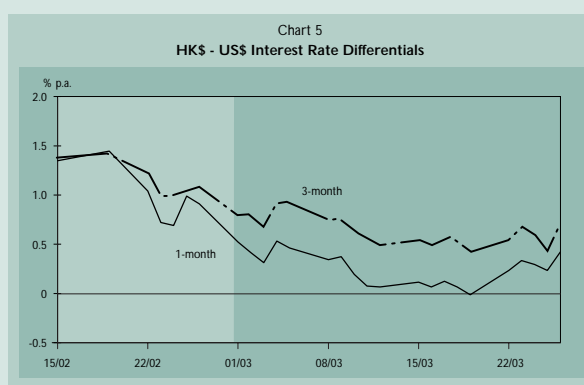
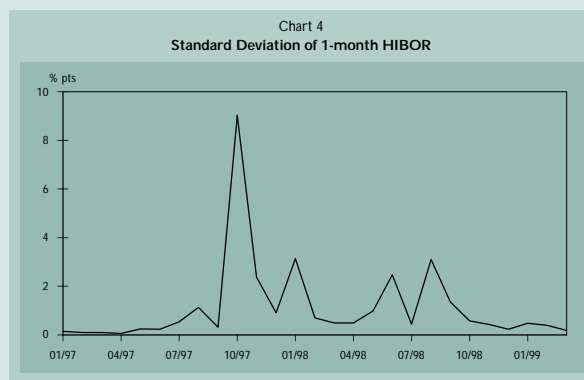
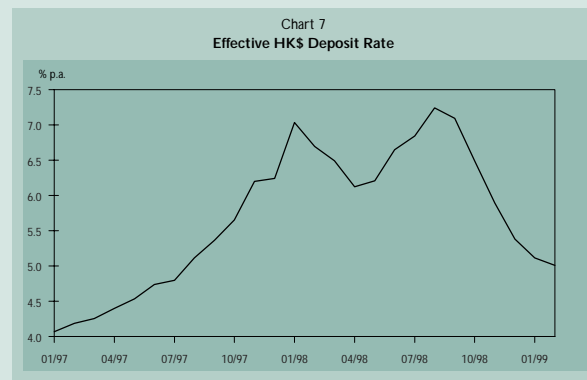


Table 1
Yield Spreads between Exchange Fund Paper
and US Treasuries (basis points)

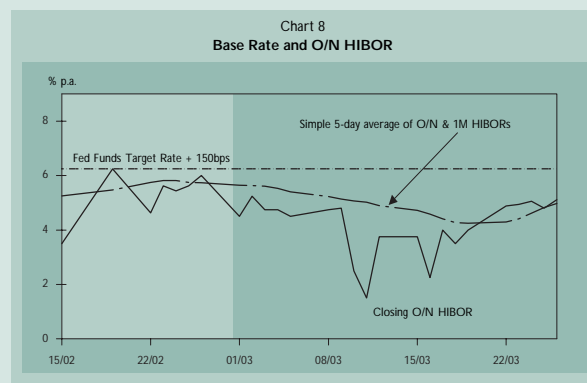
	27-Jun-97	1-Mar-99	26-Mar-99
3-month	56	84	69
1-year	21	173	146
3-year	3	171	162
5-year	27	177	174
10-year	54	187	188

In the retail market, **the savings rate under the Interest Rate Rules of the HKAB remained unchanged** at 4% during the reporting period. 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 6.5% on 26 February to 6.7% on 5 March, before declining to 5.8% on 19 March. The effective deposit rate (measured as the average of deposit rates weighted by type and maturity of deposits) continued to fall, from 5.12% in January to 5.01% in February (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\$203.64 bn on 1 March to HK\$195.85 bn on 26 March** (Table 2). The redemption of Certificates of Indebtedness after the Chinese New Year contributed to most of the decrease. Movements of individual components are discussed below.

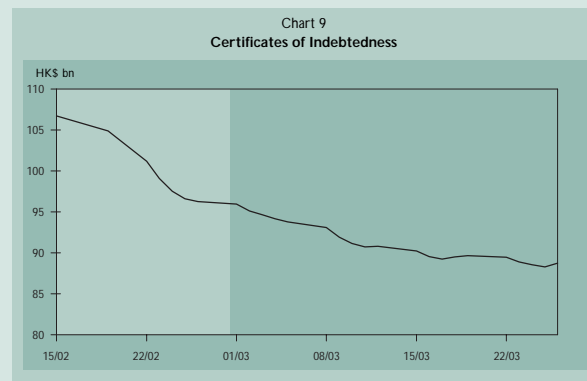
Table 2
Monetary Base

(HK\$ bn)	1-Mar	26-Mar
CIs	95.97	88.75
Coins in Circulation	6.18	6.06
Aggregate Balance	3.45	2.91
Outstanding EFBNs*	98.04	98.13
Monetary Base	203.64	195.85

* The nominal value of outstanding EFBNs remained unchanged at HK\$97.45 bn.

Certificates of Indebtedness

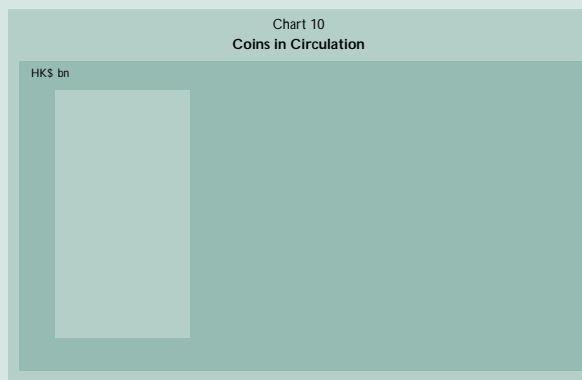
As the public continued to return surplus bank notes to the three Note Issuing Banks (NIBs) **after the Chinese New Year holidays**, the NIBs redeemed a total of HK\$7.22 bn of Certificates of Indebtedness in exchange for US\$0.93 bn during the reporting period. As a result, the outstanding amount of **CIs decreased from HK\$95.97 bn on 1 March to HK\$88.75 bn on 26 March** (Chart 9).



Coins

The total amount of **coins in circulation decreased slightly from HK\$6.18 bn on 1 March to HK\$6.06 bn on 26 March**, representing a marginal decrease of HK\$0.12 bn (Chart 10).

The new arrangements for coins in circulation, under which the issue and withdrawal of coins in circulation will be settled against US dollar value at the fixed exchange rate of HK\$7.80 to US\$1, will take effect on 1 April.



Aggregate Balance

As the HK dollar exchange rate remained firm in early March, the HKMA sold HK\$775 mn for US dollars on 2 March. As a result, **the Aggregate Balance (before Discount Window activities) increased from HK\$3.45 bn to HK\$4.23 bn on 4 March**. Subsequently, in response to an outflow of funds, the HKMA bought on 19 March HK\$1.22 bn for US\$0.17

Outstanding Exchange Fund Bills and Notes

During the period under review, **no additional issue of Exchange Fund paper was launched. The market value of outstanding Exchange Fund paper increased marginally from HK\$98.04 bn on 1 March to HK\$98.13 bn on 26 March**. 10 maturing issues of Exchange Fund Bills were rolled over. These issues were all well received by the market (Table 4). Holdings of Exchange Fund paper by the banking sector (in terms of nominal value) increased marginally from HK\$78.52 bn (80.6% of the total outstanding amount) on 1 March to HK\$79.86 bn (82.0% of the total) on 26 March.

The new arrangement to allow the outstanding size of the Exchange Fund Bills and Notes to rise in line with interest payments on outstanding Exchange Fund paper will commence on 1 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 collateralized against Exchange Fund paper. During the reporting period, **banks borrowed a total of HK\$2.58 bn** from the HKMA through the Discount Window from 1 March to 26 March. The daily amount involved was generally less than HK\$500 mn (Chart 12).

During the period under review, a total of 18 banks borrowed overnight liquidity through the Discount Window (Table 5). Most banks used the Discount Window facility only infrequently and only three of them borrowed more than twice.

An overwhelming majority (HK\$2.52bn or 97.9% of total) of the borrowings made during the period were collateralized against Exchange Fund Bills and Notes. There was no occasion in which banks borrowed an amount exceeding 50% of their holdings of Exchange Fund paper.

Backing Portfolio

The monetary base and the backing assets of the Backing Portfolio both increased by 3.3% in February. As a result, **the backing ratio remained virtually unchanged at 109%** at end-February. Under the linked exchange rate system, although specific Exchange Fund assets have been designed for the Backing Portfolio, all Exchange Fund assets are available to support the HK dollar exchange rate. 🌀

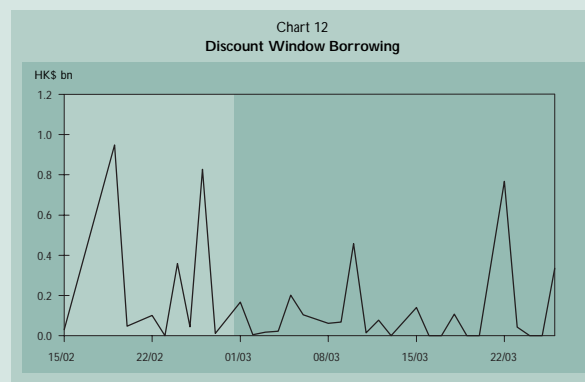


Table 5
Frequency of Individual Banks
Access to Discount Window
(1 Mar – 26 Mar)

Frequency of using Discount Window	No. of banks
1	14
2	1
3	2
4	1
Total	18