Monetary Stability

The Hong Kong dollar remained stable against the US dollar despite the global financial crisis. To relieve stress in the money market, the HKMA introduced measures to increase liquidity and reduce borrowing costs. These measures helped restore normal functioning of the interbank market and mitigate the impact of credit tightness on the wider economy.

OBJECTIVES

The overriding objective of Hong Kong's monetary policy is currency stability. This is defined as a stable external exchange value of Hong Kong's currency, in terms of its exchange rate in the foreign exchange market against the US dollar, within a band of HK$7.75-7.85 to US$1. The structure of the monetary system is characterised by Currency Board arrangements, requiring the Monetary Base to be at least 100% backed by US dollar reserves held in the Exchange Fund, and changes in the Monetary Base to be 100% matched by corresponding changes in US dollar reserves.

The Monetary Base (Table 1) comprises

- Certificates of Indebtedness, which provide full backing to the banknotes issued by the three note-issuing banks
- Government-issued notes and coins in circulation
- the Aggregate Balance, which is the sum of clearing account balances of banks kept with the HKMA
- Exchange Fund Bills and Notes issued by the HKMA on behalf of the Government.

› Monetary Base

Table 1 Monetary Base

$ million	31 Dec 2008	31 Dec 2007
Certificates of Indebtedness[1]	**177,225**	163,435
Government-issued currency notes and coins in circulation[1]	**8,319**	7,547
Balance of the banking system	**158,038**	10,639
Exchange Fund Bills and Notes issued[2]	**163,554**	138,369
TOTAL	**507,136**	319,990

1 The Certificates of Indebtedness and the government-issued notes and coins in circulation shown here are stated at Hong Kong dollar face values. The corresponding items shown in the balance sheet of the Exchange Fund in this Annual Report are in Hong Kong dollars equivalent to the US dollar amounts required for their redemption at the prevailing exchange rates on the balance sheet date. This arrangement is in accordance with the accounting principles generally accepted in Hong Kong.

2 The amount of Exchange Fund Bills and Notes (EFBN) shown here is different from that in the balance sheet of the Exchange Fund in this Annual Report. In accordance with the accounting principles generally accepted in Hong Kong, the EFBN held by the HKMA on behalf of the Exchange Fund in relation to its trading of the EFBN in the secondary market are offset against the EFBN issued, and the net amount is recorded in the balance sheet. The EFBN issued on tender dates, but not yet settled, are included in the balance sheet but excluded from the Monetary Base.

The stability of the Hong Kong dollar exchange rate is maintained through an automatic interest rate adjustment mechanism as well as the firm commitment by the HKMA to honour the Convertibility Undertakings (CUs). When the demand for Hong Kong dollars is greater than supply and the market exchange rate strengthens to the strong-side CU of HK$7.75 to the US dollar, the HKMA stands ready to sell Hong Kong dollars to banks for US dollars. The Aggregate Balance will then expand to push down Hong Kong dollar interest rates, creating monetary conditions that move the Hong Kong dollar away from the strong-side limit to within the Convertibility Zone of 7.75 to 7.85. On the other hand, if the supply of Hong Kong dollars is greater than demand and the market exchange rate weakens to the weak-side CU of HK$7.85 to the US dollar, the HKMA will buy Hong Kong dollars from banks. The Aggregate Balance will then contract to drive Hong Kong dollar interest rates up, pushing the Hong Kong dollar away from the weak-side limit to stay within the Convertibility Zone.

› Monetary Stability › Currency Board System

REVIEW OF 2008

Exchange rate stability

Currency stability in Hong Kong held up well during the year. The Hong Kong dollar market exchange rate traded within a narrow range of 7.7710 and 7.8139 in the first eight months, despite the strengthening of the renminbi, inflationary pressures in the local economy and increased volatility in financial markets (Chart 1). The market remained calm when the renminbi appreciated beyond the psychological level of RMB7 to the US dollar in April. This suggests that the HKMA was successful in managing market expectations to address speculation that the Hong Kong dollar would follow the appreciation of the renminbi.

In mid-September, the US Government's decision not to rescue the investment bank Lehman Brothers sent shock waves through global financial systems and made currency markets extremely volatile. Major currencies (except for the Japanese yen) reversed their early strength and depreciated sharply against the US dollar, partly reflecting concerns about narrowed interest-rate differentials against the US dollar. Under the Linked Exchange Rate system (LERS), the Hong Kong dollar also strengthened, appreciating against the Australian dollar, the Korean won, the British pound and the euro by over 20% between July and November.

The Hong Kong dollar spot exchange rate quickly strengthened towards the strong-side CU in September and October, and stayed near 7.75 thereafter. The strong-side CU was repeatedly triggered between 31 October and 31 December, prompting the HKMA to passively sell Hong Kong dollars against US dollars at HK$7.75 to the US dollar.

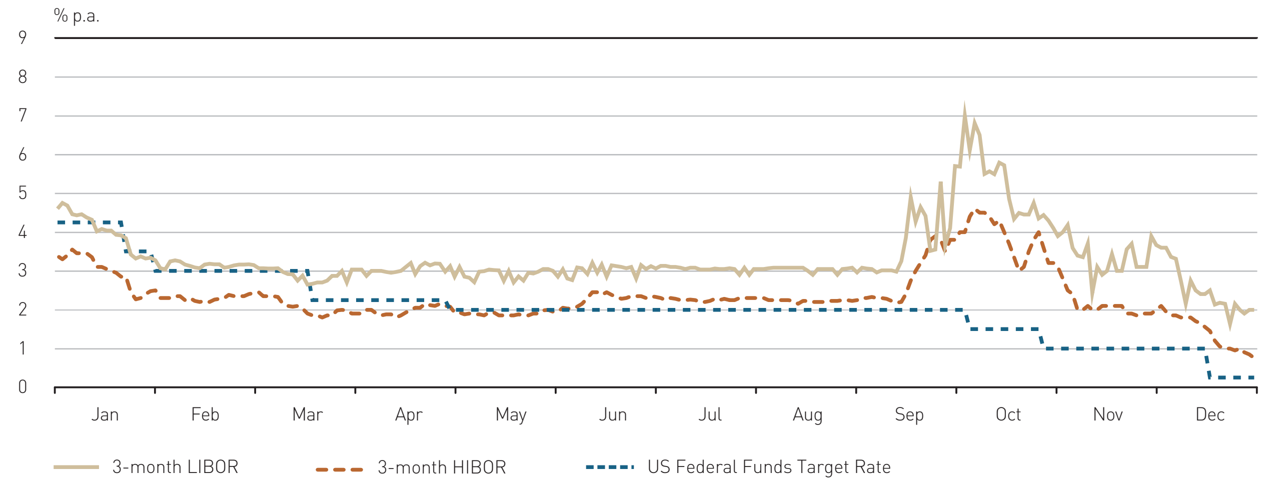
Chart 1 **Market exchange rate, January-December 2008**

There were several reasons for the strengthening of the Hong Kong dollar. First, market participants unwound their earlier Hong Kong dollar-funded carry-trade positions as the worsening global financial crisis and credit tightening led them to de-leverage and reduce their exposure to risk. Secondly, business and liquidity needs as a result of tightened credit and decreases in financial asset prices prompted some domestic corporations to repatriate their funds into Hong Kong dollars. Other possible reasons included a flight to a safe haven, foreign banks swapping US dollars for Hong Kong dollars, and demand from investors reportedly positioning for a possible rebound in the local asset markets.

Money market

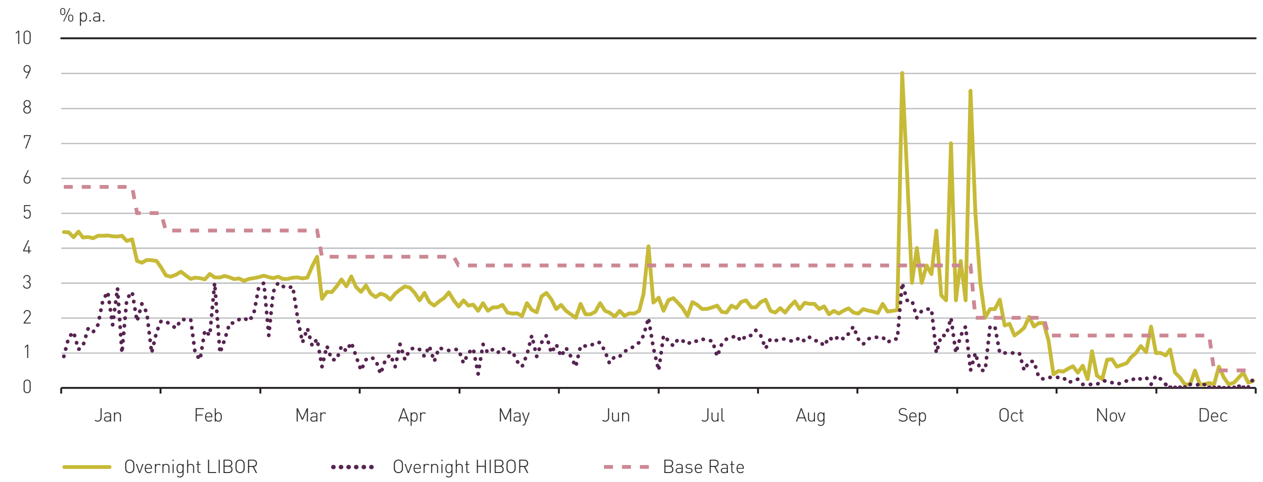
Between January and August, activities in Hong Kong's money market were generally smooth and orderly. The HKMA raised the supply of three-month Exchange Fund Bills through a tap issue on 11 January to meet increased market demand arising from banks' intraday liquidity needs.[1] The HK$6 billion worth of additional Bills was well received by market participants. In the interbank market, Hong Kong dollar interest rates generally declined in the first four months of 2008 along with their US dollar counterparts as the US Federal Funds Target Rate was lowered by a total of 225 basis points (Chart 2). The one-month and three-month HIBORs rose in late May and June, partly because of worries about the deteriorating global macroeconomic outlook and its associated negative impact on money markets. From May to August, the overnight HIBOR gradually climbed despite overnight LIBOR being largely stable, possibly due to tighter funding conditions associated with increases in the Hong Kong dollar loan-to-deposit ratio (Chart 3).

Chart 2 **Hong Kong dollar and US dollar interest rates, January-December 2008**



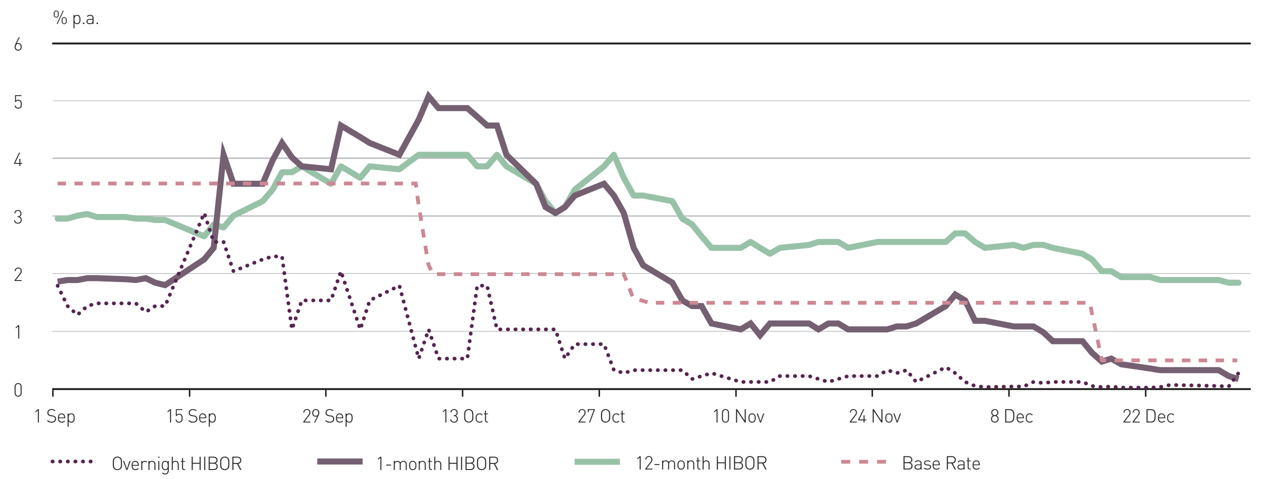
[1] From September to December 2007, the demand for short-dated Exchange Fund paper increased alongside a rise in equity market transactions. As banks need to hold Exchange Fund papers as collateral for repurchase arrangements with the HKMA, the demand for such papers increased along with the heightened demand for intraday liquidity due to rapidly growing interbank transactions.

Chart 3 **Hong Kong dollar and US dollar interest rates, January-December 2008**



Following the collapse of Lehman Brothers in mid-September, global financial markets seized up and entered a new crisis-of-confidence phase. Heightened concern about the credit worthiness of counterparties, coupled with a desire to preserve liquidity to meet contingencies, led to a general shortage of interbank liquidity locally and difficulties on the part of individual licensed banks in obtaining funding in the interbank market. As a result, banks began to refrain from lending to each other and Hong Kong dollar interbank interest rates increased sharply in tandem with US dollar counterparts (Charts 2, 3 and 4). Interest rate volatility also rose, and the HIBOR-LIBOR differentials fluctuated sharply, with discounts occasionally turning into premia suggesting the interbank market was not functioning normally.

Chart 4 **Hong Kong dollar interest rates, September-December 2008**



On 24 September a small-scale run on a local bank led to further tightness in the domestic money market. The mini-run was caused by unfounded rumours, spread by text messages, about the bank's financial soundness. Other banks became concerned that possible withdrawals by nervous depositors might increase pressure on their funding despite their sound fundamentals. At around the same time, an unusually strong demand from banks for Exchange Fund paper for liquidity management purposes drove the implied yields of short-dated Exchange Fund paper to very low levels or below zero, resulting in a divergence between interbank interest rates and the yields of the corresponding Exchange Fund paper.

Responding to the stress in the interbank market, the HKMA announced a series of temporary measures to help contain liquidity and solvency risks in the domestic banking system.

Liquidity provision

First, the HKMA injected liquidity into the banking system. In view of the sharp increases in HIBORs and the potential fragility of banking confidence caused by a small-scale local bank run, the HKMA operated within the Convertibility Zone on 18 and 25 September to inject liquidity into the banking system, purchasing US dollars against Hong Kong dollars (Table 2). As the term HIBORs showed signs of renewed tightness in late October on concerns about the financial problems of certain emerging markets, the HKMA carried out three more within-zone foreign exchange operations, one on 23 October and two on 27 October. These proactive operations, together with the repeated triggering of the strong-side CU, increased the supply of liquid funds in the banking system and relieved the tightness in the interbank market.

Table 2 Foreign exchange operations by the HKMA, September-December 2008

		Total amount of HK dollar sold (HK$ million)	**Total amount of US dollar bought** (US$ million)
Within-zone operation		**28,818**	**3,715**
– proactive liquidity injection into the banking system	(i)	24,822	3,200
– offsetting operation associated with additional supply of Exchange Fund Bills	(ii)	3,996	515
Triggering of the strong-side CU	(iii)	**153,977**	**19,868**
Total		**182,795**	**23,583**

(i) Once on 18 September, 25 September and 23 October, and twice on 27 October.
(ii) On 20 October.
(iii) Between 31 October and 31 December.
These dates refer to the trade days of the transactions.

Consequently, the Aggregate Balance increased to $158.0 billion on 31 December, exceeding the record high of around $55.0 billion in 2004 when the market speculated on the strengthening of the Hong Kong dollar alongside the appreciation of the renminbi (Chart 5). Earlier, the Aggregate Balance had declined from around $10.6 billion at the beginning of 2008 to $4.7 billion on 14 January because of the tap issue of Exchange Fund paper, and stayed at around this level until mid-September.

Secondly, the HKMA introduced five temporary measures on 30 September to provide individual banks in need with collateralised liquidity, through or outside the Discount Window (Table 3). As a result of these backstop liquidity facilities, banks were more assured about the availability of funds, and therefore more willing to lend in the interbank market. The HKMA also introduced on 6 November two refinements to collateralised term lending, extending the maximum tenor from one month to three months and introducing scope for lending at a rate lower than the interbank interest rate. The total amount of liquidity provided by these five temporary measures was initially at a high of $11.4 billion at the end of October. As the situation in the interbank market stabilised, the amount dropped to about $6.2 billion at the end of November and $6.1 billion at the end of December.

Chart 5 **Aggregate Balance, January-December 2008**

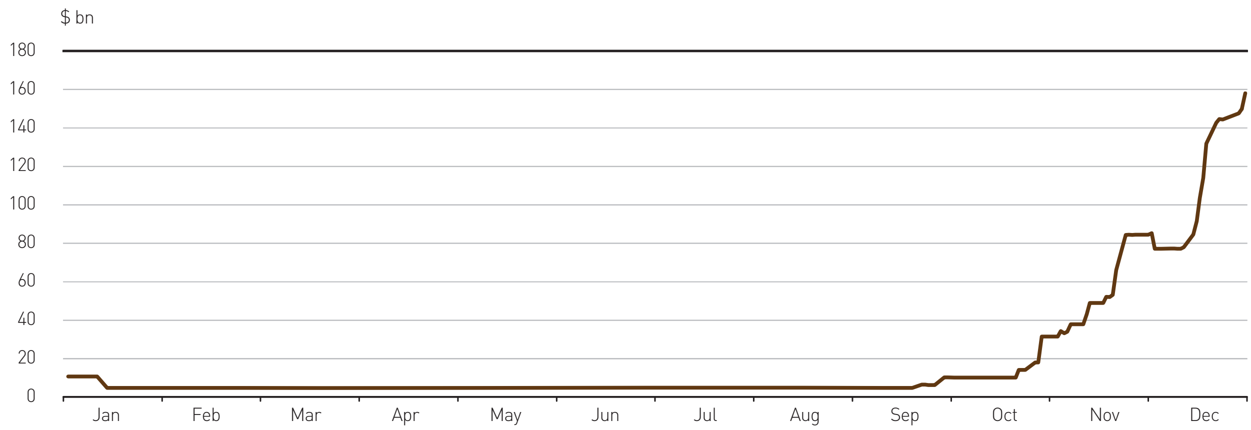


Table 3 **Liquidity assistance to licensed banks in Hong Kong: five temporary liquidity measures announced on 30 September**

(i) Wider scope of collateral under the Discount Window
Expanding eligible securities under the Discount Window to include US dollar assets of credit quality acceptable to the HKMA

(ii) Term Discount Window borrowing
Extending the term of the liquidity provided through the Discount Window from overnight to maturities up to three months

(iii) Lower interest rate at the Discount Window
Waiving the penalty rate for using over 50% of the Exchange Fund paper holding in accessing the Discount Window

(iv) Foreign exchange swaps
Conducting foreign exchange swaps (between US dollars and Hong Kong dollars of various durations) with individual licensed banks when necessary

(v) Term lending against collateral
Lending term money to individual licensed banks against acceptable collaterals when necessary, and interest rate for such lending determined with reference to market interest rates

On 14 October the Financial Secretary announced two precautionary measures to bolster public confidence in the banking system: a temporary 100% deposit guarantee and a contingent capital facility for banks. These measures were designed to stabilise the banks' deposit base as a source of funding over the next two years and provide comfort to banks on the availability of additional capital, thereby helping to restore the normal functioning of the interbank market.

Exchange Fund Bills and Notes also form a part of the liquidity in the banking system since they can be used for borrowing through the Discount Window or sold in the market for cash. To satisfy increased demand and further improve banks' access to the various newly-introduced liquidity facilities, the HKMA announced on 20 October the issuance of $4 billion of additional three-month Exchange Fund Bills in tenders on 28 October and 4 November. A foreign exchange operation, purchasing US dollars against Hong Kong dollars, was carried out by the HKMA on the announcement day to help maintain the prevailing level of liquidity in the banking system (Table 2).[2] Later, the HKMA announced on 24 November another issuance of $8 billion of additional three-month Exchange Fund Bills in a tender on 2 December.

Thirdly, the HKMA lowered the price of liquidity by temporarily adjusting the formula for determining the Discount Window Base Rate on 9 October, effectively reducing banks' borrowing cost of liquidity from the HKMA.[3] As the US Federal Funds Target Rate was lowered from 2% to 0-0.25% in the last quarter of 2008, the Base Rate declined from 3.5% in September to a record low of 0.5% at the end of December.

Effectiveness of the temporary measures

Following the introduction of these measures, the interbank credit market generally stabilised and local interbank rates declined across the board. The overnight HIBOR eased to 0.3% at the end of December after rising to an intraday high of 4% on 18 September, and the one-month HIBOR retreated to 0.2% from an intraday high of 6% over the same period. The 12-month HIBOR also declined to below 2% as a result of the much larger Aggregate Balance towards the end of 2008 (Chart 4). Efforts around the world to provide liquidity to the markets, coupled with an improvement in market sentiment, also helped the recovery of the wholesale funding market.

As the strong-side CU was repeatedly triggered, Hong Kong dollar liquidity injections by the HKMA created an opportunity to provide an accommodative monetary environment to support general economic activity. The easing of wholesale interbank interest rates should, in due course, trickle down to interest rates at the retail and corporate levels, helping borrowers better overcome the challenges posed by the current economic difficulties.

The integrity of the rule-based Currency Board system

After 25 years of operation, the LERS has continued to work smoothly, even in the face of the once-in-a-century financial crisis, as the Government continues to be firmly committed to the system. The market continues to show strong confidence in the LERS demonstrated by the absence of speculative pressures on the exchange rate in the financial market turmoil during the latter half of 2008.

[2] The combination of the additional supply of Exchange Fund paper and the within-zone foreign exchange operation is technically a transfer of different components of the Monetary Base among themselves, which is consistent with the Currency Board principles.

[3] With effect from 9 October 2008, the formula for determination of the Base Rate was changed by reducing the spread of 150 basis points above the prevailing US Federal Funds Target Rate to 50 basis points. The other leg relating to the moving averages of the relevant interbank interest rates was removed from the formula. These changes would be reviewed by 31 March 2009.

The Aggregate Balance, and hence the Monetary Base, expanded markedly during 2008 as a result of both the operation of the HKMA within the Convertibility Zone and the triggering of the strong-side CU (Table 1). These operations were in line with Currency Board principles, with changes in the Monetary Base fully matched by changes in foreign reserves. The foreign-currency assets of the Exchange Fund amounted to HK$1.4 trillion at the end of 2008, more than enough for backing the Monetary Base.

Over the years, the structure of the Currency Board has become more transparent and stronger. To improve the transparency of the Currency Board Account, a specific portion of Exchange Fund assets has been allocated to back the Monetary Base since October 1998. In 2008 following an asset transfer in January, the Backing Ratio (defined as the Backing Assets over the Monetary Base) increased to a high of 111.88% on 21 September. Subsequently, there were moderate downward pressures on the Backing Ratio, first as a result of a transitory increase in Certificates of Indebtedness in September and subsequently because of increases in the Aggregate Balance.[4 & 5] The Backing Ratio closed at 109.73% on 31 December.

Activities at the HKMA

The EFAC Currency Board Sub-Committee, established in August 1998, monitors and reviews issues pertinent to monetary and financial stability in Hong Kong. In 2008 these issues included the pass-through of changes in exchange rates to domestic inflation in Hong Kong, the effects of rising food prices in Asia and their implications for monetary policy, the impact on the interbank market of the fund-raising activities for initial public offerings in the Hong Kong stock market, and the determinants of Hong Kong dollar swap spreads. Records of discussion of the Sub-Committee on these issues and the reports on Currency Board operations submitted to the Sub-Committee are published on the website of the HKMA.

The Sub-Committee also considered a review of the Report on Currency Board Operations and agreed that the Report should be published quarterly from the beginning of 2009. The reasons for this are that the statistical data contained in the Report are all published elsewhere, including on the HKMA website, monthly and sometimes daily; market practitioners are now much more familiar with the operation of the Currency Board than when the Report was conceived; and to allow more analysis and comment to be provided in the Report. The Sub-Committee noted that, because all data in the current Report were published elsewhere at least as frequently, this would not lead to any reduction in the transparency of the operations of the Currency Board.

› Press Releases › Monetary Policy

The Hong Kong Institute for Monetary Research, established in August 1999, continued to sponsor research in the fields of monetary policy, banking and finance. In 2008 the Institute hosted 16 full-time and two part-time research fellows, and four post-doctoral fellows. It also published 25 working papers.

The Institute co-organised three international conferences. The first, held on 21 January with the Bank for International Settlements (BIS), discussed financial integration and co-operation in Asia. The second, held on 26-27 June with the Center for Pacific Basin Studies of the Federal Reserve Bank of San Francisco, Santa Cruz Center for International Economics, the University of Hong Kong and Lingnan University, examined global liquidity and its economic implications. The third, held on

[4] The Backing Ratio rose to 112.53% and surpassed 112.5% (defined as the Upper Trigger Level) on 21 January 2008, under the influence of interest income and revaluation gains which more than offset the effect of an increase in the Aggregate Balance in late October 2007. Under the arrangements approved by the Financial Secretary in 2000, a portion of the Backing Assets was then transferred to the Investment Portfolio, restoring the Backing Ratio to around 110% on 22 January 2008.

[5] The expansion in the Aggregate Balance exerted a downward influence on the Backing Ratio because while the Backing Assets rose by the same magnitude as the Monetary Base (as required under the Currency Board arrangements), the proportional increase was smaller in the former due to its larger size.

18-19 September with the BIS, dealt with the issues of the microstructure of financial markets. On 16-17 October the Institute organised jointly with the Wang Yanan Institute for Studies in Economics of the Xiamen University a workshop entitled "Efficiency and Stability of the Financial System in Mainland China". Other programmes included the Sixth Annual Summer Workshop on 28 August, and a presentation on the Global Financial Crisis co-hosted with the Asian Development Bank on 11 December. In addition to conferences and workshops, 40 public seminars were organised during the year on a broad range of economic and monetary issues.

› Research

PLANS FOR 2009 AND BEYOND

Hong Kong continues to be affected by the global financial crisis and the external environment remains highly challenging. The HKMA stands ready to provide more liquidity to the banking system if necessary, through foreign exchange operations within the Convertibility Zone, as long as exchange-rate stability is not affected. Externally, movements in the US dollar are volatile. A sudden reversal of Hong Kong dollar inflows could affect monetary and financial stability in Hong Kong.

The HKMA will monitor risks and vulnerabilities in the domestic and external environment and continually assess the effectiveness of the temporary measures taken since September 2008. It will help to ensure the financial system of Hong Kong performs the important function of financial intermediation, and provide an accommodative monetary environment to support economic activity as long as exchange-rate stability is maintained. The EFAC Currency Board Sub-Committee will examine issues relevant to Hong Kong's monetary and financial stability, review the technical aspects of the Currency Board arrangements and, where appropriate, recommend measures to strengthen them.