

Market Infrastructure



One of the main competitive advantages of Hong Kong as an international financial centre lies in the robustness and efficiency of its financial infrastructure. 2001 marked the first full year of operation of Hong Kong's new US dollar clearing system, which saw a steady increase in business both from Hong Kong and from the region generally.

Objectives

The HKMA is committed to promoting an efficient, safe and robust financial infrastructure, which is an essential ingredient of any leading international financial centre. To this end, the HKMA places emphasis not only on ensuring the resilience and efficiency of Hong Kong's existing payment and settlement systems but also on developing an infrastructure able to accommodate – and if possible anticipate – the changing needs of Hong Kong and of the region as a whole. The HKMA also pays special attention to fostering the development of the local and regional debt markets, including cross-border transfers of funds and securities.

Achievements

Hong Kong dollar payment system

Hong Kong's Real Time Gross Settlement (RTGS) system, introduced in 1996, continued to provide efficient and reliable settlement for Hong Kong dollar interbank payments. In 2001 the RTGS system had an average daily throughput of 13,838 CHATS¹ transactions (totalling \$355 billion in value), 178 Central Moneymarkets Unit² (CMU) secondary market transactions (\$21.9 billion in

value) and 503 intraday repo transactions (\$40.9 billion in value). The system also provided smooth operation for the four daily bulk clearings – the net settlement of stock market transactions, low-value bulk electronic payment items, paper cheques and JETCO items.

US dollar clearing system

Hong Kong's US dollar clearing system was introduced in 2000 to facilitate the efficient settlement of US dollar transactions in Hong Kong during Asian business hours. In March 2000, the HKMA appointed The Hongkong and Shanghai Banking Corporation Limited to be the settlement institution for the US dollar clearing system for a franchise period of five years from 1 August 2000. Hong Kong Interbank Clearing Limited (HKICL) is the clearing operator for both the Hong Kong dollar and US dollar interbank clearing systems.

¹ The Clearing House Automated Transfer System (CHATS) is a computer-based system designed for large-value interbank payment under the RTGS system.

² The Central Moneymarkets Unit (CMU) is a clearing and custodial system operated by the HKMA for Exchange Fund Bills and Notes and for private sector debt papers.

Since its full implementation in December 2000, the US dollar clearing system has operated efficiently and received wide acclaim. At the end of 2001, there were 65 direct and 115 indirect participants. Among the indirect participants, 74 were from overseas. Despite the slowdown in the local economy, the turnover of the system has been growing steadily, assisted by promotional efforts by the HKMA, both locally and in the region. In December 2001, the US dollar RTGS system handled on average 3,100 transactions daily, with a total value of over US\$5.1 billion (Chart 1).

The seamless interface between the Hong Kong dollar and US dollar clearing systems enables payment versus payment (PvP) settlement for US dollar/Hong Kong dollar foreign exchange transactions. This real-time PvP, pioneered by Hong Kong, established a landmark on 25 September 2000 by performing the first electronic foreign exchange PvP transaction in world financial history. The usage of PvP is becoming more popular, accounting for about a third of the US dollar RTGS turnover by value in Hong Kong in 2001.

The PvP procedure eliminates Herstatt risk (the settlement risk which arises when two legs of a foreign exchange transaction are settled in different time zones) by ensuring that the two legs of a foreign exchange transaction are settled simultaneously. Thus the application of bilateral counterparty trading limits becomes significantly less important with the elimination of credit risk via PvP. Liquidity management may also be improved with the traded currencies being put to immediate use in the respective clearing systems. In particular, small and medium size banks may find themselves less handicapped by counterparty credit limits and better able to participate actively in the foreign exchange market.

With Hong Kong's US dollar clearing system, customers are able to open US dollar current accounts with banks in Hong Kong. The cheques drawn against these accounts are settled on the day following their presentation in Hong Kong. In December 2001, an average of more than 800 US dollar cheques were processed daily, with a daily value totalling over US\$29 million.

By means of a seamless interface with the US dollar RTGS system, the CMU provides settlement of US dollar denominated debt instruments on a delivery-versus-payment (DvP) basis. During 2001 the outstanding amount of US dollar debt instruments lodged with the CMU doubled, to reach US\$1.5 billion.

CMU system enhancements and external linkages

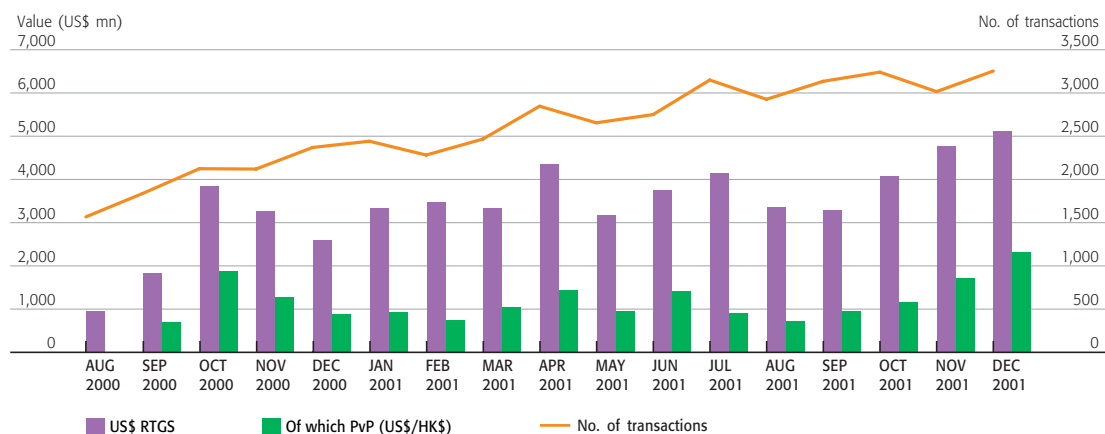
The CMU provides an efficient clearing and depository service for the Hong Kong debt market. Building on the experience gained since its establishment in 1990, the CMU is now well positioned to assume a more international dimension and play a bigger role in fostering the development of Asia's debt markets.

To facilitate the establishment of CMU external linkages with regional and international central securities depositories, we have recently launched a process of CMU modernisation to include new features and products.

In December 2001, the HKMA and Euroclear (the Brussels-based international central securities depository) agreed to set up a direct link between the CMU and Euroclear. This fully automated real-time link will enable investors in Hong Kong and other parts of Asia to hold and settle Euroclear

CHART 1

US dollar clearing system turnover (daily average)



debt securities directly via their CMU accounts. The new linkage will enhance the ability of Asian investors to access international securities and counterparties in a secure, DvP environment. This new link will be ready by the end of 2002.

To promote the international standing of the CMU, the HKMA joined the Asia-Pacific Central Securities Depository Group (ACG) in March 2001. The ACG is a group of central securities depositories in the Asia-Pacific region that aims at developing means to reduce risk in settlement activities, improving the efficiency of clearing and settlement activities and sharing information on practice and disclosure standards. The HKMA also co-hosted an APEC Working Group on electronic financial transactions systems in May 2001 in Hong Kong.

Joint clearing facility for Hong Kong dollar cheques presented in Mainland cities

The joint clearing facility for Hong Kong dollar cheques was introduced in September 2000 by the HKMA and the Guangzhou Branch of the People's Bank of China (PBoC) in order to speed up the processing of Hong Kong dollar cheques issued by banks in Hong Kong and presented in Guangdong. This was the second agreement of its kind, a similar joint cheque clearing facility having been established in Shenzhen in January 1998. In 2001, about 120,000 cheques totalling \$20 billion were cleared through the two joint cheque clearing facilities. In September 2001, an agreement was reached for the cross-border joint cheque clearing facilities in Guangdong and Shenzhen to cover also Hong Kong dollar cashier's orders and demand drafts.

Review of retail payment systems in Hong Kong

The HKMA launched a comprehensive review of retail payment systems in Hong Kong in August 2000 to examine the accessibility, costs, pricing,

efficiency, competition and risks associated with various means of retail payment. The review, completed in October 2001, found that Hong Kong was well served by a variety of retail payment channels, including cash, cheques, credit cards, debit cards and stored value cards. The review did not detect any significant factors adversely affecting the systemic stability of payment systems. It nevertheless identified policy issues and recommendations for the enhancement of sectoral efficiency and transparency of the retail payment systems in Hong Kong:

- **Cash** – it notes that a review of the design and security of banknotes is making good progress, paving the way for the launch of a new generation of banknotes.
- **Cheques** – the review notes that there is merit in extending the existing Hong Kong dollar joint cheque clearing service in Shenzhen and cities in Guangdong to US dollar cheques issued by banks in Hong Kong. This will enable US dollar cheques to be presented in Mainland China and cleared on the next working day in Hong Kong.
- **Credit and debit cards** – it notes that an appropriate framework to foster greater transparency in fee setting for credit and debit cards is needed.
- **Stored value cards** – the review supports the promotion of competition in the use of stored value card schemes. It recommends that the definition of "stored value card" be broadened to cover new non-card payment devices, such as digital cash.
- **E-payment and e-legal tender** – it sees the benefits of wider availability of cost-efficient facilities for e-payments to be settled across inter-bank accounts to facilitate e-trading. At an appropriate time, the HKMA may launch a study on e-legal tender in view of changes in market demand, both within and outside Hong Kong.



■ The HKMA co-hosts an APEC Working Group on electronic financial transactions systems in May 2001.



■ Representatives from the HKMA and HKICL explain the joint cheque clearing facility at a briefing held in Guangzhou.

The HKMA will implement the recommendations in a phased manner. To begin with, the HKMA is adopting a more progressive, self-regulatory approach to improve the oversight of payment system operations in Hong Kong. Under this approach, the market participants will draw up industry codes of practices and also monitor their own compliance, with the HKMA playing a facilitating and oversight role. The HKMA is also monitoring closely the development of e-money and its impact on retail payments and on seignorage.

Measures to further enhance the settlement efficiency of money settlement for CCASS items

The HKMA has been working with the Securities and Futures Commission (SFC) and Hong Kong Exchanges and Clearing Limited (HKEx) to follow up recommendations put forward by the Standing Committee on Electronic Financial Infrastructure. The HKMA chairs a working group, set up in March 2001, to explore the feasibility of improving the DvP arrangement for share transactions under the Central Clearing and Settlement System (CCASS). The working group includes members from the SFC, HKEx and HKICL. It has made good progress in identifying specific recommendations to improve the DvP settlement process.

Survey on foreign exchange settlement practices

In order to raise market awareness and to promote market practices to reduce foreign exchange settlement risk, the HKMA conducted a survey of foreign exchange settlement practices of major banks in Hong Kong in January 2001. The survey was part of a project of the EMEAP Working Group on Payment and Settlement Systems. The survey results for Hong Kong were in line with similar surveys conducted by other international central banking forums such as the Committee on Payment and Settlement Systems of the Bank for International Settlements (BIS). The findings were released in November 2001 and seminars were held for the authorized institutions in Hong Kong to understand better the need to mitigate settlement risk.

Self-assessment on core principles for systemically important payment systems

The HKMA conducted a self-assessment in February 2001 of the compliance of Hong Kong's payment system with the ten core principles for systemically important payment systems, promulgated by the BIS Committee on Payment and Settlement Systems. The self-assessment indicated that the Hong Kong dollar payment system complies with the core principles. In 2002 the International Monetary Fund will be conducting an external assessment of Hong Kong's compliance as part of the Financial Sector Assessment Program.

Debt market development in Hong Kong

Although the amount of Hong Kong dollar debt issuance was, at \$386 billion, 15% lower in 2001 than in 2000, the total of Hong Kong dollar debt outstanding rose by 5% to reach \$494 billion at the end of 2001. The decline in issuance was mainly attributable to the economic downturn and a poor external environment. Other than statutory bodies and government-owned corporations, all classes of issuer registered a reduction in issuance. Nevertheless, the market saw an increase in product variety and strong retail interest in debt securities. The Hong Kong Mortgage Corporation launched its debut retail bond issue in Hong Kong in October, with a minimum denomination of \$50,000. The issue was well received.

Exchange Fund Bills and Notes Programme

The HKMA continued to implement the plan introduced in the fourth quarter of 2000 to adjust the maturity distribution of the Exchange Fund Bills and Notes (EFBN) portfolio. All 28-day Exchange Fund Bills and some 91-day Exchange Fund Bills were replaced by corresponding increases in the issuance of 364-day Exchange Fund Bills, 2-year and 3-year Exchange Fund Notes. While the plan helps to reduce the heavy concentration of issuance at the short end of the EFBN yield curve, the change was most notable in the 6-month to 2-year segment, owing to the time decay factor and the less frequent and smaller number of issues of longer dated Exchange Fund Notes.

The HKMA continued to monitor closely the performance of the EFBN market makers via a quarterly performance review scheme. This process has been effective in promoting active

participation of the market makers in the EFBN tenders and secondary market trading. The overall performance of the market makers improved significantly during the year, and most of them were able to fulfill all the objective criteria by the fourth quarter of 2001. The average daily turnover of Exchange Fund Notes increased to about \$2.5 billion in 2001 from \$1.2 billion in 2000.

As a means of reducing the generally higher interest cost associated with issuance of long dated Exchange Fund Notes, the HKMA has begun to use Hong Kong dollar interest rate swaps to convert the fixed long-term interest rate liability into short-term floating interest rates.

Plans for 2002

To further reduce settlement risk and improve efficiency in the settlement process, the HKMA will continue to upgrade and fine-tune the existing payment and settlement systems. We shall continue to promote wider usage of the US dollar clearing system and the development of associated US dollar denominated products. We shall also continue to explore possible establishment of similar facilities for other currencies, such as the euro and the yen.

The HKMA is working with the PBoC Guangzhou Branch to expand the existing one-way link, which covers Hong Kong dollar cheques issued by banks in Hong Kong and presented in Guangdong (including Shenzhen), to a two-way link. The new link will speed up the processing of Hong Kong dollar cheques drawn upon banks in Guangdong (including Shenzhen) and presented in Hong Kong. The expanded link is expected to become operational in June 2002.

The HKMA will continue to develop the new linkage between the CMU and Euroclear, which is highly automated to minimise manual intervention during the settlement process.

In January 2002, the HKMA and China Government Securities Depository Trust & Clearing Co. Ltd. (CDC) agreed in principle to establish a link between the CMU and CDC's Government Securities Book-Entry System (GSBS). This link will enable Mainland financial institutions authorized to deal in foreign exchange transactions to hold and settle debt securities in Hong Kong. When the new link from the CMU to Euroclear is in place, the Mainland financial institutions will be able to hold and settle international debt securities lodged with

Euroclear through their accounts with the CMU. They will thus be able to settle in Asian time, and on a real-time DvP basis, transactions in debt securities denominated in US dollars, and prospectively in other currencies too if Hong Kong in due course develops, for example, euro and yen clearing systems. The provision of a secure and efficient settlement service will enhance risk management by Mainland investors engaged in the trading of cross-border debt securities.

The increasing importance of external links to Hong Kong's financial infrastructure has brought about the need for a universally applicable communication platform. With a view to fostering system inter-operability, the HKMA, in conjunction with the Hong Kong Association of Banks, will consider the wider application of SWIFT platform in Hong Kong's clearing and settlement systems. The HKMA will also continue to oversee the banking industry's project to pursue a new system of cheque imaging and truncation to replace physical paper cheques with electronic images throughout the clearing cycle.

With the advice of the Competition Policy Advisory Group, the Committee for Payment Systems and the Exchange Fund Advisory Committee, the HKMA will implement in phases the recommendations identified in the review of the retail payment systems in Hong Kong. We shall also continue working with the SFC and the HKEx to improve securities settlement in Hong Kong and to provide straight-through processing for both institutional and retail investors.

To promote local debt market development, the HKMA will continue to work closely with market participants and relevant entities in the Government, in particular by participating in the review of the rules and regulations concerning public offering of debt securities led by the SFC.

To streamline the EFBN programme, the HKMA is considering reducing the number of "non-benchmark" issues of EFBN, by establishing a re-opening mechanism through which the HKMA would sell an additional amount of an existing EFN instead of offering a new issue. The HKMA endeavours to strengthen its ties with the market participants, in order to solicit feedback and ideas on ways to enhance market development. As a first step, the HKMA has re-activated the EFBN Market Committee and Market Regulation Sub-Committee to invite more market participants to express their views and to take part in formulating policy.