Engineering staff provide maintenance services to ensure aircraft safety at Hong Kong International Airport. Aircraft maintenance in Hong Kong uses the most technically advanced methods available and generates more than 1.5 million working hours of maintenance every year.

MARKET INFRASTRUCTURE

A robust financial infrastructure is essential to Hong Kong's effectiveness as an international financial centre. One of the HKMA's key policy objectives is to promote the development of a safe and efficient financial market infrastructure in Hong Kong, with particular emphasis on its clearing and settlement arrangements for funds and securities. In addition to ensuring the safe and efficient operation of the existing systems in 2003, the HKMA worked on a draft law that will provide for a regulatory oversight regime for important clearing and settlement systems in Hong Kong.

OBJECTIVES

The HKMA is committed to promoting a safe and efficient financial market infrastructure, which is the foundation of all leading international financial centres. As well as overseeing the efficient operation of the interbank payment and clearing systems in Hong Kong, the HKMA is involved in developing infrastructure to accommodate the evolving needs of Hong Kong. The HKMA pays particular attention to fostering the development of the local and regional debt markets and clearing systems to facilitate cross-border transfers of funds and securities.

REVIEW OF 2003

Hong Kong dollar interbank payment system

Structure and characteristics

The Clearing House Automated Transfer System (CHATS) is Hong Kong's Real Time Gross Settlement (RTGS) system introduced in 1996. It provides Hong Kong with a safe and efficient interbank payment system with the following features:

(a) a robust and single-tier system in which all licensed banks maintain settlement accounts with the HKMA;

(b) interbank payments settled using central banking funds across the books with the HKMA;

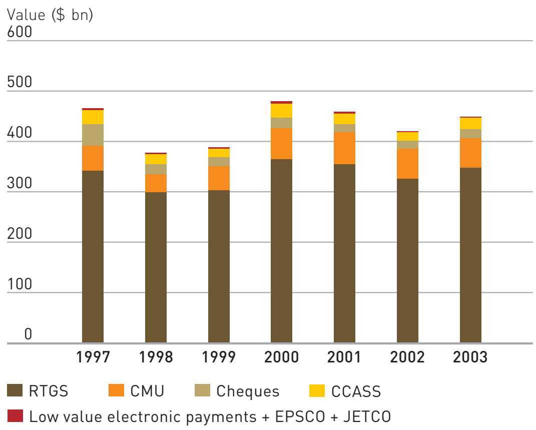
(c) intraday liquidity provided through highly automated intraday repo facility using Exchange Fund Bills and Notes;

(d) seamless interface with the Central Moneymarkets Unit (CMU – a debt securities clearing and settlement system operated by the HKMA) which makes it possible to offer real time delivery-vs-payment (DvP) and end-of-day DvP functions;

(e) a central queuing system for unsettled payment messages, which can only be cancelled, resequenced or amended by the paying banks; and

(f) a capability for developing payment-vs-payment (PvP) links with other payment systems to reduce settlement risk in foreign exchange transactions.

CHART 1 **Hong Kong dollar payment system daily average turnover**



Hong Kong Interbank Clearing Limited (HKICL), jointly and equally owned by the HKMA and the Hong Kong Association of Banks (HKAB), was formed in 1995. It serves as the system operator for CHATS and other related payment services. Its track record in the provision of Hong Kong dollar interbank payment services has been excellent and reliable. In 2003, the HKICL processed a daily average value of $348 billion (13,721 items in volume) CHATS transactions and $21.1 billion (138 items in volume) CMU secondary market transactions. The system also provided for the smooth settlement of the four daily bulk clearings – the money settlement of stock market transactions (CCASS), low-value bulk electronic payment items (EPSCO), cheques and low-value ATM transfers (JETCO) (Chart 1). Reflecting an increase in stock market and IPO activities, the volume of CHATS transactions and cheque turnover increased substantially in December 2003.

During the year, banks made good use of their Exchange Fund Bills and Notes to obtain interest-free intraday liquidity through conducting intraday repo transactions with the HKMA for settlement of interbank payments. On average, $37 billion worth of intraday repo transactions were done daily to facilitate payment flows. This represented about 35% of the $106 billion Exchange Fund paper held by banks in December 2003.

Cheque imaging and truncation

With the support of the HKMA, HKAB commissioned HKICL to implement the Cheque Imaging and Truncation System (CITS) on an industry-wide basis. This new system began operating in June 2003. In implementing CITS, the Bills of Exchange Ordinance was amended in March 2003 to allow banks to present electronic images of cheques for payment.

CITS has transformed the clearing process for cheques. Under CITS, low-value cheques are exchanged and cleared on the basis of an electronic presentation of cheque images and the relevant cheque data. This reduces the need for banks to physically deliver low-value cheques for clearing and settlement. Higher value cheques, and special items (such as suspicious cheques) regardless of their value, are still presented physically together with their images to the paying banks.

With cheque imaging and truncation, the data and images taken from cheques are cheaper to handle and store and can be retrieved almost instantaneously from the image database through computer workstations.

Hong Kong dollar clearing and settlement arrangements between Hong Kong and Guangdong

With the support of the HKMA and the Guangzhou branch and Shenzhen sub-branch of the People's Bank of China (PBoC), the joint clearing facilities for Hong Kong dollar cheques were fully implemented in June 2002. This has reduced the clearing time to two working days for Hong Kong dollar cheques drawn on banks in Hong Kong and presented in Guangdong, or vice versa. In 2003, around 253,000 cheques, with a value of $22.3 billion, were cleared through these joint clearing facilities.

The HKMA and Shenzhen sub-branch of the PBoC introduced a scheme in December 2002 for the Shenzhen Financial Electronic Settlement Centre to operate a Hong Kong dollar RTGS system in Shenzhen. The scheme marked another milestone in the development of cross-border financial infrastructure, and should expedite Hong Kong dollar payments between banks in Hong Kong and Shenzhen. In 2003 the scheme handled around 3,400 transactions, with a total value of over $18 billion. The scheme was further extended in November 2003 to enable banks to make US dollar RTGS payments between banks in Hong Kong and Shenzhen.

> Press Releases > Market Infrastructure category

Foreign currency payment systems

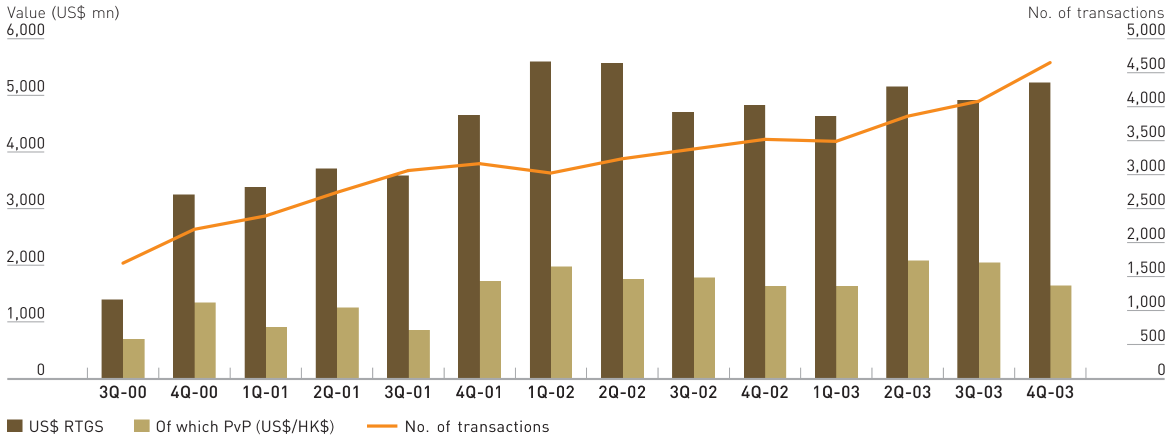
To enable efficient settlement of US dollar and euro transactions in Hong Kong during Asian business hours, the HKMA introduced a US dollar clearing system in Hong Kong in August 2000 and a euro clearing system in April 2003. The HKMA appointed The Hongkong and Shanghai Banking Corporation Limited and the Standard Chartered Bank as the settlement institutions for the US dollar and euro clearing systems respectively, with HKICL as the operator of these two systems (in addition to the Hong Kong dollar RTGS system).

These two foreign currency systems offer a range of advanced clearing functions similar to those of the Hong Kong dollar payment system to satisfy the needs of banks, corporate and individuals for real-time payment in the US dollar and euro in the Asian time zone. Users of these systems can achieve substantial benefits through streamlining their day-to-day operations and better management of liquidity.

US dollar clearing

The US dollar clearing system has operated efficiently since its implementation in August 2000. By the end of 2003 there were 67 direct and 160 indirect participants in the system, including 113 indirect participants from outside Hong Kong. Despite the slowdown in the local economy, turnover of the system grew steadily. In the fourth quarter of 2003, the system handled an average 4,600 transactions a day with a total value of over US$5.2 billion (Chart 2). In December 2003 an average of more than 2,600 US dollar cheques were processed daily, with a total value of over US$87 million.

CHART 2 US dollar RTGS turnover (daily average)



Euro clearing

The euro clearing system operated smoothly in its first year. By the end of 2003, there were 23 direct and 22 indirect participants, including nine indirect participants from outside Hong Kong. In the fourth quarter of 2003 the system handled an average 30 transactions a day with a total value of over €740 million.

Reduction in settlement risk

Delivery-versus-payment of debt securities transactions

Through seamless interfaces with the Hong Kong dollar, US dollar and euro RTGS systems, the CMU offers DvP settlement, during Asian business hours, of debt instruments denominated in these three currencies (Chart 3). The DvP mechanism substantially eliminates the settlement risk by ensuring that the payment in Hong Kong dollars, US dollars or euros for the debt securities transaction is undertaken simultaneously with, and conditional on, the securities transfer.

Payment-versus-payment settlement of foreign exchange transactions

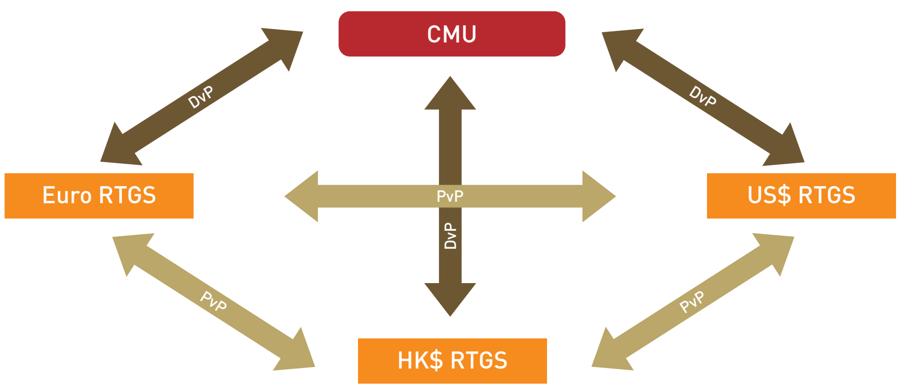
The interface between the Hong Kong dollar, US dollar and euro payment systems offers PvP settlements for US dollar/Hong Kong dollar, euro/US dollar and euro/Hong Kong dollar foreign exchange transactions (Chart 3). Use of PvP has become increasingly popular in Hong Kong and accounted for about a third of US dollar and euro RTGS turnover, by value, in 2003.

The PvP mechanism eliminates Herstatt risk (risk arising from settlement of the two legs of a foreign exchange transaction in different time zones) by ensuring that the two legs of a foreign exchange transaction are settled simultaneously. Liquidity management is also improved, as the traded currencies can be recycled immediately in their respective clearing systems. This should particularly benefit small and medium-sized banks and enable them to participate more actively in the foreign exchange market by being less constrained by counterparty credit limits.

CMU external linkages

The CMU provides an efficient clearing, settlement and depository service for both Hong Kong dollar and other international debt securities. Since its establishment in 1990, the CMU has developed external linkages with other regional and international central securities depositories.

CHART 3 **DvP and PvP clearing facilities for multiple currencies**



Through these links, overseas investors can hold and settle securities lodged with the CMU. In 1994 the CMU set up one-way in-bound links with Euroclear and Clearstream (formerly Cedel) and these links became two-way (both in-bound and out-bound) in November 2002 for Euroclear and January 2003 for Clearstream. The establishment of out-bound links allows investors in Hong Kong and other parts of Asia to hold and settle international securities directly through CMU members (most of which are banks in Hong Kong) in a safe and secure DvP environment. In addition to facilitating cross-border holdings and trading of international securities, the CMU offers Hong Kong and Asian investors a one-stop service to clear, settle and hold domestic and international securities through CMU members.

Formal oversight regime for the important clearing and settlement systems

The International Monetary Fund (IMF) undertook a Financial Sector Assessment Programme (FSAP) examination for Hong Kong in the second half of 2002, and published a summary report in June 2003. The IMF report concluded, among other things, that the market infrastructure in Hong Kong had all the necessary characteristics to support the efficient functioning of financial markets. The payment systems, in particular, were singled out as efficient and supportive of the smooth operation of the wholesale markets for money, foreign exchange and securities transactions.

However, the IMF recommended that consideration should be given to the introduction of statutory backing for the responsibilities currently assumed by the HKMA in overseeing the clearing and settlement systems in Hong Kong. It also recommended that, as a matter of priority, appropriate legislation should be introduced to ensure finality of settlements and to underpin netting systems.

In this connection, a Clearing and Settlement Systems (CSS) Bill was introduced into the Legislative Council on 10 December 2003 to provide for a statutory oversight regime and settlement finality for important clearing and settlement systems in Hong Kong.

The CSS Bill will also facilitate the admission of Hong Kong dollar transactions into the Continuous Linked Settlement (CLS) system – a global clearing and settlement system for cross-border foreign exchange transactions. Many major international currencies have already been admitted to the system (the Australian dollar, Canadian dollar, Danish krone, euro, Japanese yen, Norwegian krone, pound sterling, Singapore dollar, Swedish krona, Swiss franc and US dollar). As in other jurisdictions, the CLS system requires, as a pre-condition for entry, that the laws of Hong Kong provide for settlement finality for both transactions through the CLS and the underlying RTGS system in Hong Kong.

Under the proposed framework set out in the CSS Bill, the HKMA will be empowered to designate any clearing and settlement system to be subject to the oversight of the HKMA if the system is, or is likely to become, a system whose proper functioning is material to the monetary or financial stability of Hong Kong, or to the functioning of Hong Kong as an international financial centre. The Bill also provides for the granting of statutory protection from the insolvency regime to designated clearing and settlement systems to ensure settlement finality. The power to designate will not apply to any clearing and settlement system that is, or is operated by a company recognised as, a clearing house for the purpose of section 37 of the Securities and Futures Ordinance (SFO). This is to avoid regulatory overlap with the Securities and Futures Commission under the SFO.

Debt market development in Hong Kong

Gross issuance of Hong Kong dollar debt declined slightly in 2003, by 3% to $384 billion. Following a sharp increase of 28% in 2002, debt issuance by non-Multilateral Development Bank (MDB) overseas borrowers rose in 2003, by 17% to $86 billion. However, this was more than offset by a strong decline in domestic private-sector debt issuance, which fell by 15% and 38% for authorized institutions (AIs) and local corporates respectively. Debt issuance activity by the Exchange Fund, statutory bodies/government-owned corporations and MDBs also moderated.

Despite the fall in gross issuance, the value of outstanding Hong Kong dollar debt rose to $558 billion at the end of 2003 as total new issuance during the year outstripped maturing securities by $25 billion. Net issuance (gross issuance minus debt matured) by non-MDB overseas borrowers reached $42 billion in 2003: they replaced AIs as the largest debtor, accounting for almost one-third of outstanding Hong Kong dollar debt. At the same time, possibly reflecting ample liquidity in the banking sector and hence little need for external funds, AIs reduced their total outstanding debt by $11 billion to $138 billion.

In 2003 the overall market continued to deepen, with more structured products bearing yield enhancement features, and an increase in sales of longer-term debt securities. However, the demand for retail bonds weakened, in part because of a rebound in Hong Kong stock and residential property prices in the second half of 2003. It is estimated that a total of $12 billion of retail bonds and certificates of deposits were issued in Hong Kong in 2003, a decline of around 50% from the previous year.

The HKMA continued to work closely with market participants and the Government to promote the development of the local debt market. Frequent and regular dialogue was maintained with various industry bodies, including the Hong Kong Capital Markets Association and ACI – The Financial Markets Association of Hong Kong. The HKMA also participated in working groups and committees led by the Government to develop policy initiatives conducive to debt market development. Examples of these are the relaxation of maturity requirements and an increase in tax concessions for qualified debt securities, as announced by the Financial Secretary in his Budget Speech in March 2003.

Exchange Fund Bills and Notes programme

Efforts were made to improve the liquidity and credibility of the benchmark Hong Kong dollar yield curve by rebalancing the maturity mix of the Exchange Fund Bills and Notes (EFBN) portfolio. This was done through shifting issuance from short term Exchange Fund Bills to Exchange Fund Notes (EFN), streamlining the EFBN portfolio through reopening 5-year EFN for tender, promoting active participation of market makers in the EFBN market through regularly reviewing the performance of the market makers and enhancing pricing transparency of EFBN through publishing daily a set of official fixings on prices and yields.

> What's New > Daily Updates > Exchange Fund Bills and Notes Fixings

In helping to broaden the investor base of EFN and Hong Kong dollar debt securities in general, the HKMA introduced a one-year pilot scheme (the Retail Scheme) in August 2003 to facilitate retail investment in EFN. Under the Scheme, a portion of each quarterly issue of 2-year and 3-year EFN is set aside for non-competitive tender by retail investors through the Retail Exchange Fund Notes Distributors – the Bank of East Asia, DBS Bank (Hong Kong) and Wing Lung Bank. The first three non-competitive tenders, conducted in August, October and November 2003, allocated $241 million of EFN to retail investors. In addition to providing a non-competitive tender service, the Distributors also agreed to adhere to a number of unified standards in the distribution of EFN to retail investors in the secondary market, to increase pricing transparency for retail investors. A new section, "Exchange Fund Notes: Information for Investors", was also added to the HKMA website to educate retail investors on bond investment. A pamphlet on EFN was issued for distribution to the public to promote awareness of the retail EFN programme.

> Exchange Fund Notes: Information for Investors