



# Serving the **COMMUNITY** and Leading Changes

“ The Mortgage Insurance Programme had a record year in 2005. The Corporation’s initiative to promote the offer of fixed rate mortgage products also saw banks making similar offers to widen the choice of mortgage interest rates for homebuyers. The Corporation is on the lookout for new business opportunities to contribute to maintaining banking stability, promoting home ownership and facilitating the development of the local debt market.

”

2005 was undoubtedly a challenging year. The rising interest rate trend and the sizeable slowdown in property market transactions in the second half of the year have combined to create a difficult operating environment. Nonetheless, the Corporation managed to achieve satisfactory financial results through its activities in mortgage purchase, mortgage insurance, debt issuance and mortgage securitisation.

### PERFORMANCE HIGHLIGHTS

The major achievements include:

- Purchase of a total of HK\$2.9 billion of mortgage loans;
- Providing mortgage insurance coverage for newly originated mortgage loans totalling HK\$18.1 billion, an increase of 27% over 2004;
- Issuance of HK\$5.1 billion in debt securities and HK\$1 billion in mortgage-backed securities (“MBS”), maintaining its position for the fifth year as the most active corporate issuer in the Hong Kong dollar debt market;
- Maintaining an excellent asset quality with a combined ratio of 0.35% for 90-day overdue and rescheduled loans, compared with the industry average of 0.54%;
- Maintaining long-term credit ratings of A1/AA- for foreign currency and Aa3/AA- for local currency debt securities from Moody’s Investor Service, Inc. (“Moody’s”) and Standard & Poor’s (“S&P’s”), the same as those for the Hong Kong SAR Government.

These achievements resulted in the following satisfactory financial results in 2005:

- Profit after tax of HK\$600.6 million, which is HK\$63.4 million or 9.5% less than the record high in 2004;

- Return on assets improved from 1.3% in 2004 to 1.5% in 2005;
- Return on shareholder’s equity of 13.6%, a decrease of 3.5% over 2004;
- Capital-to-assets ratio remained strong at 12%, well above the minimum requirement of 5%;
- Cost-to-income ratio of 14.6%, significantly lower than the banking industry average of 41.9%.

### OPERATIONAL HIGHLIGHTS

During the year, the Corporation continued to make good headway in developing its core businesses as follows:

#### Mortgage Purchase

- Extension of Fixed Adjustable Rate Mortgage (“FARM”) programme in November 2005 with tenor up to 10 years to provide homebuyers a useful tool to hedge against a rise in interest rate;

#### Mortgage Insurance

- Expanding the coverage of self-employed non-professionals from 85% loan-to-value (“LTV”) ratio to 90% under the Mortgage Insurance Programme (“MIP”), providing homebuyers a higher degree of flexibility for mortgage financing;
- Further improvement in processing efficiency to attain a 1-day turnaround time for MIP applications in general;
- Increase in market penetration of the MIP from 8% in 2002 to 20% in 2005, which is evidence of wider public acceptance.

## Business Overview

Figure 1

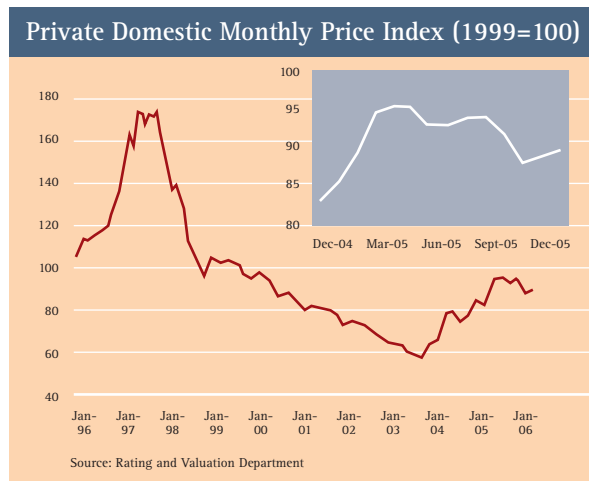
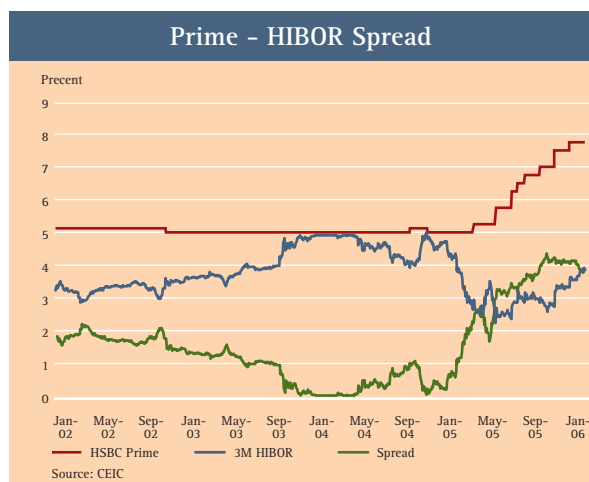


Figure 2



### Fund-raising

- Continuing to be the most active corporate issuer in the Hong Kong dollar debt market for five years in a row;
- Issuance of a total of HK\$5.1 billion plain vanilla and structured corporate debts with tenors ranging from 1 to 15 years to support mortgage purchase activities and redemption of maturing debts.

### Mortgage-Backed Securitisation

- Issuance of a new series of HK\$1 billion MBS to boost a total MBS issuance amount to HK\$11.2 billion since 1999.

### Mortgage Operations

- Launch of a new line of business operations in direct servicing;
- Implementation of the recommendations of process re-engineering review to revamp the treasury operations and complete the first phase of integration with SWIFT.

## MORTGAGE MARKET OVERVIEW

### Impact of rising interest rate trend on property prices/volume

According to the Private Domestic Price Indices (“PDPI”) published by the Rating and Valuation Department, property prices reached a peak of 95.4 in April 2005, 15% higher than end-December 2004 and 63% above the nadir in mid 2003 when the market was hard hit by SARS. However, the momentum gradually lost steam in the second half of 2005 as buying interests waned mainly as a result of more than 3% rise in the prevailing gross mortgage rate. Prices fell by nearly 7% from April to December 2005. The residential transaction volume shrank by about one-third from 62,000 cases in the first half of 2005 to only 41,000 cases in the second half of the year. On the whole, residential prices rose about 7% for the year (Figure 1). The total transactions of over 103,000 cases was the highest since 1997.

### Keen competition for mortgage loans continued

At the beginning of the year, as the Prime-HIBOR spread remained relatively wide (over 4% in January - Figure 2), the low cost of funds encouraged banks to compete aggressively for new mortgage business, partly in order to compensate for the shrinkage in portfolio due to fast mortgage loan prepayments. About 92% of the new mortgage loans approved in the first quarter of 2005 were priced at 2.5% or more below the Prime rate (Figure 4). This pricing level attracted many homebuyers to enter the market. Developers also geared up for the promotion of their new projects. On the back of active property

transactions in the primary and secondary markets, the amount of new mortgage loans made in the second quarter reached a record high since 1997 of HK\$52.8 billion (Figure 3).

**Change in market sentiment**

With the continued rise in interest rate, competition for mortgage loans became subdued in the second half of the year. The rising cost of funds made the banks more cautious and most of them tightened their lending policy by raising mortgage rate and cutting sweeteners such as the cash rebate offered to borrowers. The latter was also due to a circular issued by the HKMA on 28 February 2005 concerning cash rebate on residential mortgage loans. As a result, the share of newly approved loans priced at a rate of more than 2.5% below the Prime rate declined significantly from 92% in first quarter of the year to merely 4% in the last quarter (Figure 4). This tightening in the pricing of mortgage financing triggered a consolidation in the residential property market and affected the demand for mortgage loans accordingly. As a result, the amount of new mortgage loans shrank to HK\$23.1 billion in the last quarter of the year, 56% down from the record high of HK\$ 52.8 billion in the second quarter.

**Banks' concentration risk still high**

Based on the HKMA's Monthly Residential Mortgage Survey, for 2005 as a whole a total of HK\$143 billion new mortgage loans were originated. However, after deduction of prepayment estimated at HK\$115 billion and amortization at HK\$22 billion, the outstanding mortgage balance only gained HK\$6 billion to HK\$533.1 billion. From the perspective of the banking sector as a whole, mortgage loans account for 27.9% of the total loans for use in Hong Kong (Figure 5) as at December 2005. Taking into account loans for property development and investment, property-related loans amounted to HK\$976 billion and represented 50.6% of the total loan book of the banks. Although most banks in Hong Kong have a relatively strong capital base (with an average capital adequacy ratio of 14.9% in December 2005), the relatively high exposure to property-related lending indicates that a sharp downturn in the property market could have a significant impact on the overall stability of the banking system.

Figure 3

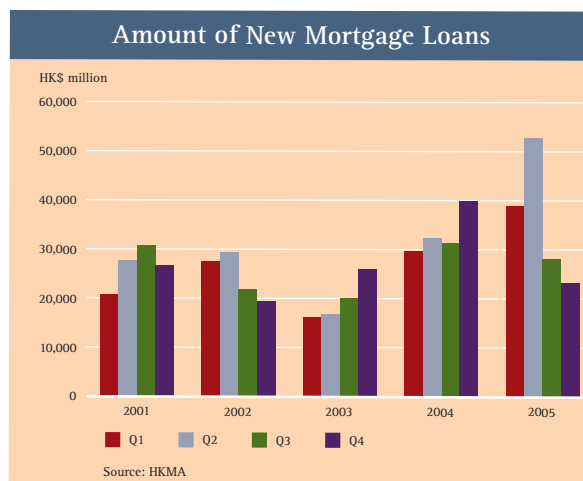


Figure 4

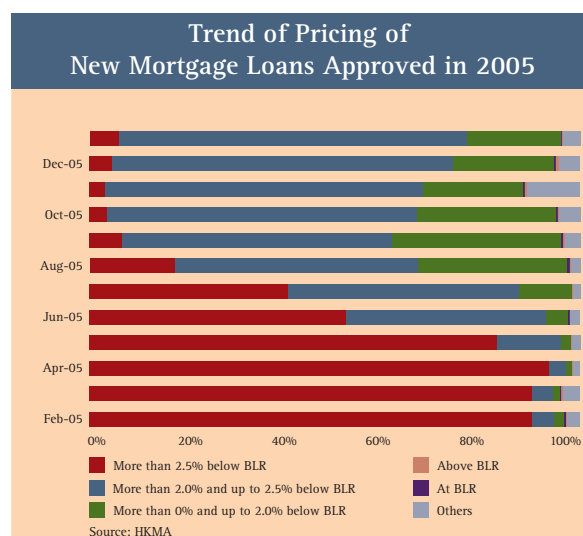
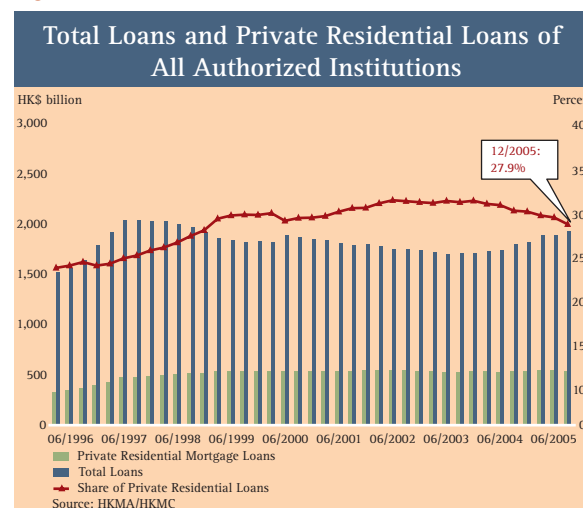
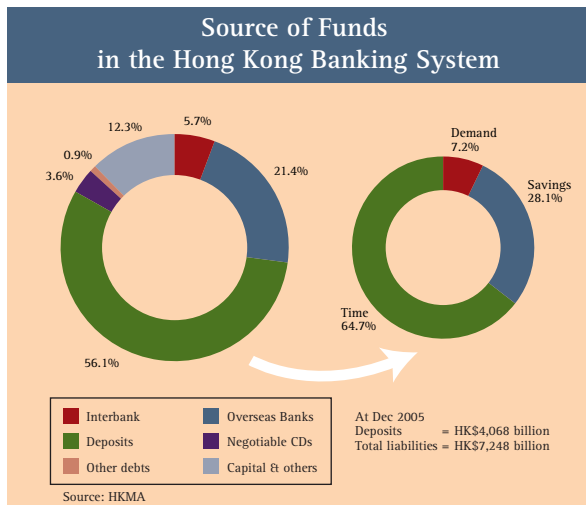


Figure 5



## Business Overview

Figure 6



contractual maturity (mostly 20 years or over). Although prepayment and refinancing will help to shorten the average maturity of mortgage loans to between five to seven years, the risk of a funding maturity mismatch is inherent within the banking system.

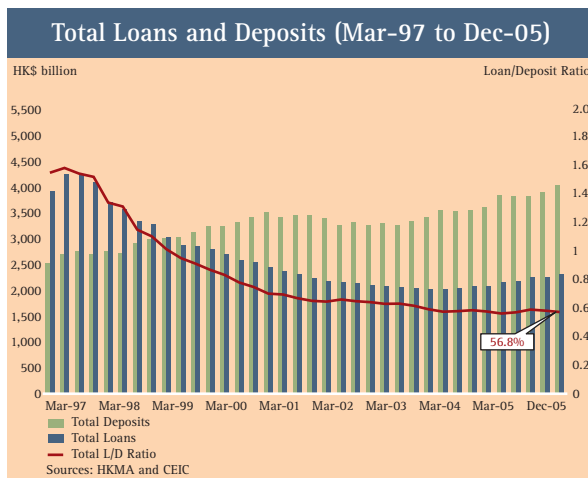
### Channel for the banks to address risks

Under the circumstances, the existence of a mature securitisation market would be very helpful. This will allow banks to off-load part of their mortgage portfolio, if required, in order to manage the above-mentioned risks effectively. However, the development of such a market has been very slow. Without a liquid secondary mortgage market, banks with high concentration in mortgage loans would have limited tools to manage the concentration risk. This is where the HKMC plays a critical role.

## MORTGAGE PURCHASE

The HKMC purchases mortgages and finds suitable opportunity to dispose of them through securitisation. Mortgage purchase represents the Corporation's core activity and interest income from the retained portfolio accounts for a majority of the Corporation's revenue. The continuous acquisition of mortgage loans gives rise to funding needs and is a prerequisite for the issuance of debt securities in order to help to promote the development of the local debt market.

Figure 7



### Funding maturity mismatch

Banks active in mortgage business usually have strong retail networks and they tend to rely heavily on customer deposits for their funding. The cost of funds for deposit is significantly lower than the interbank funding. On an overall basis, deposits contribute 56.1% of all AIs' funding. The duration of these deposits is usually rather short. At the end of 2005, 7.3% of the HK\$4.1 trillion deposits (in all currencies) consisted of demand deposits, which could be drawn on demand by cheque (Figure 6). Savings deposits have a slightly longer duration but could still be drawn upon at the discretion of the depositors. The majority of time deposits have duration of less than one year. In short, deposits as a funding source for banks generally mature within one year. In stark contrast, the mortgage loans in the books of the AIs generally have a long

In the past year the purchase of mortgage loans from banks by the Corporation was not sizeable due to two main factors. First, banks were still flush with liquidity and not keen to offload their mortgage loans. Although the recovery in the local economy revived the general demand for loans in the economy, with the 5.2% growth in deposits, the total loan-to-deposit ratio still declined to a low of 56.8% at the end of 2005 (Figure 7). Secondly, mortgage loan continued to be the banks' treasured asset on account of its good performance. The performance of loans in general benefited from the economic recovery, and the delinquency ratio (overdue more than 3 months) of all loans in the banking sector declined steadily from the peak of 6.63% seen in March 1999 to 0.69% in December 2005. That said, the performance of mortgage loans showed even greater resilience with

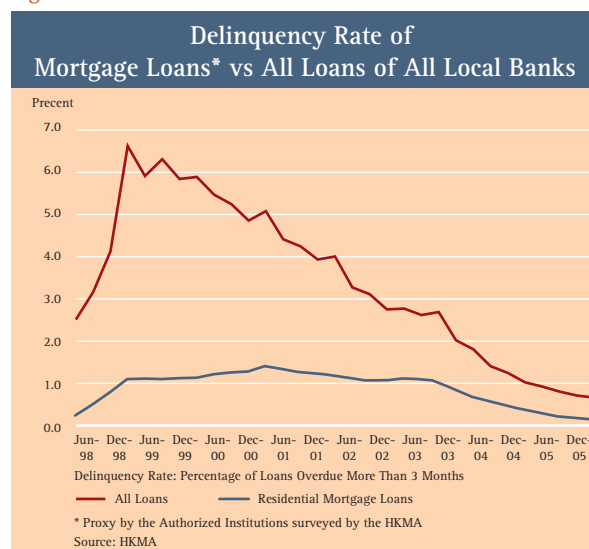
a delinquency ratio of 0.19% recorded in December 2005 (Figure 8).

Although the amount of mortgage loans purchased from banks has not been sizeable in recent years, the function of the HKMC to provide liquidity to the banks continue to be of great value to the maintenance of banking stability in normal times and in times of need. With the increased risk management capability of banks and the advent of the Basel II capital framework in January 2007, individual banks do approach the Corporation to sell off a certain portion of their mortgage portfolio for balance sheet or risk management purposes.

Apart from purchasing from banks, the Corporation also purchases from other sources. In December 2000, the HKMC expanded the range of Approved Sellers and has successfully acquired mortgage loans from the Hong Kong SAR Government, public sector housing agencies and property developers. In particular, the purchases from the Government and the housing agencies have helped to address their cash flow needs and created a win-win situation for both these entities and the Corporation. By virtue of this expansion, the Approved Sellers of the Corporation now comprise a wide range of institutions who can sell loans to the Corporation as and when necessary. This widened range of Approved Sellers provides a useful diversification in the sources of mortgage supply and addresses the problem of sole reliance on banks for supply of mortgage loans. With such a high degree of flexibility, the Corporation has veritably become the cornerstone of the secondary market by acting as an outlet for the vast majority of entities originating mortgage loans in the primary market.

The Corporation has also taken a lead in the development of new mortgage products in Hong Kong. In light of the rising interest rate trend since the start of 2005, the Corporation launched an extension under the Fixed Adjustable Rate Mortgage (FARM) Programme in November 2005 to offer mortgage loans with a fixed-rate period ranging from 1 to 10 years. The FARM Programme was pioneered by the HKMC in March 1998 for the purpose of promoting fixed-

Figure 8

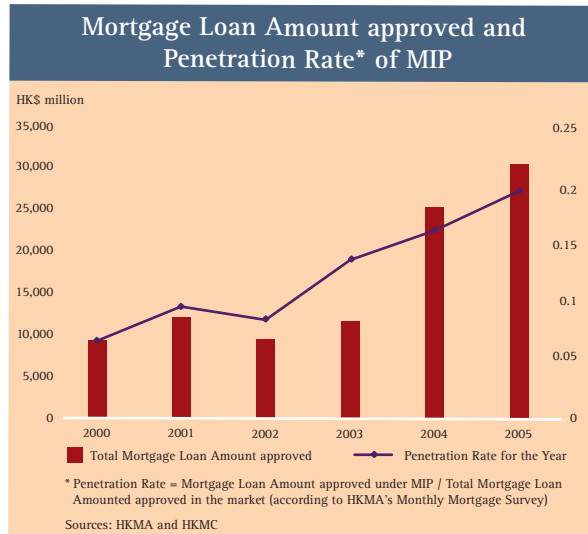


rate mortgage loans in Hong Kong. The main purpose of the programme is to provide an additional choice of mortgage financing to borrowers. The programme is designed to protect borrowers against adverse movement in interest rates. The new scheme offered an extension of the loan tenor under the FARM Programme from 5 years to 10 years. At the end of the fixed-rate period, borrowers had a choice of either re-fixing the mortgage rate for another term at the then prevailing fixed rate offered by the HKMC or converting the mortgage loan to a pre-committed floating rate (at a rate of Prime - 2.25%). The fixed rate product provides homebuyers with a tool to lock in their monthly mortgage payments and thus remain unaffected by any fluctuations in interest rate during the fixed-rate period.

As far as product innovation is concerned, during the year 8 the Corporation explored the possibility of introducing reverse mortgage to Hong Kong. A reverse mortgage is a special type of home equity loan that allows senior homeowners to convert built-up equity in their homes into cash while still being able to continue to live in the property. The product is especially helpful to those “asset-rich but cash-poor” senior homeowners as it enables them to make use of the equity in their homes to achieve better quality of living. The Corporation engaged the University of



Figure 9



Hong Kong to conduct a feasibility study on the acceptability and market demand for a reverse mortgage product in Hong Kong. In addition, we also discussed the business prospects of the product with a number of banks. It was generally concluded that at this moment in time the product might not attract sufficient interest amongst eligible senior homeowners. Hence, after deliberation, the Corporation decided to shelve the introduction of the product for the time being. This subject can be revisited as and when there is a good market demand for the product.

### MORTGAGE INSURANCE PROGRAMME

The MIP serves as a useful tool in assisting potential homebuyers to overcome the hurdle of coming up with a substantial down payment for the purchase of a property. From the banking industry perspective, the programme allows the banks to engage in higher LTV lending without incurring additional credit risk and jeopardising the stability of the banking system. In all, it creates a win-win situation for both homebuyers and banks. The total number of MIP applications grew by a healthy 10% from 17,300 cases in 2004 to around 19,000 cases in 2005. The aggregate loan amount increased by an even higher rate of 16.7% from HK\$ 33.2 billion to HK\$38.8 billion. This has

taken the total number of applications received since inception to 68,200 for a total mortgage amount of HK\$130 billion. The growth in the MIP compares favourably to the stagnant growth in the overall mortgage market. This can primarily be attributed to the strenuous efforts undertaken by the Corporation to expand the product range and eligibility criteria of the programme, plus also the continuous improvement in servicing quality, in particular the turnaround time for loan approval.

Over the years the MIP has gained increasing public acceptance and firmly established itself as an integral part of the mortgage financing scene in Hong Kong. Its penetration rate rose from 7% of all new mortgage loans approved as a whole in 2000 (the first full year the MIP was in force) to 20% in 2005 (Figure 9). By comparison, the penetration of mortgage insurance in the U.S., a mature market which has taken a few decades to develop, is around 30%. Since its inception in 1999, the MIP has assisted nearly 35,000 homebuyers to achieve the dream of homeownership.

In the past year, the Corporation undertook the following major steps to further enhance the features of the MIP:

- Expansion in Eligibility Criteria

The increasing popularity of the programme is achieved primarily through continuous product innovation, plus constant efforts in fine-tuning the programme's eligibility criteria in response to market demand. Given the short history of mortgage insurance in Hong Kong, the Corporation has always adopted a gradual and prudent approach in new product development. This approach has proven to be effective and the range of products under the programme has now been enriched to accommodate the varying needs of a wider range of borrowers, without sacrificing prudent risk management or creating noticeable adverse effects on the performance of the loans under coverage. The table below

summarises key MIP product development in the second half of 2004 and in 2005 (Figure 10). Looking forward to the future, the Corporation will continue to take steps to expand the programme with a view to enabling more homebuyers to benefit from the use of mortgage insurance.

Figure 10: Recent MIP Product Development

2H 2004	
July	Launch of 95% LTV product (for loan size up to HK\$5 million)
November	Increase in maximum loan size for 95% LTV up to HK\$8 million
December	Cash-out refinancing mortgages with LTV up to 85%
December	Maximum combined age of property and loan tenor of up to 60 years
2005	
January	Increase of maximum LTV ratio to 90% (for both first Legal charge and equitable mortgage) for self-employed non-professional borrowers
January	Increase of DTI ratio to 60% for borrowers with monthly income of not less than HK\$60,000
March	Increase in the maximum loan size for 95% LTV product to HK\$20 million and the maximum combined age of property and loan tenor to 75 years

- Training and Marketing

The Corporation has always kept participating banks closely informed of all new developments under the MIP and sought their feedback prior to launch. We have also proactively invited banks and other market players such as estate agents and referral companies to send their staff to attend seminars organised by the Corporation. These seminars serve the purpose of providing thorough training on product features and eligibility criteria so that the attendees are sufficiently equipped to market the new products to their customers.

- Improvement in Processing Efficiency

The Corporation has set up a dedicated MIP servicing team to provide prompt feedback to enquiries from the banks and the public. On-going training courses are also organised for back-office staff of the banks with a view to enhancing their knowledge of the MIP and the work flow. We have also reinforced the MIP

underwriting team in order to achieve a target turnaround time of one day. Going forward, we plan to further streamline the application/approval process so that the time required for loan underwriting work could be further reduced.

One of the key objectives of the HKMC is to promote homeownership. Despite the challenging economic environment over the past few years, the homeownership rate in Hong Kong has increased from 50% in 1997 to 57% at end-2005. The continual enhancement of the MIP's market penetration rate has contributed in no small way to the increase in homeownership rate. The Corporation will spare no efforts in continuing to work assiduously towards furthering this objective.

## FUNDING

Although a rising interest rate trend prevailed throughout the year, the Corporation managed to issue a sizeable amount of debt securities at reasonably low cost and maintained its status as the most active Hong Kong Dollar corporate issuer over the past five years. In 2005, our 29 debt issues for a total amount of HK\$5.1 billion financed our mortgage purchase activities and redemption of maturing debts. At the end of 2005, the Corporation had a total outstanding debt amounting to HK\$28 billion.

The Corporation has two debt issuance programmes which allow the issuance of debt securities in an efficient and effective manner.

### Debt Issuance Programme

The Debt Issuance Programme (DIP) is the HKMC's major platform for raising funds – over 80% of our debt issues were offered under this programme. The DIP was established in July 1998, targeting institutional investors in the Hong Kong dollar debt market. It was set up with an initial programme size of HK\$20 billion which was subsequently increased to HK\$40 billion in 2003. The structure of the DIP is similar to that of a Euro Medium Term Note Programme, under which plain vanilla and, structured debts and transferable loan certificates can be issued in a flexible and efficient manner. During 2005, the Corporation drew down altogether 28 DIP debt issues



## Business Overview

for a total amount of HK\$4.5 billion. At the end of 2005, the total outstanding amount of DIP debt securities was HK\$21.8 billion.

### Retail Bond Issuance Programme

The Corporation successfully pioneered a new offering mechanism for the retail bond market in Hong Kong in November 2001. To further spur the solid development of the retail bond market, the Corporation established a HK\$20 billion Retail Bond Issuance Programme (RBIP) and made a debut issue in June 2004. Under this programme, banks acting as Placing Banks use their retail branch networks, telephone and electronic banking facilities to place debt securities issued by the Corporation to retail investors. To ensure that the bonds held by retail investors can be sold at any time before maturity, the Placing Banks for our retail bonds have committed to making firm bid prices for the bonds in the secondary market.

The retail bond issue launched by the Corporation in 2005 attracted participation by 17 Placing Banks. The Placing Banks altogether boasted a network of as many as 850 branches and also set up telephone and electronic facilities to accept retail investors' applications. An aggregate amount of HK\$625 million was raised through two HK\$ tranches and two US\$ tranches in this issue. This was also the Corporation's first issuance of foreign currency bonds for the purpose of diversifying our funding sources. The retail bond issue has brought the total amount of HKMC's retail bonds issued to HK\$11 billion since 2001. At the end of 2005, the total outstanding amount of retail bonds issued by the Corporation stood at HK\$5.2 billion.

As one of Hong Kong's most active bond issuers to facilitate the development of the debt market, the HKMC will continue to issue debts in both institutional and retail markets. This will not only help to broaden the Corporation's funding base but also provide institutional and retail investors with high-quality debt instruments to satisfy their need for portfolio diversification and yield enhancement.

### Credit Ratings

The Corporation's ability to attract investors to invest in our debt securities is underpinned by the strong credit ratings accorded by Moody's and S&P's. After the annual surveillance in May and June 2005 respectively, the credit rating agencies reaffirmed the Corporation's credit ratings (the same as those of the Hong Kong SAR Government) and stable outlook.

Credit Ratings of the HKMC				
	Moody's		S&P's	
	Long-term	Short-term	Long-term	Short-term
Foreign currency (outlook)	Aa3* (stable)	P-1 N/A	AA- (positive)*	A-1+ N/A
Local currency (outlook)	Aa3 (stable)	P-1 N/A	AA- (positive)*	A-1+ N/A

(\* Note: S&P's revised the outlook to positive from stable on 18 April 2006 and Moody's upgraded the long term foreign currency to Aa3 from A1 on 25 May 2006)

Subsequently, on 20 July 2005, in line with the upgrade of the credit ratings of the Hong Kong SAR Government, S&P's upgraded the long-term foreign currency rating of the Corporation from "A+" to "AA-" and the short-term rating to from "A-1" to "A-1+".

The credit rating agencies have made very positive comments on the credit standing of the HKMC. The following comments are extracts from their credit rating reports in 2005:

#### Moody's

"The baseline credit assessment of 3 (on a scale of 1 to 6, where 1 represents lowest credit risk) is underpinned by HKMC's unique franchise in Hong Kong, flexible business model, professional and prudent risk management, solid financial fundamentals and strong management team."

"Its asset-liability management is well developed within the constraints of the local markets in terms of the availability of tools and long-term funding. HKMC's ability to assess and manage risk has resulted in levels well within the Corporation's own guidelines and, in some cases, superior to some of its larger international peers."

“HKMC had demonstrated a strong ability to secure funding, even when liquidity in the system shrank during unexpected circumstances.”

“HKMC adopted a Corporate Governance Code in December 2004 so as to ensure staff adheres to the best practices in corporate governance. Moody’s is confident that HKMC will continue to function at the highest possible international standard.”

### S&P’s

“The ratings also reflect HKMC’s solid capital base, good asset quality, satisfactory profitability, well-managed liquidity, and strong financial flexibility.”

“The quality of HKMC’s residential mortgage portfolio is good, as reflected by its low ratio of non-performing assets to gross loans and securitized assets.”

“HKMC’s liquidity is well managed. The Corporation maintains a reasonably good level of liquid assets in the form of marketable debt securities, and cash and bank deposits maturing within 12 months.”

“Outlook: HKMC is expected to continue to benefit from its market position as the major purchaser of residential mortgages in Hong Kong, its strong financial profile, and its implied support from the government of the HKSAR.”

### Mortgage-Backed Securitisation

The Corporation has established two mortgage-backed securitisation programmes for issuance of MBS in an efficient and effective manner. These two programmes, the Guaranteed Mortgage-Backed Pass-Through Securitisation Programme and the Bauhinia Mortgage-Backed Securitisation Programme, were the first-ever securitisation programmes set up in the Hong Kong debt market.

MBS are powerful financial instruments that can channel long-term funding from the debt market to supplement the need for the long-term financing generated by mortgage loans. Banks and financial institutions can make use of MBS to manage risks

inherent in mortgage loans such as credit, liquidity, interest rate and asset liability maturity mismatch. A deep and liquid MBS market can help to enhance the development of an efficient secondary mortgage market and further promote Hong Kong as an international financial centre.

### Guaranteed Mortgage-Backed Pass-Through Securitisation Programme

This first MBS securitisation programme of the HKMC was established in October 1999 and targeted at banks that did not just want to offload mortgage loans but also wished to enjoy the benefits of holding MBS guaranteed by the HKMC.

The back-to-back structure under this programme allows the HKMC to acquire mortgage loans from a bank and then sell the mortgage loans directly to a bankruptcy remote special purpose entity (“SPE”). The SPE in turn issues MBS to the bank as investor of the security. Through this back-to-back exercise, the bank can convert illiquid mortgage loans into liquid MBS. Furthermore, as far as capital adequacy requirement is concerned, the MBS guaranteed by the HKMC are assigned a 20% risk asset weighting under the Banking Ordinance as opposed to 50% for mortgage loans, thereby allowing the banks to utilise their capital more efficiently. Since the inception of the programme, four series of MBS for a total amount of HK\$2.8 billion have been issued.

### Bauhinia Mortgage-Backed Securitisation Programme

The Bauhinia Mortgage-Backed Securitisation Programme established in December 2001 is a US\$3 billion multi-currency mortgage-backed securitisation programme. The programme provides a convenient, flexible and cost-efficient platform to the HKMC for the issuance of MBS with various product structures, credit enhancement and distribution methods. MBS issued under the Bauhinia Mortgage-Backed Securitisation Programme have the trading and settlement characteristics of a eurobond. Trading of the MBS in the secondary market is therefore made more convenient and efficient.

## Business Overview

Since the inception of the Bauhinia Mortgage-Backed Securitisation Programme, the Corporation has successfully securitised HK\$8.4 billion mortgage loans through four public issues and one private placement issue. The debut Bauhinia MBS issue with a size of HK\$2 billion was done in March 2002. The second issue of HK\$3 billion done in November 2003 was the largest ever Hong Kong dollar denominated residential MBS. The third public issue of HK\$2 billion, split into two portions for institutional and retail investors respectively, was done in November 2004. This was the first time in the whole of Asia that retail investors were given the opportunity to invest in MBS. The fourth MBS issue under the Bauhinia Programme of HK\$1 billion was done in November 2005.

### RISK MANAGEMENT

Prudent risk management is a fundamental and integral part of the HKMC's operations and one of the crucial factors in sustaining the growth in corporate earnings and profits. Over the years, the Corporation has continually made refinements and now possesses a robust and time-tested risk management framework as described below. The five major risk areas facing the HKMC comprise credit risk, interest rate risk, liquidity risk, currency risk and operational risk.

#### a) Credit Risk

Credit risk is the primary risk exposure for the HKMC. It represents the risk of default of loan borrowers or other counterparties and that amounts owed cannot be fully recovered.

The credit quality of the HKMC's retained mortgage portfolio has all along remained consistently good, even with the rapid growth of the portfolio over the past few years. The delinquency ratio for the retained portfolio as a whole (including mortgage loans securitised with the Corporation's guarantee) was 0.22% as at December 2005, compared with 0.36% as at December 2004. If rescheduled loans are included, the combined ratio of 0.35% compared favourably with the combined ratio of 0.54% for the banking industry as a whole. This bears testimony to our strong emphasis on combining loan growth with prudent risk management.

At the heart of the credit risk management framework are two committees, the Credit Committee and the Transaction Approval Committee.

#### Credit Committee

The Credit Committee is vested with the task of setting the Corporation's overall credit policies and standards, notably for mortgage purchase and insurance, which are benchmarked against those adopted by the banking and insurance industries. The Committee makes recommendations to the Board for the approval of such policies as appropriate. It oversees the exercise of approval authority to accept applications to become Approved Sellers/Servicers under the Mortgage Purchase Programme and Approved Reinsurers under the MIP, the setting and monitoring of risk exposure limits for business counterparties and the making of recommendations to Senior Management on appropriate follow-up actions.

#### Transaction Approval Committee

The Transaction Approval Committee is responsible for assessing the credit risks and the terms and conditions for new products under the areas of mortgage purchase, mortgage insurance and MBS, taking into consideration the latest market conditions and business strategies. The Committee also conducts in-depth analyses of potential transactions for internal approval, prior to their submission to Executive Director for authorization where necessary.

Both Committees are chaired by the CEO and its members include the Senior Vice President (Finance), the Senior Vice President (Operations), the General Counsel and senior staff of the Operations Division and the Finance Division.

To address credit risk effectively, the Corporation adheres to a four-pronged approach to maintain the asset quality of its mortgage loan and MIP portfolios:

- Careful selection of Approved Sellers;
- Prudent mortgage purchasing criteria and insurance eligibility criteria;

- Effective due diligence review process; and
- Adequate protection for higher-risk mortgages or transactions.

#### Careful selection of Approved Sellers

The HKMC conducts a detailed due diligence assessment of a potential seller of mortgage loans prior to its appointment as an Approved Seller/Servicer. The assessment covers a broad range of credit-related matters, focusing primarily on the seller's mortgage loan underwriting policies, historical delinquency experiences and loan servicing capabilities. Once approved, the Approved Seller/Servicer is subject to periodic reviews.

#### Prudent mortgage purchasing and insurance eligibility criteria

The HKMC adopts prudent mortgage purchasing criteria to restrict its purchases only to mortgages secured by owner-occupied properties. The borrowers' repayment ability is also carefully evaluated by using key indicators such as debt-to-income ratio (normally less than 50%) and exposure to outside debts. Other relevant criteria are in line with best market practices adopted by the banking industry. For mortgage insurance, prudent eligibility criteria and underwriting guidelines are implemented strictly in line with the agreement reached with the Approved Reinsurers on different MIP products.

#### Effective due diligence process

As an integral part of the risk management framework, the HKMC conducts due diligence review on a sample of acquired mortgage loans both before and after their purchase to ensure compliance with the Corporation's mortgage purchasing criteria.

#### Adequate protection for higher-risk mortgages

For products involving a higher degree of credit risk such as top-up loans, the HKMC has established credit enhancement arrangements such as repurchase warranties or reserve funds in order to mitigate the additional credit risk associated with these loans.

#### b) Interest Rate Risk

Net interest income is the predominant source of the Corporation's earnings. It represents the excess of interest income from the HKMC's retained mortgage portfolio, cash and debt investments over its interest expenses on short and long-term borrowings. Interest rate risk arises when changes in market interest rates affect the income and expenses derived from the asset-liability portfolio.

The primary objective of interest rate management is therefore to limit the potential adverse effects arising from interest rate movements on interest income/expenses and, at the same time, achieve a stable growth in earnings. The interest rate risks faced by the Corporation are threefold.

##### Interest rate mismatch risk

Interest rate mismatch risk is the most significant type of interest rate risk affecting the HKMC's net interest income. It arises mainly as a result of the differences in the timing of interest rate re-pricing for the Corporation's interest-earning assets and interest-bearing liabilities. Interest rate mismatch risk is most evident in the retained mortgage portfolio where the majority of the loans are floating-rate loans benchmarked against the Prime rate or Hong Kong Interbank Offered Rate (HIBOR), whilst the majority of our liabilities are fixed-rate debt securities.

The Corporation makes prudent use of a range of financial instruments such as interest rate swaps, interest rate swaptions, basis swaps, forward rate agreements and the issuance of MBS to manage the interest rate mismatch risk. The proceeds of the fixed-rate debt securities are generally swapped into HIBOR-based funds via interest rate swaps. Through the use of such swaps, interest expenses arising from the issuance of debt securities will be changed from a fixed-rate basis to a floating-rate basis in order to better match the floating-rate income from the mortgage assets.

## Business Overview

The Corporation also makes use of duration gap as an indicator to monitor and manage interest rate mismatch risk. Duration gap measures the difference in interest rate re-pricing intervals between assets and liabilities. The wider the duration gap, the higher is the interest rate mismatch risk, and vice versa. A positive duration gap means that the duration of assets is longer than that of the liabilities and represents a greater risk exposure to rising interest rates. On the other hand, a negative duration gap indicates a greater risk exposure to declining interest rates. Depending on the prevailing interest rate outlook and market conditions, the Corporation proactively re-balances the duration gap of our asset-liability portfolio under the guidance and supervision of the Asset and Liability Committee (ALCO). A cap of three months for the duration gap has been set by ALCO to limit the interest rate mismatch risk. Throughout 2005, the actual duration gap has been kept within one month, indicating that the Corporation is handling interest rate mismatch risk in a very prudent manner.

### Basis risk

Basis risk represents the difference in basis of the Corporation's interest-earning assets that are Prime-based and interest-paying liabilities that are HIBOR-based. There are limited financial instruments currently available in the market to hedge the Prime-HIBOR basis risk fully. In general, basis risk can only be effectively addressed when mortgage loan assets are based on HIBOR to match the funding base or when related risk management instruments become more prevalent or economical. Over the past few years, the Corporation has consciously adopted the strategy of acquiring more HIBOR-based assets and as at the end of 2005, about three-quarters of the Corporation's mortgage portfolio are HIBOR-based loans. As a result, the Prime-HIBOR basis risk for the Corporation has been substantially reduced. In addition, the issuance of Prime-based MBS and the use of average HIBOR swaps have also been deployed to mitigate the basis risk of the Prime-based portion of the Corporation's mortgage portfolio.

### Maturity mismatch risk

While the contractual maturity of a mortgage loan can go up to 30 years, the average life of a portfolio of mortgage loans is in reality much shorter. The average life will depend on the speed of scheduled mortgage repayments and unscheduled prepayments. Higher prepayment rates will shorten the average life of a portfolio of mortgage loans. In Hong Kong, prepayment occurs for two main reasons: (i) housing turnover - borrowers repaying their mortgages upon the sale of the underlying property; and (ii) refinancing - borrowers refinancing their mortgage loans to obtain lower mortgage rates.

The maturity mismatch risk can be more specifically analysed as reinvestment risk and refinancing risk. Reinvestment risk refers to the risk of a lower return from the reinvestment of proceeds received by the Corporation (from prepayment and repayment of mortgage loans). Refinancing risk, on the other hand, is the risk of refinancing liabilities at a higher level of interest rate. The Corporation is exposed to refinancing risk when it uses short-term liabilities to finance long-term mortgage assets.

Reinvestment risk is managed through the ongoing purchases of new mortgage loans to replenish the repaid mortgages in the retained portfolio and the investment of surplus cash in debt securities or cash deposits to fine-tune the average life of the overall pool of assets.

Refinancing risk is managed through the issuance of callable bonds and transferable loan certificates. The call option included in callable bonds and transferable loan certificates will allow the Corporation to adjust the average life of its liabilities to match more closely that of the overall pool of assets. In this regard, the Corporation has the flexibility of issuing debt securities on a broad spectrum of maturities ranging from 1 year to 15 years. This will again serve to adjust the average life of the overall liability portfolio in a



dynamic fashion. In addition, refinancing risk can be mitigated by adjusting the maturities of assets in the investment portfolio and off-loading mortgage assets through securitisation of mortgage loans as MBS.

### c) Liquidity Risk

Liquidity risk represents the risk of the Corporation not being able to repay its obligations (such as redemption of debt issuance) or to fund committed purchases of mortgage loans. Liquidity risk is managed through monitoring the actual inflow and outflow of funds on a daily basis and projecting longer-term inflows and outflows of funds across a full maturity spectrum.

The Corporation has successfully established well-diversified funding sources to support the growth of its business and the maintenance of a well-balanced portfolio of liabilities. The diversification allows us to pursue a strategy of funding business activities at the lowest possible cost whilst at the same time offering safeguards against the inability to raise funds in unfavourable market conditions. The funding sources currently comprise:

- (i) Shareholders' Capital: authorized capital of HK\$3 billion, of which HK\$2 billion is fully paid up. Accumulated shareholders' funds amounted to HK\$4.7 billion as at 31 December 2005;
- (ii) HK\$40 Billion Debt Issuance Programme: there are 6 Primary Dealers and 15 Selling Group Members which will underwrite and distribute debts to institutional investors under the DIP. The Transferable Loan Certificate Sub-Programme under the DIP provides a further diversification of funding sources and broadening of investor base;
- (iii) HK\$20 Billion Retail Bond Issuance Programme: this debt issuance programme has 19 Placing Banks which will assist in offering retail bonds to investors;

(iv) US\$3 Billion Bauhinia Mortgage-Backed Securitisation Programme: with a total of 8 Dealers, this multi-currency mortgage-backed securitisation programme permits the HKMC to originate MBS in the local and international markets;

(v) Cash and Debt Investment Portfolio: the Portfolio comprises cash and bank deposits, high-quality certificates of deposit, notes and MBS that can be readily converted into cash;

(vi) HK\$10 Billion Revolving Credit Facility: this is a commitment from the Exchange Fund to provide the Corporation with HK\$10 billion in revolving credit; and

(vii) Money Market Lines: the Corporation has procured money market lines from a large number of local and international banks for short-term financing.

### Asset and Liability Committee

ALCO is established with the CEO as Chairman, the Senior Vice President (Finance), the Senior Vice President (Operations), and senior staff of Treasury, Financial Control and Pricing, Credit and Risk Management Departments as members. ALCO performs the important task of managing the Corporation's asset-liability portfolio based on prudent risk management principles. Strategies on interest rate risk management, financing, hedging, investments are formulated by the Committee. A weekly meeting is held to review the latest conditions in the financial markets and the asset-liability portfolio mix.

## Business Overview

ALCO oversees the implementation of risk management and investment guidelines approved by the Board of Directors. The Treasury Department is responsible for monitoring financial market movements and executing transactions in the cash, derivatives and debt markets in accordance with the strategies laid down by ALCO. The Financial Control Department assumes a middle office role and monitors the compliance of counterparty and transactions risk limits.

### d) Currency Risk

Currency risk represents the impact of fluctuations in foreign exchange rates on the company's financial position and cash flows denominated in foreign currency. The Corporation manages its currency risk in strict accordance with the investment guidelines approved by the Board of Directors and under the supervision of ALCO which sets daily monitoring limits on currency exposure. So far, the Corporation has limited its foreign currency exposure to US dollar only.

### e) Operational Risk

Operational risk represents the potential loss as a result of the occurrence of certain internal or external operational activities. The HKMC seeks to minimise the possibility of such occurrence by maintaining a comprehensive system of internal controls and procedures. To ensure adequate compliance, the Corporation's key operating systems and processes are subject to regular audit and review by both internal and external auditors.

To reduce potential human errors, the HKMC applies extensive technology solutions to its business operations, including the use of the Internet. The Corporation has established a comprehensive disaster recovery plan and business continuity plan, including the establishment of an offsite back-up centre, to ensure that its information technology (IT) systems can continue operating even in the event of a core system's failure or other unexpected major disruptions. To cater for a contingency situation that restricts staff access to the office, arrangements have also been made for some staff to work from home to help maintain the functioning of the Corporation.

The Corporation completed a number of initiatives in 2005 as a further strengthening of the operational framework as follows:

- a) launch of a new line of business operations in direct servicing;
- b) implementation of the recommendations of the business process reengineering review performed in 2004 and revamp of the treasury operation flows;
- c) completion of the first phase of integration with SWIFT; and
- d) modification of systems to support the launch of new MIP and treasury products.

## NEW INFORMATION TECHNOLOGY

Automation of operational systems is the key to ensuring efficiency and accuracy in the Corporation's daily operations. Since inception, the Corporation has continuously been developing and upgrading various computer systems.

Following the recommendations in the Corporation's IT strategic plan, we successfully rolled out the new Mortgage Insurance Programme System ("MIPS") in May 2005. The system employs imaging technology to automate the handling of supporting documents for underwriting to significantly reduce the need for manual matching of supporting document and loan records. This shortens the processing time for mortgage insurance applications. With the implementation of the MIPS, operational efficiency and productivity of the mortgage insurance business have been substantially improved.

### Business Continuity Plan

To cater for the possible disruption arising at the time of the World Trade Organisation Ministerial Conference ("WTOMC") held in Hong Kong from 13 to 18 December 2005, the Corporation adopted a split-office arrangement during a two-week period. Three groups of staff worked in parallel during the period - one team worked at the disaster recovery site, another

group of colleagues worked from their homes whilst the majority of the staff remained working in the headquarters. The arrangement served to test the Corporation's ability to deal with unforeseen disruption in business continuity.

A detailed business continuity plan has also been formulated to ensure that the Corporation can continue its business under a variety of disaster scenarios.

## HUMAN RESOURCES

### Staffing

As the HKMC promotes the development of the secondary mortgage market, it attracts and also trains up professionals with expertise in its key business areas of mortgage purchase, mortgage insurance and debt issuance. Through system automation and process re-engineering, the Corporation maintains a lean and efficient workforce, notwithstanding the increase in the scope of purchase and the complexity of the products offered by the Corporation. The permanent establishment in 2005 was 117 and is expected to remain unchanged in 2006.

The Corporation continued to experience a high staff turnover rate of 16.3% in 2005, in particular for staff of the junior ranks.

### Training and Development

The HKMC devotes considerable training resources to equip its staff with professional knowledge and skills. During the year, the HKMC arranged a number of in-house and external courses to improve and enhance the managerial and technical skills of the staff. Courses were offered to cover mortgage-related issues, credit management, information technology, and management skills. A series of tailor-made customer service training and off-site team building workshops were arranged during the year. An in-house experience sharing session on interviewing technique was also held among different departments.

New staff attended an induction programme which gave them an overview of the Corporation's operations as well as their own area of work.



Team Building



Dress Casual Day

### Employee Relations and Staff Activities

As a caring employer, the HKMC continued to promote the health and emotional well-being of its staff. An Employee Support Programme was launched in August 2005 to provide counseling, consultation services and health seminars.

To further enhance two-way communication in the Corporation, the HKMC launched a Staff Suggestion Scheme in June 2005 to encourage staff's contribution of ideas for workplace improvement.

The HKMC Staff Club organised a number of well-received staff activities to enhance employee relationships and communication. Staff activities included hiking, visit to Mai Po Marshes Reserve and interest classes in Erhu and French. Sports activities included the HKMC's participation in the Public Organisation Challenge Soccer League, the Supervisory Cup Basketball Competition and the Badminton Friendly Game with other public organisations.



## Business Overview

The HKMC staff also participated in a number of charitable and fund-raising activities during the year. The HKMC Music Group performed and raised funds for the Salvation Army Shop for the Elderly. Donation campaigns were also organised for the Community Chest through the Dress Casual Day, the victims of tsunamis in South Asia and the sufferers of earthquake in Pakistan-India Border.

## OFFICE ADMINISTRATION

The HKMC continued to support and implement green office measures to make the office more environmentally friendly. Staff awareness of environmental issues was enhanced by increased use of electronic communications, and waste paper was collected for recycling. The HKMC also encouraged its staff to make suggestions for a greener office.

During the year, the HKMC stepped up efforts to review and strengthen its business continuity plan to handle unexpected or sudden disruptions to daily operations. Regular drills were organised for staff to be conversant with the activation of the back-up facilities, the contingency plans and communication arrangements in case of emergency.



HKMC Badminton Team



Bowling Competition



HKMC Charity Night



Erhu Interest Class

## 2006 OUTLOOK

For the core business of mortgage purchase, with the successful diversification of the sources of mortgage supply from Authorized Institutions to cover the Hong Kong SAR Government, public sector housing agencies and property developers, the HKMC has a higher degree of flexibility to respond to the changing environment in the mortgage market. We are also on the lookout for new products and business opportunities to enable the Corporation to continue to contribute to maintaining banking stability, promoting homeownership and facilitating the development of the local debt market.

Many banks in Hong Kong have a high concentration of property-related loans in their loan portfolio. Their inclination to offload mortgage loans has been limited in recent years. This is probably due to the relatively good performance of mortgage loans and the buffer provided by their capital base against potential credit risk. With the implementation of the new capital adequacy rules under the Basel II framework on 1 January 2007 and the increasing sophistication of

banks in their risk management approach, there may well be renewed interest from banks to be more active in managing their balance sheet exposure and reduce concentration risk as appropriate. The HKMC stands ready as a reliable liquidity provider and offers banks a convenient and proven avenue to offload mortgage loans through outright sale or securitisation.

The Corporation's Mortgage Insurance Programme provides a durable, level-playing field for banks to offer mortgages above 70% LTV. The Corporation will continue to take a lead in developing new mortgage insurance products to meet the needs of the market. The Corporation is working on access to the consumer credit data base to enhance the underwriting process so that more accurate credit assessment can be made. This will foster a healthy, long-term development of the mortgage insurance market that is in the interest of promoting home ownership.

As regards the development of the local debt market, the Corporation will continue to maintain its active profile in the market. The interest rate trend together with the likely abnormality of the US yield curve make the market environment even more challenging than 2005. Nevertheless the Corporation will continue to issue corporate bonds and securitise mortgage loans into MBS to fund its asset acquisition and debt redemption as well as to meet the needs of investors.



Staff Suggestion Scheme



Mai Po Marshes Visit