

# Monetary Stability

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The Hong Kong dollar exchange rate traded in an orderly manner in 2016 despite a turbulent external environment and higher US dollar interest rates. The money market continued to operate smoothly with ample interbank liquidity. Being highly resilient against various shocks, the Linked Exchange Rate System continued to serve as an anchor for Hong Kong's monetary and financial stability.

## OBJECTIVES

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

The Monetary Base (Table 1) comprises:

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

**Table 1**    **Monetary Base**

HK\$ million	31 December 2016	31 December 2015
Certificates of Indebtedness <sup>1</sup>	<b>407,795</b>	360,165
Government-issued currency notes and coins in circulation <sup>1</sup>	<b>12,000</b>	11,408
Balance of the banking system	<b>259,593</b>	391,343
EFBNs issued <sup>2</sup>	<b>962,579</b>	829,791
<b>Total</b>	<b>1,641,967</b>	1,592,707

1. The Certificates of Indebtedness and the government-issued currency notes and coins in circulation shown here are stated at Hong Kong dollar face values. The corresponding items shown in the balance sheet of the Exchange Fund in this Annual Report are in Hong Kong dollars equivalent to the US dollar amounts required for their redemption at the prevailing exchange rates on the balance sheet date. This arrangement is in accordance with the accounting principles generally accepted in Hong Kong.
2. The amount of EFBNs shown here is different from that in the balance sheet of the Exchange Fund in this Annual Report. In accordance with the accounting principles generally accepted in Hong Kong, the EFBNs held by the HKMA on behalf of the Exchange Fund in relation to its trading of the EFBNs in the secondary market are offset against the EFBNs issued, and the net amount is recorded in the balance sheet.

The stability of the Hong Kong dollar exchange rate is maintained through an automatic interest rate adjustment mechanism and the firm commitment by the HKMA to honour the Convertibility Undertakings (CUs). When the demand for Hong Kong dollars is greater than the supply and the market exchange rate strengthens to the strong-side CU of HK\$7.75 to one US dollar, the HKMA stands ready to sell Hong Kong dollars to banks for US dollars. The Aggregate Balance will then expand to push down Hong Kong dollar interest rates, creating monetary conditions that move the

Hong Kong dollar away from the strong-side limit to within the Convertibility Zone of 7.75 to 7.85. Conversely, if the supply of Hong Kong dollars is greater than demand and the market exchange rate weakens to the weak-side CU of HK\$7.85 to one US dollar, the HKMA will buy Hong Kong dollars from banks. The Aggregate Balance will then contract to drive Hong Kong dollar interest rates up, pushing the Hong Kong dollar away from the weak-side limit to stay within the Convertibility Zone.

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### REVIEW OF 2016

#### Exchange rate stability

After experiencing some volatility during the first two months of the year, the Hong Kong dollar exchange rate moved within a narrow range for the rest of 2016. The Hong Kong dollar weakened notably against the US dollar in early 2016, easing from 7.7510 on 4 January to 7.8196 on 20 January (Chart 1). The movements were in line with the normal functioning of the Linked Exchange Rate System (LERS) given widened negative spreads between the Hong Kong dollar and the US dollar interest rates following the US interest rate lift-off in December 2015. Other market-related factors, such as sell-off in the domestic equity market, less optimistic

outlook for the Mainland and Hong Kong economies, heightened volatility of the renminbi exchange rate, and general weakness in Asian currencies also dampened demand for the Hong Kong dollar. The Hong Kong dollar exchange rate regained some strength in February, underpinned by improved market sentiment, and traded within a narrow range of 7.753–7.776 from March onward despite market volatilities stemming from the Brexit referendum and the US presidential election. Weakening pressures on the Hong Kong dollar exchange rate arose briefly in May due to market expectation of US interest rate hike in the summer. Overall, the Hong Kong dollar exchange market continued to function normally throughout the year.

**Chart 1** Market exchange rate in 2016

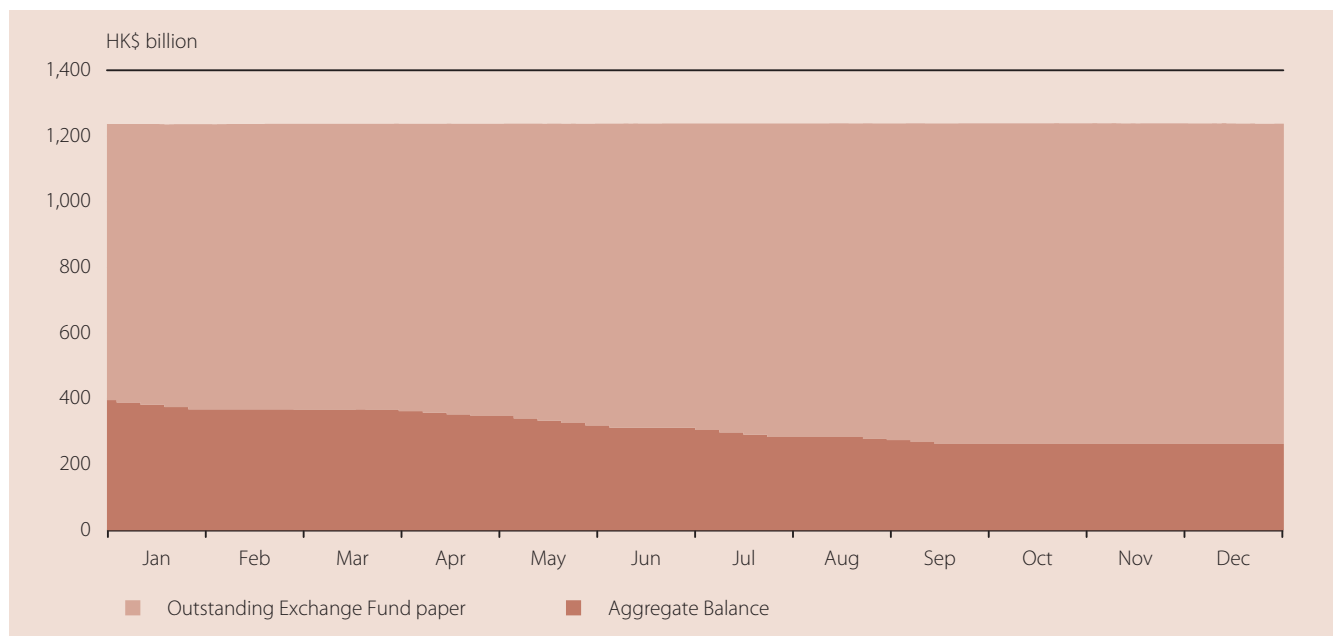


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As the CUs were not triggered, the total of the Aggregate Balance and outstanding EFBNs remained virtually unchanged at around HK\$1,222.2 billion throughout 2016 (Chart 2). During the year, the HKMA issued a total of HK\$132 billion of additional Exchange Fund Bills to meet banks' strong demand for liquidity management purpose, leading to a corresponding contraction of the Aggregate

Balance to HK\$259.6 billion at the end of 2016. The additional issuance of Exchange Fund Bills was consistent with Currency Board principles, as it represented a change in the composition of the Monetary Base with a shift from the Aggregate Balance to the outstanding EFBNs. The Monetary Base remained fully backed by foreign exchange reserves.

**Chart 2** Aggregate Balance and outstanding Exchange Fund paper in 2016



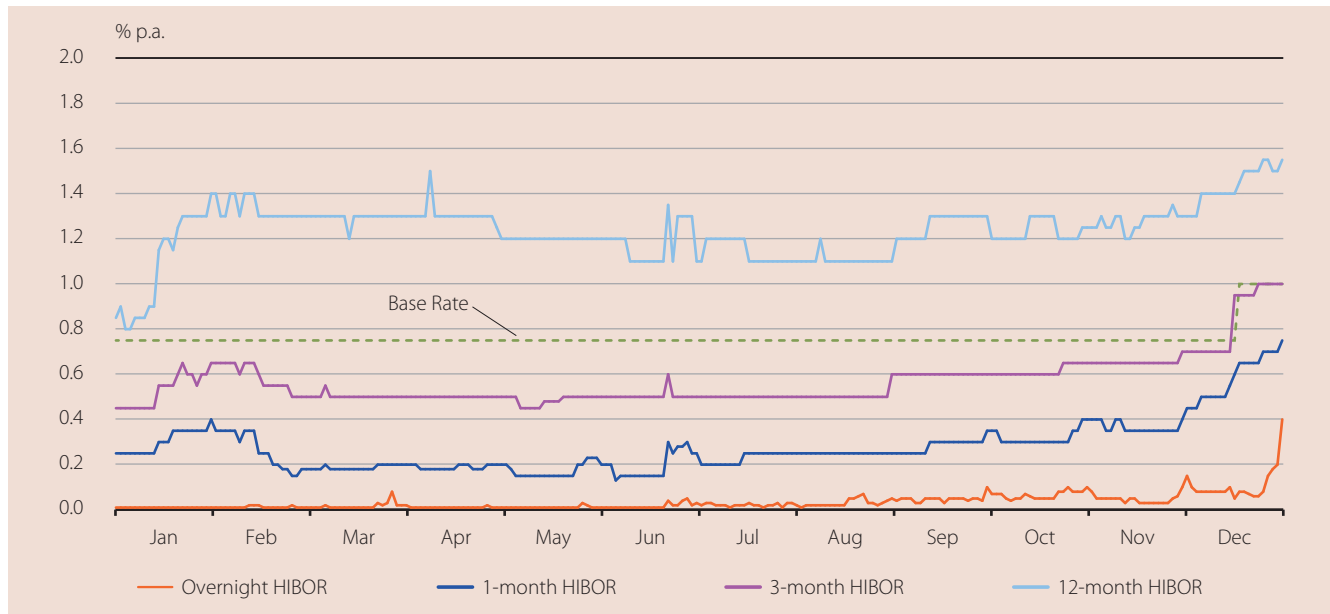
### Money market

The Hong Kong dollar interbank interest rates were relatively low in most of 2016 (Chart 3). After facing some upward pressures in January and February amid heightened financial market volatilities, the Hong Kong dollar interbank rates stabilised in March as the financial environment restored calm. During the second and third quarters, the Hong Kong dollar interbank rates remained largely stable despite concerns about the outcome of the Brexit referendum and US money market fund reforms. In the fourth quarter, the Hong Kong dollar interbank rates registered larger pick-ups, partly reflecting year-end funding demand, as well as a catch-up with the increases in the US dollar interbank rates. Nevertheless, the short-dated interbank rates mostly traded below the Base Rate in 2016.

On 15 December, the Base Rate was adjusted upward from 0.75% to 1.00% as the target range for the US Federal Funds Rate moved upwards from 0.25–0.50% to 0.50–0.75% on 14 December (US time). The adjustment of the Base Rate was in accordance with the revised formula announced on 26 March 2009, where the Base Rate is set at either 50 basis points above the lower bound of the prevailing target range for the US Federal Funds Rate or the average of the five-day moving averages of the overnight and one-month Hong Kong Interbank Offered Rates (HIBORs), whichever is the higher.

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**Chart 3 Hong Kong dollar interbank interest rates in 2016**



The Hong Kong dollar forward points recorded notable premiums in January, roughly tracking the movement of the Hong Kong dollar-US dollar interest rate spreads, and partly reflecting investors' currency hedging demand for their Hong Kong equity portfolio (Chart 4). The forward premiums started to decline in February. In line with the stabilisation in market conditions, the Hong Kong dollar forward points remained largely steady between March and November, before picking up again in December along with the narrowing of the Hong Kong dollar-US dollar interest rate spreads. Overall, Hong Kong's money markets operated smoothly and interbank liquidity remained ample. Discount Window borrowing was not active, amounting to only HK\$5.3 billion in 2016.

### The Linked Exchange Rate System

The LERS has continued to be a cornerstone of Hong Kong's monetary and financial stability over the past few decades, despite a series of regional and global financial crises. Amid heightened market volatilities in early 2016, there was renewed discussion among commentators about the weakening of the Hong Kong dollar and resemblance of the situation to the Asian financial crisis. To promote better understanding of the LERS, the HKMA explained the technical details of the LERS to the public and highlighted the robustness of Hong Kong's financial system against shocks.<sup>1</sup> The Government also reiterated its full commitment to the LERS. Stability in the foreign exchange and money markets further reinforced public confidence in the Government's commitment and the use of Hong Kong dollar as a means of payment and store of value. In its annual Article IV consultation with Hong Kong, the International Monetary Fund strongly endorsed the LERS as the best exchange rate arrangement for Hong Kong, as it is underpinned by a flexible economy, ample fiscal and reserve buffers, and strong financial regulation and supervision.

<sup>1</sup> For more details, see the inSight articles on "The Hong Kong Dollar Linked Exchange Rate System" and "Get a Full Grasp of the Situation and Stay Calm" published on 27 January and 1 February 2016 respectively.

## Monetary Stability

**Chart 4** Hong Kong dollar forward points in 2016

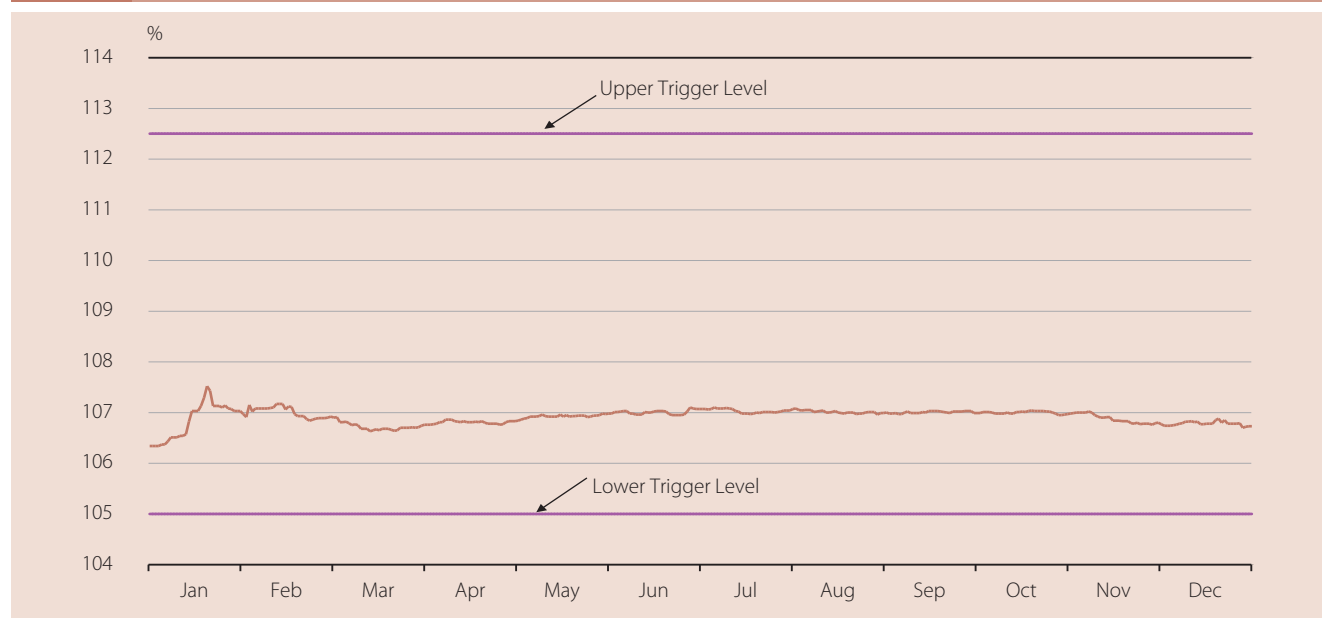


As a robust banking system is crucial to the normal functioning of the LERS, the HKMA continued to closely monitor banks' credit, liquidity and interest rate risk management and stress-test results, and strengthened its supervisory efforts on household, corporate, and Mainland-related lending to ensure the resilience of the banking sector. As the Hong Kong dollar interbank rates have started to pick up amid the US monetary policy normalisation, the HKMA reminded the public to stay vigilant and be well-prepared for potential volatilities and risks.

To improve the transparency of the Currency Board Account, a specific portion of Exchange Fund assets has been allocated to back the Monetary Base since October 1998. The Backing Ratio (defined as the Backing Assets divided by the Monetary Base) moved within a narrow range of 106.3–107.5% during 2016, without touching the Upper or Lower Trigger Level. The ratio closed at 106.7% on 31 December (Chart 5). Under the LERS, while specific Exchange Fund assets have been designated for the Backing Portfolio, all Exchange Fund assets are available to support the Hong Kong dollar exchange rate. In the event of abrupt shocks, the sizeable amount of financial resources of the Exchange Fund provides a powerful support to Hong Kong's monetary and financial stability.

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**Chart 5** Daily movement of the Backing Ratio in 2016



### Research

The Currency Board Sub-Committee (CBC) of the Exchange Fund Advisory Committee monitors and reviews issues relevant to monetary and financial stability in Hong Kong. In 2016, the CBC considered issues including Hong Kong's growth synchronisation with Mainland China and the US, external demand for the Hong Kong dollar currency, and financial conditions indexes for Hong Kong. Records of the CBC's discussions on these issues and the reports on Currency Board operations submitted to the CBC are published on the HKMA website.

The Hong Kong Institute for Monetary Research (HKIMR) continued to sponsor research in the fields of monetary policy, banking and finance. In 2016, the HKIMR hosted 18 research fellows and published 20 working papers.

The HKIMR organised six international conferences and workshops during the year. The major events included:

- ◆ The Seventh Annual International Conference on the Chinese Economy in January, under the title "The Growing Influence of China in the World Economy". Eight research papers were presented at the conference, covering a wide variety of issues including rebalancing and potential for growth in China, economic spill-overs from China, global and regional influence of renminbi, and carry trade dynamics and information flow between renminbi markets.
- ◆ The HKUST-Keio-HKIMR Conference on Exchange Rates and Macroeconomics jointly organised with the Hong Kong University of Science and Technology and Keio University in March. The conference covered many different economic issues, including global imbalances, exchange rate dynamics, capital controls and monetary policies.

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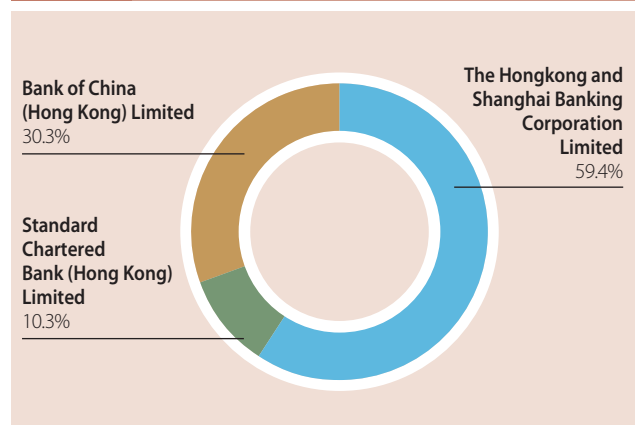
- ◆ The Real Estate and Financial Stability Conference jointly organised by the HKIMR and the City University of Hong Kong in August. The conference featured papers on topics covering age, demographics and the housing demand, the effect of large investors on asset quality, Hong Kong's housing price dynamics, housing market affordability, the impacts of mortgage regulations on households' life-cycle housing decisions and the residential property market in Mainland China.
- ◆ The HKMA and the Bank for International Settlements joint conference on Asia-Pacific Economies in October. The theme of the conference was "The Resilience of the Regional Economies in a Turbulent Global Environment". The conference brought together senior policy makers from various central banks, leading academics and experts from international organisations and the private sector to share their views in an interactive roundtable discussion on the most pressing issues facing the Asia-Pacific economies. The conference examined a wide range of issues including financial imbalances in Asia, capital flows, spill-overs of Mainland's slowdown to the rest of the region, and the implications and prospects for potential growth in Asia.

The HKIMR also hosted its 14th HKIMR Summer Workshop in August and the 14th HKIMR Conference on the Mainland Economy in September which addressed issues on the asset quality of Mainland banks and financial stability. The conferences and workshops were attended by participants from academia, the financial services industry and global central banks. In addition, the HKIMR held 21 public seminars during the year covering a broad range of economic, monetary and financial issues.

### Notes and coins

At the end of 2016, the total value of banknotes (notes issued by note-issuing banks) in circulation was HK\$407.8 billion, an increase of 13.2% from a year earlier (Charts 6, 7 and 8). The total value of government-issued notes and coins in circulation amounted to HK\$11.8 billion, up 5.3% (Charts 9 and 10). Among the government-issued notes and coins, the value of HK\$10 notes in circulation was HK\$4.4 billion, of which 86% were polymer notes.

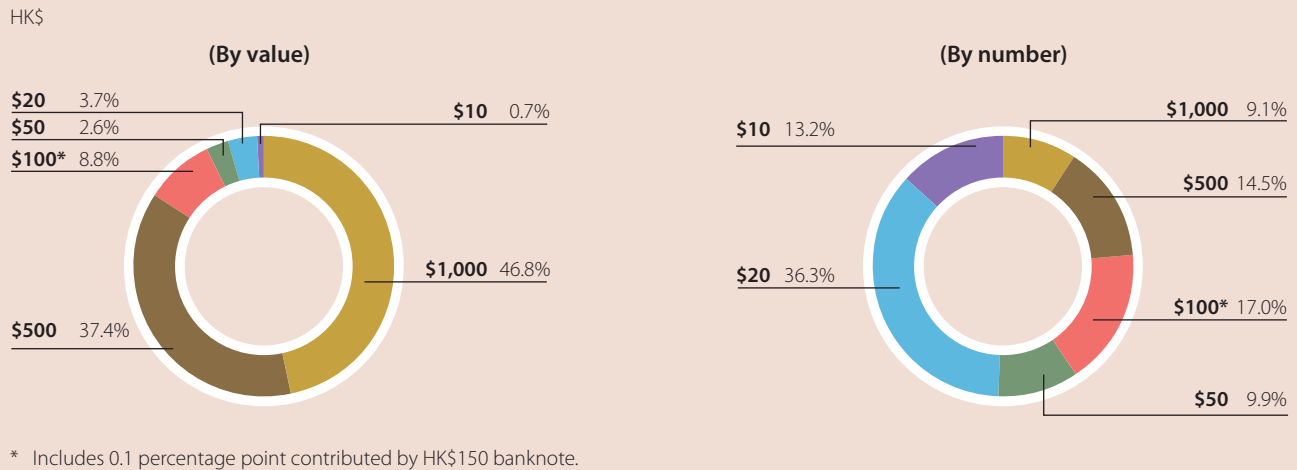
**Chart 6 Banknotes in circulation by note-issuing banks at the end of 2016**



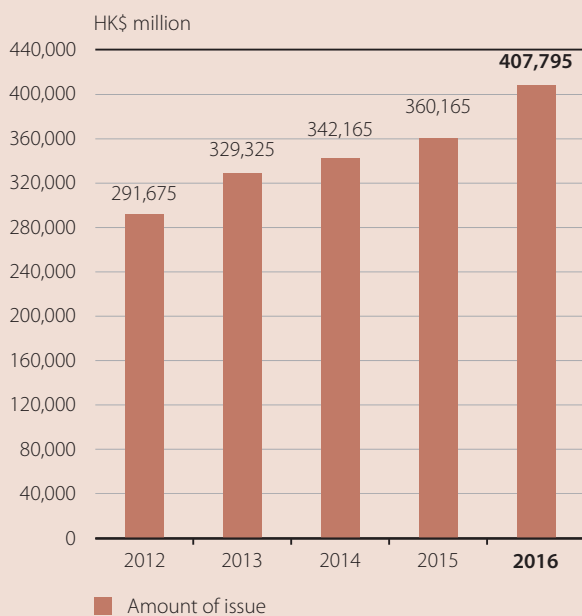


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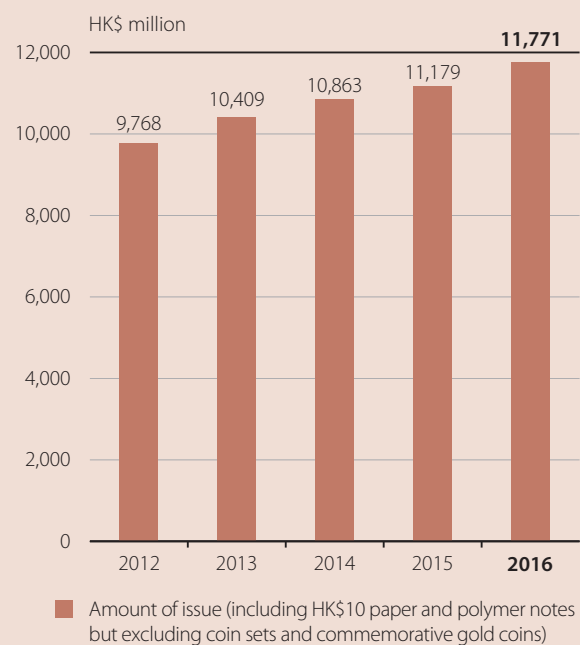
**Chart 7** Distribution of banknotes in circulation at the end of 2016



**Chart 8** Banknotes in circulation at the end of 2016

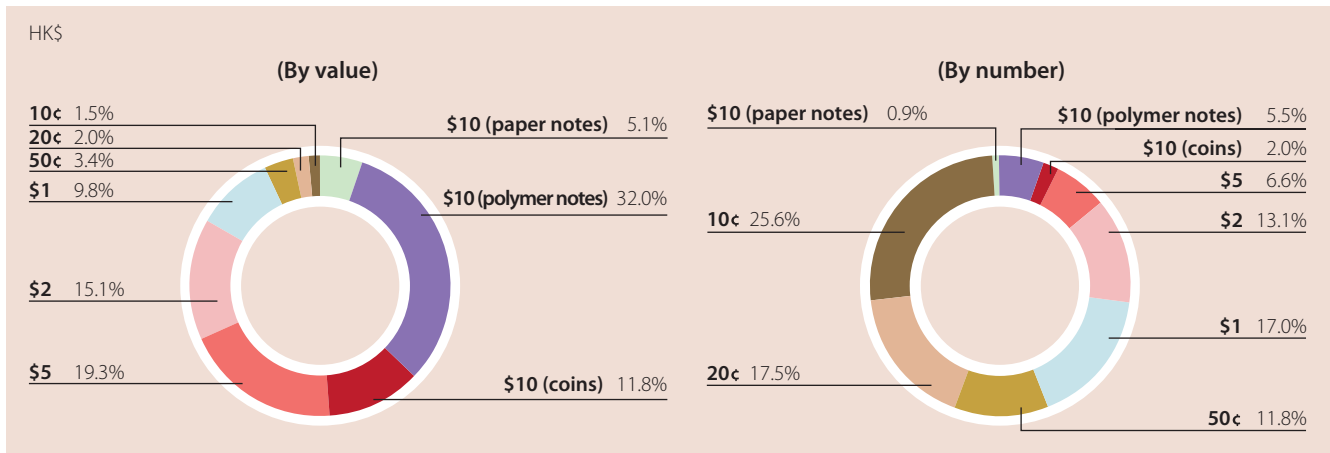


**Chart 9** Government-issued notes and coins in circulation at the end of 2016



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**Chart 10 Government-issued notes and coins in circulation at the end of 2016**



### *Hong Kong banknotes*

In pursuit of the plan to update Hong Kong's banknotes to stay ahead of counterfeiters, the HKMA and the three note-issuing banks have begun preparatory work for a series of banknotes with completely new designs and advanced security features.

The HKMA also continued its public education programme to promote awareness of the designs and security features of Hong Kong's banknotes. During the year, 28 seminars were organised for more than 4,500 bank tellers, retailers and students giving them the knowledge and skills to authenticate banknotes.

### Coin Collection Programme

The Coin Collection Programme, launched in October 2014, continued to be well received by the public. It is the world's first structured coin collection scheme with two mobile trucks, known as Coin Carts, visiting the public across all 18 districts on a rotation basis. Each Coin Cart is equipped with two high-speed coin counting machines and an electric wheelchair lift. The public may choose to exchange their spare coins for banknotes, top up their Octopus cards, or donate such coins to the Community Chest box on board. Working with the Hong Kong Council of Social Service, the Coin Carts collected coins on flag days for non-governmental organisations. The Coin Carts also visited schools to raise the awareness of the programme. The original two-year pilot programme was very successful and the HKMA decided to extend the programme to September 2018.

The two Coin Carts have served about 256,000 people and collected 217 million coins with a total face value of HK\$263 million since inception. Details of the programme and up-to-date information, including the service schedule, are available on a designated page of the HKMA website at [coincollection.hkma.gov.hk](http://coincollection.hkma.gov.hk).



A Coin Cart visits a school on 22 June 2016.

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### Exchange Fund Bills and Notes

With ample liquidity in the interbank market, demand for short-dated Exchange Fund Bills from banks remained strong. A total of HK\$132 billion worth of additional Exchange Fund Bills were issued by the HKMA in the first three quarters to meet such demand. The additional issuance resulted in a corresponding decrease in the Aggregate Balance. At the end of 2016, the amount of outstanding Exchange Fund paper stood at HK\$963.1 billion (Table 2).

### PLANS FOR 2017 AND BEYOND

The global macro-financial environment is expected to remain challenging in 2017. Policy uncertainties surrounding the new US administration, the Brexit process and national elections in several European countries will overshadow the global financial markets. These uncertainties, together with the US interest rate normalisation and rebalancing of the Mainland economy, may lead to renewed financial

turbulences. Against this backdrop, the Hong Kong dollar exchange rate may ease to the weak-side CU of 7.85 and outflows from the Hong Kong dollar may occur in accordance with the design of the LERS, hence raising the Hong Kong dollar interest rates with ramifications for the domestic economy.

Given the heightened uncertainties, the HKMA will continue to monitor risks and vulnerabilities closely in the domestic and external environment and stand ready to deploy appropriate measures where necessary to maintain Hong Kong's monetary and financial stability. Research programmes in 2017 will study issues affecting the Hong Kong economy and assess their potential risks. The CBC will continue to examine issues relevant to Hong Kong's monetary and financial stability, review the technical aspects of the Currency Board arrangements and, where appropriate, recommend measures to strengthen them.

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**Table 2 Outstanding issues of EFBNs**

HK\$ million	2016	2015
Exchange Fund Bills (by original maturity)		
28 days	<b>2,200</b>	3,000
91 days	<b>524,998</b>	447,621
182 days	<b>338,000</b>	277,000
364 days	<b>49,700</b>	42,200
Sub-total	<b>914,898</b>	769,821
Exchange Fund Notes (by remaining tenor)		
1 year or below	<b>15,200</b>	15,200
Over 1 year and up to 3 years	<b>16,000</b>	20,800
Over 3 years and up to 5 years	<b>3,200</b>	7,200
Over 5 years and up to 10 years	<b>10,200</b>	10,600
Over 10 years	<b>3,600</b>	4,800
Sub-total	<b>48,200</b>	58,600
Total	<b>963,098</b>	828,421