

the Bank strengthened public education on the security features of NT dollar notes and coins to help individuals quickly identify counterfeits. Educational materials were provided through various channels such as the Bank's website, the Virtual Money Museum of the Bank, television, radio, and YouTube. Leaflets were also distributed to the public, financial institutions and government agencies.

Box

The Role of Cash in Taiwan's Payment Systems

The rapid development of electronic payments in recent years has brought about the issue of whether to move toward a “cashless society.” The statistical data of most major economies point to the fact that their currency issuance has grown in synchronization with electronic payments, and Taiwan is no exception. Therefore, the news reports claiming that cash would disappear anytime soon seem to be exaggerated. In line with government policy, the Bank has continued its efforts to promote the development of electronic payments in Taiwan. Meanwhile, cash remains an integral part of real economic activity, and the Bank ensures an adequate supply of cash to meet the public's demand so as to maintain the smooth functioning of the economy and the financial system.

1. Continuous Growth in Cash Demand in Most Economies

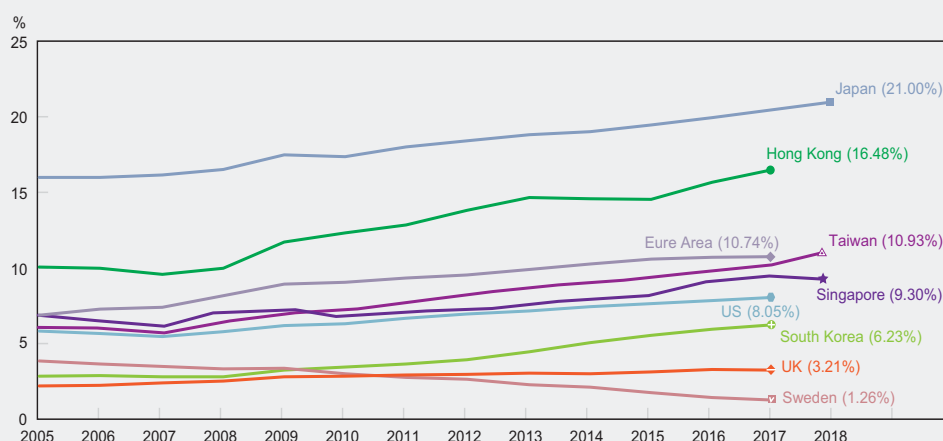
For more than a decade, the world has witnessed a broad trend of continuous expansion in currency issuance. The annual growth rates of currency issuance have been higher than those of nominal GDP, causing currency issuance to GDP ratios to display upward trends in most countries, including Taiwan. This demonstrates that cash is still an essential payment instrument despite the flourishing development of electronic payment services.

Among major economies, Sweden was the only one with a currency issuance to GDP ratio lower than 2% on average from 2005 to 2018 and declining, whereas such ratios in other countries broadly range from 5% to 20% for the same period and have shown steady uptrends. Taiwan has seen currency issuance as a percentage of GDP rise year by year from 6.04% in 2005 to 10.93% in 2018.

Demand for cash varies significantly across countries, mainly affected by a string of factors such as the usage habits of local consumers and retailers, the development of the payment market, and cultural differences. In Sweden, low population density adds to the difficulty in cash distribution, while a small number of banks dominate the market of electronic payment instruments, leading cash demand to decline year by year, which is quite different from Taiwan's case.¹

¹ Department of Statistics, Ministry of Economic Affairs (2018), “Trade and Food Services Operations Surveys,” Oct. According to the report, cash payments account for the largest share of retail payments in Taiwan. In supermarkets and convenience stores, nearly 80% of consumers pay in cash, indicating that cash remains a dominant means of payment in small-value retail transactions.

Ratios of Currency Issuance to Nominal GDP in Major Economies



Note: Data on currency issuance are year-end figures; GDP figures of 2018 for Japan, Taiwan, and Singapore are preliminary estimates.

Sources: Aremos; Thomson Reuters Datastream; Department of Issuing, CBC; DGBAS.

2. Unique Benefits and Necessity of Cash in Payment Systems

Sweden is considered a pioneer of the cashless society, yet the Riksbank, Sweden's central bank, pointed out several risks arising from a cashless economy. Moreover, an increasing number of central banks and relevant studies advocated the irreplaceable advantages of cash and the necessity of its existence.

2.1 Unique Benefits of Cash

For small retailers, benefits of cash payments include low transaction costs, real-time clearing, and a high prevalence. Furthermore, users do not need to afford additional service charges or install terminal devices. With its legal tender status,² cash is deemed the safest payment tool. An ECB study also found that cash has been a dominant payment instrument in small-value transactions.³

In addition, cash also serves as a store of value. As indicated in a study by the BIS,⁴ cash demand has risen in most advanced economies since the global financial crisis. This resurgence appeared to be driven in part by a lower opportunity cost of holding cash (primarily referring to bank deposit rates) and by store-of-value motives of the public to increase cash holdings, reflecting their loss of confidence in the banking system.

² This refers to the NT dollar as a legally defined means of payment valid for meeting debt obligations. If a creditor refuses payment when a debtor repays debt with legal tender, the creditor would be liable for the default, unless the creditor and the debtor have separate agreements.

³ Currency News (2017), "ECB Study: Cash Remains Dominant Throughout the Eurozone," Currency News, Volume 15, No.12, pp.6-7, Dec.; Esselink, Henk and Lola Hernandez (2017), "The Use of Cash by Households in the Euro Area," *European Central Bank Occasional Paper Series*, No. 201, Nov. The field work was carried out in three waves from October 2015 to July 2016 through online surveys, telephone interviews, and face-to-face interviews. Around 65,000 respondents from 17 member countries participated in the survey, reporting nearly 130,000 transactions in the euro area for analysis.

⁴ Bech, Morten, Umar Faruqui, Frederik Ougaard and Cristina Picillo (2018), "Payments are A-Changin' But Cash Still Rules," *BIS Quarterly Review*, Mar.11.

2.2 Potential Risks of a Cashless Society Reflecting the Necessity of Cash

Going completely cashless may cause hardship for the disadvantaged such as the elderly and the visually impaired in making payments and would further widen differences among social classes.⁵ In addition, if non-cash payment systems are concentrated in just a few private institutions, this would create potential risks of bankruptcy or monopoly, thereby leading users' rights to be exploited.

On top of that, the use of non-cash payment instruments must rely on electronic facilities. Once contingencies such as system malfunctions or power outages occur, the payment systems would be entirely paralyzed, thus compromising the smooth functioning of the real economy. It is also possible for electronic facilities to be invaded by hackers, which may cause unauthorized transactions or theft of users' assets.

3. Policy Stance of Major Central Banks and the Bank on Cash Payments

To deal with the issue of a cashless society, the Riksbank has urged the Swedish parliament to amend relevant regulations to ensure access to cash for the public. The People's Bank of China prohibits retailers or individuals from refusing cash payments to avoid undermining the legal tender status of the renminbi. Meanwhile, central banks in many countries share the view that cash remains needed as a well-functioning means of payment, and advocate to ensure the status of cash through agreements or legislation.⁶

In recent years, Taiwan has seen enhanced efforts in increasing the penetration rate of electronic payments. For example, the Financial Supervisory Commission has proposed a plan of boosting the ratio of electronic payments to private consumption to 52% by 2020. The Executive Yuan also announced a policy target of 90% mobile payment penetration by 2025. In the meantime, the Bank has instructed the Financial Information Service Co., Ltd. to take relevant measures in accordance with the policies above.

Moreover, the Bank raised the ceiling on the amount of financial institutions' end-of-day balances in the "Interbank Funds Transfer Guarantee Special Accounts" to be counted as part of the required reserves from 4% of the current month's required reserves to 8%, effective from January 4, 2019. This adjustment aimed to ensure that retail payment systems operate smoothly at all times.

Nevertheless, as a cashless economy may face a multitude of risks as mentioned before, cash remains an irreplaceable payment method in the short term. So long as the public still have needs for cash usage, the Bank would ensure an adequate supply of cash to maintain the smooth functioning of the economy and the financial system.

⁵ McCart, Melissa (2018), "The Problem with Cashless Restaurants," *Eater*, Feb. 15.

⁶ Scholten, Bram (2017), "Decline Management: The Case of Cash," presented at Deutsche Bundesbank International Cash Conference in Mainau Island, Apr. 25-27.