Regulating cryptocurrencies
Virtual currency (VC) and digital currency are a new class of digital assets (money) that allow borderless transactions. The number and valuation of virtual currencies has risen to over 1,300 VCs with a total market capitalization of over US$465 billion as of December 2017 (Figure 1).

However, the industry remains highly volatile. Some instances of this volatility are:

- Value of a Bitcoin has increased by 293 percent in the last three months of 2017 (October–December) and 17 percent in one day (11 December 2017) to over US$18,000 after being launched on the Chicago Board Options Exchange’s (CBOE) future exchange market.

- Ethereum lost US$17.5 billion in market value (50 percent from its peak) in only four weeks in July 2017. It has since risen by almost four times its value to US$63.71 billion.

Given the increasing demand for, and potential of cryptocurrencies, a number of countries have passed regulations affecting these digital assets. In April 2017, Japan recognized cryptocurrencies as a legal method of payment. In October 2017, Australia passed a law (to be applicable from July 2018) to remove a double taxation problem for those accepting digital currencies. Recently, the International Monetary Fund’s (IMF) Managing Director, Christine Lagarde, talked about the potential of virtual currencies to replace traditional monies in the coming decade.

Challenges facing cryptocurrencies

Speculation: Cryptocurrencies have no valuation basis, which has led to a speculative bubble. In addition, the severe volatility has led to a decrease in the usage and acceptance of the cryptocurrencies as most buyers choose to retain their holding in the hope of multiplying their values.

Control: Cryptocurrencies present a bigger challenge to central banks and governments as they can potentially compete with fiat money (paper money considered as legal tender by a government decree), which will impact their planning and monetary policy.

Jurisdiction: The openness and cross-border nature of cryptocurrency transactions and wallets presents a unique problem to central banks and governments in terms of jurisdiction and regulation.

Criminal financial activity: The most pressing cryptocurrency concern remains ensuring financial integrity, specifically, combating financial crime. The opacity of most cryptocurrency networks presents significant challenges for law enforcement authorities.

Hacking: A major reason for the volatility in the value of cryptocurrencies has been a lack of security. On the other hand a number of regulators, including central banks, are struggling to catch up and come to terms with this phenomenon, and are considering ways to evaluate and regulate cryptocurrencies to benefit from the opportunity and mitigate associated risks.

A major reason for the volatility in the value of cryptocurrencies has been a lack of security.
Regulating cryptocurrencies-the way forward
In light of these concerns, governments and regulators have taken steps to protect consumer interests and prevent financial crime activity.

In July 2014, the New York State Department of Financial Services proposed Bit License, a comprehensive regulation of virtual currencies, after gathering inputs from a comprehensive community of bitcoin supporters and the financial industry.

However, much remains to be done by the regulators in this area. We believe there are two areas where central banks and other regulators can play a direct and active role in regulating cryptocurrencies: The area of introducing or endorsing a closed loop currency and regulating points of conversion as well as intermediaries.

Closed loop currency: Regulators could look at introducing and/or endorsing a cryptocurrency that could scale with demand. Such a cryptocurrency would enable the regulator to monitor the end-to-end transaction process and manage issues related to price stability, security and reliability that other cryptocurrencies face.

In December 2017, the central banks of the United Arab Emirates (UAE) and Saudi Arabia announced plans to introduce a pilot initiative to test a new cryptocurrency for cross-border payments between the two countries.

The People's Bank of China recently announced that China has completed trial runs on algorithms that will be used to supply a digital currency. The UK, Sweden and Canada have also been considering the adoption of digital currencies.

Regulating access points: Cryptocurrency administrators and exchanges usually fall within covered entities for the purpose of Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) preventive measures, while users usually do not. Regulators could make it mandatory by law for all cryptocurrency intermediaries involved in currency transactions to have a compliance program, including AML, to implement preventive measures and report suspicious transactions. The law introduced should allow third parties approved by respective central banks to carry out verification activities to ensure they are up to the approved standards and to avoid any conflicts of interest.

However, if cryptocurrencies become so widespread that there is no longer a need for participants to cash out i.e. convert the cryptocurrency into fiat money, it may be necessary to extend regulations to other virtual network participants, such as wallet service providers and payment processors.

Some jurisdictions, such as the United States, Germany, the UK and Canada, have taken steps to clarify the applicability of existing AML/CFT obligations to certain VC businesses. Other jurisdictions, such as Italy, have taken a different approach by issuing warnings to their financial sectors on ML/TF risks posed by VC businesses, while China has gone as far as barring the interaction between VCs and the formal financial sector.

Adopting a holistic regulatory approach could help address issues around jurisdiction. This would mean international coordination between central banks and regulators to introduce global standard regulations around purchase, trade and acceptance of cryptocurrencies.

Conclusion
Similar to how the Internet changed the way people carry out their daily activities, cryptocurrencies and blockchain platforms will likely have the same transformative impact. Although still evolving, they have already introduced cheaper and quicker ways to carry out monetary transactions. It is only a matter of time before the world embraces this technology and works to overcome its constraints.

Instead of pushing the cryptocurrencies to the periphery of financial systems, the central banks and other regulators as well as market authorities must play a leading role in making them mainstream. While challenges remain on jurisdiction in light of the borderless nature of transactions, one way to overcome these could be to regulate the points where cryptocurrency is exchanged for real money, goods or services. For this to happen, there should first be a comprehensive understanding of cryptocurrencies and a will to address related concerns.

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