

Digital challenges to the international monetary and financial system

Panel remarks by Benoît Cœuré, Member of the Executive Board of the ECB, at the Banque centrale du Luxembourg-Toulouse School of Economics conference on “The Future of the International Monetary System”

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When^[1] the euro was created 20 years ago it was hailed as one of the most important turning points in the history of the international monetary system since the demise of the Bretton Woods system.^[2] Many observers saw the euro as a natural contender to rival the supremacy of the US dollar in the global monetary and financial system. After all, the euro area was (and remains) the world’s largest trading bloc.^[3]

The remarkable rise of China in the global economy, its expanding role in international trade, and the inclusion of the renminbi in 2016 in the International Monetary Fund’s Special Drawing Right (SDR) valuation basket, were widely heralded as yet another turning point for the international financial system.

Yet, the US dollar remains the dominant international currency.^[4] It has defied all attempts to rival its monopoly position, even going back to the 1980s, when hopes that Japan’s emergence as global creditor would support the internationalisation of the yen were also disappointed.^[5]

The US dollar today accounts for around half of global foreign exchange transactions worth 6.6 trillion dollars per day.^[6] It is used to invoice nearly half of global foreign trade, a share far greater than that of the United States in the global economy.^[7] And it is now as widely used as a reference unit for exchange rate arrangements as it was during the Bretton Woods era. By some measures, it has taken on an even greater role.^[8]

Today, the discussion is about so-called “stablecoins” – crypto-assets with value-stabilising characteristics.^[9]

Although private digital forms of money have been around for decades, Facebook’s large installed customer base suggests that Libra could be the first private initiative to have a truly global footprint from day one. Facebook has over 2.4 billion users – more than a quarter of the world population.^[10] WhatsApp and Instagram, both owned by Facebook, have 1.6 billion and 1 billion users each.^[11]

Global “stablecoin” initiatives can make international payments cheaper and faster and support financial inclusion. But they raise formidable challenges across a broad range of policy domains: operational robustness, safety and soundness as payment systems, customer protection, risks to financial stability

and monetary sovereignty, and, last but not least, data protection and compliance with anti-money laundering and terrorism financing rules.^[12] Some public authorities already expressed strong concerns, suggesting that regulatory hurdles will be set very high for these initiatives to get off the ground.^[13] Partly in response to these concerns, a G7 working group has been mandated to examine global “stablecoins” in more detail.

The group is expected to provide policy recommendations to G7 Ministers and Governors by the time of the IMF-World Bank Annual Meetings in October this year. The Financial Stability Board has also started looking into the regulatory implications of these initiatives.

In my remarks this evening, I would like to discuss whether Libra, or similar global “stablecoin” initiatives, may be a contender for the Iron Throne of the dollar. I will start by discussing the factors that distinguish the discussion today from previous discussions. I will argue that, in specific circumstances, and if allowed to develop, private digital forms of money could challenge the supremacy of the US dollar more easily, and faster, than currencies issued by other sovereigns.

Yet, whatever fate awaits private digital money, they will likely change the international monetary and financial system in one way or another, either directly or by driving global central banks to innovate.

Digitalisation and currency competition

In the past century or so, competition for pre-eminence in the international monetary system has been confined to currencies issued by sovereigns. Economic size, openness and stability were long considered to be among the key determinants of the success and demise of international currencies. The fact that the global appeal of the yen, the euro and the renminbi has not risen more forcefully is typically associated with one, or a combination of, these factors. In the case of the euro, for example, fragmented domestic capital markets and the absence of a true European safe asset – one that provides stability in challenging economic times – are likely to have prevented the euro from being used more widely.^[14] There is a vast body of literature assessing the relative importance of these and other factors.^[15]

The general consensus, however, is that other currencies continue to face considerable obstacles to displacing the US dollar in the international monetary and financial system, and that the broad contours of the system can be expected to remain unchanged in the near term.

This raises the question of whether the arrival of private digital forms of money could challenge the pecking order of the current system more easily – whether there is something special about these “currencies” that could allow them to compete more effectively with the US dollar, assuming of course that they passed the high bar set by global regulators.

The short answer, in my view, is yes – for two main reasons.

Inertial forces may become less powerful

The first relates to the speed of adoption, or the potential for the system to change rapidly.

Global currencies, much like domestic currencies, serve the three classic functions of money – a unit of account, a store of value and a means of payment.^[16] But not all functions are equally important. Both history and theory suggest that being a means of payment is, de facto, the leading function of a global currency.^[17]

In the past, however, international payments were mainly carried out by firms, merchants, banks and governments, and mainly took the form of wholesale transactions by large players in global trade and financial markets. The banks of Amsterdam and Hamburg, for example, performed key central bank functions as early as the beginning of the 17th century, and were created to provide giro deposits to merchants as an efficient and stable means of payment.^[18]

The pound sterling's rise as an international currency started with so-called merchant banks in London lending to merchants to finance exports and imports, after which it developed into a vehicle for international investment and became a reserve currency.

For firms, merchants, banks and governments, there are material costs involved in agreeing on one international currency standard, and in switching from one to another. They often hold significant balances denominated in the leading international currency, and in doing so take on exchange rate risk, safe in the belief that this currency will remain the principal global payment unit in the future.

As a result, inertia in international currency use has historically been substantial. High switching costs, lock-in effects and habit persistence were strong forces in favour of the status quo.^[19] There is an active debate as to how long it takes for one leading currency to replace another. But the consensus is that the process takes years, if not decades.^[20]

Consumers, by contrast, have generally had much more limited exposure to, and interest in, global currency use, except in "dollarized" or "euroized" economies where the US dollar or the euro, are, or were, formal or informal means of payment in lieu of the domestic currency.^[21]

This has changed, however. The most recent wave of globalisation, in conjunction with the rapid evolution of online services, has supported consumer demand for payment services that work across borders and that are also faster, cheaper and easier to use.

Global tourism flows, for instance, have doubled over the past 15 years. The number of internet users has doubled too, as has the number of mobile phone users. The cost of sending data has shrunk considerably and access to more convenient services has widened. And in just ten years, global remittances

have increased by over 50%, while cross-border e-commerce activity has trebled.^[22]

It is only natural, then, that new and emerging private payment solutions are mainly targeting consumers and workers, not merchants. Consumers and workers constitute a much larger pool of potential users, with the associated network effects, which has meant that existing digital initiatives have been adopted much more quickly.

Consider M-Pesa. It has revolutionised payments by making it possible to settle low-value transactions without a bank account. The volume of mobile money transactions in Kenya has trebled in less than seven years and today already accounts for half of the country's GDP.^[23] Advanced economies are only starting to catch up with Kenya.

In China, Alipay and WeChat Pay, two payment solutions developed by domestic bigtech firms, have attracted almost one billion customers each in less than ten years. Bigtech payment services account for 16% of GDP in China, higher than anywhere else.^[24] Third-party mobile payment transactions last year in China were 15 times larger than in 2015.^[25]

The available evidence therefore suggests that transaction and switching costs are much smaller in the case of retail consumer payments than they are for traditional currencies used for wholesale cross-border trade and finance. There is little reason to believe that such network effects would be less powerful for global networks, possibly making international currency competition a much more dynamic contest in the future.

Drivers of international currency use in the digital age

This brings me to my second point, namely that the factors driving international currency use are likely to change too. With consumers at the heart of competition, we may have to rethink the set of factors, and their relative importance, that will ultimately determine the scale and scope of global currency adoption.

Some fundamental drivers will not change, of course.

Price stability remains, and will remain, a precondition for a currency to gain widespread use, whether digital or not. For this reason, central banks worldwide have adopted price stability as their primary mandate. And this is why unstable crypto-assets, such as bitcoin, whose price in fiat currencies is highly volatile, will never be able to serve as a reliable means of payment. "Stablecoins", if they meet their promise of stability, are the natural next step in the evolution of digital assets.

This was already understood nearly 50 years ago when Friedrich Hayek proposed abolishing the government monopoly on money issuance, arguing that competitive forces would exert disciplinary effects on issuers and

incentivise them to provide stable money.^[26] Ultimately, the currency with the lowest inflation rate would crowd out its competitors.

Next to stability, other factors are likely to play a growing role in the digital age. Convenience is a prime candidate.

Consider the euro area. Despite the creation of the single currency 20 years ago, cross-border e-commerce in the euro area has not taken off. Home bias remains strong. Only one-third of European e-shoppers make purchases from sellers in other EU countries.^[27] And around 40% of European websites do not sell to consumers based in other member states, while almost 80% of online sales are domestic.^[28]

Put differently, it is probably easier to connect a new currency to an existing network – the case of Libra – than to build a new network on an existing currency – the case of the euro. Few retailers have seen the introduction of the euro as an opportunity to build a pan-European network around it. With or without the euro, the single market for services remains incomplete.

Global “stablecoin” initiatives could work in reverse. They could turn the nature of payments on its head. WhatsApp, for example, is a messaging service. Adding a payment leg that enables direct transfers of money between registered users will not change the nature of its business. But it will provide a platform to turn a means of payment into a global currency. This is the exact opposite of what theoretical models of global currency use would predict. According to these models, payments lead and other uses follow.

A second, and related, new driver of international currency use in the digital age relates to privacy.

Historically, privacy was not an issue. Anonymity is one of the salient features of paper money.^[29] Private digital currencies that run through a distributed ledger have arguably restored anonymity in the virtual world, making them prone to being used to finance illegal activities, such as tax evasion or terrorism.^[30]

To pass the test of faith, therefore, any “stablecoin” initiative will have to conform to international anti-money laundering and know-your-customer regulations.^[31]

But assuming they do comply with the applicable regulations, “stablecoins” could differentiate themselves according to how much personal data they collect and process. Some could use or sell customer data, whereas others may give priority to protecting the privacy of their customers.

It is hard to tell just how much the privacy dimension will affect international currency use. But the effects could also work in reverse. There are significant differences across countries in terms of how much consumers value the privacy of their data. In Europe, individuals’ control over their personal data has been protected by an EU regulation – the General Data Protection Regulation, or GDPR – since May 2018.^[32] Any private initiative operating in the EU will have to comply with this regulation.

The future shape of the international monetary and financial system

All this means that digitalisation may significantly change the way currencies compete with each other. It also means that it will become much more difficult to predict the future contours of the international monetary and financial system.

Several equilibria are conceivable. I would like to briefly discuss three of them, each with very different implications for the future shape of our international monetary and financial system.

Preserving the status quo

A first possible equilibrium may simply be the status quo.

Concerns expressed about Libra in large parts of the world, including in the United States, has been considerable. Some governments have already announced their intention to ban Libra, if and when it gets up and running.

In other words, the standards required to preserve safety against theft, fraud and operational failures may prove too demanding, or too costly, for many initiatives to get off the ground.

This equilibrium would not imply a digital standstill, however. Other initiatives can help meet growing consumer demand for payment services that work across borders and that are faster, cheaper and easier to use than current payment systems.

Libra has undoubtedly been a wake-up call for central banks to strengthen their efforts to improve existing payment systems. This by itself is undoubtedly a win-win situation for the global community. Progress made by those central banks already operating at the technological frontier can be expected to increase the speed of technological diffusion across borders.^[33]

Europe is leading by example here. In November last year, for example, the Eurosystem launched Target Instant Payment Settlement (TIPS) – a new market infrastructure which allows payment service providers to offer funds transfers to customers across Europe in real time, around the clock, and on every day of the year.

TIPS could be a role model for developing economies. It not only has the potential to help better prepare incumbents for the challenges arising from digital giants, it has also the potential to be a catalyst for financial inclusion, which should be a key objective of any public initiative in the payment field.^[34]

Central bank digital currencies

A second, and related, equilibrium is what Bank of England Governor Mark Carney recently called a synthetic hegemonic currency that is provided through a network of central bank digital currencies – CBDCs for short.^[35]

Many central banks have been working on CBDCs in recent years, though at differing speeds, depending on differences in demand for cash by citizens, among others.^[36] Sveriges Riksbank and the Central Bank of Uruguay, for example, are among the most advanced central banks in this area. Their experiments with the “e-krona” and “e-peso” provide useful food for thought. The People’s Bank of China has also reportedly accelerated plans for its own digital currency in response to Libra.^[37]

The costs and benefits of issuing a global synthetic currency have been discussed since John Maynard Keynes’ Bancor proposal and are far beyond the scope of this speech. In fact, they have little to do with new technology, and everything to do with appetite for global economic cooperation, which has been low since the demise of the Bretton Woods system – many would argue that it is even lower today.^[38]

But cooperation is precisely what Governor Carney is calling for: closer central bank coordination to reap the benefits of recent technological advances more quickly and more efficiently. Much in this spirit, the ECB and the Bank of Japan have already joined forces to examine the possible use of distributed ledger technology in financial market infrastructures.^[39]

The next natural step would be for global central banks to join forces and jointly investigate the feasibility of CBDCs based on common technical standards.

Digital currency areas

The third equilibrium that I would like to briefly sketch out would be more disruptive. It would be in the spirit of what Markus Brunnermeier, Harold James and Jean-Pierre Landau have called “digital currency areas” that would cut across borders.^[40]

Digital currency areas are networks where payments and transactions are made digitally by using a currency specific to the network – be it a fiat currency or not.^[41]

In this hypothetical world, policymakers would successfully coordinate across borders to ensure that global private payment system providers fully comply with key policy priorities.

At one extreme, cooperation would cut across continents and lay the ground for the rise of a truly *global* private digital currency. This would be a long way to go. Today, even networks such as Facebook, Amazon or Alipay remain confined to geographical blocks, and this is before a discussion on regulatory aspects around payment systems has even started.

More conceivable are therefore digital *regional* currency areas. Given the already high degree of regulatory and economic convergence, Europe is certainly best placed to advance here. But others might follow.

This equilibrium would, however, entail a risk of fragmentation of the international monetary system, and the transition towards it would pose several challenges to public authorities.

Currency substitution would be one of them. The “stablecoinisation” would likely start in economies with stubbornly high inflation or weak institutions – Gresham’s law in reverse.^[42] The decline in the prime legal tender would, in turn, undermine the effectiveness of monetary policy in these economies. But unlike “traditional” currency substitution, “stablecoinisation” would potentially relegate key policies that belong to the public sphere to private payment system providers – an outcome which citizens clearly cannot accept.^[43]

Global “stablecoins” would likely also increase capital flow volatility, with potential effects on exchange rates and financial conditions, and hence on domestic inflation outcomes.^[44] Small open economies, for example, could seek to introduce or increase capital controls to limit or offset such fluctuations, in particular if capital flows are one-sided.

In other jurisdictions with deep and liquid financial markets, purchases of safe assets by global “stablecoin” issuers could compress term premia by increasing scarcity, and thereby reinforce or offset the actions taken by domestic central banks.^[45]

In other words, the journey towards digital currency areas would be long and full of perils. Ultimately, however, the shape of the international monetary and financial system would be determined by two factors: the citizens’ appetite for being part of global networks, or not, and differences in tastes and preferences, including about privacy.

Conclusion

Wherever our journey takes us, and with this I would like to conclude, global “stablecoin” initiatives, such as Libra, will prove disruptive in one way or another. They are the natural result of rapid technological progress, globalisation and shifting consumer preferences.

But how we respond to these challenges is up to us. We can focus our efforts on ensuring that private payment systems will thrive in a space that respects our common global policy priorities. Or we can accelerate our own efforts to overcome the remaining weaknesses in global payment systems, safe in the belief that only public money can ultimately, and collectively, ensure a safe store of value, a credible unit of account and a stable means of payment. Or we can do both of these things, and create an environment in which market-based and public payment systems effectively complement each other, jointly shaping the payments universe in the 21st century.

Thank you.

^[1]I would like to thank Arnaud Mehl for his contributions to this speech. I remain solely responsible for the opinions contained herein.

^[2]See Bergsten, F. (1997), “The dollar and the euro”, *Foreign Affairs*, Vol. 76, No 4, pp. 83-95.

[3]The United States accounts for about 11% of global trade, compared with 14% for the euro area.

[4]For an overview of the international role of the US dollar, see, for example: Goldberg, L. and Lerman, R. (2019), "The U.S. dollar's global roles: where do things stand?", *Liberty Street Economics*, Federal Reserve Bank of New York. Although China has become the world's second largest economy, the international use of its currency is still in its infancy. The renminbi is currently the fifth most used unit in international payments, behind the Japanese yen and the pound sterling; see SWIFT (2019), *RMB tracker – Monthly statistics and reporting on renminbi progress towards becoming an international currency*, July 2019.

[5]See e.g. Tavlas, G., and Y. Ozeki (1991), "The Japanese yen as an international currency", *IMF Working Paper*, No. 91/2.

[6]See Bank for International Settlements (2019), *Triennial central bank survey. Foreign exchange turnover in April 2019*, 16 September.

[7]See Gopinath, G. (2015), "The international price system", *Working Paper Series*, No 21646, National Bureau of Economic Research.

[8]For instance, around one-third (GDP-weighted) of countries worldwide used the US dollar as an exchange rate anchor in 1970, compared with nearly one-half in 2015 (see Ilzetzki, E., Reinhart, C. and Rogoff, K. (2019), "Exchange arrangements entering the twenty-first century: which anchor will hold?", *The Quarterly Journal of Economics*, Vol. 134, No 2, pp. 599-646). In addition, about two-thirds of official foreign exchange reserves are invested in the US dollar.

[9]For more details on "stablecoin" initiatives, see e.g. Bullmann, D., J. Klemm and A. Pinna (2019), "In search of stability in crypto-assets: are stablecoins the solution?", *ECB Occasional Paper Series*, No 230.

[10]Facebook defines a monthly active user as a user who has logged in and visited Facebook through its website, a mobile device or its Messenger application in the last 30 days as of the date of measurement (see Facebook's 2019 Q2 report, available at <https://investor.fb.com/financials/default.aspx>).

[11]Data on monthly users retrieved from statista.com (on 15 August 2019). There is overlap between Facebook's family of products; an estimated 2.7 billion users use Facebook, Instagram, WhatsApp or Messenger each month.

[12]See Cœuré, B. (2019), "Update from the Chair of the G7 working group on stablecoins", update to the G7 Finance Ministers and Central Bank Governors Meeting 17-18 July 2019, Chantilly, France.

[13]See Ministère de l'économie et des finances and Bundesministerium der Finanzen (2019), "Joint statement on Libra", Helsinki, 13 September 2019.

[14]See Cœuré, B. (2019), "The euro's global role in a changing world: a monetary policy perspective", speech at the Council on Foreign Relations, New York City, 15 February 2019.

[15]See e.g. Maggiori, M., Neiman, B. and Schreger, J. (2019), "The rise of the dollar and fall of the euro as international currencies", *AEA Papers and Proceedings*, Vol. 109, American Economic Association, pp. 521-526.

[16]See, for example, Krugman, P. (1984), "The international role of the dollar: theory and prospect", *Exchange Rate Theory and Practice*, National Bureau of Economic Research, University of Chicago Press, pp. 261-278.

[17]For historical evidence see Eichengreen, B., Mehl, A. and Chițu, L. (2017), *How global currencies work – Past, present and future*, Princeton University Press. Moreover, Gita Gopinath and Jeremy Stein provide a unified theory for why a currency may be used dominantly in global trade and finance, where its role as an invoicing unit of international trade transactions is complementary to its role as a safe store of value; Gopinath, G. and J. Stein (2018), "Banking, trade, and the making of a dominant currency", *NBER Working Paper*, No. 24485.

[18]See Bindseil, U. (2018), "Pre-1800 central bank operations and the origins of central banking", mimeo.

[19]See also Portes, R. and Rey, H. (1998), "The emergence of the euro as an international currency", *Economic Policy*, Vol. 13, No 26, pp. 307-343.

[20]According to a seminal study by Robert Triffin, it took between 30 and 70 years for the US dollar to overtake the pound sterling as the dominant international currency (see Triffin, R. (1960), *Gold and the dollar crisis: the future of convertibility*, Yale University Press: New Haven). More recent studies have challenged that view and suggest that the transition from the pound sterling to the US dollar was much faster (see, for example, Chițu, L., Eichengreen, B. and Mehl, A. (2014), "When did the dollar overtake sterling as the leading international currency? Evidence from the bond markets," *Journal of Development Economics*, Vol. 111(C), pp. 225-245).

[21]See, for example, Calvo, G. (2002), "On dollarization", *The Economics of Transition*, Vol. 10, No 2, pp. 393-403.

[22]See Committee on Payments and Market Infrastructures (2018), *Cross-border retail payments*, Bank for International Settlements, Basel. Data on tourism flows (international tourist arrivals by world region) are from the United Nations World Tourism Organization; those on internet and mobile phone users are from the International Telecommunication Union and the World Bank; and data on global remittances are from the World Bank. There are no direct data on cross-border e-commerce activity, but parcel volume in this area (as measured by the Universal Postal Union) is considered to be a reasonable proxy.

[23]See Rolfe, A. (2019), "Mobile money transactions equivalent of half of Kenya's GDP", *Payments Cards and Mobile*, 25 January.

[24]This refers to mobile payments for consumption in 2017.

[25]This includes mobile consumption, mobile finance, personal application and other payments such as telecom recharging.

[26]See Hayek, F. (1976), *Denationalisation of money*, Hobart Paper Special, 70, Institute of Economic Affairs, London.

[27]See Eurostat (2018), "E-commerce statistics for individuals", *Statistics Explained*, 20 December 2018.

[28]See "The economic policy at the heart of Europe is creaking", *The Economist*, 16 September 2019.

[29]For further discussion, see Rogoff, K. (2014), "Costs and benefits to phasing out paper currency", paper presented at the NBER Macroeconomics Annual Conference, 11 April.

[30]In reality, current private crypto-assets only allow for pseudo-anonymity, as all transactions are publicly recorded. But users do not necessarily have to reveal their true identities.

[31]See Financial Action Task Force (2019), "Guidance for a risk-based approach to virtual assets and virtual asset service providers", June.

[32]The GDPR (Regulation (EU) 2016/679) governs data protection and privacy for all individual citizens of the EU and the European Economic Area. It was adopted on 14 April 2016 and became enforceable on 25 May 2018. The GDPR also addresses the transfer of personal data outside the EU. One possible implication of this is a race to the top in terms of data protection standards.

[33]See Cœuré, B. (2018), "The future of financial market infrastructures: spearheading progress without renouncing safety", speech at the Central Bank Payments Conference, Singapore, 26 June.

[34]See Cœuré, B. (2019), "Payments for the people", introductory remarks at the High-Level Meeting on Financial Inclusion, Basel, 27 May.

[35]See Carney, M. (2019), "The Growing Challenges for Monetary Policy in the current International Monetary and Financial System", speech given at the Jackson Hole Symposium, 23 August.

[36]See Barontini, C. and Holden, H. (2019), "Proceeding with caution – a survey on central bank digital currency", *BIS Papers*, No 101, Bank for International Settlements, January.

[37]China sees global leadership in digital payment services as a strategic goal – precisely with the aim of avoiding the future of digital money being dominated by one player in the way that the global monetary and financial system has so far been dominated by one currency. See Chorzempa, M. (2019), “Who Likes Facebook’s Libra Currency? Not the Chinese”, *Realtime Economic Issues Watch*, Peterson Institute for International Economics, 16 July.

[38]As the late Tommaso Padoa-Schioppa stressed: “Not surprisingly, the final de-linking from gold shifted monetary management away from international constraints toward domestic priorities. Monetary nationalism took over”; see Padoa-Schioppa, T. (2010), “The ghost of Bancor: the economic crisis and global economic disorder”, lecture at the University of Louvain-la-Neuve, 25 February.

[39]A report was published in March 2018 (see ECB and Bank of Japan (2018), “Securities settlement systems: delivery-versus-payment in a distributed ledger environment”, STELLA - a joint research project of the European Central Bank and the Bank of Japan).

[40]See Brunnermeier, M., James, H. and Landau, J. P. (2019), “Digital currency areas”, *Vox*, 3 July.

[41]So, as they put it, even if the network still uses official fiat currencies as a unit of account and to back the payment instrument, that instrument cannot be used for transactions and exchanges outside the network.

[42]*Gresham’s law* is a monetary principle stating that “bad money drives out good”. That dollarization is akin to a reversal of Gresham’s law is a long-standing theme in the academic literature; see e.g. Guidotti, P. and C. Rodriguez (1992), “Dollarization in Latin America: Gresham’s law in reverse?”, *IMF Staff Papers*, 39, pp. 518-544.

[43]For further detail see Adrian, T. and T. Mancini-Griffoli (2019), “The rise of digital money”, IMF Fintech Note, 19/01. Dual or multiple currency systems entail transaction costs for agents which explain why they remain relatively rare (see Engel, C. (2018), “The Implications of Digital Currencies for Monetary Policy and the International Monetary System,” paper presented at the ABFER workshop on digital currency economics and policy, Singapore, 14-18 November 2018.)

[44]See e.g. Pettis, M. (2019), “Facebook’s Libra: Does the World Need Frictionless Money?”, *Carnegie Endowment for International Peace*, 27 June 2019. During periods of financial stress, some emerging market and developing economies may see outflows of commercial bank deposits into “stablecoins”. This might reduce domestic financial intermediation, accelerate capital outflows and increase exchange rate volatility.

[45]And they could increase scarcity of safe assets in the major banking sectors and complicate open market operations, as eligible collateral becomes scarcer. This would be the case provided that flows into global “stablecoins” do not come exclusively from flows out of deposits in those same banking sectors.