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Unleashing the potential of Fintech: Developing effective working relationships with the private sector

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Abstract

The 'rise of Fintech' is a truly global phenomenon, with implications for financial centres that play host to a large part of the Fintech sector and developing countries looking to leverage technological innovation to address stubbornly high rates of financial exclusion and overcome barriers to development. The development of trust and understanding between the public sector and this emerging industry is critical if all countries are ultimately to benefit from the 'disruptive' transformation many are predicting the rise of Fintech will have on the provision of financial services. This paper briefly examines the rise of Fintech, including the growth of the Fintech sector and its implications for central banks. Its focus is on how Commonwealth member countries, in seeking to understand and respond to these challenges, are engaging with the private sector. It identifies a number of strategies being employed and recommends that, given the cross-border

nature of some of these activities, member countries should continue to share information and experiences in engaging with the sector.

Guiding questions

- What challenges do central banks face in understanding Fintech, its implications and the sector that is behind its development?
- How important is it that central banks engage with this sector to meet these challenges?
- What strategies are central banks applying to undertake this engagement?

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1. Introduction

Technological innovations have long affected how we access and manage money and have influenced the nature and structure of those intermediaries that have helped us do so. In the 1950s, introduction of the first mainframe computers by banks significantly increased automation and efficiency. Today, a consumer in Nairobi can purchase goods by means of the transmission of an electronic signal from a mobile phone, constructed from a range of raw materials sourced from around the world and facilitated by a 'network' operator that in turn is supported by a broad network of agents.

Of course, these changes have occurred over a number of decades. The current focus on and excitement around 'Fintech' is a result of the prospect of a new wave of technological innovations to drive both rapid and, as many describe it, 'disruptive' change in the financial sector. It has implications for globally significant financial centres that play host to a large part of the Fintech sector; for developing countries looking to leverage technological innovation to address stubbornly high rates of financial exclusion; and for small states eager to exploit the potential technological innovation offers to overcome inherent physical barriers to development.

Central banks are playing and will continue to play a significant role in formulating the public sector's response to these developments. This will involve striking the right balance between their role of regulator, with a mandate to support financial stability, and that of enabler, particularly in developing country contexts, where central banks play a leading role in promoting financial inclusion.

In taking on this role, central banks must develop effective working relationships with the sector that is driving much of this change. This is not without its challenges, given that the rise of Fintech has brought with it a rapid change not only in business models and processes but also in the financial sector itself.

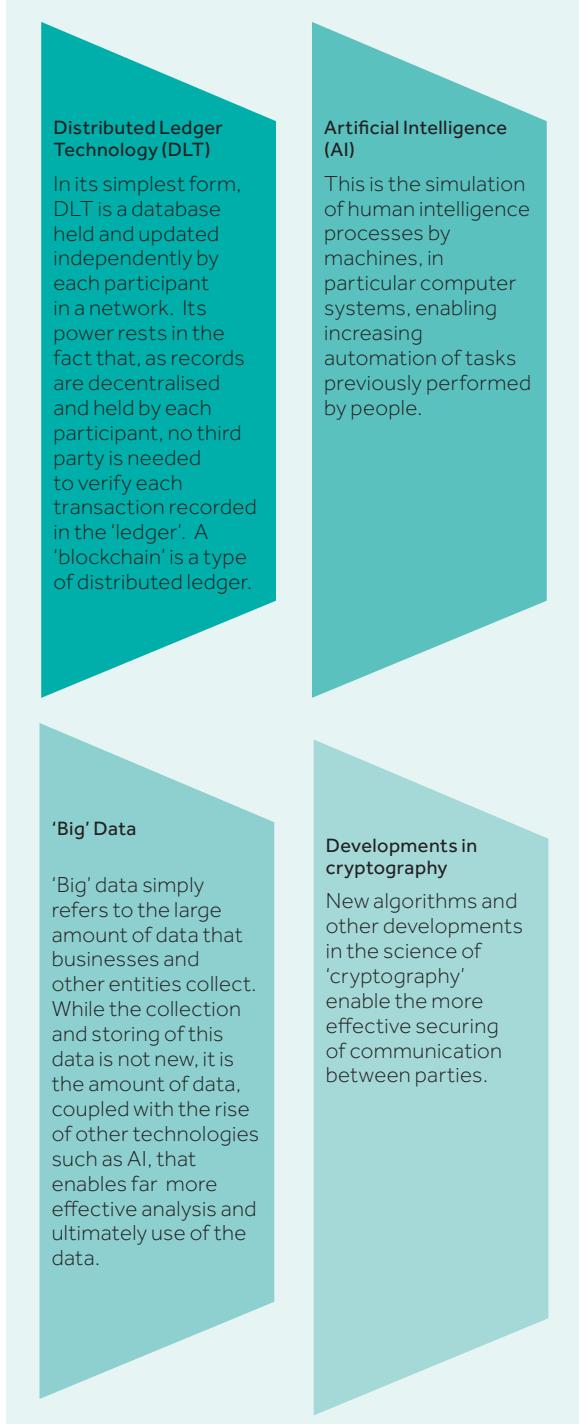
This paper examines this 'rise of Fintech', including its implications for issues such as financial inclusion and 'de-risking'. It briefly explores the issues this poses for central banks, given their mandate, and how they are working with the companies to effectively discharge this mandate. The paper concludes with some recommendations and questions for reflection.

2. The rise of Fintech

2.1 What is Fintech?

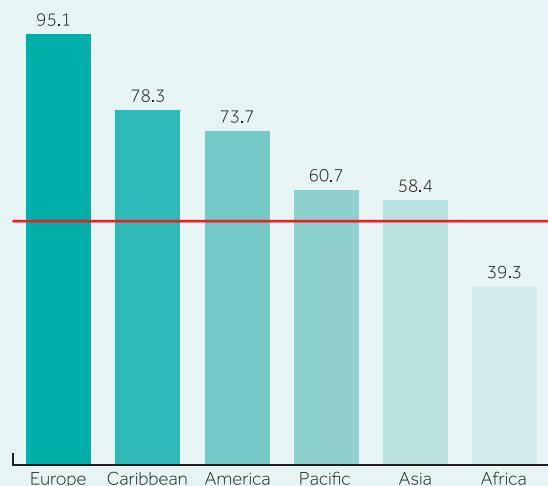
As Figure 1 shows, the concept of Fintech broadly captures a number of technologies, which, often working in combination, promise to transform (and in some cases already are transforming) the provision of financial services in a number of ways (He et al., 2017).

Figure 1: Some of the key 'techs' in Fintech



Fintech offers significant potential to enhance efficiencies, reduce costs, enable more effective risk management and expand access to financial services across a range of different areas, including lending, payments, personal finance, money transfer and insurance. There is a significant focus on Distributed Ledger Technology (DLT) in particular, given the potential it offers to resolve the traditional trade-off that exists between guaranteeing security and legality of transactions on the one hand and its cost efficiency and anonymity on the other (Smets, 2016). The highest-profile and most discussed application of DLT is its support to the development of virtual currencies such as bitcoin, and their subsequent use as a private means of exchange for goods, services and assets.

Figure 2: Financial inclusion in the Commonwealth – account at a financial institution, 2014 (% of population aged 15+)



Note: Caribbean – Jamaica only; the red line shows the global average.

Source: Global Financial Inclusion Database, World Bank, except Fiji, Papua New Guinea, Samoa and Solomon Islands (where information was sourced from PFIP (2016) & Reserve Bank of Fiji (2016))

The potential for Fintech to facilitate greater access to the financial system is particularly significant in the context of broader international and national efforts to promote financial inclusion among the estimated 2 billion (predominantly women) who remain without access to formal financial services. Indeed, as Figure 2 illustrates, promoting greater financial inclusion remains a key priority in many regions of the Commonwealth where financial inclusion rates remain relatively low.

The much-cited case of Kenya's M-Pesa system highlights the potential of new business models, drawing on new technologies, to significantly expand access to the financial system in developing countries.

There are a number of other examples of Fintech companies trialling the use of technology to promote financial inclusion in other ways. One company, operating across a number of Commonwealth developing countries, is using an individual's social media network to prove identity and creditworthiness, seeking to overcome the challenges of doing so with existing financial institutions based on traditional methods. With the costs of sending remittances still far above the five per cent goal set by the G20, and indeed costs for Commonwealth developing countries far above the global average (Hopper, 2016), there is also significant focus on the prospect offered by new business models built on emerging technology. This includes the development of peer-to-peer networks or even overcoming the challenges associated with interoperability, which places limits on the versatility of existing mobile money business models. While this potential exists in relation to all countries, for small states facing the invariable physical barriers that hamper development and economic growth, the potential technological innovation offers to reduce transaction costs is of particular significance (IMF, 2015).

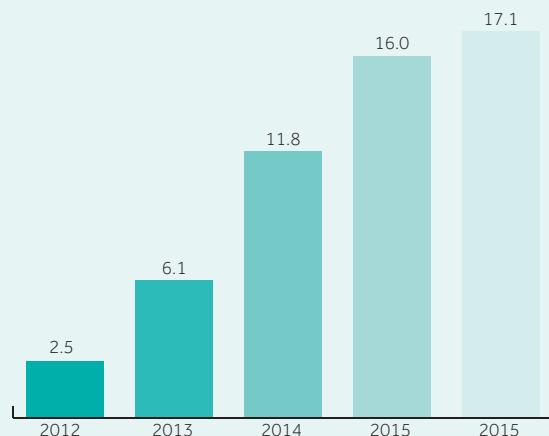
Fintech may even play a role as part of the broader global and regional search for effective solutions to 'de-risking', something of particular interest to small states in the Pacific and the Caribbean. Such states, seeing a decline of 10 per cent in correspondent banking relationships in 2016 alone, continue to be most affected by this phenomenon (FSB, 2017). A recent paper produced by the United Nations Economic Commission for Latin America and the Caribbean explored the possible use of a blockchain-based settlement framework to improve surveillance of transactions and to even bypass the need for correspondent banks altogether (Williams, 2017).

2.2 The growth of Fintech

While the underlying technological innovation is a key aspect of this change, it is the marshalling of the forces of the private sector – in channelling investment, developing new applications, identifying new markets – that is very much setting the pace and shaping the nature of the change.

As Figure 3 illustrates, global Fintech investments increased from US\$2.5 billion in 2012 to over \$17 billion in 2016, with investment in Asia now representing almost half of investment, followed by the traditional Fintech ‘hubs’ of North America and Europe (Autonomous Research, 2017). Other centres, including Canada (KPMG, 2017) and Australia (CBI Insights, 2017), are also becoming increasingly important.

Figure 3: Global investment in Fintech, 2012–2016 (US\$ billions)



Source: Autonomous Research (2017).

As remarkable as these investment trends are, it is the structure of the sector that is perhaps of the greatest significance. The past several decades have witnessed significant consolidation in the financial sector, with the emergence of a relatively small number of systemically significant financial institutions (He et al., 2017). However, while such existing institutions are increasingly investing in Fintech, either directly or in partnership, the growing ‘Fintech sector’ is vast.

There are now 22 so called Fintech ‘unicorns’ – or Fintech companies worth more than US\$1 billion, with a total valuation of an estimated \$77 billion.

Significantly, overall, there are an estimated 5,000–6,000 Fintech start-ups vying for market share in various market segments. These markets range from lending tech to money transfer, blockchain and insurance.

While traditional financial centres are the home for many of these Fintech companies, other centres are emerging. In recognition of both the enormous market potential of ‘unbanked’ populations and the success of the application of new business models as demonstrated by M-Pesa, in Africa alone there are an estimated over 300 Fintech start-ups. Kenya, Nigeria and South Africa are at the forefront of this start-up activity (Disrupt Africa, 2017).

This increased number of intermediaries and their capacity to leverage technology to engage customers directly, as well as the variety of products and business models, represent significant changes to the financial services landscape. For central banks, this has a number of implications, which are briefly explored in the next sections.

3. Implications for central banks

The rise of Fintech presents both opportunities and challenges for central banks, in terms both of how they need to respond to the risks posed by Fintech and how they can support its responsible adoption, helping economies realise its potential.

3.1 Responding to the risks

While their capacity to facilitate transactions quickly and more efficiently has underpinned much of the excitement around virtual currencies, concerns have also been raised about their capacity to facilitate illegal activities, given their anonymity and decentralised nature. For central banks with the responsibility of maintaining financial stability and, in many cases, overseeing the domestic implementation of global regulatory frameworks, such as those relating to Anti Money-Laundering and Countering the Financing of Terrorism (AML/CFT), this is an issue of concern. Not surprisingly, a number of central banks in the Commonwealth have warned against the use of virtual currencies, and the global-standard setter for AML/CFT regulations has issued specific guidance (FATF, 2014).

The Commonwealth's own Virtual Currency Working Group² is also examining the issue of regulating virtual currencies (Commonwealth Secretariat, 2015).

In addition, while the capacity of new entrants to leverage technology to engage directly with consumers is positive, particularly in relation to those people currently under-serviced by the existing financial services sector, it also raises potential risks. These include risks with respect to privacy around the personal information consumers provide in an online environment, the risk of fraud and financial risks associated with consumers not fully understanding the products they purchase.

Indeed, concerns around consumer protection appear to be a driver behind the Central Bank of China's recent decision to ban so called 'initial coin offerings'³ – effectively an unregulated means of crowd-funding using cryptocurrencies.

The approach taken by regulators to supervision will also likely be affected. The recent significant increase in the number of entities providing financial services and the different types of financial services they provide point to the need for a new approach to supervision and regulation by public sector entities such as central banks. Among other things, the rise of the Fintech sector is likely to stretch already limited regulatory and supervisory capacity, leading some to suggest regulation may need to focus more on activities rather than entities (He et al., 2017).

3.2 Acting as an enabler and adopter

The public sector response cannot be defined only by considerations of risk and regulation. It must also act as an enabler of Fintech, given the significant potential the sector offers across all economies (Commonwealth Secretariat, 2015). Governments generally play a critical role in creating the enabling conditions necessary for widespread adoption of technology. While this requires not 'overshooting' with a regulatory response, such that any adoption is stifled, it also needs governments to put in place sufficient regulation to build confidence in a market and provide for a level playing field (CPTM, 2017).

The slow adoption in developing countries of new and innovative remittance models such as peer-to-peer networks, the greater use of pre-paid cards and the growth of the so-called 'rebittance' market are in part a result of the lack of clear guidance relating to operators of new business models.

Given the role many central banks play, particularly in developing countries, in promoting financial inclusion, they are in a unique position to frame the public sector response – one that does not ignore the risks but creates an enabling environment for the responsible adoption of innovative technologies. Of course, this is not the responsibility of the central bank alone: in many developing countries, limitations on the adoption of technologies extend beyond the regulatory framework, to include, for example, absence of the necessary physical infrastructure.

In some instances, potential engagement by central banks with Fintech is far more direct. A broader application of DLT, for example, could see central banks issuing their own digital currency, effectively creating a proxy or alternative for traditional fiat currency. The precise implications of such a Central Bank Digital Currency (CBDC) would ultimately depend on its design but are potentially significant, particularly if the currency operates to compete with the commercial sector (Broadbent, 2016). As noted below, it is for this reason that a number of central banks in the Commonwealth are closely examining the risks and opportunities the issuance of a CBDC offers.

Ultimately, in responding effectively to the rise of Fintech as regulators, as enablers of technological innovation or even in adopting technology itself in furtherance of their own core mandate, central banks face significant challenges – in understanding sufficiently both the risk and the potential new business models offer and the technology that underlies them, and all in the context of a quickly growing industry and market. A key part of responding to this challenge lies in developing effective working relationships with the private sector.

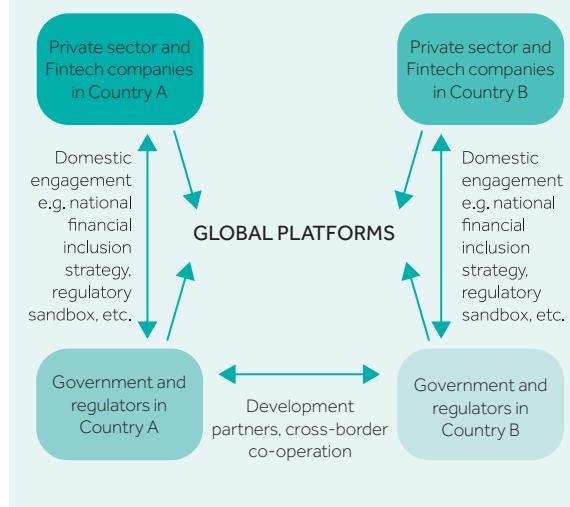
² The Commonwealth's Virtual Currency Working Group was established following a roundtable on Virtual Currencies held in February 2015, to examine the prevalence and impact of virtual currencies across the membership and respond to a need for technical guidance to assist members in developing their regulatory response to virtual currencies. The Working Group includes Australia, Barbados, Kenya, Nigeria, Singapore and Tonga, together with the International Monetary Fund (IMF) and the World Bank.

³An ICO is an unregulated means by which funds are raised for a new cryptocurrency venture.

4. Working with the private sector: Experience of Commonwealth members

Commonwealth member countries are engaging with the Fintech sector in a number of ways, both in a domestic context and as part of global platforms. In addition, jurisdictions and regulators are increasingly recognising the value that lies in forging closer ties with similar entities in other jurisdictions, as a means of sharing knowledge and experience, and in facilitating the engagement of private sector entities operating across borders. This is shown in Figure 4 and further detailed below.

Figure 4: Working with the private sector



Close collaboration with the private sector to promote financial inclusion exists in many countries in the Commonwealth, formalised under **national financial inclusion strategies**.⁴ Such strategies provide a roadmap of actions agreed and defined at the national or subnational level that stakeholders follow to achieve financial inclusion objectives. Increasingly, these strategies have recognised the importance of consultation and engagement with the private sector, including with respect to those leveraging Fintech. In many cases, they have formalised this engagement through the presence of private sector organisations on the bodies charged with overseeing strategy implementation (AFI, 2016). In the majority of cases, central banks lead the implementation of these strategies.

which gives them an important role, among other things in helping frame a broader public sector (including regulatory) response to the issues posed by new business models but in a way that recognises their potential to promote greater financial inclusion.

The success story of M-Pesa provides useful insights into public–private collaboration. The mobile money platform ultimately applied by Safaricom was first tested and piloted under a programme overseen and funded by the UK Department for International Development (DFID). Despite some concerns, the subsequent roll-out of the platform owes much to the approach the Central Bank of Kenya adopted, which, while imposing certain basic conditions, ultimately did not raise any objections to its launch, in part because of its 'desire to enhance financial inclusion' (AFI, 2010).

These formal relationships with the private sector have been developed in other ways. For example, a number of central banks in the Commonwealth recently established formal platforms to provide an environment in which both a greater understanding of Fintech can be developed and the sector itself can be developed. Last year (2016), for example, saw the Bank of England establish its Fintech Accelerator and Bank Negara Malaysia establish its Financial Technology Enabler Group.

Recognising that Fintech raises a broad range of regulatory issues, in some member countries other national regulators have similarly developed '**innovation hubs**', which are designed in part to ensure new businesses operating innovative business models understand the regulatory framework and how it applies to them. This is the case for the UK's Financial Conduct Authority and Australia's Securities and Investment Commission (ASIC). The latter also provides an example of establishing formal working relationships with other country regulators to assist new businesses to better engage with regulators across borders, in recognition of the fact that the Fintech phenomenon is global.⁵

At the global level, there are also a number of forums or networks that have been established to bring together private and public sector actors.

⁴ In the Commonwealth, strategies have been adopted by Fiji, India, Malawi, Malaysia, Mozambique, Namibia, Nigeria, Pakistan, Papua New Guinea, Samoa, Sierra Leone, Solomon Islands, Tanzania and Vanuatu. Bangladesh, Swaziland, Trinidad and Tobago and Uganda are at different stages of developing one.

⁵ ASIC has entered into formal agreements to collaborate with, among others, regulators in Canada, Kenya, Malaysia, Singapore and the UK.

The Better Than Cash Alliance, for example, has been established at the UN to promote transition from cash to digital payments in order to reduce poverty and drive inclusive growth.

The Alliance is a partnership of governments, international organisations and the private sector and collaborates closely with other global organisations, and is an implementing partner for the G20 Global Partnership for Financial Inclusion. Eleven Commonwealth member countries⁶ are part of the alliance.

A common approach that national regulators, including some central banks, are using to explore in conjunction with the private sector the potential application and implications of Fintech is use of a **regulatory sandbox**. A sandbox is a set of rules that provides a safe environment for Fintech experiments by enabling financial institutions and Fintech start-ups to experiment with innovative financial products or services within a well-defined space and duration, often under relaxed regulatory requirements. It includes appropriate safeguards to contain the consequences of failure and maintains the overall safety and soundness of the financial system.

While many of the Commonwealth's larger advanced members (such as Canada, Malaysia, Singapore and the UK) have adopted this approach, Mauritius, recognising the potential value of Fintech as a means of breaking down transactional barriers for small island states, has also established one. The Reserve Bank of Fiji recently announced its intention to similarly establish a regulatory sandbox.

A number of member central banks have also entered into, or are exploring the development of, **partnerships with Fintech companies**, in which central banks are considering the potential application of Fintech in situations where it will affect their core mandate.

The Bank of England in June 2017 carried out a test to see whether it could synchronise a multimillion-pound wholesale payment passing from its own settlement system, known as the Real-Time Gross Settlement (RTGS), to another central bank's core system. The test was carried out using an 'interledger' programme developed by Ripple, the California-based blockchain specialist, to synchronise a payment between two central

banks' systems. The test allowed money to move between countries near-instantaneously and without settlement risk. Despite the successful test and willingness to explore more, the Bank has concluded that DLT is 'not sufficiently mature' to support the core RTGS system yet.

The Bank of Canada has been working on Project Jasper with the country's largest banks, Payments Canada and the R3 consortium. The project which commenced in summer 2016 involves the testing of a digital fiat currency called Cad-Coin which uses DLT. It concluded in May 2017 that DLT is currently not compatible with operating the country's centralised interbank payment systems and there are privacy, resilience and scalability issues that need to be resolved.

These examples from Canada and the UK highlight both the value in thoroughly testing certain applications of new technologies such as DLT and also the fact that, in some respects, these technologies, their application and their interface with existing systems need to be tested further.

In a small state context, the Central Bank of Barbados is in discussions with local Fintech start-up, Bitt, to enter into a pilot involving the issuance of Digital Barbados Dollars drawing on blockchain and DLT. The pilot is essentially a feasibility study designed to test the viability and functionality of the Central Bank of Barbados issuing Digital Barbados Dollars in a digital financial ecosystem, with evaluation of this pilot providing the basis for larger-scale implementation.

Finally, as the M-Pesa example above highlights, **programmes funded by development partners** can be utilised to support the responsible development and deployment of new business models to promote development outcomes in developing economies. DFID continues its work in this area through its Private Sector Development Programmes. The Bank of Papua New Guinea is also working in collaboration with the Australian government to research and develop blockchain technology solutions to promote financial inclusion for the country's unbanked population.

⁶Bangladesh, Fiji, Ghana, India, Kenya, Malawi, Pakistan, Papua New Guinea, Rwanda, Sierra Leone and Solomon Islands.

5. Conclusion

This paper has shown that, in discharging their responsibilities, both those of regulator and those of enabler, central banks across the Commonwealth's membership have sought to engage, collaborate and in some cases explore partnering with the Fintech sector in a variety of ways. Deployment of a regulatory sandbox is increasingly being adopted to test, and tailor regulatory responses to, the application of new business models. This is true not only for the Commonwealth's advanced members but also for its developing members.

Platforms at both the global and the national levels have been established to enable central banks and other national regulators to engage with the Fintech sector and other stakeholders, providing a forum for building greater trust and understanding. Increasing engagement of the private sector in national strategies for financial inclusion is welcome, and provides an effective context for exploring the potential to leverage financial innovation to promote greater financial inclusion, in many cases under the national leadership of central banks.

Given the mutual interest that central banks (and the public sector generally) and many Fintech companies have in encouraging the responsible adoption of new technologies and new business models in national economies, in the context of the challenges they are facing central banks should reflect on how else they can usefully learn from or work with private sector enterprises to discharge their mandates.

Moreover, as Fintech and its implications are something that central banks across the Commonwealth's membership are grappling with, these actors should also reflect on how they can work together and share experiences and insights on how members are seeking to engage with the burgeoning Fintech sector.

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