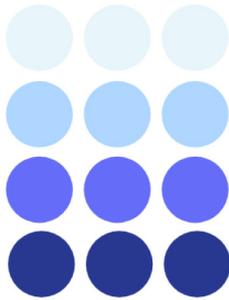




IADI Fintech Briefs provide high-level overviews and key takeaways on Fintech topics of relevance to deposit insurers.



NO. 1

FINTECH BRIEF

INTRODUCTORY BRIEF
CHALLENGES FOR DEPOSIT INSURERS

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INTRODUCTORY BRIEF (PART I) CHALLENGES FOR DEPOSIT INSURERS

Foreword

The International Association of Deposit Insurers (IADI) is launching a research series that will explore innovations in financial technology (fintech) and how they affect deposit insurance systems (DIS). The Financial Stability Board (FSB) has defined fintech as

“technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services.”

Fintech presents challenges and opportunities, and this research series will attempt to identify and analyse these developments from the perspective of deposit insurers. This brief will focus on the challenges fintech presents for deposit insurers and a second brief will discuss opportunities.¹ Subsequent briefs will explore such developments in detail.

Fintech is disrupting the traditional business model of deposit-taking institutions (DTIs), around which DIS have been designed and implemented. These new business models blur the lines between financial products and services offered within and outside the traditional financial system and have the potential to introduce confusion as to whether a product is guaranteed by the DIS. For example, in some jurisdictions, fintech firms directly compete with DTIs to provide lending and payment services, but are not covered by the deposit insurance system. In other jurisdictions, fintechs may offer their products and services in partnership with DTIs and as such may be covered by the DIS. Such innovation presents a challenge for deposit insurers around the issue of public awareness of deposit insurance coverage and ultimately brings into question the DIS’ role in supporting financial stability.

1 Background

Deposit accounts are the principal source of funding for DTIs and offer depositors a way to save and make payments. In a DIS, depositors are protected against the loss of their insured deposits in the event a DTI is unable to meet its obligations. The presence of a DIS reduces the incentive for depositors to withdraw their deposits or “run” at the first sign of trouble in their institution and, therefore, helps to maintain financial stability and minimises disruptions to the real economy. In an explicit DIS, DTIs pay premiums to the DI to fund this insurance.

1.1 Technology inside and outside the financial sector

Advances in technology have enabled traditional DTIs to gather deposits and deliver related services through third-party agents and electronic channels such as computers or smartphone applications. We are even witnessing the growth of purely virtual DTIs that have no physical branch presence. Further, innovative financial products and services are being developed and provided by non-bank entities such as mobile network operators and tech companies. The developments being introduced by these new providers are markedly different from the major advances in payment systems we have experienced in the past (e.g., the development of ATMs, checks, debit cards, credit cards, and electronic funds transfers), as they are developing outside the traditional financial sector. These innovations are disrupting relationships between consumers and traditional DTIs. Some of these products have the potential to create confusion for consumers who may not understand the differences between them and deposits in DTIs. They also raise questions about what, if any, role there is for deposit insurance in these new environments. This brief will explore some of the complex issues and questions about how deposit insurance is or should be functioning in this new environment.

¹ These opportunities include, for example, improving the reimbursement processes, enhancing reporting procedures, etc.

1.2 What is driving fintech growth?

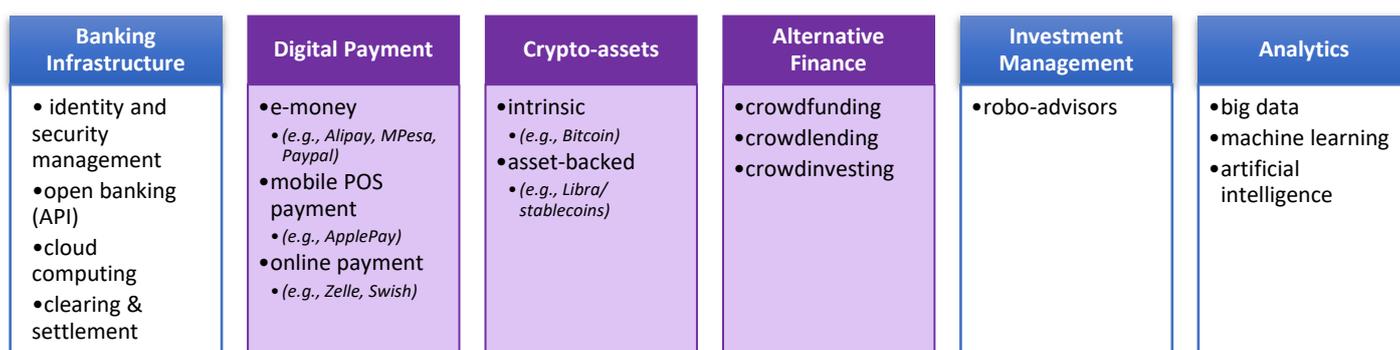
The growth in fintech products and services is largely driven by the lower regulatory costs and the search for market opportunities. In some developed markets, fintech products have aimed largely at capturing the “overbanked” financial services customers with greater convenience and lower transaction costs. Big Tech companies, such as Apple and Google, have utilised new technologies to deliver “convenient, attractive, low-cost, and trusted services to a large network of customers. User-centred design is second nature. They understand how people behave on social media and online. They can make payments integrate seamlessly (Adrian and Mancini-Griffoli, 2019).” For DTIs, innovations have improved the speed and accuracy of internal processes through automation and greater consistency, helping to drive down cost and improve the customer experience.²

Reaching the unbanked or “underbanked” is also a motivator for fintech innovation in developed but, more so, in emerging economies, wherever there is an unmet demand for financial services (Frost, 2020). Thirty-four percent of unbanked adults in key emerging economies reported they are unable to maintain the minimum balance required to open a bank account (Ghose et al., 2020). Beyond the lack of sufficient funds, the perceived cost of banking, geographical distance, documentation process, and lack of trust are cited as reasons for not having a traditional bank account. Additionally, nine percent of adults globally — or thirteen percent of account owners — opened their first account specifically to receive digital payments (e.g., private sector wages, government payments, or payments for the sale of agricultural products) (Demirgüç-Kunt, et al., 2018).³ Fintech innovation has allowed for the introduction of simple financial products to the unbanked. There is some evidence that as fintech financial services are made more available, the unbanked have joined the traditional financial sector. This has been seen in Africa, where increased mobile money adoption is correlated with increased bank account adoption in Ghana, Kenya, Rwanda, Tanzania, Uganda, and Zimbabwe (Bill & Melinda Gates Foundation, 2019).⁴

2 Fintech landscape

The modern fintech landscape is broad and each segment has implications for consumers and financial institutions alike. The focus of this brief is on those segments that could have a direct effect on DTIs’ balance sheets (highlighted in Figure 1 below). Future briefs in this research series will expand on these issues as well as cover additional topics in the fintech landscape.

Figure 1. Fintech Landscape



² Decreased costs are also a motivator for fintechs that have lower operating costs (e.g., no physical branches).

³ The World Bank Global Findex includes accounts opened at a bank or another type of financial institution, or opened using a mobile money service.

⁴ Beyond the broad themes of reaching the “overbanked” and the “underbanked” fintech growth can also be attributed to the rapid development of modern technologies (through the internet, mobile phones, computing power, and big data), as well as younger, more tech-savvy generations entering the labour market.

2.1 Digital payment

Digital payments can serve as an alternative to cash, checks, and debit cards, and have similarities to activities on the liabilities side of a DTI balance sheet. Types of digital payments include e-money products, such as mobile money and electronic purses (represented by open-system pre-paid cards), mobile point of sale (POS) services, and online payments offered through DTIs.⁵

IADI defines “**e-money**” as an electronic store of monetary value on a technical device that may be widely used for making payments to entities other than the e-money issuer. The device acts as a prepaid bearer instrument that does not necessarily involve bank accounts in transactions.

In this brief, the term “**mobile money**” refers to a type of e-money that is offered specifically by mobile network operators.

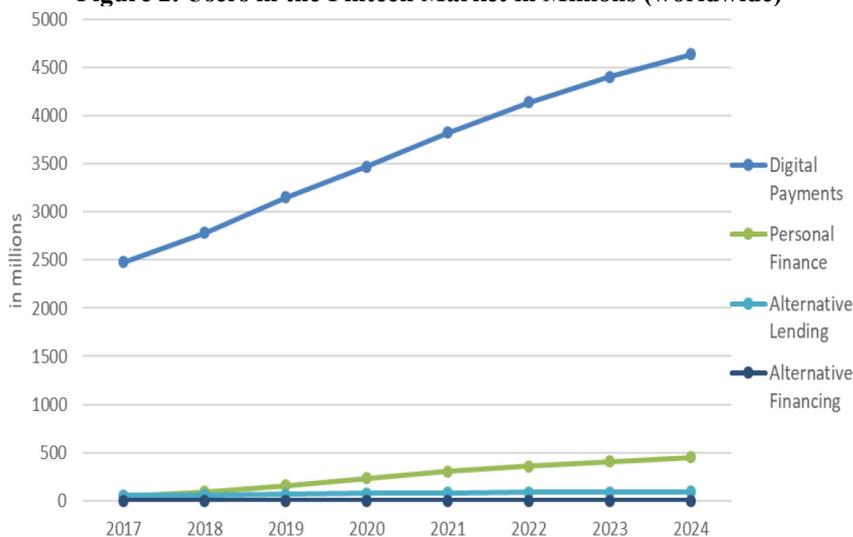
E-money can be broken down further into two types of models. Each may have different implications for deposit insurers. In one model the e-money issuer (EMI) primarily links to a customer’s account at a DTI for ultimate settlement of the transaction, although customers can still hold funds in their e-money accounts. This model is used in China, for example, where Alipay and WeChat are third party payment service providers that use smartphone apps linked to an account at a DTI. In the second model, there is no link with an existing DTI account. This is demonstrated in Kenya where mobile network operators offer financial services such as mobile money accounts that do not need to be linked to a customer account at a DTI (Demirgüç-Kunt, et al., 2018).

Online payment services partner directly with DTIs to allow users to make payments to other persons. One such service, Zelle, bills itself as an easy way to send money directly between almost any U.S. bank account, typically within minutes. Similarly, mobile point of sale services (e.g., ApplePay) allow users to make payments directly to vendors. These payments are processed via smartphone applications by triggering an online bank transfer or by using a digitally stored credit or debit card.

The rates of adoption of digital payments, in both emerging and developed economies, are staggering. Figure 2 provides a forecast of the growth of digital payments globally through 2024.

In Kenya, for example, more than 70 percent of adults have used mobile money while only about 55 percent hold a traditional bank account (Ghose et al., 2020). In China alone, the value of e-money transactions (through WeChat Pay and Alipay) is greater than the worldwide value of Visa and Mastercard transactions combined (Adrian and Mancini-Griffoli, 2019). Mobile payments in China are now equivalent to 16 percent of GDP (FSB, 2019). Finally, DTIs themselves are developing innovations in the payments systems. In Europe there is pressure on banks (e.g., by the European Central Bank and European Commission) to ease cross-border and instant payments by developing solutions within the banking industry and not leave the field to payment service providers. For example, in Sweden, seven out of ten Swedes use Swish – a bank-owned online payment app created by six large Swedish banks in 2012. The app allows people to make instant (real time) payments from their account to other payment accounts (Riksbank, 2019).

Figure 2. Users in the Fintech Market in Millions (worldwide)



Source: Statista (Forecast adjusted for expected impact of COVID-19), June 2020

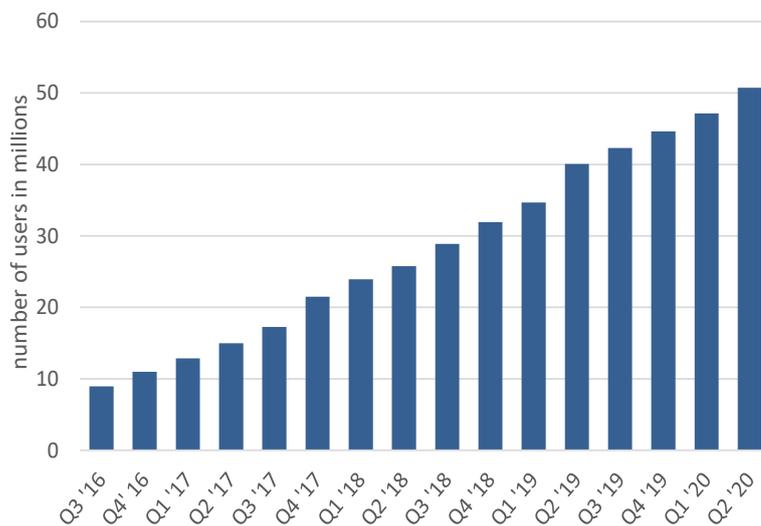
⁵ Examples of open-system pre-paid cards are Visa and MasterCard gift cards.

2.2 Crypto-assets

Crypto-assets are digital assets, which have similarities to activities on both sides of the DTI balance sheet, can work as a medium of exchange, and as storage of value, using distributed ledger technology.⁶ The two most common types of crypto-assets are intrinsic crypto-assets and asset-backed crypto-assets. Intrinsic crypto-assets are free floating and are not backed by any asset; the value is derived from market speculation (e.g., Bitcoin). Asset backed crypto-assets, such as stable coins, are often pegged to and backed by fiat currency or another financial asset by their issuer.

Consumer use of these assets has steadily increased since the creation of Bitcoin in 2009. The number of blockchain wallet users surpassed 50 million at the end of June 2020 (see Figure 3).⁷ However, many merchants are still hesitant to accept crypto-assets as payment due to the volatility of their market value. While not yet a widely common method of payment, DTIs have gradually begun to invest in crypto-assets, provide custodial services to their customers, as well as develop their own crypto-assets for customer use. For example, in the United States, JP Morgan created a digital coin for payments in February 2019.⁸ Additionally, the Office of the Comptroller of the Currency clarified the authority of national banks to provide crypto asset custody services for customers in September 2020.⁹ In Switzerland, SEBA Bank provides accounts and custody for fiat and digital assets to Swiss blockchain companies.¹⁰

Figure 3. Number of Blockchain Wallet Users in Millions (worldwide)



Source: Statista – July 2020

2.3 Alternative finance

The Alternative Finance segment of the fintech landscape most closely resembles DTI activities on the asset side of the balance sheet. It includes crowdfunding, crowdinvesting, and crowdlending (or peer-to-peer lending). Broadly speaking, each of these models allows for individuals or small-medium sized businesses to bypass traditional financial institutions and raise funds from many people through a digital platform, typically at a lower cost than through traditional sources. This allows inexperienced or previously excluded financial consumers to invest directly, which can be risky with the lack of transparency in these alternative finance models.

⁶ Distributed ledger technology, which includes blockchain, records peer-to-peer transactions across decentralised computers without a central authority (Zavialova, 2020). This shared infrastructure allows for the creation of assets that only exist in digital form within the boundaries of the issuing system, as well as the digital representation of assets, including rights, held elsewhere.

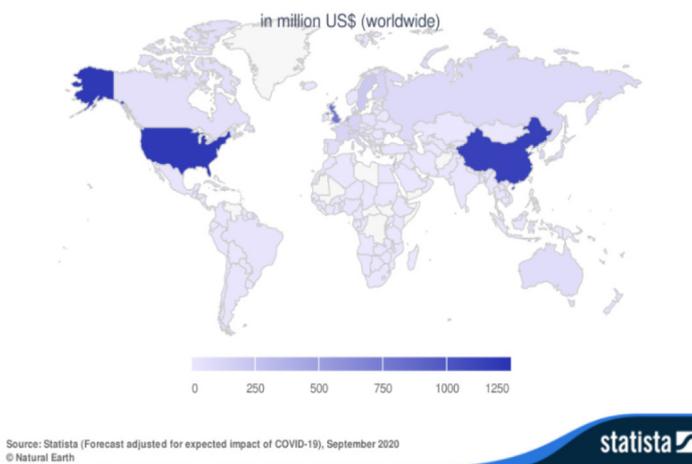
⁷ Blockchain wallets are digital accounts that allow users to store their personal data (e.g., name, phone number, email address) with the wallet provider and send payment information to vendors in the form of a token. The token holds sufficient information for the wallet provider to associate with the correct account, but does not include personal information.

⁸ <https://www.jpmorgan.com/solutions/cib/news/digital-coin-payments>

⁹ <https://www.occ.gov/news-issuances/news-releases/2020/nr-occ-2020-98.html>

¹⁰ <https://www.seba.swiss/#services>

Figure 4. Global Comparison - Transaction Value in the Alternative Financing market



Crowdfunding (or reward-based crowdfunding) provides an alternative platform for businesses to raise funding. Businesses seek funds by advertising their prototypes or projects in a “campaign.” The campaign specifies the amount of funds needed to produce the project within a certain timeframe and investors are “rewarded” for their funding by getting the product early or by receiving some other kind of merchandise from the business. The most widely used crowdfunding platform is Kickstarter, which has raised over USD 5 billion since its founding in 2009 (Zavialova, 2020). Crowdfunding (or equity-based crowdfunding) is a similar concept, but rather than offering a tangible reward, businesses offer a small equity stake in the company. The United States and China use crowdfunding and crowdlending far more than other countries (see Figure 4).

Crowdlending (or peer-to-peer lending) enables individuals or small-medium sized businesses to receive loans from private and institutional investors. The transaction value in the crowdlending market is highest in China, with a forecasted transaction value of over USD 250 million in 2020, followed by the forecasted transaction value of over USD 27 million in the United States (Zavialova, 2020).

3 Challenges and questions

3.1 Challenges for deposit insurers

The introduction of fintech innovations creates several challenges for deposit insurers and more broadly the financial safety net. While the rates of adoption of crypto-assets (including crypto-currencies) and alternative finance are notable and worthy of continued attention to see how they reshape the banking sector and affect DIS, they do not pose immediate challenges to deposit insurers. By contrast, advances in digital payments, especially e-money, are presenting more immediate challenges that are important for DIs to address.

Importantly, it must be determined, thereby taking country specifics into account, whether these products are so similar to deposits or are so interwoven into the financial system, leading to financial stability concerns, that some sort of protection should be provided for them. In order to do so, the deposit insurer should collaborate with the other financial safety net players to better understand fintech platforms, their products, and their business strategies. If EMIs or other fintechs, for example, are not allowed to intermediate and lend consumer funds, do they pose the same risk to consumers as DTIs do in the event of failure? Once the fintech platforms are better understood, the deposit insurer and the larger financial safety net can determine whether fintech platforms are sufficiently regulated, and whether deposit insurance or other safeguards, such as regulation of float, are warranted.

Concurrently, DIs will need to increase their public awareness initiatives and work toward improving consumer financial literacy in order to help consumers better understand the difference between an uninsured e-money account, crypto-asset, or an alternative finance instrument and a DIS insured deposit, for example. Additionally, deposit insurers must ensure that their staff are well versed in new technology. This would involve embracing human capital management policies that enable deposit insurers to attract, retain, and develop staff that can keep up with the rapidly changing ecosystem.

3.2 Research questions related to the Core Principles

IADI’s Core Principles (CPs) provide standards for effective deposit insurance. They reflect lessons learned in past financial crises and provide a useful means for evaluating developments in technology and how they might affect a DIS. Below is a preliminary, non-exhaustive list of possible research questions, relating to specific CPs, regarding deposit insurers’ policy responses to this new fintech environment. Future briefs may discuss fintech issues related to other CPs and how jurisdictions have addressed these.

CP 1 – Public Policy Objectives: The principal public policy objectives for DIS are to protect depositors and contribute to financial stability. Do these technological developments pose new challenges to achieving these objectives? Is this especially problematic when innovations target consumers outside the traditional financial system?

CP 4 – Relationships with other Safety-Net Participants: How would development of fintech have an effect on coordination and communication between the deposit insurer and other safety net players? Coordination becomes even more crucial with increased fintech adoption, and the need for financial safety net players to determine how these new platforms fit into the financial system. Are there regulators outside the financial safety-net (e.g. the telecommunications) that need to be brought into discussions with financial safety-net regulators?

CP 5 – Cross Border Issues: Should cross-border agreements account for fintech products and services?

CP 6 – Deposit Insurer’s Role in Contingency Planning and Crisis Management: We have seen in past crises the confusion and financial instability that can occur when nonbank products and services exist side-by-side with bank products and services. How should fintech be incorporated into contingency planning and crisis management policies?

CP 7 – Membership: DTI membership in a DIS should be compulsory. If the decision is made to insure e-money or other fintech products, should these issuers be required to join the DIS? Challenges might include the need for regulatory oversight over firms that, traditionally, are not accustomed to such oversight. In addition, the need to pay deposit insurance premiums would increase the operational costs of the EMI and could offset some of the lower transaction costs that EMIs are able to offer.¹¹

CP 8 – Coverage: New fintech products available to customers may raise the question of potential DIS coverage. Three approaches to e-money coverage (exclusion, direct, and indirect/pass-through) have been implemented in various jurisdictions.¹² Are all three approaches equally viable?

CP 10 – Public awareness: Given the variety of new products and services that co-exist and intermingle with traditional financial products payment services, how do deposit insurers ensure the public is aware of what is covered and what is not?

CP 14 – Failure resolution: Are there any special considerations for the resolution of an EMI if it were to be included in the DIS? What are the challenges in resolving DTIs that partner with fintech offerors? Does a jurisdiction’s legal and regulatory framework appropriately account for these challenges?

CP 15 – Reimbursing depositors: What are the challenges in reimbursing depositors of DTIs that offer insured fintech products or provide pass-through insurance to account holders of fintech providers? How can a deposit insurer overcome challenges to depositor data pertinent for quick reimbursement if the data is kept with non-member firms?

4 IADI’s Fintech Research Series

Given the novelty and quick rise of fintech, there is very little research in the area of deposit insurance that directly answers these questions, and almost no guidance on policy actions that deposit insurers should universally take, if any. This fintech brief series will begin to identify the appropriate issues for deposit insurers around various fintech developments and identify relevant areas for future research and possible guidance.

¹¹ Jurisdictions such as Colombia, India, and Mexico have adopted the direct coverage approach, where e-money is included in the definition of an eligible deposit, and EMIs are granted membership in the DIS (CGAP, 2016 and 2019).

¹² Some jurisdictions, such as El Salvador, have opted for an exclusion approach for the DI, but have chosen to require EMIs to hold reserves to cover the amount of their float at the central bank. The float represents the funds a central bank requires an EMI provider to set aside in order to be able to meet all customer demands at all times.

The indirect approach has been adopted by Kenya, Nigeria, and the United States, among others (Izaguirre et al., 2016 and 2019).

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