



DIGITAL FINANCIAL SERVICES  
(DFS) WORKING GROUP

# ADVANCING FAIR COMPETITION FOR INCLUSIVE DIGITAL FINANCE:

Insights from Emerging Markets



SPECIAL REPORT



## EXECUTIVE SUMMARY

Digital Financial Services (DFS) have greatly expanded financial inclusion and stimulated innovation, but their benefits to consumers are heavily influenced by the level and nature of competition in each market. Competition can serve as both an enabler and inhibitor of inclusive growth, depending on structural, regulatory, and market dynamics.

This study, commissioned by the Alliance for Financial Inclusion (AFI) under the Competition Knowledge Enablers Exchange (CKX) workstream, explores the mechanisms through which competition shapes DFS outcomes and the regulatory approaches that can promote healthy markets. It draws on existing literature, case precedents, and interviews with regulators and industry experts across multiple jurisdictions, identifying common competition concerns and detailing current regulatory responses with the aim of providing other financial regulators with guidance on how to move forward with similar challenges in their jurisdictions.

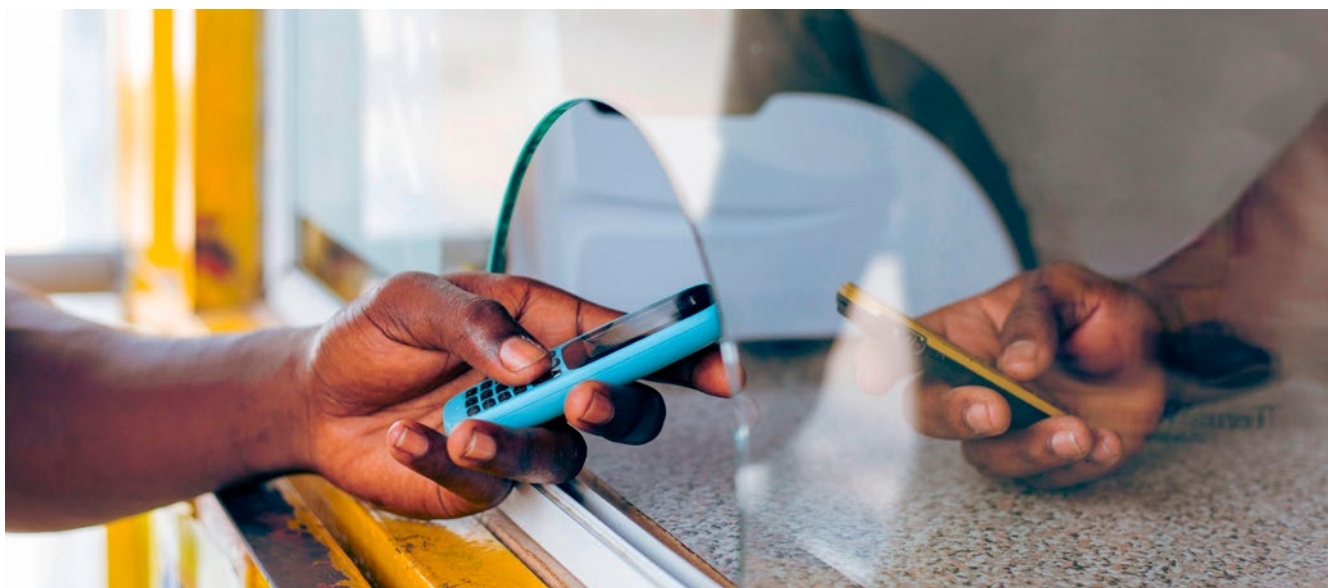
The report begins by examining the link between competition and financial inclusion, highlighting how DFS is transforming the financial sector. By introducing new players and business models, DFS has intensified competition and generated valuable

outcomes, especially through greater access to and usage of financial services. It then discusses the circumstances under which competition may fail, thus requiring interventions.

Competition is hindered when three main types of barriers to entry and expansion arise: structural, regulatory, and strategic barriers. The report provides detailed examples of these barriers within the financial sector and further explores the emerging competition concerns in DFS.

The report concludes by outlining possible regulatory responses to competition from financial regulators, drawing on country examples where these measures have been implemented. It highlights the important role regulators play in addressing competition concerns. The typology of responses includes interventions designed to promote openness, interoperability, and market entry, such as tiered licensing, regulatory sandboxes, open finance frameworks, and the development of digital public infrastructure. The findings suggest that regulators can leverage existing tools within their current mandate to tackle competition challenges, provided these are implemented with a competition lens. The report also recommends additional approaches for the future, including market studies and monitoring.

Ultimately, it concludes that a tailored, dynamic regulatory approach, one that balances innovation, stability, and competition, is essential for enabling DFS markets to reach their full potential in advancing financial inclusion.



# 1. BACKGROUND TO COMPETITION AND FINANCIAL SERVICES AND POTENTIAL THEMES

Competition plays an important role in enhancing efficiency, dynamism, and productivity in markets. This has been particularly evident in the financial sector, where competition spurred by the entry of new types of providers has led to substantial growth in financial inclusion. Competition within the financial sector has impacted financial inclusion by determining which firms are able to enter the market, the types of products and innovations introduced, and the providers delivering them.

These competitive dynamics have influenced how well products and services meet the needs of financially excluded groups - whether by tailoring offerings to underserved segments or by improving affordability through better rates. As a result, the past decade has seen a substantial increase in formal account holders, primarily driven by the expansion of digital financial services.<sup>1</sup>

The following developments in digital markets have accelerated competition in the financial sector:

- > **The types of institutions providing financial products:** This includes the entry of DFS including mobile money, the participation of BigTech companies in payments (such as Apple Pay, Google Pay, Alipay, WeChat Pay), and the growth of FinTech companies.
- > **The data available to promote and provide financial services:** Data can be used to better understand customer profiles and risk, allowing providers to more effectively tailor financial offerings.

- > **The physical location of services:** While traditional brick-and-mortar banks and ATMs required significant physical infrastructure, digitalization has enabled service provision across a far broader geographic footprint.
- > **The rails and infrastructure supporting financial products and services:** Digitalization has improved financial infrastructure in terms of cost, speed, and complexity, expanding the potential for new and value-added products and services.
- > **The cost associated with service provision:** The digitalization of services has reduced the cost at which these services can be delivered.

As will be discussed, these developments have influenced the competitive environment within the sector. They have both expanded the range of products available and altered pricing dynamics across the market, leading to increased access to financial services and higher levels of financial inclusion.

However, competitive entry alone does not always translate into better outcomes. In some contexts, barriers to entry and expansion, such as regulatory restrictions, structural market features that reward scale, or exclusionary tactics by incumbents, can limit the benefits of competition. These challenges may prevent new players from gaining traction, thereby dampening innovation, lowering quality, or maintaining high prices. The following sections explore these constraints and their implications for financial inclusion.

Banking and telecommunications, both critical to the delivery of DFS, are sectors with wide-ranging societal impacts, including on financial stability, trade, and welfare. Consequently, products and services in these sectors are typically subject to regulatory oversight. The design of this oversight varies significantly across countries depending on the legal framework, product type, and institutional landscape. Regulators may include central banks, telecommunications authorities, conduct regulators, competition agencies, and data protection bodies. In some cases, innovation-led financial services operate outside traditional oversight altogether. These regulatory bodies often pursue diverse objectives - such as financial stability, integrity, inclusion, innovation, consumer protection, and competition - that may at times align but also come into tension. Understanding how these objectives are prioritized, and by whom, is critical to shaping pro-competitive policies in digital finance.

<sup>1</sup> Klapper, Leora, Dorothe Singer, Laura Starita, and Alexandra Norris. 2025. The Global Findex Database 2025: Connectivity and Financial Inclusion in the Digital Economy. Available at: <https://openknowledge.worldbank.org/entities/publication/8b9002b6-d8dd-426c-aa7c-6d7d16902cd7>

While regulatory goals such as inclusion, stability, and innovation can be mutually reinforcing, they may also conflict. For example, promoting entry can introduce new risks that affect financial stability, while overly stringent rules may deter new market entrants and, in turn, stifle innovation. Policymakers must therefore carefully balance these objectives when crafting regulation. This report outlines where competition can be enabled - or unintentionally constrained - in digital financial markets, and how financial regulators can achieve an inclusive, innovation-friendly environment.

This document is structured as follows:

- > First, it maps the business models in the financial sector and how they have evolved. This section develops a typology of different financial models, encompassing both traditional institutions and DFS, along with other innovations that have emerged through digitalization.

- > Second, it examines key competition issues that have arisen. This includes a review of the different mechanisms and market dynamics related to the effects of digital financial products on competition, as well as the various theories of competitive harm identified within the sector.
- > Third, it outlines existing regulatory remedies, their efficacy, and the challenges faced in implementation. This section covers competition and antitrust interventions, the establishment of new regulatory structures to promote innovation, such as regulatory sandboxes and open banking initiatives, and measures aimed at curbing the exertion of market power.

The report concludes with recommendations outlining the way forward for financial regulators.



Farmers in Kenya. / Jake Lyell, Alamy Stock Photo

## 2. EMERGING BUSINESS MODELS

The term DFS refers to the broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances, and insurance. The DFS concept also encompasses mobile financial services (MFS).

In this context, “digital channels” include the internet, mobile phones (both smartphones and feature phones), ATMs, POS terminals, NFC-enabled devices, electronically enabled cards, biometric devices, tablets, phablets, and other digital systems. DFS models typically employ agents and third-party intermediary networks to improve accessibility and reduce overall service delivery costs.<sup>2</sup>

Advances in internet and mobile connectivity, lower computing and data storage costs, and improved data analytics have expanded the range of DFS and reduced their delivery costs.<sup>3</sup>

DFS encompass a range of products that vary depending on their purpose, target customer segment, delivery channel, and the technical infrastructure required.

- > **Use case:** DFS can include payments (person-to-person (P2P), person-to-business (P2B), merchant payments), savings, insurance, and lending.
- > **Customer target:** Customers can vary in terms of device sophistication (e.g. consumers with 2G-enabled phones require different technical solutions than those with smartphones and 4G or 5G connectivity), technical ability, transaction size, transaction complexity, and whether they are consumers or businesses. This diversity creates a range of products tailored to different types of customers.

- > **Access channels:** DFS can be accessed through mobile-based channels such as USSD, apps, or QR codes, as well as physical channels including agents, bank branches, digital kiosks, and point-of-sale machines.
- > **Underlying infrastructure and inputs:** The infrastructure required depends on the product type and business model. For example, some products may need an agent network to enable customers to convert cash to electronic money, others may require access to a payment switch connecting multiple providers for retail payments, while some rely on data regarding customer payment and transaction patterns.
- > **Types of providers:** Depending on jurisdictional rules, DFS may be offered by a range of providers beyond traditional banks, including non-bank financial institutions, FinTech startups, digital-only banks, BigTech platforms, and telecommunications companies.

DFS has evolved differently across countries depending on several context specific factors, including:

- > The extent of consumer access to financial products, such as bank accounts.
- > The reach and sophistication of the underlying infrastructure enabling digital services, such as telecommunications networks, internet access, and the types of devices used by consumers.
- > The regulatory and legislative framework for market entry and operations, which determines which types of providers can participate.
- > Consumer familiarity with technology and ease of use.

For example, considering one subset of DFS - namely payments - the following three models have developed over time:

**Telco-led model:** The telco-led model typically involves mobile network operators (MNOs) offering financial services (usually payments, P2P transfers, and e-wallet storage of value) to their mobile customer base.<sup>4</sup> This is often referred to as “mobile money”. Customers can deposit cash via agents, transfer money to merchants or individuals using their phones, and withdraw cash at agent outlets, all without needing a formal bank account. MNOs can reach remote areas through their airtime agent networks and quickly onboard users,

<sup>2</sup> For example, see the World Bank ([Overview | Digital Finance Inclusion](#)), BIS ([FinTech and the digital transformation of financial services: implications for market structure and public policy](#)), AFI ([Guideline Note No. 19](#)).

<sup>3</sup> Feyen, E., Frost, J et al. 2021. Fintech and the digital transformation of financial services: implications for market structure and public policy. Bank of International Settlements. Available at: <https://www.bis.org/publ/bppdf/bispap117.pdf>

<sup>4</sup> Naghavi, N. 2020. State of the industry report on mobile money 2019. GSMA. Available at: <https://www.gsma.com/sotir/wp-content/uploads/2020/03/GSMA-State-of-the-Industry-Report-on-Mobile-Money-2019-Full-Report.pdf>

since almost anyone with a basic mobile phone can access the service.<sup>5</sup> Telco-led models have significantly advanced inclusion.<sup>6</sup> Beyond payments, these ecosystems often include mobile loans (including micro-loans), insurance, and remittance products.

**Bank-led and neo-banks:** Bank-led products involve either incumbent banks digitizing their services or new digital-only banks (sometimes called neo-banks or challenger banks) entering the market under banking licenses.<sup>7</sup> In this model, the bank - as a regulated deposit-taking institution - is the primary DFS provider.<sup>8</sup> Unlike telco or BigTech models, this approach keeps finance within prudentially regulated entities while transforming how services are delivered (via apps, online platforms, agent networks, etc.). Sub-variants of this model include:

- > **Incumbent banks going digital:** Traditional banks in many countries have launched mobile banking apps, USSD services, agent banking, or subsidiary brands to reach new customer segments, while many banks in emerging markets have developed simplified accounts or e-wallets that mimic mobile money, sometimes in partnership with telcos.<sup>9</sup>
- > **Neo-banks or digital-only banks:** These are newly licensed banks with no physical branches, delivering services entirely through digital channels. They often have lower cost structures and targeted niches underserved by incumbents.<sup>10</sup>
- > **Hybrid models:** In many cases, banks and non-banks may partner closely. For example, a telco might operate a wallet but use a bank's license or hold

funds in trust or escrow accounts.<sup>11</sup> These can be considered bank-led from a regulatory standpoint (since the bank is ultimately responsible) but non-bank-led operationally.<sup>12</sup>

**Platform-led:** The second group of DFS is driven by large technology companies (Big Tech) through so-called “super-apps” that integrate financial services into broader digital ecosystems. In this model, companies with established online platforms - e-commerce, social media, ride-hailing, or communications - add financial functionalities such as payments, lending, insurance, and investments. Examples include Ant Group's Alipay (originating from Alibaba) and Tencent's WeChat Pay (embedded in the WeChat app)<sup>13</sup> in China, which offer multi-functional ecosystems where users can chat, shop, order rides, and make purchases using a single integrated wallet.<sup>14</sup>

There has been a rapid uptake in these services. For example, Alipay and WeChat Pay collectively reached over 90 percent of China's mobile payments market share, processing billions of transactions and effectively replacing cash in urban China.<sup>15</sup> This model is also emerging in other markets where large apps are expanding to provide financial services. In Uganda, SafeBoda began as a ride-hailing app and has evolved into a wallet with savings functionality,<sup>16</sup> while in Southeast Asia, Grab and Gojek (both originating as ride-hailing apps) have developed into super-apps offering payments, savings products, and credit.<sup>17</sup> In Latin America, MercadoLibre (an e-commerce platform) expanded into financial services through MercadoPago, which provides payments and loans as a parallel FinTech arm.<sup>18</sup>

5 Hernandez, E. 2019. Agent networks at the last mile: A guide for digital finance to reach rural customers. CGAP. Available at: [https://www.cgap.org/sites/default/files/publications/2019\\_11\\_Technical\\_Guide\\_Agent\\_Networks\\_Last\\_Mile\\_0.pdf](https://www.cgap.org/sites/default/files/publications/2019_11_Technical_Guide_Agent_Networks_Last_Mile_0.pdf)

6 For example, Kenya saw mobile money account ownership rise from zero in 2006 (pre-M-Pesa) to approximately 83.7 percent of adults by 2024, according to the FinAccess 2024 Household Survey; Johnston, Z., Kwang, K., Sharifi, M., Yin, K., Bilton, A. and Mahmoud, A. 2015. Left behind: The socioeconomic barriers to last-mile mobile money access in Kenya. Reach Alliance, University of Toronto and Center for Inclusive Growth. Available at: <https://reachalliance.org/wp-content/uploads/2021/03/m-pesa-1.pdf>; FSD Kenya. 2024. FinAccess Household Survey: Key insights into Kenya's financial landscape. Nairobi: FSD Kenya. Available at: <https://www.fsdkenya.org/blogs-publications/2024-finaccess-household-survey-key-insights-into-kenyas-financial-landscape/>

7 Basel Committee on Banking Supervision. 2024. Digitalisation of finance. Bank for International Settlements. Available at: <https://www.bis.org/bcbs/publ/d575.pdf>

8 Ibid.

9 For example, Kenya's commercial banks collectively introduced mobile/agent banking (e.g. Equity's Equitel, KCB's VOOMA mobile wallet) to compete with M-Pesa, and aligned projects, such as NCBA offering M-Shwari loans, which is effectively a bank-led response in a telco-dominated market. In Pakistan, agency banking has also been highly effective.

10 In Brazil, a prime example is Nubank which launched as a FinTech providing credit cards, obtained a banking license and now offers deposits, payments, etc., entirely via its app. Similarly, various countries introduced differentiated license types (for example, India created categories for Payments Banks, Small Finance Banks) to allow new entrants, including some telecoms or FinTechs, to offer basic banking with lighter regulatory requirements which led to banks with different models.

11 STL Partners. 2021. Mobile payments and telco financial services - top 5 examples. Available at: <https://stlpartners.com/articles/consumer/mobile-payments-telco-financial-services/>

12 Pakistan's EasyPaisa began this way. Telenor ran the service, but Tameer Microfinance Bank, which Telenor later acquired, held the license. These models increasingly coexist and overlap within the same market, with growing examples of convergence and partnerships such as a telco obtaining a bank license (Orange Bank in West Africa and MTN is planning a bank in Nigeria), BigTech partnering with banks (Apple with Goldman Sachs for the Apple Card), and banks adopting platform strategies (offering marketplaces of services in their apps).

13 Hasselwander, M. 2024. Digital platforms' growth strategies and the rise of super apps. Available at: <https://doi.org/10.1016/j.heliyon.2024.e25856>

14 Ibid.

15 Aveni, T., Roest, J. 2017. China's Alipay and WeChat Pay: Reaching rural users. Available at: <https://www.cgap.org/research/publication/chinas-alipay-and-wechat-pay-reaching-rural-users>

16 Njoroge, B. and White, Z. 2023. Powering mobility: The rise of digital transportation in Africa. GSMA. Available at: <https://www.gsma.com/mobilefordevelopment/resources/powering-mobility-the-rise-of-digital-transportation-in-africa/>

17 CXOtoday News Desk. 2024. Super apps in Southeast Asia: Transforming banking and financial services. Available at: <https://cxotoday.com/story/super-apps-in-southeast-asia-transforming-banking-and-financial-services/>

18 Kazananis, J. 2025. How Mercado Libre built a Fintech empire: From solving checkout to rewriting financial services in Latin America. Popular FinTech. <https://popularfintech.com/p/how-mercado-libre-built-a-fintech-empire-3f7ac04a0eca3947>

These platform-led players enjoy cross-sector integration and leverage data from e-commerce or social interactions to assess risk to provide loans, or use profits from one segment to subsidize another. They also often have extensive user bases, as they can convert existing platform users into financial customers with just a few app updates.<sup>19</sup>

The trend has also operated in reverse, with mobile money companies expanding into digital markets. For example, MTN Uganda has launched an e-commerce platform,<sup>20</sup> while M-Pesa in Kenya has added services such as ride-hailing and e-commerce, further blurring the lines between telcos and super-apps.<sup>21</sup> There are also technology-based platforms, such as Apple Pay and Google Pay, which offer different functionalities depending on the market but build on their device or software ecosystems to provide financial services. For instance, in many markets globally, Apple Pay and Google Pay operate as “pass-through” wallets allowing users to make payments using a token linking their account number to a virtual card.

While payments are often the first use case introduced in a market, there is a wide range of other digital financial products and value-added services. These include credit products (such as micro-loans), insurance products (including InsureTech solutions), savings products and wallets, investment products, and international money transfers.<sup>22</sup>

There are also underlying sets of inputs and platforms utilized to provide these services, which vary by use case and can include the following:

- > **Technical platforms** - for example, switches that allow transactions to be routed across different payment providers and acquirers.
- > **Identity and KYC data** - this data is required for onboarding and verification of customers, and can include digital identity systems that enable remote onboarding by linking to a central database.

- > **Transaction and customer data** - such data can be used to assess risk and deliver value-added services, therefore, enabling companies to compete more effectively, particularly for products requiring risk assessments.
- > **Device-related access and technical facilities** - for example, app stores, technical integration with payment systems, and access to telecommunications services required for payments.

As such, the DFS ecosystem is rich and highly variable, depending on market dynamics, underlying infrastructure, and the enablers required for each product type. For instance, a retail payment transaction may occur through multiple channels - mobile money, a mobile wallet, or an instant payment via a digital or traditional bank app. These products, although offered by providers with different licenses and regulatory frameworks, can serve the same user need. As a result, they may act as competitive substitutes. This implies that providers across different industries and business models may exert competitive constraints on each other. Hence, competition should not be assessed in silos, as doing so risks underestimating the degree of cross-provider rivalry.

Companies that provide DFS services may interact with each other in various ways, for example, as competitors, as suppliers or customers in vertical relationships, or as counterparts to transactions. In practice, there is often a complex web of relationships between companies. For instance, a traditional bank may compete with a mobile money provider or digital bank in offering payment services to customers. At the same time, the traditional bank may hold a trust account for the mobile money provider, be a shareholder in a switch used for payments, or hold the account of the payee, making it a counterpart to the transaction.

This demonstrates that there are numerous ways in which interactions can shape competition in a market, and equally, ways in which both competitive and anti-competitive behaviors can manifest.

19 Barba Rodríguez, M. Á. and Valenzuela Núñez, I. 2023. Revolutionizing consumption of digital services through Super Apps. Telefónica. Available at: <https://www.telefonica.com/en/communication-room/blog/revolutionizing-consumption-digital-services-super-apps/>

20 Fintech Finance News. 2025. MTN MoMo Uganda introduces the virtual card by MoMo to enable e-commerce growth. Available at: <https://ffnews.com/newsarticle/paytech/mtn-momo-uganda-introduces-the-virtual-card-by-momo-to-enable-e-commerce-growth/>

21 Bright, J. 2016. In Kenya, Safaricom's Little Cab app goes head to head with Uber. TechCrunch. Available at: <https://techcrunch.com/2016/07/31/in-kenya-safaricom-little-cab-app-goes-head-to-head-with-uber/>

22 Pazarbasioglu, C, Mora, A.G, Uttamchandani, M, Natarajan, H, Feyen, E and Saal, M. 2020. DFS. Available at: [World-Bank-DFS-Whitepaper-DigitalFinancialServices.pdf](https://www.worldbank.org/publications/dfs/World-Bank-DFS-Whitepaper-DigitalFinancialServices.pdf)

### 3.

## THE IMPACT OF DFS ON THE COMPETITIVE ENVIRONMENT

### COMPETITION ENHANCING EFFECTS OF DFS

Higher levels of competition are generally associated with better prices, greater innovation, higher quality, and collaborative advancements, as both incumbents and new entrants face stronger incentives to deliver improved products and services.

In the context of DFS, increased competition has produced several outcomes that have enhanced the access, usage, and quality of financial services:



#### More competitive prices

In countries where the banking sector was highly concentrated, incumbents historically enjoyed high profits through elevated fees and large net interest margins.<sup>23</sup> The emergence of mobile money, digital-only banks, and bank-FinTech competition has disrupted this pattern. Digital banks, for example, operate without branches,

maintain lean staffing structures, and employ higher levels of automation.<sup>24</sup> These efficiencies allow them to serve lower-balance customers profitably and to reduce or eliminate fees and minimum balance requirements that once excluded low-income or unbanked customers.<sup>25</sup> In Brazil, where a few large banks dominated and charged high fees,<sup>26</sup> FinTechs and neo-banks such as Nubank entered the market with no-fee products and technology-driven customer experiences.<sup>27</sup> By mid-2024, Nubank surpassed 100 million customers in Brazil and became the primary financial institution for nearly 30 percent of Brazilian adults.<sup>28</sup>,<sup>29</sup> Incumbents responded by launching their own digital brands or improving their mobile banking services - major banks like Itaú, Bradesco, and Banco do Brasil now offer zero-fee digital accounts or upgraded apps.<sup>30</sup>

23 Müller, C., Juelsrud, R. E. and Andersen, H. 2024. Risk-based pricing in competitive lending markets. Bank for International Settlements. Available at: <https://www.bis.org/publ/work1169.pdf>

24 Gambacorta, L. 2023. Digital banking: opportunities and challenges. Presentation at the IMF - Singapore Regional Training Institute. Bank for International Settlements.

25 Ibid.

26 Kapronasia. 2020. How has Brazil's Nubank amassed 25 million customers? Available at: <https://www.kapronasia.com/research/blog/how-has-brazil-s-nubank-amassed-25-million-customers.html>

27 PYMNTS. 2023. Ualá introduces no-fee credit card in Argentina. Available at: <https://www.pymnts.com/credit-cards/2023/uala-introduces-no-fee-credit-card-in-argentina/>

28 Nubank. 2024. Nubank surpasses 100 million customers. Available at: <https://international.nubank.com.br/100m/nubank-surpasses-100-million-customers/>  
Nubank. 2025. Nubank celebrates 12 years and is Brazil's favorite financial institution. Available at: <https://international.nubank.com.br/company/nubank-celebrates-12-years-and-is-brazils-favorite-financial-institution/>

29 Kapronasia. 2020. How has Brazil's Nubank amassed 25 million customers? Available at: <https://www.kapronasia.com/research/blog/how-has-brazil-s-nubank-amassed-25-million-customers.html>

30 Galileo. 2025. The digital revolution in the Brazilian banking industry: A decade of transformation. Available at: <https://www.galileo-ft.com/blog/digital-revolution-brazilian-banking-decade-transformation/>



Stallholder, Pakistan / Robert Harding Productions, Alamy Stock Photo



### Improved quality and customer experience

Digital financial service providers have improved the quality and range of products available to customers by incentivizing innovation. Advances include easier account opening (sometimes using e-KYC and digital ID), transparency in pricing, and 24/7 accessibility via smartphones<sup>31</sup> allowing customers to more efficiently manage their finances and risks.



### Enhanced access

DFS has expanded access to financial services, particularly through mobile money in Sub-Saharan Africa. In Mozambique, multiple MNO-led services such as Vodacom M-Pesa and M-Cel's mKesh have helped 74.6 percent of the population adopt electronic money services by 2023, compared to only 29.8 percent with bank accounts.<sup>32</sup> M-Pesa alone now serves roughly six million customers through 54,000 agents nationwide.<sup>33</sup> In countries with lower smartphone penetration or digital literacy, digital banks may initially attract a more urban, tech-savvy clientele (often younger and male), leaving the most excluded, such as the rural elderly and less literate populations, underserved.<sup>34</sup> In such contexts, USSD-based services have played an important role in expanding inclusion by enabling basic digital transactions via feature phones without internet access. However, hybrid models that use agent networks or ATM partnerships to provide cash access and in-person support when needed can significantly expand inclusion.<sup>35</sup> In Latin America, this often involves partnering with corner stores or pharmacies as cash-in/cash-out points, since many users still rely on cash.<sup>36</sup> In Pakistan, branchless banking, including through agents, has driven coverage from 13 percent to 64 percent of adults.

31 Global Partnership for Financial Inclusion and Alliance for Financial Inclusion. 2023. Regulatory toolkit for enhanced digital financial inclusion of micro, small and medium enterprises (MSMEs): Final post GPF 3rd plenary meeting 2023. Available at: <https://www.gpfi.org/sites/default/files/2023%20GPF%20-%20AFI%20-%20MSMEs%20DFS%20Toolkit.pdf>

32 360 Mozambique. 2023. 74.6% of the Mozambican population has access to electronic currency. Available at: <https://360mozambique.com/economy/74-6-of-the-mozambican-population-has-access-to-electronic-currency/>

33 Ibid.

34 Msweli, N. T. and Mawela, T. 2021. Financial inclusion of the elderly: Exploring the role of mobile banking adoption. *Acta Informatica Pragensia*, 10(1), 1-21. Available at: <https://doi.org/10.18267/j.aip.143>

35 CGAP. 2023. Digital finance's little secret. Available at: <https://www.cgap.org/research/podcast/digital-finance-little-secret-agent-networks>

36 PYMNTS. 2025. Cash share of in-store payments plummets to 25% in Latin America. Available at: <https://www.pymnts.com/digital-payments/2025/cash-share-of-in-store-payments-plummets-to-25-in-latin-america/>

China's platform-based DFS ecosystem has also been transformative, with AliPay and WeChat Pay dramatically expanding payments and credit access for previously excluded groups, such as urban micro-entrepreneurs and younger consumers without credit histories.<sup>37</sup> By some measures, account ownership and digital transaction use have risen to cover more than 90 percent of adults.<sup>38</sup>



### Benefits to merchants

Digital payment systems have enabled smaller merchants to expand their payment options to customers and reduce the transaction costs related to handling cash. For instance, WeChat Pay has allowed millions of small shops in China to process digital payments via simple QR codes.<sup>39</sup>



### Financial innovation and deepening

Competition in DFS has led to the introduction of a range of products that have deepened financial inclusion. For example, in Kenya, although M-Pesa was telco-led, banks eventually leveraged the trust in the financial system to offer savings and credit products to M-Pesa users, such as M-Shwari and KCB M-Pesa accounts.<sup>40</sup>

## WHERE COMPETITION FAILS

For a range of reasons, competition in a market may be limited or imperfect. In these instances, the full gains from competition may not be fully realized.

Firms may be able to raise prices above competitive levels, influence the price or output of products or services in the market, lower quality, or lack sufficient incentives to innovate, all of which can have adverse consequences for consumers. The ability to price above a competitive level is typically referred to as "market power", which often arises from market structure or what is broadly termed as "market failure". Market power can occur when there are barriers to entry and expansion, resulting in limitations on competition.

37 CGAP. 2019. China: A digital payments revolution. Available at: <https://www.cgap.org/research/publication/china-digital-payments-revolution>

38 Ibid.

39 Ibid.

40 Cook, W. and McKay, C. 2017. Banking in the M-PESA Age: Lessons from Kenya. CGAP. Available at: <https://www.cgap.org/research/publication/banking-m-pesa-age-lessons-kenya>; Paelo, A., and Roberts, S. 2022. Competition and Regulation of Mobile Money Platforms in Africa: A Comparative Analysis of Kenya and Uganda. Available at: <https://doi.org/10.1007/s11151-022-09858-x>

### Barriers to entry and expansion in a market:



#### STRUCTURAL



#### STRATEGIC



#### REGULATORY

These are discussed at a high level below, with further details and case studies provided in the sections that follow.

### STRUCTURAL FACTORS

Various structural features of a market may lead to concentration, ineffective competition from new entrants, or a lack of entry altogether.

- > **Economies of scale:** Where there are certain fixed costs, companies with a larger customer base typically have lower per-unit costs, allowing them to compete more effectively in the market. In financial services, traditional firms have faced high costs due to back-office operations and physical distribution networks, limiting the number of viable competitors. While newer DFS have lower costs, economies of scale remain relevant.<sup>41</sup>
- > **Economies of scope:** Companies offering a broader range of products can share certain costs (such as branding, marketing, and customer services) and benefit from bundling and cross-selling opportunities.<sup>42</sup> In digital markets, this is particularly important, as platforms in adjacent industries, such as e-commerce, can integrate the digital delivery of other services for their customers by leveraging off their existing technology. This includes embedded finance, where services such as payments, credit, and insurance are bundled directly into non-financial platforms (e.g. e-commerce or ridesharing), reinforcing scope advantages.

- > **Network effects:** When users benefit from the participation of other users in the network, markets tend to concentrate around larger firms. This can lead to dominance, as consumers prefer products with more users rather than trying those of new entrants. In DFS, where systems are closed (for example, when customers can only send payments within the same network), there is little incentive to adopt a new provider that is not widely accepted by merchants or peers.
- > **Sunk costs:** These are costs that cannot be recovered. Their presence can discourage new entrants, as companies may be reluctant to invest in markets where they cannot recover costs if they later exit.
- > **Switching costs:** High switching costs make it more difficult for entrants or competitors to challenge incumbents, reinforcing the market power of dominant firms and creating consumer lock-in. In digital finance, these can include monetary costs (fees to transfer balances or close accounts), convenience costs (needing to re-enter data or learn a new interface), and network costs (losing the ability to transact with contacts on the old network if the new one is not interoperable).<sup>43</sup> They can also include challenges when historical data (transactions, credit history, or preferences) cannot be easily transferred to a competitor resulting in poorer products being offered.<sup>44</sup> Psychological factors also play a role in switching.<sup>45</sup> For newly included customers, trust is paramount.<sup>46</sup> Once a customer builds their trust in a provider, they may be hesitant to trust another, especially if the benefits of switching are unclear.<sup>47</sup> Furthermore, many low-income users have low financial literacy and navigating a new service can seem daunting, creating a status quo bias.<sup>48</sup>

41 Feyen, E., Frost, J et al. 2021. Fintech and the digital transformation of financial services: implications for market structure and public policy. Bank of International Settlements. Available at: [Fintech and the digital transformation of financial services: implications for market structure and public policy](#)

42 Ibid.

43 Engels, B. 2016. Data portability among online platforms. Internet Policy Review. Available at: <https://doi.org/10.14763/2016.2.408>

44 Ibid.

45 OECD and IOSCO. 2018. The application of behavioural insights to financial literacy and investor education programmes and initiatives. Available at: [https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/05/the-application-of-behavioural-insights-to-financial-literacy-and-investor-education-programmes-and-initiatives\\_0fe01712/0b5f985d-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2018/05/the-application-of-behavioural-insights-to-financial-literacy-and-investor-education-programmes-and-initiatives_0fe01712/0b5f985d-en.pdf)

46 Ibid.

47 Ibid.

48 Ibid.

- > **Information asymmetry:** This occurs when consumers have imperfect information about products or when providers have imperfect information about their customers, leading to inadequate provision.<sup>49</sup> Customers with imperfect information may rely more on brands and reputation when choosing their financial service provider.

### Examples of structural barriers in DFS

**Network effects:** Given the high economies of scale and scope in the provision of financial products, there are often high levels of concentration in the market. While the introduction of DFS can help reduce concentration (for example, through non-bank entry), in many markets this has instead led to new forms of dominance. This is often due to network effects.

The advantages arising from network effects may occur because the first MNO to launch mobile money in a market can rapidly capture a critical mass of customers, as people tend to join the service used by their friends and family. The MNO's ability to market to its existing telecom subscriber base further reinforces this effect,<sup>50</sup> leading to high market concentration. For example, Safaricom was highly dominant in mobile telecommunications, which allowed its mobile money product, M-Pesa, to gain a dominant market share in Kenya, holding over 80 percent of mobile money users for many years.<sup>51</sup>

49 Stiglitz, J. E. 1989. Markets, Market Failures, and Development. The American Economic Review. Available at: <http://www.jstor.org/stable/1827756>

50 Feyen, E., Frost, J., Gambacorta, L., Natarajan, H., and Saal, M. 2021. Fintech and the digital transformation of financial services: Implications for market structure and public policy (BIS Papers No. 117). Bank for International Settlements. Available at: <https://www.bis.org/publ/bppdf/bispap117.pdf>

51 Cherry, R. 2017. M-Pesa and Kenya: Why mobile money matters? Cornell SC Johnson College of Business. Available at: <https://business.cornell.edu/article/2017/01/m-pesa-and-kenya-why-mobile-money-matters/>



Restaurant displaying signage of online payment, Malaysia / ThamKC, Alamy Stock Photo

Even with the entry of other mobile providers, network effects have limited switching. This dominance was furthermore reinforced by differential pricing within and across platforms (which can be seen as a strategic barrier). Customers faced higher costs when sending money outside of the network, incentivizing them to stay with the provider that had the largest customer base. An inquiry by the CAK into USSD access found that the lack of interoperability at the time served to reinforce these network effects. As will be discussed later, Kenya's Central Bank and the Competition Authority pushed for non-discriminatory pricing<sup>52</sup> and technical interconnection between mobile money services, which led Safaricom to drop the fee differentiation.<sup>53</sup> Network effects are also common in card markets. For example, in many countries, Visa and Mastercard maintain high levels of dominance because they are accepted widely by merchants and can be used internationally, such as for e-commerce purchases or subscriptions from companies based abroad. As a result, competing card systems, such as national card schemes, often struggle to break into the market.

**Switching costs:** Another subtle but important market failure in DFS is the presence of high user switching costs, which can lead to consumer inertia and reduced competition.<sup>54</sup> Switching costs refer to the tangible and intangible costs a customer faces in moving from one service provider to another. In digital finance, these can include monetary costs (fees to transfer balances or close accounts), convenience costs (needing to re-enter data, learning a new interface), and network costs (losing the ability to transact with contacts on the old network if the new one isn't interoperable).<sup>55</sup>

Data lock-in, when a user's historical data (transactions, credit history, preferences) is held by their current provider and cannot be easily transferred to a competitor, is also a challenge.<sup>56</sup> Such data gives the incumbent provider an informational advantage and discourages the user from switching, since a new provider lacking this history may be unable to offer equally favorable terms (for instance, a new lender

52 Competition Authority of Kenya. 2015. Assessment of regulatory impact on competition: Guidance for policy makers. Competition Authority of Kenya. Available at: <https://www.cak.go.ke/sites/default/files/downloads/2024-08/Assessment%20of%20Regulatory%20Impact%20on%20Competition%20in%20Kenya.pdf>

53 Paelo, A. 2025. Competition and regulation of mobile money platforms in Africa: Kenya and Uganda. Alliance for Financial Inclusion. Available at: <https://www.afi-global.org/wp-content/uploads/2025/04/250108-Comp-Reg-of-MM-CKX-Presentation-January-2025-1.pdf>

54 Centre for Information Policy Leadership. 2024. Data sharing obligations under the DMA: Challenges and opportunities (CIPL Discussion Paper). Hunton Andrews Kurth. Available at: <https://www.informationpolicycentre.com/uploads/5/7/1/0/57104281/data-sharing-obligations-under-the-dma-challenges-and-opportunities-may24.pdf>

55 Engels, B. 2016. Data portability among online platforms. Internet Policy Review, 5(2). Available at: <https://doi.org/10.14763/2016.2.408>

56 Ibid.

unable to see the user's past repayment behavior may offer a smaller loan).<sup>57</sup>

In many mobile money markets, switching costs are significant. A customer might accumulate a network of payees and payers on their wallet (family, employer, utility billers). If they consider switching to another wallet, they face the inconvenience that many of their counterparts are not on that other platform.<sup>58</sup> Until interoperability is achieved, switching could mean losing connectivity with those who only use the original service.<sup>59</sup> This is essentially a network effect reinforcing the status quo. Even if a second provider offers lower fees or better service, users may rationally stick with the one that everyone uses around them. This dynamic was observed in East Africa: when Airtel Money in Kenya tried to significantly undercut M-Pesa's fees, it gained limited traction because most Kenyans' social networks and merchants were on M-Pesa, making it impractical for an individual to leave the platform entirely.<sup>60</sup>

Providers may strengthen switching costs through loyalty programs or agent encouragement to discourage customers from considering alternatives. In some cases, contractual or technical barriers exist, for example, a mobile money account might be tied to a specific SIM card and phone number. As switching phone numbers has additional consequences, users may prioritize keeping their phone number and, by extension, the linked wallet.

Structural features such as network effects and switching costs are often natural outcomes of market design and product characteristics rather than the deliberate actions of incumbents. However, they can still have a significant impact on market dynamics.

### REGULATORY BARRIERS

DFS can be hampered by various access bottlenecks that act as market failures, preventing otherwise efficient outcomes where more firms could serve more consumers. While many of these regulations serve important goals, such as financial stability or consumer protection, they may still produce exclusionary effects. For example, capital adequacy requirements are essential for deposit-taking banks, and Know Your Customer (KYC) rules may require documentation that limits competition in certain market segments or restricts switching, even though they are necessary to prevent fraud and money laundering. However, these same requirements may inadvertently limit which types of companies are able to offer services.

Key bottlenecks include restrictive licensing regimes, burdensome customer due diligence requirements, and unequal access to essential infrastructure such as payment switches, agent networks, or telecom rails. These barriers often prevent non-bank players or smaller institutions from competing on equal terms, thereby constraining innovation and consumer choice.

Common regulatory barriers include:

- > **Licensing barriers:** When regulatory regimes make it difficult for new entrants to obtain a license or regulatory approval to offer services, potential consumer benefits are reduced. Such bottlenecks are often unintended - high entry standards imposed for prudential reasons can inadvertently suppress competition and innovation, limiting inclusion as fewer providers serve the unbanked.<sup>61</sup>
- > **Barriers to accessing facilities and data:** Regulatory and legal requirements may limit which firms are able to access certain facilities and platforms, which could hinder entry and fair competition.
- > **Disproportionate compliance burdens:** Risk-insensitive or duplicative compliance regimes can create high fixed costs and uncertainty for new entrants, discouraging participation and innovation.

### Examples of regulatory restrictions that impact competition in DFS

**Licensing:** Limitations on the types of companies that can enter a particular market can impact competition. Regulation influences the extent to which different types of companies participate in the market. These differences include:

- > Whether non-bank entities are permitted to obtain licenses for financial activities
- > Whether specific licenses exist for non-banks, such as electronic money licenses
- > Whether licenses with differentiated requirements are available for particular business models, such as digital banks and e-money issuers

Challenges to market entry have emerged in jurisdictions with strict rules governing which companies can offer DFS. The types of companies able to enter and compete has evolved differently depending on these legislative requirements. In some countries, legislation has prevented non-bank entry, in others, it has been alleged to dampen - though not fully prevent - non-bank competition; while in some other instances, it limits specific types of entrants.

<sup>57</sup> Ibid.

<sup>58</sup> Jack, W., and Suri, T. 2011. Mobile money: The economics of M-PESA (NBER Working Paper No. 16721). National Bureau of Economic Research. Available at: <http://www.nber.org/papers/w16721>

<sup>59</sup> Ibid.

<sup>60</sup> Ibid.

<sup>61</sup> Dias, D. 2020. How can licensing regimes keep up with financial innovation in 2020? CGAP. Available at: <https://www.cgap.org/blog/how-can-licensing-regimes-keep-with-financial-innovation-in-2020>

In certain countries, regulations effectively bar independent mobile money firms, allowing only banks to operate e-money platforms.

**Nigeria is a notable case:** for a long time, the telco-led model was explicitly disallowed, as the Central Bank's framework only permitted bank-led or non-bank-led models operated by deposit-taking institutions, stating that "the telco-led model... shall not be operational in Nigeria". The intent was to maintain oversight through banks, but this also meant that mobile network operators could not directly offer mobile money services, despite their wide consumer reach. This created a market with a different set of competitors in comparison to countries such as Kenya, Uganda, Tanzania, Ghana, and Rwanda, where the telco model was allowed. Recent regulatory reforms, including the introduction of Payment Service Bank licenses, now allow telecoms and other non-banks to participate more fully in the digital finance space.

This can also prevent entry by competitors with complementary infrastructure. For example, in one small island economy, a lottery operator with a nationwide retail presence, including supermarkets and gas stations, explored offering certain financial services. However, as legislation required a full banking license to do so, the process effectively slowed their entry as they navigated the regulatory landscape.

In some instances, e-money issuers or other non-banks are allowed to operate but must hold their customer funds in an escrow account with a licensed bank. While this is a standard risk-management requirement, it can pose a barrier to entry when banks are unwilling to provide services to potential competitors. Separately, some jurisdictions require non-bank e-money issuers to formally partner with a licensed bank in order to offer services, which can inhibit entry when banks hesitate to cooperate with potential competitors.

- > **In South Africa**, by law, non-bank providers must partner with a bank in order to issue e-money. This requirement can also limit competition in narrower market segments. Legislative changes are underway.<sup>62</sup>
- > **In Peru**, FinTechs have been required to hold accounts with a partner bank in order to operate.

However, concerns have been raised that some banks were rejecting or closing FinTech accounts due to 'de-risking' practices, thereby limiting competition. In response, the regulator has intervened to mitigate these exclusionary dynamics.

- > **In Uganda**, previous rules required non-banks to partner with banks to offer mobile money services. These requirements were later relaxed without observable harm to market stability or consumer protection. As a result, the number of licensed e-money issuers increased to 23 as of 30 August 2025,<sup>63</sup> suggesting that the initial restrictions were potentially overly restrictive and were appropriately revised to promote competition.
- > **In Tanzania**, the central bank began licensing telecom-linked e-money issuers in 2008, granting six licenses. In 2015, it introduced a general Payment Service Provider license, open to banks, EMLs, and FinTechs. However, only banks and licensed EMLs are permitted to hold customer deposits - a limitation critics argue restricts entry by other providers in certain product segments.
- > **In Rwanda**, a payments law allows tiered service providers (e-money issuers, payment operators, etc.), but e-money issuers cannot hold customer funds directly - these must be escrowed with banks.

In some contexts, **licensing restrictions may constrain the growth of providers**. In Sri Lanka, e-money wallet size limits and requirements to partner with banks were acknowledged to have limited growth and profitability. While these measures were introduced by the regulator for KYC and anti-money laundering purposes indicating a stability-related rationale, they may help explain the lower levels of growth in mobile wallets.

Controls over entry windows can further impede entry. Licensing processes may delay entry by restricting when applications can be submitted. In some jurisdictions, new licenses are only issued during specific application windows, creating additional delays and limiting timely market entry. Even where such windows exist, slow processing times and limited supervisory capacity can act as defacto entry caps, as seen in countries such as Peru and Sri Lanka, effectively rationing participation despite there being no formal quota.

In some markets, foreign FinTechs, BigTechs, and small local startups face high capital requirements or complex approval processes to obtain licenses (for e-money, remittances, etc.), which in practice protects incumbents from new competition.

62 South African Reserve Bank. 2025. Directive in respect of specific payment activities within the national payment system. Draft for Consultation. Available at: <https://www.resbank.co.za/content/dam/sarb/what-we-do/payments-and-settlements/consultation-documents/2025-comment-documentation/Draft%20Authorisation%20Framework%20-%203%20March%202025%20-%20sent%20to%20industry.pdf>. Please see: <https://www.resbank.co.za/content/dam/sarb/what-we-do/payments-and-settlements/consultation-documents/2025-comment-documentation/Draft%20Payment%20Activities%20Exemption%20Notice%20-%20sent%20to%20industry%20-%203%20March%202025.pdf>

63 Bank of Uganda. 2025. Licensed payment service providers and payment system operators as at 1 July 2025. Available at: <https://www.bou.or.ug>

**KYC requirements:** Know-Your-Customer (KYC) and customer due diligence rules should follow the risk-based approach of the Financial Action Task Force to mitigate financial crime while avoiding unintended consequences for financial inclusion. Where jurisdictions fail to apply simplified measures for lower-risk products and consumer segments, competition and inclusion can be hindered.<sup>64</sup> In many developing countries, large portions of the population lack formal identification documents. If regulations require extensive documentation and do not allow simplified measures to open basic accounts or mobile wallets, millions of poor customers may be excluded from formal finance by default.<sup>65</sup> This discourages the private sector from serving these customers due to compliance costs or overly strict regulations.

The solution is proportionate, risk-based KYC. Many regulators have adopted tiered KYC frameworks, allowing basic accounts with low transaction limits to be opened with simplified ID requirements. For example, a user can provide a verified phone number and national ID number (without address verification) to open a low-tier wallet with a monthly usage cap. These regulatory adjustments exempt certain marginalized groups (e.g. poor or remote customers) up to a transaction or value limit (tiered KYC), allowing them to at least enter the system, making onboarding easier and cheaper for providers.

A related bottleneck is the lack of digital ID infrastructure. Some countries have reduced KYC frictions by implementing national biometric ID systems and e-KYC utilities (e.g. India's Aadhaar and e-KYC API, which enable rapid account opening for low-income users).<sup>66</sup> Where digital ID systems cover the entire population and include underserved segments, they reduce identification bottlenecks and strengthen the business case for providers to reach unbanked populations.

Inflexible KYC rules can also dampen competition as large banks can absorb compliance costs, while smaller FinTechs may avoid serving poorer clients due to high onboarding costs. Ultimately, strict KYC without flexibility risks reinforcing exclusion by keeping those without ID outside the financial system.

## STRATEGIC AND BEHAVIORAL FACTORS

Competition can also be affected by the strategic behavior of market participants aimed at enhancing or maintaining their market position. This can include conduct aimed at excluding competitors or exploiting customers. Common patterns of abuse include the following:<sup>67</sup>

- > **Predatory pricing** - pricing below cost with the intent to raise prices once competitors exit the market. This often occurs in response to new entry.
- > **Margin squeeze** - when a dominant, vertically integrated firm charges high wholesale prices to downstream rivals while simultaneously offering lower retail prices for the same service, leaving competitors with insufficient margins to operate profitably.
- > **Tying or bundling** - selling products or services together to customers in a manner that excludes entry in a more competitive segment.
- > **Exclusive dealing** - preventing suppliers or customers from dealing with competitors, thereby limiting their ability to compete.
- > **Refusal to deal** - the unjustified refusal by a dominant firm to supply goods or services to a rival, whether in the same or a different market segment.
- > **Excessive pricing** - exploitation of market power by charging unreasonably high prices in markets where the company is dominant.
- > **Collusion** - cooperation between competitors to maintain higher margins and limit competition in a market, such as agreements to fix prices, restrict quantities, or refuse to supply potential competitors.

Such exclusionary conduct leads to market foreclosure - competitors are either prevented from entering or are unable to compete effectively, allowing the dominant firm to maintain or extend its market position.<sup>68</sup>

Cartel behavior or concerted practices between competitors can restrict competition without requiring a dominant position. These practices aim to preserve higher margins and reduce market contestability. Common forms include price fixing (beyond just setting prices), limiting output or service availability, and refusing to supply potential entrants. Such practices are prohibited per se under competition law, regardless of market power.

<sup>64</sup> Alliance for Financial Inclusion. 2019. KYC innovations, financial inclusion and integrity in selected AFI member countries. Available at: <https://www.afi-global.org/sites/default/files/publications/2019-03/KYC-Innovations-Financial-Inclusion-Integrity-Selected-AFI-Member-Countries.pdf>

<sup>65</sup> Ibid.

<sup>66</sup> Meagher, P. 2019. Risk-based customer due diligence: Regulatory approaches. CGAP. Available at: <https://www.cgap.org/research/publication/risk-based-customer-due-diligence-regulatory-approaches>

<sup>67</sup> For example, see Motta, M. 2004. Competition Policy: Theory and Practice. Cambridge: Cambridge University Press.

<sup>68</sup> Ibid.

Consumer harm may not be immediate in terms of higher pricing, as some dominant DFS providers initially keep prices low, but in the **long run**, this can lead to reduced choice, higher prices, or worse terms once competitive pressure diminishes.<sup>69</sup> From a financial inclusion angle, exclusionary conduct by a dominant DFS provider can result in whole segments being underserved.<sup>70</sup> A dominant player might focus on the most profitable customer segments and exclude smaller, marginalized segments indirectly.<sup>71</sup> If its dominance prevents niche competitors, who might have targeted those marginalized groups, from operating, then some needs go unmet. For instance, a smaller mobile money operator might have targeted rural areas or tailored products for women, but if the dominant network locked up all agents and customers through exclusivity, that competitor might never launch or survive. Additionally, innovation also suffers - features that could benefit low-income users (such as more transparent pricing or financial literacy tools) may not emerge if one firm controls the market.

Concentration and market dominance can also increase through mergers. As such, merger regulation is another key area which requires competition oversight. For example, a proposed merger between Visa and Plaid in the US was blocked by the US Department of Justice, which argued that Plaid was well positioned to challenge Visa's monopoly in online debit payments, and that Visa was therefore trying to prevent competition by merging.<sup>72</sup>

In the context of DFS, these behaviors can take unique forms. Dominant firms may delay or deny access to critical infrastructure, such as messaging platforms (used for OTP delivery) or payment APIs, disadvantaging smaller entrants. Others may require exclusive agent contracts, limiting the ability of competitors to build viable distribution networks. These strategic barriers can prevent new DFS providers from reaching customers, even where formal licensing or capital requirements are met.

The following chapter discusses some of the potential ways in which strategic or behavioral factors can influence competition.



Man using smartphone at open market area, Malaysia / Lano Lan, Alamy Stock Photo

### BALANCING BENEFITS FROM RESTRICTIONS ON COMPETITION

Under certain circumstances, actions that appear to limit competition can generate positive outcomes – such as enabling investment incentives in markets where firms may be more willing to reinvest profits when returns are less uncertain.

- > **Intellectual property and patents:** While intellectual property laws restrict entry by providing companies with temporary monopolies, they can also encourage innovation by enabling firms to recoup R&D investments, thereby stimulating dynamic competition.
- > **Exclusive dealing:** Exclusive arrangements can, under certain circumstances, incentivize providers to invest in infrastructure or customer acquisition. In early mobile money markets, providers were granted exclusive arrangements, particularly over agent networks, which helped incentivize rapid infrastructure development at scale. This investment incentive may not have emerged had full interoperability been mandated from the outset. Research suggests that initial exclusivity can foster co-investment in agent networks, before interoperability rules are eventually introduced to expand participation and competition.<sup>73</sup>
- > **Stability:** Limitations on entry may be necessary to ensure stability of the financial system.

Accordingly, competition should be assessed contextually, weighing both the positive and negative impacts of a given agreement or law.

69 Digital Frontiers Institute. 2017. Consumer protection in your DFS go-to-market plan. Available at: <https://digitalfrontiersinstitute.org/consumer-protection-in-your-dfs-go-to-market-plan/>

70 International Finance Corporation. 2024. Her fintech edge: Market insights for inclusive growth. Available at: <https://www.ifc.org/content/dam/ifc/doc/2024/her-fintech-edge.pdf>

71 Ibid.

72 Department of Justice. 2021. Visa and Plaid abandon merger after Antitrust Division's suit to block. Available at: <https://www.justice.gov/archives/opa/pr/visa-and-plaid-abandon-merger-after-antitrust-division-s-suit-block>

73 Bianchi, M., and Garz, S. 2024. How can interoperability drive investment and competition in digital payments? FIT IN Initiative, Research synthesis brief. Toulouse School of Economics. Available at: <https://www.tse-fr.eu/sites/default/files>

## 4. COMPETITION CONCERNS THAT HAVE ARISEN IN DFS

A digital financial service provider often requires a range of inputs and interactions with other companies.

Depending on the structure and use case, this can include the following:

- > **Customer connectivity:** To utilize DFS, customers require access to suitable devices (such as mobile handsets) and reliable network connectivity, either through the internet or mobile networks.
- > **Distribution or product access:** For customers to access DFS products, providers need effective distribution networks, which can include agent networks, access via application stores on devices, or product menus on purchase platforms.
- > **Verification and KYC:** Access to identity verification systems can enable faster onboarding and bank account opening.
- > **Data:** To offer value-added services (such as loans or insurance) and to allow for quicker switching, DFS providers often rely on access to data such as

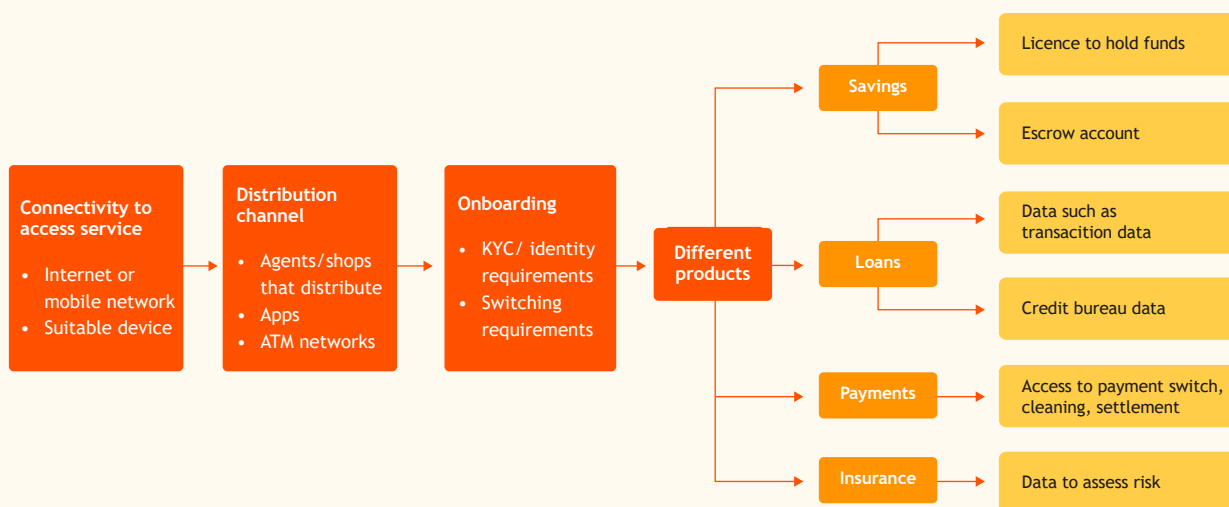
transaction histories and payment contacts.

Mechanisms for accessing or porting such data are therefore key enablers.

- > **Inputs for provision:** Some DFS rely on third-party software, infrastructure, or algorithms to function. For instance, a FinTech lender may depend on external credit scoring models or access to APIs that provide data for loan underwriting. If such inputs are proprietary or exclusively licensed, this can limit competition by raising entry barriers for smaller players.
- > **Storage of deposits:** For certain transactions and types of companies, access to a trust or escrow accounts is essential to enable the lawful storage of customer funds.
- > **Access to telecommunications and digital platforms:** Technical platforms for payment and notifications – such as USSD channels, application stores, and APIs – enable digital financial service providers to operate. In addition, non-bank providers often rely on access to bank accounts and banks acting as net settlement agents.
- > **Interchange:** To process payments, companies require access to payment systems, which can be established through bilateral agreements or via a central switch.

The schematic below shows some of the key inputs required for different DFS products.

FIGURE 1: KEY METRICS



While DFS has increased competition and expanded banking services, different factors can still inhibit competition. This includes exclusionary conduct aimed at preventing competitors from accessing essential inputs, as well as exploitative practices.

Such exclusionary or exploitative conduct often does not arise solely from concentration within the product market but can stem from market power in adjacent markets that provide the required inputs, such as devices, operating systems, and telecommunications markets.

When considering whether strategic behavior is anti-competitive, it is important to assess the dynamics of the affected market and the conditions in related markets where competitive blockages are occurring.

## EXPLOITATIVE PRICING

### PRICING OF INTERCHANGE AND MERCHANT DISCOUNT RATES

Exploitative pricing can occur in various instances, including at the retail level when a provider holds market power. This may arise in markets with only a few service providers or where a provider offers a “must-have” product. If these providers do not exert strong competitive pressure on each other, either because of coordination, high switching costs, or product differentiation, consumers may face higher prices than they would in a more competitive environment.

One of the key competition concerns historically observed in banking, and one that offers lessons for DFS, relates to the setting of interchange prices. In the context of payment systems, interchange refers to “the process whereby banks, through their devices, systems, and procedures, facilitate the acceptance, collection, exchange, clearance, and settlement of payment instruments utilized by their customers”.<sup>74</sup> The merchant discount rate is the amount a merchant pays for payment processing, while interchange fees are paid by the merchant’s bank to the cardholder’s bank when a consumer uses a credit or debit card.

From a competition perspective, two potential issues have historically arisen in relation to interchange. First, the setting of multilateral interchange rates by banks can be collusive, resulting in fees that are higher than optimal and effectively establishing a minimum floor price. Second, due to the market power of major card companies, merchants often have to accept the fees imposed, as their customers demand access to those payment systems. Given the power held by card companies (in part due to network effects), these fees are often higher than would be expected. Since interchange fees are paid by the banks and remain unseen by end customers, payment providers can charge higher, often excessive prices. This conduct is considered exploitative pricing.

Interchange pricing has subsequently been scrutinized by competition authorities and financial regulators in jurisdictions such as the European Union and the United Kingdom. As a result of these concerns, several jurisdictions, including Australia, Brazil, South Africa, and Canada, have capped interchange or merchant discount rates. These developments are discussed further in the section on remedies.

Similar to traditional card schemes (e.g. Visa and Mastercard), newer payment systems, such as instant payment networks, may raise similar competition concerns where providers hold significant market power. In such contexts, regulatory intervention, such as setting maximum caps on interchange fees or merchant discount rates, could benefit consumers and merchants. However, such measures should also consider provider sustainability and the need to maintain viable business models for long-term service delivery.

<sup>74</sup> South African Reserve Bank. 2022. Interchange policy in South Africa. Available at: <https://www.resbank.co.za/content/dam/sarb/what-we-do/payments-and-settlements/regulation-oversight-and-supervision/document-for-comments>



Women embroidering fabrics at their market stall, Kajiado, Kenya. / David Dorey, Alamy Stock Photo

### EXPLOITATIVE PRICING OF WHOLESALE INPUTS

In many developing markets, FinTechs and banks rely on USSD (simple text message menus) to reach customers without smartphones and on SMS to confirm transactions. However, mobile network operators (MNOs) control USSD gateways. There have been numerous complaints and investigations into MNOs charging excessive fees or providing poor quality USSD connectivity to third-party mobile banking or payment services, which undermines the viability of those services, effectively raising rivals' costs.<sup>75</sup> In some cases, complainants have alleged that MNOs, notably those active in the payments space, delayed the delivery of payment confirmations for competitors.

A seminal case of competition enforcement in DFS occurred in Kenya, where Safaricom was accused of inflating USSD prices for competitors. The Competition Authority of Kenya (CAK) conducted a market inquiry into USSD to investigate this behavior, which included: (i) excessive USSD pricing by MNOs, (ii) price discrimination or charging different prices to different customers, and (iii) margin squeeze in USSD prices.<sup>76</sup>

The CAK found that the prices charged were unfairly high, discriminatory, and undermined competition by restricting the ability of rivals to compete. In addition, they found that the strongest competitors were charged the highest USSD prices and there was evidence of refusal to supply.<sup>77</sup> Ultimately, the CAK reached an agreement with Safaricom to reduce USSD prices from levels of KSH2-10 to just KSH1.<sup>78,79</sup>

In Nigeria, banks and telcos have experienced long-running disputes over USSD session costs, at times disrupting services for customers.<sup>80</sup> At the time of writing, no regulatory intervention has occurred. Similar concerns appear common across a range of markets, where the absence of regulatory intervention in USSD pricing underscores the need for telecommunications regulators to assist in helping mitigate these risks.

75 Nepal Rastra Bank. 2024. A study report on the USSD-based payment system and its regulations: Suggestions for Nepal. Payment Systems Department. Available at: <https://www.nrb.org.np/contents/uploads/2024/10/A-Study-Report-on-the-USSD-based-Payment-System-and-its-Regulations-Suggestions-for-Nepal.pdf>

76 Macmillan Keck and Acacia. 2014.

77 OECD. 2020. Using Market studies to tackle emerging competition issues - Contribution from Kenya. Available at: [https://one.oecd.org/document/DAF/COMP/GF/WD\(2020\)65/en/pdf](https://one.oecd.org/document/DAF/COMP/GF/WD(2020)65/en/pdf)

78 CGAP. 2014. Mobile payments infrastructure access and its regulation: USSD. Available at: <https://www.cgap.org/sites/default/files/Working-Paper-Mobile-Payments-Infrastructure-Access-and-Its-Regulation-May-2014.pdf>

79 Nkhonjera, M. 2017. Competition Authority of Kenya (CAK) rules on USSD pricing. CCRED. Available at: <https://www.competition.org.za/ccred-blog-competition-review/2017/4/12/competition-authority-of-kenya-cak-rules-on-ussd-pricing>

80 African Business. 2023. Dispute between Nigerian banks and telcos over \$260m USSD debt threatens financial inclusion. Available at: <https://african.business/2023/05/finance-services/dispute-between-nigerian-banks-and-telcos-over-260m-ussd-debt-threatens-financial-inclusion>

## EXCLUSIONARY BEHAVIOR

Lack of access to essential inputs can make it harder for new players to enter the DFS market. Even when access is granted, high costs, poor service quality, or limited usability can still make it difficult to effectively compete.

### ACCESS TO PLATFORMS THAT CAN BE USED AS TECHNICAL INFRASTRUCTURE

Some digital finance providers depend on infrastructure controlled by others, which can be a bottleneck if access is limited or excessively priced. The infrastructure required varies depending on the technology used. However, in DFS some of the required inputs and infrastructure - such as access to app stores or mobile communication channels - have been subject to strategic behavior by dominant firms in adjacent markets. For example, some app stores have restricted FinTech apps from using their own payment channels, prompting intervention by competition authorities.



Women complete a market transaction using mobile-phones, Kenya / David Dorey, Alamy Stock Photo

### Tying of payment processing with use of app store:

India's Unified Payments Interface (UPI) is built as an open, interoperable payments infrastructure allowing any bank or FinTech to plug in and offer services.<sup>81</sup> This openness was meant to ensure equal access and promote competition. Yet in practice, Google Pay (and Walmart-backed PhonePe) leveraged early entry, massive user incentives, and tight integration with Android smartphones to rapidly dominate UPI.

This was facilitated by Google Play Billing System, which required that all app purchases and in-app digital payments use Google's payment system rather than third-party payment processors. As a result, apps were unable to provide alternative payment links. By late 2023, Google controlled over 83 percent of UPI transaction volume,<sup>82</sup> while many banks and smaller apps struggled to compete - especially as UPI's zero-fee model gave them little incentive to aggressively promote it.<sup>83</sup> The Competition Commission of India investigated the market and imposed a INR935.44 crore penalty on Google Pay for abuse of dominance. Google was found dominant in the market for licensable operating systems and was leveraging that dominance to protect its position in downstream markets. The CCI found that the practice was "arbitrary and devoid of any legitimate business interest". Google was required to cease and desist from anticompetitive behavior including restricting app developers from using third-party payment processing services, imposing anti-steering provisions on app developers, and restricting end users.<sup>84</sup>

In a similar case, in mid-2024, Turkey's Competition Authority launched an investigation into Apple Inc. for potential abuse of dominance related to mobile payment restrictions.<sup>85</sup> The inquiry, part of a broader "Mobile Ecosystems" sector review, is examining Apple's rules that make its in-app payment system (IAP) mandatory and prohibit developers from directing users to alternative payment methods.<sup>86</sup>

81 Cornelli, G., Frost, J., Gambacorta, L., Sinha, S. and Townsend, R. M. 2024. The organisation of digital payments in India - Lessons from the Unified Payments Interface (UPI). BIS. Available at: [https://www.bis.org/publ/bppdf/bispap152\\_e\\_rh.pdf](https://www.bis.org/publ/bppdf/bispap152_e_rh.pdf)

82 Sarvesh, M. 2024. Parliamentary panel flags dominance of foreign-owned PhonePe and Google Pay in UPI space. Medianama. Available at: <https://www.medianama.com/2024/02/223-parliamentary-panel-flags-dominance-phonepe-google-pay/>

83 Kalra, J. 2024. Exclusive: India to again delay caps on UPI payments market share. Reuters. Available at: <https://www.reuters.com/business/finance/india-delay-payments-market-cap-helping-walmart-backed-phonepe-google-pay-2024-05-09/#>

84 Competition Commission of India. 2022. CCI Imposes a monetary penalty of Rs 934.22 on Google for anti-competitive practices in relation to its Play Store Products. Available at: <https://cci.gov.in/images/pressrelease/en/pr-no-562022-231666698260.pdf>

85 FinTech Istanbul. 2024. Turkey launches probe into Apple on limitations over payment systems. Available at: <https://fintechistanbul.org/en/2024/06/08/turkey-launches-probe-into-apple-on-limitations-over-payment-systems/>

86 Ibid.

### Tying of technology and device (access to Apple Pay):

In certain markets, Apple handsets have a strong presence in the smartphone segment. However, payment FinTechs offering “tap and go” services using near-field communications have faced challenges in accessing the necessary technical infrastructure on Apple devices. Unlike Google’s Android operating system, which allows third party apps to access NFC, Apple restricts such access exclusively to Apple Pay.<sup>87</sup>

However, the cost of linking to Apple Pay is also high, involving significant onboarding costs and transaction fees ranging from 0.15 percent to 0.5 percent.<sup>88</sup> In 2022, the European Commission formally charged Apple with abusing its dominant position by limiting NFC to favor its own solution (Apple Pay) – a form of platform self-preferencing.<sup>89</sup> The Commission found that Apple had significant market power in smart mobile devices and a dominant position in the in-store mobile wallet market on iOS. Apple was found to have “abused its dominant position by refusing to supply NFC input on iOS to competing mobile wallet developers while reserving such access only to Apple Pay”.<sup>90</sup>

In Australia, banks and third-party wallet providers have raised competition concerns about this closed model, arguing that Apple’s refusal to grant access to key infrastructure (such as the NFC controller) prevents them from offering their own integrated digital wallets on iPhones.<sup>91</sup> A consortium of banks contended that having NFC access would increase competition, innovation, and consumer choice in mobile payments.<sup>92</sup>

According to regulators such as the Competition Commission of India and the Turkish Competition Authority, these limitations “stifled innovation and prevented competition”. Evidence showed some developers abandoned plans for new payment apps for these very reasons, leaving consumers with little alternative on Apple devices.<sup>93</sup> This closed ecosystem reinforced Apple’s platform dominance as Apple Pay remained the only tap-to-pay wallet on iOS, allowing Apple to capture transaction fees from banks on all iPhone payments.<sup>94</sup>

Regulators, including competition and financial sector authorities, warn that as digital wallets become a main interface for payments, such gatekeeping can impede innovation and competition in digital finance. Any platform that imposes frictions on access to essential technology may ultimately harm consumers by reducing competition, choice, and openness in payments.<sup>95</sup>

### EXCLUSIVE DEALING

Where a company is a first mover, one way of limiting competition is by creating exclusive arrangements along the value chain. While exclusivity may have certain benefits, such as supporting relationship-specific investments, it becomes problematic when a dominant firm uses it to tie up scarce resources and block market entry. With DFS historically, complaints relating to exclusivity have often involved agent networks.

Dominant DFS providers may require agents handling cash-in/cash-out services to work exclusively for them, preventing competitors from developing equally extensive agent networks. Such arrangements create significant barriers to entry, reinforcing the dominant firm’s market reach.

87 Consumer Financial Protection Bureau. 2023. Big tech’s role in contactless payments: Analysis of mobile device operating systems and tap-to-pay practices. Available at: <https://www.consumerfinance.gov/data-research/research-reports/big-techs-role-in-contactless-payments-analysis-of-mobile-device-operating-systems-and-tap-to-pay-practices>

88 Franck, J.U. and Linardatos, D. 2010. Germany’s ‘Lex Apple Pay’: Payment Services Regulation Overtakes Competition Enforcement. EPoS Collaborative Research Centre Transregio. Available at: [https://www.wiwi.uni-bonn.de/bgsepapers/boncrc/CRCTR224\\_2020\\_173v2.pdf](https://www.wiwi.uni-bonn.de/bgsepapers/boncrc/CRCTR224_2020_173v2.pdf)

89 Consumer Financial Protection Bureau. 2023. Big tech’s role in contactless payments: Analysis of mobile device operating systems and tap-to-pay practices. Available at: <https://www.consumerfinance.gov/data-research/research-reports/big-techs-role-in-contactless-payments-analysis-of-mobile-device-operating-systems-and-tap-to-pay-practices>

90 European Commission. 2022. Antitrust: Commission sends Statement of Objections to Apple over practices regarding Apple Pay. Available at: [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_2764](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2764); Slivka, E. 2022. EU officially objects to Apple limiting third-party access to Apple Pay NFC capabilities. MacRumors. Available at: <https://www.macrumors.com/2022/05/02/eu-apple-pay-nfc-objection>

91 Australian Competition and Consumer Commission. 2017. ACCC denies authorisation for banks to collectively bargain with Apple and boycott Apple Pay. Available at: <https://www.accc.gov.au/media-release/accc-denies-authorisation-for-banks-to-collectively-bargain-with-apple-and-boycott-apple-pay>

92 Ibid.

93 European Commission. 2022. Antitrust: Commission sends Statement of Objections to Apple over practices regarding Apple Pay. Available at: [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_2764](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2764)

Slivka, E. 2022. EU officially objects to Apple limiting third-party access to Apple Pay NFC capabilities. MacRumors. Available at: <https://www.macrumors.com/2022/05/02/eu-apple-pay-nfc-objection>

94 Loser, P. 2024. Apple mobile payments: Evaluating the proposed commitments to the European Commission. Kluwer Competition Law Blog. Available at: <https://legalblogs.wolterskluwer.com/competition-blog/apple-mobile-payments-evaluating-the-proposed-commitments-to-the-european-commission>

95 Consumer Financial Protection Bureau. 2023. Big tech’s role in contactless payments: Analysis of mobile device operating systems and tap-to-pay practices. Available at: <https://www.consumerfinance.gov/data-research/research-reports/big-techs-role-in-contactless-payments-analysis-of-mobile-device-operating-systems-and-tap-to-pay-practices>



### BOX 1: Exclusive Dealing in Mobile Money - Agent Exclusivity in Kenya

In Kenya's early mobile money market, Safaricom signed exclusivity agreements with its M-Pesa agents, preventing them from serving other mobile money providers.<sup>96</sup> This made it difficult for competitors such as Airtel Money and Equity Bank's Equitel to expand, as many of the most capable agents in each town were locked into M-Pesa.<sup>97</sup> The CAK, in coordination with the CBK, found this to be anti-competitive and in 2014 negotiated an end to Safaricom's exclusivity clauses, paving

the way for agent sharing in the market. The CBK has since played a proactive role in facilitating agent interoperability and levelling access across providers. Following this change, competitors like Equitel expanded rapidly - its agents reached about 20 percent of M-Pesa network by 2019, demonstrating that removing exclusivity improved market competition. Several countries, including Kenya, Uganda, and Tanzania, have since adopted regulations to prevent similar exclusivity practices.

96 Mazer, R., Pillai, R., and Staschen, S. 2016. Agents for everyone: Removing agent exclusivity in Kenya and Uganda. CGAP. Available at: <https://www.cgap.org/blog/agents-for-everyone-removing-agent-exclusivity-in-kenya-uganda>

97 Ibid.



M-PESA kiosks, Kenya / Amazing Aerial, Alamy Stock Photo

### REFUSAL TO INTEROPERATE AND SELF-PREFERENCING

Dominance in a particular market can be sustained when a company with a large customer base benefits from strong network effects. In digital financial service markets, payments and transfers are often possible between people with accounts at different banks or wallet providers - but this is not always the case. When interoperability is limited or absent, customers are more likely to choose a platform with the most users or merchants, reinforcing the dominance of incumbents.

This creates a self-reinforcing dynamic as a company with a large platform may have little incentive to interconnect its mobile wallet with rivals or with bank accounts, since this would allow users to transact directly with competitors. As a result, consumers on different networks remain siloed.<sup>98</sup> This fragmentation harms smaller providers, whose users struggle to send money to more dominant networks, reducing the perceived utility of those smaller platforms.

#### Interoperability of digital financial platforms:

The challenges from a lack of interoperability are illustrated by China's experience. The two largest digital platforms, WeChat and Alibaba, operated largely closed ecosystems. Tencent's WeChat initially blocked links or access to Alibaba's platforms (e.g. users could not easily open the Taobao e-commerce platform or share Alipay links within WeChat), while Alibaba's marketplaces did not offer WeChat Pay as a payment option.<sup>99</sup> Each company effectively foreclosed the other from its user base.<sup>100</sup>

This refusal to interoperate or allow rivals access to one's platform is a form of exclusionary conduct viewed by regulators as anti-competitive. In 2020-2021, the State Administration for Market Regulation (SAMR) fined Alibaba a record USD2.8 billion for abusing its dominance, specifically citing its "choose one of two" policy that forced merchants to exclusively use Alibaba's platform and payment system.<sup>101</sup> The crackdown extended to financial services: Ant Group's IPO was suspended, and the company was ordered to restructure as a financial holding company under stricter oversight, partly out of concern for its

growing dominance and systemic importance.<sup>102</sup> In parallel, China's financial regulators - particularly the People's Bank of China (PBOC) - played a central role in addressing risks posed by large platforms. Their actions included reclassifying Ant Group as a financial holding company and tightening oversight of digital services, citing concerns over systemic importance and unregulated lending.

**Self-preferencing:** A platform might technically allow others to interoperate but give its own financial service better placement, integration, or data access on the platform.<sup>103</sup> For example, an app store may promote its own payment method by showing it more prominently than others at checkout, or a super-app may automatically default to its own lending product when users need credit. In many mobile money markets, dominant wallet providers have also been known to block or delay interoperability at the account level, preventing users from sending money to other platforms even where technical standards exist. These behaviors distort the playing field. As a result, regulatory authorities are increasingly imposing ex ante rules on BigTech. For instance, the EU's proposed Digital Markets Act will outlaw practices such as self-preferencing by major platforms.<sup>104</sup>

**Exclusion from switches:** Another infrastructural bottleneck can be payment switch access. If, for instance, new banks or mobile money providers are not allowed or able to connect to a payment switch, then moving money across providers is cumbersome or costly.<sup>105</sup> This fragmentation favors whichever companies are dominant and reduces overall network usefulness. There are a range of different switches with different ownership models. Challenges have particularly arisen in instances in which payment systems and switches were set up and owned by larger or incumbent banks. This has sometimes created a bottleneck to new entry.

98 GSMA. 2020. Tracking the journey towards mobile money interoperability: Emerging evidence from six markets. Available at: [https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2020/06/GSMA\\_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf](https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2020/06/GSMA_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf)

99 Kharpal, A. 2021. Alibaba apps are starting to support Tencent's WeChat Pay. Here's why it's a big deal. CNBC. Available at: <https://www.cnbc.com/2021/09/28/alibaba-apps-are-starting-to-support-tencent-wechat-pay-amid-scrutiny.html>

100 Ibid.

101 Wang, C. 2021. China slaps Alibaba with \$2.8 billion fine in anti-monopoly probe. CNBC. Available at: <https://www.cnbc.com/2021/04/09/china-fines-alibaba-in-anti-monopoly-probe.html>

102 BBC News. 2021. China forces Jack Ma's Ant Group to restructure. Available at: <https://www.bbc.com/news/business-56728038>

103 Khan, L. M. 2019. The separation of platforms and commerce. Columbia Law Review. Available at: <https://www.columbialawreview.org/content/the-separation-of-platforms-and-commerce/>

104 European Parliament. 2022. Digital Markets Act: EU legislation in progress briefing. Regulation 2022/1925. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R1925>

105 Lowe, C. 2024. The commercial sustainability of mobile money providers in interoperability initiatives: Insights from Ghana, Jordan, Pakistan, Rwanda, Tanzania and Uganda. GSMA. Available at: <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2024/02/The-commercial-sustainability-of-mobile-money-providers-in-interoperability-initiatives.pdf>

For example, in South Africa the key payment systems were historically bank operated. Key payment rails were governed and managed by the Payments Association of South Africa (PASA), whose members were banks. Direct clearing membership historically was limited to banks, with only a few non-bank entities granted access on a case-by-case basis.<sup>106</sup> A Competition Commission inquiry in 2006 recommended that an access regime for non-banks in clearing and settlements be developed and suggested various measures to limit the role of banks in approval payment system entrants.

Infrastructure governance was also a challenge as BankservAfrica (now PayInc), the national interbank switch operator, was historically owned by the major commercial banks. However, historic patterns are now changing. Bankserv (as of October 2025) is now jointly owned by the South African Reserve Bank following SARB's 50 percent equity purchase. At present, however there are still challenges - for example, non-bank payment providers can connect to the new PayShap instant payment platform only via a sponsoring bank under current rules.<sup>107</sup> Regulators have not mandated interoperability across schemes. As a result, mobile money and e-wallet platforms in South Africa are siloed with no inter-platform interoperability to date.<sup>108</sup> Furthermore, participation in new payment initiatives is voluntary, so only ten banks initially joined PayShap, with no FinTechs connected.<sup>109</sup> While initial recommendations on open access were not fully implemented after the Competition Commission Banking Inquiry, SARB has more recently engaged in a series of reforms and signaled a shift toward more inclusive governance. For example, they have published consultation documents, draft Directives and an exemption that will enhance interoperability and enhancing participation in the National Payment System.

### Refusal to share access to customer data or accounts:

In addition to challenges in accessing payment infrastructure like switches and clearing systems, FinTechs often face a second barrier: the inability to access customer accounts or data. In markets with high banking concentration, this manifests as restricted API access that would otherwise allow for payment initiation or customer data sharing. Banks may create APIs that technically meet regulatory requirements but are commercially or technically unusable by third parties. In many instances, this allows incumbents to block FinTechs that could compete with their business model, particularly those offering innovative or lower-cost alternatives. This undermines competition in data-driven services and entrenches the position of dominant firms.

### PRICE DISCRIMINATION AND MARGIN SQUEEZE

Another exclusionary tactic is price discrimination or predatory pricing aimed at squeezing out rivals. In mobile money, a common example is on-net versus off-net pricing, where operators charge cheap fees for transfers within their own network but steep fees for transfers to other providers' wallets, effectively penalizing customers for transacting on a different network.<sup>110</sup> This discourages multi-homing and can lock in a user base to the dominant platform.

Regulators in some countries, including Kenya, have intervened to outlaw such discriminatory pricing in payments, ensuring that sending money across networks costs the same as within them.<sup>111</sup>

Additionally, some competition authorities, such as the CAK, have examined whether dominant firms engage in margin squeeze<sup>112</sup> - for instance, when a mobile money provider that also controls telecom infrastructure charges unreasonably high USSD fees to independent DFS providers, making it unviable for them to compete.<sup>113</sup> The CAK addressed this by working with the telecom regulator to reduce USSD charges and enforce fair access.<sup>114</sup>

106 SAIFM. 2023. PASA response to "Establishing a mobile money payment clearing house participant group: The key to unlocking a cashless economy for South Africa". Financial Markets Journal. Available at: <https://financialmarketsjournal.co.za/pasa-response-to-establishing-a-mobile-money-payment-clearing-house-participant-group-the-key-to-unlocking-a-cashless-economy-for-south-africa>

107 Ibid.

108 Ibid.

109 AfricaNenda, UNECA, and the World Bank. 2024. PayShap South Africa: Case study. In The state of inclusive instant payment systems in Africa. Available at: <https://www.africanenda.org/siips2024>

110 Hoernig, S. 2007. On-net and off-net pricing on asymmetric telecommunications networks. Information Economics and Policy. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0167624507000182>

111 Plaitakis, A. 2019. Modularization of DFS and competition issues. CGAP. Available at: [https://bfglobal.com/wp-content/uploads/2020/01/Competition-DFS\\_01\\_Modularization-Brief\\_Final.pdf](https://bfglobal.com/wp-content/uploads/2020/01/Competition-DFS_01_Modularization-Brief_Final.pdf)

112 OECD. 2021. Economic analysis and evidence in abuse cases - Contribution from Kenya. Available at: <https://one.oecd.org/document/DAF/COMP/GF/WD%282021%293/en/pdf>

113 Ibid.

114 Competition Authority of Kenya. 2021. Strategic plan (2021/2022 - 2024/2025) (Revised): Expanding enforcement frontiers for increased consumer welfare and sustainable economy. Competition Authority of Kenya. Available at: [https://cak.go.ke/sites/default/files/CAK\\_STRATEGIC\\_PLAN.pdf](https://cak.go.ke/sites/default/files/CAK_STRATEGIC_PLAN.pdf)

## PLATFORM POWER AND USER DATA

Access to user data can create a barrier to entry and reinforce the dominance of large companies. It may also allow companies with market power in one area (e.g. mobile telecommunications or online search) to leverage that dominance into other sectors. For example, if a borrower has used one mobile credit service for years, that provider holds extensive data on their repayment and usage patterns, which could be used to offer better terms.<sup>115</sup> However, if the borrower seeks a better loan from another FinTech, the new provider - lacking access to that data - may price cautiously offering higher interests or lower limits, effectively penalizing the borrower for switching.<sup>116</sup> This dynamic discourages switching and keeps borrowers tied to their original provider.

The same logic applies to merchants. Their sales history on a payment platform might qualify them for a loan within that ecosystem, but without traditional collateral or financial statements, access to credit from a bank is limited, leaving the merchant “locked in” to the platform.<sup>117</sup>

Access to data has also emerged as an entry barrier in some circumstances. In South Africa, according to interviews conducted with the Competition Commission, a FinTech approached the authority raising concerns that an incumbent bank was restricting the use of screen scraping to access consumer data. During the investigation, stakeholders raised concerns over the security risks of screen scraping, though the complaint was not referred to the Competition Tribunal. However, the South African Reserve Bank subsequently issued a directive clarifying the rules for such transactions<sup>118</sup> highlighting the importance of inter-regulator engagement.

## LEVERAGING DOMINANCE IN ADJACENT MARKETS

Where there is vertical integration, a platform controls multiple services in the value chain.<sup>119</sup> Because the platform operator sets the rules within its ecosystem, it may favor its own upstream or downstream services over those of competitors.<sup>120</sup> This can distort competition through cross-subsidization, margin squeeze, or self-preferencing.<sup>121</sup> Furthermore, in some instances, dominance in an adjacent market can be leveraged into a digital financial market, disadvantaging or locking out rivals. Notably, the source of market power may not always lie within the digital financial market itself but in an upstream or related sector.

For example, in Kenya, Safaricom’s dominance in mobile telecommunications was leveraged into the mobile money market through M-PESA.<sup>122</sup> In advanced economies, Apple has used its dominance in devices and linked operating systems and app stores to exert power in payments.<sup>123</sup>

In DFS, vertical integration has created challenges in various contexts, including:

- > Vertical integration between telecommunications companies and mobile money providers (e.g. Kenya)
- > Leveraging dominance in e-commerce into payments (e.g. China)
- > Leveraging dominance in devices into payments (e.g. Apple)
- > Leveraging dominance in operating systems into payment processing (e.g. Google in India)

## SUMMARY

Figure 2 on page 26 shows some of the key inputs and platforms used in DFS as well markets where potential market power may arise based on experiences from other sectors. It also highlights some of the competition challenges that have occurred.

115 Serfes, K., Wu, K. and Avramidis, P. 2025. FinTech vs. Bank: The impact of lending technology on credit market competition. *Journal of Banking and Finance*. Available at: <https://www.sciencedirect.com/science/article/pii/S0378426624002528>

116 Ibid.

117 ITU-T Focus Group DFS. 2016. Merchant data and lending: Can digital transaction history help jumpstart merchant acceptance? Available at: [https://www.itu.int/en/itu-t/focusgroups/dfs/documents/10\\_2016/itufgdfs\\_report\\_on\\_merchant%20data\\_and\\_lending-10-2016\\_final.pdf](https://www.itu.int/en/itu-t/focusgroups/dfs/documents/10_2016/itufgdfs_report_on_merchant%20data_and_lending-10-2016_final.pdf)

118 South African Reserve Bank. 2023. Directive No. 1 of 2023: Draft directive in respect of issuing of electronic funds transfer credit payment instructions on behalf of the payer in the national payment system. Available at: <https://www.resbank.co.za/content/dam/sarb/what-we-do/payments-and-settlements/regulation-oversight-and-supervision/document-for-comments/doc-for-comments>

119 Lee, R. S. 2013. Vertical integration and exclusivity in platform and two-sided markets. *American Economic Review*. Available at: <https://doi.org/10.1257/aer.103.7.2960>

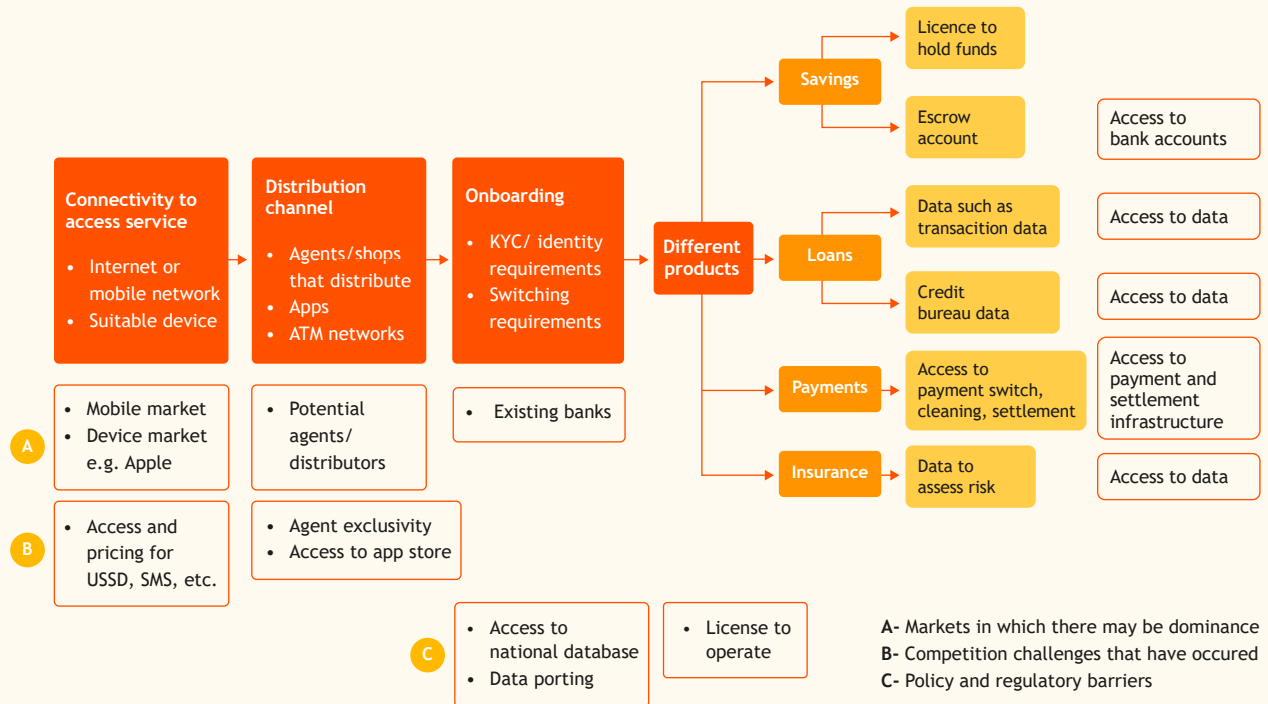
120 Ibid.

121 Khan, L. M. 2019. The separation of platforms and commerce. *Columbia Law Review*. Available at: <https://www.columbialawreview.org/content/the-separation-of-platforms-and-commerce/>

122 Jack, William, Adam Ray and Tavneet Suri. 2013. Transaction Networks: Evidence from Mobile Money in Kenya. Available at: <https://www.aeaweb.org/articles?id=10.1257/aer.103.3.35>

123 European Commission. 2024. Commission accepts commitments from Apple opening access to ‘tap and go’ technology on iPhones. Available at: [https://ec.europa.eu/commission/presscorner/api/files/document/print/fin/ip\\_24\\_3706/IP\\_24\\_3706\\_EN.pdf](https://ec.europa.eu/commission/presscorner/api/files/document/print/fin/ip_24_3706/IP_24_3706_EN.pdf)

FIGURE 2: MARKET STRUCTURE, DOMINANCE, AND POTENTIAL COMPETITION CHALLENGES



Source: Acacia Economics



Shop selling cell phone units and performing financial transactions, Rwanda / Godong, Alamy Stock Photo

## 5. REGULATORY RESPONSES TO COMPETITION

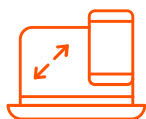
There have been a range of regulatory approaches to competition in the DFS space. A typology by function includes the following:<sup>124</sup>



Interventions to promote entry  
(e.g. sandboxes, new licenses, tiered KYC)



Interventions to prevent abuse  
(e.g. competition law, codes of conduct for dominant players, conduct supervision)



Interventions to ensure openness  
(e.g. interoperability, data portability, agent sharing)



Interventions to protect consumers in a competitive market  
(e.g. transparency requirements, caps on excessive fees or interest)



Interventions to monitor and assess competition  
(e.g. development of indicators, market dashboards, data sharing mandates, regular market studies)

However, with many of these regulatory approaches, their effectiveness depends on the specifics of the intervention, the contours of the underlying market, and how well the regulatory solutions work in practice. As the underlying markets and influence of different market participants and regulators is likely to vary significantly across jurisdictions, it is necessary to tailor the regulatory approach accordingly.

There are two main approaches to competition-focused regulation: ex ante and ex post regulation.

- > **Ex ante regulation:** This approach involves authorities intervening to prevent the emergence of anticompetitive conduct or arrangements. In DFS, ex ante regulation plays a critical role in shaping competitive markets by preventing potential risks before they take root.
- > **Ex post regulation:** This approach involves authorities assessing and addressing anticompetitive conduct once it has already occurred.

In addition to these formal regulatory interventions, softer or non-regulatory measures also play a vital role in promoting competition. These include close collaboration between financial regulators and competition or data protection authorities, public-private dialogue with industry actors, and recognizing competition as a strategic priority within national frameworks such as National Financial Inclusion Strategies or National Payment Strategies.

With DFS, the optimal regulatory approach is likely to combine measures that promote competitive markets using ex ante rules while also being cognizant of potential areas of abusive conduct, which should be assessed on an ex post basis if and when they emerge. In markets that are rapidly evolving, new forms of abuse may emerge over time; therefore, there is a continued need to monitor and investigate potential abuses on an ex post basis as it occurs.

Given the multiple regulators with jurisdiction over DFS, a range of approaches has been adopted to address challenges in the sector. The three key institutions typically involved in regulating DFS are the central bank and financial sector regulator, the competition authority, and the communications authority. Additional institutions likely to play a role include the information regulators and digital market regulators.

<sup>124</sup> Asian Development Bank. 2021. Fintech policy tool kit for regulators and policy makers in Asia and the Pacific. Available at: <https://www.adb.org/publications/fintech-policy-tool-kit-regulators-policy-makers>

The effectiveness of pro-competition reforms depends not only on the rules themselves, but also on how responsibilities are distributed across institutions. In many jurisdictions, competition oversight is led by the central bank; in others, it falls under a standalone competition authority, or is jointly managed through memoranda of understanding (MOUs). While the net result may be similar regardless of how responsibility is distributed, effective coordination between regulators and a common understanding of the interactions between different regulatory mechanisms are essential.

### ENABLING COMPETITION BY PROMOTING ENTRY

A range of regulatory interventions have been implemented to create a level playing field within markets, often introduced in response to barriers and challenges faced by new entrants. However, the efficacy of such interventions depends largely on their design, with several approaches focused on limiting barriers posed by the regulatory and policy environment.

### TIERED AND FLEXIBLE LICENSING

Entrants into financial services are often faced with legacy regulations focused on traditional business models. In particular, prudential regulations aimed at protecting systemic stability may not be fully relevant to new business models. For example, regulations requiring a high capital reserve and detailed reporting may be disproportionate for newer digital business models such as FinTechs or e-money issuers that pose a low systemic risk (especially when transaction volumes and value are small).

In response, regulators have increasingly created new license categories or relaxed certain requirements to encourage entry into the market. This includes licenses targeted at different types of institutions such as non-banks (for example, e-money licenses) or digital banks, as well as licenses permitting specific functions (e.g. payment institution or payment bank licenses that allow for payment functionality but not credit or lending), etc.<sup>125</sup>

These regulatory developments increase competition by allowing the entry of a new tier of providers, including those focused on digital innovation and customer segments historically underserved by incumbents (such as youth and SMEs).<sup>126</sup> Conversely, in markets where

regulators have been slower to open banking to new players, or where incumbents hold significant political or economic power, the pace of change can be slower.<sup>127</sup>

Changes to regulations can include lower capital requirements, simplified reporting requirements, and differentiated KYC rules for various types of providers. For example, lower capital requirements may apply to institutions focused on solely on payments that do not take deposits or engage in lending. This type of flexible licensing allows regulators to facilitate market entry for inclusion-oriented providers without taking on full banking risks.

- > The **Central Bank of Brazil (BCB)** created a new category for FinTech credit companies (Sociedade de Crédito Direto) and simplified payment institution licenses allowing non-banks to provide certain financial services.<sup>128</sup>
- > **Ghana and Tanzania** provide e-money issuer licenses that telcos and FinTechs have used to operate mobile money under central bank oversight.<sup>129</sup> In addition, Ghana has also introduced a tiered FinTech licensing framework to support a broader range of non-bank providers.<sup>130</sup>
- > **India's Payments Banks**, launched in 2015, allowed telecoms and other players to offer deposits and payments (but no direct lending) to promote financial inclusion.<sup>131</sup> Although not all entrants succeeded - several payments banks struggled - successful examples such as Paytm Payments Bank or Airtel Payments Bank have onboarded tens of millions of previously unbanked customers, often in rural areas.<sup>132,133</sup>

127 Augustine, A. 2023. The limits of accelerating digital-only financial inclusion. Carnegie Endowment for International Peace. Available at: <https://carnegieendowment.org/research/2023/07/the-limits-of-accelerating-digital-only-financial-inclusion?lang=en>

128 Restoy, F. 2021. Fintech regulation: How to achieve a level playing field (Occasional Paper No. 17). Bank for International Settlements. Available at: <https://www.bis.org/fsi/fspapers17.pdf>

129 Bank of Ghana. 2022. Payment Systems Oversight Annual Report: 2022. Available at: <https://www.bog.gov.gh/wp-content/uploads/2023/11/Payment-Systems-Oversight-Annual-Report-2022-public.pdf>

130 Bank of Tanzania. 2024. National Payment System Annual Report for 2024. Available at: <https://www.bot.go.tz/Publications/Regular/Annual%20Report/sw/2025032515311662.pdf>

131 Reserve Bank of India. 2014. Operating Guidelines for Payments Banks. Available at: <https://www.rbi.org.in/commonman/Upload/English/Notification/PDFs/NT8012D3D3858D194184981CAF033321AA26.PDF>

Reserve Bank of India. 2015. RBI grants "in-principle" approval to 11 applicants for Payments Banks. Available at: <https://rbidocs.rbi.org.in/rdocs/PressRelease/PDFs/PR4373D581F56D7B64BD08F4162D299E33EDF.PDF>

132 Finance Magnates. 2023. Paytm and Financial Inclusion: Bridging the Gap. Available at: <https://www.financemagnates.com/fintech/paytm-and-financial-inclusion-bridging-the-gap/>

133 Economic Times. 2025. Airtel Payments Bank crosses one bn transactions. Available at: <https://m.economictimes.com/industry/banking/finance/airtel-payments-bank-crosses-one-bn-transaction-mark/articleshow/119108249.cms>

125 World Bank. 2020. Payment aspects of financial inclusion in the fintech era. World Bank Group. Available at: <https://documents1.worldbank.org/curated/en/230091592918282222/pdf/Payment-Aspects-of-Financial-Inclusion-in-the-Fintech-Era.pdf>

126 Ibid.

- > **The Philippines, Malaysia, and Pakistan** introduced a digital banking licenses in 2020, issuing six before placing a moratorium. The aim was to inject a cohort of fully digital competitors into a banking sector known for high fees.<sup>134</sup>

Tiered licensing can also extend to agents - with some countries certifying agent networks or aggregators, making it easier for banks or wallets to share agents (in Peru, banking agents can serve multiple banks, which promotes competition in distribution).<sup>135</sup> These enabling licenses increase competition for serving customers at the base of pyramid.

The introduction of new license categories can also allow for rapid market entry. In Nigeria, once telcos were allowed to enter via licenses for Payment Service Banks, MTN and Airtel quickly rolled out services (MoMo PSB, SmartCash) that within a year signed up millions of customers.<sup>136, 137</sup> In East Asia, Malaysia and Singapore recently awarded digital bank licenses to non-traditional players (consortia involving FinTechs, e-commerce firms, etc.) to spur competition and inclusion.<sup>138</sup> Hong Kong took a similar approach in 2018, licensing virtual banks that have since onboarded hundreds of thousands of customers with user-friendly apps and better deposit rates.<sup>139</sup>

In some cases, regulators have also simplified the licensing process. Rwanda recently offered a FinTech license that covers multiple financial services under one framework, simplifying the path for startups to operate across payments and lending.<sup>140</sup> By contrast, Peru applies an activity-based licensing framework for non-deposit-taking institutions, meaning that FinTechs

must obtain separate licenses for each function - such as payments, foreign exchange, cross-border transfers, e-money issuance, or lending - if they wish to offer these services. While some licenses (such as lending) are optional, firms that do not obtain them may still need to register for AML/CFT purposes. This fragmented licensing approach can create added time and cost burdens, especially for FinTechs wishing to combine services (for example, offering both e-money and lending). Recognizing this, the regulator is currently reviewing the licensing framework to ensure it does not constrain digital business models or create unnecessary barriers to entry.

### REGULATORY SANDBOXES

A sandbox is a controlled environment where FinTech innovators can test new products under temporary regulatory relief.<sup>141</sup> By 2025, dozens of jurisdictions have implemented sandboxes to encourage experimentation with DFS.<sup>142</sup> While their impact on inclusion varies by context, some initiatives have supported tools for underserved populations. For example, the UK's FCA sandbox, launched in 2015, has enabled FinTech firms to try new products under regulatory oversight, including some designed for financially vulnerable groups.<sup>143</sup>

Sandboxes lower entry barriers by reducing regulatory uncertainty and compliance costs for startups in their pilot phase. They also facilitate learning for regulators and encourage incumbents and new players to collaborate (incumbent banks sometimes participate to partner with FinTechs).

As an enabling tool, sandboxes can stimulate competition by increasing the pipeline of market entrants with novel solutions, temporarily relaxing certain laws (for example, capital or licensing requirements) while a new company experiments with its business model.

If successful, a sandbox yields new licensed entrants or regulatory changes. There have been some noteworthy innovations tested through sandboxes. For instance, Malaysia's BNM used sandbox trials (e.g. remote e-KYC by World Remit) to validate solutions and subsequently amended regulations (e-KYC guidelines) for all providers, enabling broader market adoption of

134 Bangko Sentral ng Pilipinas. 2020. Circular No. 1105: Guidelines on the establishment of digital banks. Available at: <https://www.bsp.gov.ph/Regulations/Issuances/2020/c1105.pdf>; Lucas, D. L. 2021. In surprise move, BSP sets 3-year moratorium on new digital banking licenses. Philippine Daily Inquirer. Available at: <https://business.inquirer.net/329122/in-surprise-move-bsp-sets-3-year-moratorium-on-new-digital-banking-licenses>

135 CGAP. 2015. Driving scale and density of agent networks in Perú. Available at: <https://www.cgap.org/sites/default/files/Brief-Driving-Scale-and-Density-of-Agent-Networks-in-Peru-Jan-2015.pdf>

136 Nairametrics. 2024. MTN MoMo PSB's active wallet users hit 5.3 million in 2023. Available at: <https://nairametrics.com/2024/03/03/mtn-momo-psbs-active-wallet-users-hit-5-3-million-in-2023/>

137 Nairametrics. 2024. SmartCash PSB's active customers reach 1.5 million in March 2024. Available at: <https://nairametrics.com/2024/05/13/smartcash-psbs-active-customers-reach-1-5-million-in-march-2024/>

138 Mambu Communications. 2022. New digital banking licences awarded in Malaysia. Available at: <https://mambu.com/en/insights-hub/articles/new-digital-banking-licences-awarded-in-malaysia>; Medina, A. F. 2021. Singapore issues first digital banking licenses: Potential for regional expansion. ASEAN Briefing. Available at: <https://www.aseanbriefing.com/news/singapore-issues-first-digital-banking-licenses-potential-for-regional-expansion/>

139 Chen, S., D'Silva, D., Packer, F. and Tiwari, S. 2022. Virtual banking and beyond. Bank for International Settlements. Available at: <https://www.bis.org/publ/bppdf/bispap120.pdf>

140 AfricaNenda Foundation. 2024. Expanding the reach of IPS: Removing barriers to fintech licensing. Available at: [https://www.africanenda.org/uploads/files/siips-collection2024\\_fintech-licensing.pdf](https://www.africanenda.org/uploads/files/siips-collection2024_fintech-licensing.pdf)

141 UNSGSA Fintech Sub-Group. 2020. Regulatory sandboxes: Briefing paper. United Nations Secretary-General's Special Advocate for Inclusive Finance for Development. Available at: [https://www.unsgsa.org/sites/default/files/resources-files/2020-09/Fintech\\_Briefing\\_Paper\\_Regulatory\\_Sandboxes.pdf](https://www.unsgsa.org/sites/default/files/resources-files/2020-09/Fintech_Briefing_Paper_Regulatory_Sandboxes.pdf)

142 Ibid.

143 Ibid.

inclusion-friendly technologies.<sup>144</sup> Many countries hope sandbox experiments lead to products that benefit underserved groups, such as e-KYC, alternative credit scoring, and micro-insurance.<sup>145</sup> Early lessons show that sandboxes can indeed strengthen regulatory capacity and help dismantle barriers to inclusion by enabling dialogue.

However, the impact of sandboxes depends on broader factors such as:<sup>146</sup>

- > The specifics on which regulations and laws are suspended for entrants.
- > The impact on entry feasibility should the suspended regulations, or a subset of them, be re-introduced.
- > The criteria for sandbox participation, since in some countries eligibility is determined by regulators (through competitions, for example), which may favor certain types of companies.

- > Having a sandbox alone is insufficient to drive competition, but an effectively designed sandbox can assist companies by allowing them to test new products while temporarily bypassing regulatory barriers.

### SIMPLIFIED REGULATORY REQUIREMENTS FOR CUSTOMERS

Another enabling condition is when regulators enforce “tiered” or proportionate requirements for different customer types (as opposed to different types of institutions), such as allowing tiered KYC accounts with simpler identity requirements for low-risk customers.<sup>147</sup> This enables banks to onboard low-income customers without burdensome paperwork, improving inclusion. For instance, under India’s Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme, banks opened over 300 million basic accounts with simplified KYC.<sup>148</sup> While the government created the scheme, banks implemented it, making it a bank-led inclusion effort (though initial account usage was low, the adoption of technologies such as mobile banking and Aadhaar e-KYC later helped increase activity).<sup>149</sup>

144 World Bank. 2020. Regulation and supervision of fintech: Considerations for emerging markets and developing economies. Available at: <https://documents1.worldbank.org/curated/en/099735204212215248/pdf/P173006033b45702d09522066cbc8338dcb.pdf>

145 World Bank. 2020. Global experiences from regulatory sandboxes. Available at: <https://documents1.worldbank.org/curated/en/912001605241080935/pdf/Global-Experiences-from-Regulatory-Sandboxes.pdf>

146 UNSGSA Fintech Sub-Group. 2020. Regulatory sandboxes: Briefing paper. United Nations Secretary-General’s Special Advocate for Inclusive Finance for Development. Available at: [https://www.unsgsa.org/sites/default/files/resources-files/2020-09/Fintech\\_Briefing\\_Paper\\_Regulatory\\_Sandboxes.pdf](https://www.unsgsa.org/sites/default/files/resources-files/2020-09/Fintech_Briefing_Paper_Regulatory_Sandboxes.pdf)

147 Asian Development Bank. 2021. Fintech policy tool kit for regulators and policy makers in Asia and the Pacific. Available at: <https://www.adb.org/publications/fintech-policy-tool-kit-regulators-policy-makers>

148 MicroSave Consulting. 2020. Pradhan Mantri Jan Dhan Yojana: Ideas and lessons from India. Available at: <https://www.microsave.net/wp-content/uploads/2020/05/PMJDY-1.pdf>

149 Variyava, K. F. 2025. Beyond the bank account: Financial inclusion and Maharashtra’s microenterprises. Claremont McKenna College. Available at: [https://scholarship.claremont.edu/cmc\\_theses/3945](https://scholarship.claremont.edu/cmc_theses/3945)



Grocer in Manila, Phillipines / Martin Lindsay, Alamy Stock Photo

## REGULATORY APPROACHES AIMED AT ENABLING COMPETITION BY PROMOTING OPENNESS

### OPEN FINANCE AND DATA-SHARING INITIATIVES

There are different levels of data that can be shared. Open banking refers to frameworks that allow regulated third parties to access customer banking data - such as account balances or transaction history - through standardized APIs, typically with the customer's consent. Open finance builds on this by expanding data-sharing beyond banks to include a wider range of financial institutions, such as insurers, asset managers, and pension funds. Data sharing serves two main purposes: enabling switching and comparison, and facilitating innovative financial services.

- > **Innovation:** Access to data allows companies to offer a deeper range of products and better customization. This can include aggregating account information to assist with budgeting, allowing for risk assessments for insurance and credit, and assisting with savings and investment planning.<sup>150</sup> It can also extend to APIs that enable payment initiation.
- > **Switching:** Customers may be hesitant to change financial institutions due to switching costs. Data-sharing can help reduce these costs. For example, if customers' payment data can be ported to a new provider, they avoid re-entering information. Data-sharing rules, such as allowing users to download their data or share it via APIs, can help level the playing field. In several jurisdictions, these rules are designed to prevent dominant firms from gaining an unfair advantage by hoarding customer data, ensuring that consumers are not locked in simply because one provider has exclusive access to their information.<sup>151</sup>

Across the AFI network, open finance frameworks are increasingly seen as vital tools for enhancing competition and improving inclusion. AFI's Policy Development and Implementation Guide for Inclusive Open Finance highlights how third-party access to customer-permissioned data promotes innovation, product diversity, and consumer choice.<sup>152</sup>

Under data mobility, regulators enabling or mandating open finance frameworks are using an enabling intervention to spur competition.<sup>153</sup> The approach is to standardize and open data exchange (through APIs) so that new providers can build on top of the infrastructure and customer relationships of incumbent banks.<sup>154</sup> While data can also be accessed via screen-scraping, this is typically a less secure means of transacting.

The UK's Open Banking (2018) is a flagship example. It forced the largest banks to share account and transaction data (with customer consent) with licensed third parties.<sup>155</sup> This led to an ecosystem of FinTech apps offering budgeting, comparison, and alternative lending services - giving consumers more choices and often better deals.<sup>156</sup> While the UK's main goal was competition (after a CMA investigation found big banks were not competing enough),<sup>157</sup> a side benefit was inclusion, as new FinTech services for people with thin credit files or low incomes emerged.<sup>158</sup>

153 CGAP. 2024. Key considerations for open finance. Available at: [https://www.cgap.org/sites/default/files/publications/KP\\_Open%20Finance%20Report.pdf](https://www.cgap.org/sites/default/files/publications/KP_Open%20Finance%20Report.pdf)

154 Totolo, E., Mortimer-Schutts, I., Rizzi, A., Rice, C. and Chakraborty, A. 2024. The role of data exchange in financial inclusion: Lessons from leading markets and emerging policy approaches. Center for Financial Inclusion at Accion. Available at: <https://www.centerforfinancialinclusion.org/wp-content/uploads/2024/09/The-Role-of-Data-Exchange-in-Financial-Inclusion.pdf>

155 Open Banking Implementation Entity. 2017. UK's Open Banking to launch on 13 January 2018. Available at: <https://www.openbanking.org.uk/news/uks-open-banking-launch-13-january-2018/>

156 Babina, T., Bahaj, S., Buchak, G., De Marco, F., Foulis, A., Gornall, W., Mazzola, F. and Yu, T. 2024. Customer data access and fintech entry: Early evidence from open banking. Bank of England. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2024/customer-data-access-and-fintech-entry-early-evidence-from-open-banking.pdf>; Open Banking Implementation Entity. 2025. OBL Impact Report 7: Open Banking delivers real-world impact as adoption accelerates year-on-year. Available at: <https://www.openbanking.org.uk/insights/obl-impact-report-7-open-banking-delivers-real-world-impact-as-adoption-accelerates-year-on-year/>; Harris, H. 2025. The impact of open banking on financial services and consumer empowerment. University of Melbourne. ResearchGate. Available at: [https://www.researchgate.net/publication/390302858\\_The\\_Impact\\_of\\_Open\\_Banking\\_on\\_Financial\\_Services\\_and\\_Consumer\\_Empowerment](https://www.researchgate.net/publication/390302858_The_Impact_of_Open_Banking_on_Financial_Services_and_Consumer_Empowerment)

157 Baker, K. CBE. 2022. Open banking lessons learned review. Competition and Markets Authority. Available at: [https://assets.publishing.service.gov.uk/media/62908644d3bf7f036ebf5880/CMA\\_OB\\_Lessons\\_Learned\\_Review.pdf](https://assets.publishing.service.gov.uk/media/62908644d3bf7f036ebf5880/CMA_OB_Lessons_Learned_Review.pdf)

158 Moran, K. 2022. Innovating in the UK's credit information market - how Open Banking can help and why it matters. Available at: <https://plaid.com/blog/open-banking-innovation-credit-information-uk/>

150 Intergovernmental Fintech Working Group. Blog - Open Finance: A potential solution for financial deepening in South Africa? Available at: [https://www.ifwg.co.za/Pages/Open\\_Finance.aspx](https://www.ifwg.co.za/Pages/Open_Finance.aspx)

151 Centre for Information Policy Leadership. 2024. Data sharing obligations under the DMA: Challenges and opportunities. Hunton Andrews Kurth. Available at: [https://www.informationpolicycentre.com/uploads/5/7/1/0/57104281/data\\_sharing\\_obligations\\_under\\_the\\_dma\\_-\\_challenges\\_and\\_opportunities\\_-\\_may24.pdf](https://www.informationpolicycentre.com/uploads/5/7/1/0/57104281/data_sharing_obligations_under_the_dma_-_challenges_and_opportunities_-_may24.pdf)

152 Alliance for Financial Inclusion. 2025. Policy development and implementation guide for inclusive open finance. Available at: <https://www.afi-global.org/wp-content/uploads/2025/02/Policy-Development-and-Implementation-Guide-for-Inclusive-Open-Finance.pdf>

Mexico and Brazil have followed with comprehensive open finance regulations, citing that enhanced competition and customer choice will help reach segments not well served by traditional institutions.<sup>159</sup> In emerging markets, open data can, for instance, allow a small farmer to share her mobile money receipts with a bank to get a loan,<sup>160</sup> or enable a microinsurance startup to access telecom data to underwrite policies.<sup>161</sup> By enabling these data flows, regulators hope to unlock innovation targeted at underserved communities.

The benefits of data sharing and open finance also depend quite heavily on the form that regulatory intervention takes. The impact can differ based on a range of factors, including:

- > Whether it is mandatory or voluntary (e.g. bank-led)
- > The quality of data available
- > The type of data covered (transactions, credit records)
- > Data protection regimes
- > The technical structure, including standards for data and system architecture
- > Consumer protection requirements
- > The treatment of risk and liability
- > The ecosystem and the extent to which innovative companies have the capability to use the available data
- > The format of the data and the associated risks involved
- > The actors who can access data (typically regulated financial institutions, FinTechs, and licensed third-party providers, depending on jurisdictional rules and consumer consent frameworks)
- > Governance structures (often including regulatory oversight bodies, data standardization agencies, and dedicated open banking units to ensure interoperability, security, and fairness)

- > Long-term viability and sustainability, which depend on clear value propositions for all stakeholders (e.g. cost-benefit for data holders and users), as well as ongoing regulatory engagement, consumer trust, and technical interoperability

In countries with limited data depth and low usage, engaging in extensive open data requirements may not have benefits commensurate with the costs. As a result, the extent to which open data frameworks are designed and implemented must be tailored to the specific country context.

### DIGITAL PUBLIC INFRASTRUCTURE

Many governments have undertaken the creation of public digital infrastructure as an enabling foundation for competition. For example, real-time payment systems provided by central banks (such as India's UPI or Brazil's Pix) offer an open-access platform on which any licensed provider, big or small, can offer fast, low-cost payments.<sup>162</sup> This helps level the playing field, which might otherwise be uneven if one company's proprietary network dominated or if a group of institutions controlled key decisions related to entry, pricing, and governance.

Pix in Brazil, launched by the central bank in 2020, it is free for individuals and has open APIs.<sup>163</sup> All banks and FinTechs above a certain size were mandated to join Pix.<sup>164</sup> The system effectively commoditized basic payments, as moving money became instant and free, forcing providers to compete on customer experience and value-added services.<sup>165</sup> This spurred an explosion in FinTech usage and within a year, Pix had tens of millions of users and was being leveraged by digital banks to attract customers.<sup>166</sup> Inclusion-wise, Pix brought many previously excluded Brazilians into digital payments, with even informal traders accepting Pix because it was simple and free, requiring only a mobile phone.<sup>167</sup>

159 Comisión Federal de Competencia Económica. 2024. Fintech and competition: The impact of financial technology on the Mexican financial system. Available at: [https://www.cofece.mx/wp-content/uploads/2024/11/EE24-F\\_fintech-ENG\\_1DEAI-1-1.pdf](https://www.cofece.mx/wp-content/uploads/2024/11/EE24-F_fintech-ENG_1DEAI-1-1.pdf); Inclusive Finance Frontiers. 2024. Banking on open finance to advance financial inclusion: Lessons from Brazil. CGAP. Available at: <https://www.cgap.org/research/podcast/banking-on-open-finance-to-advance-financial-inclusion-lessons-brazil>; Totolo, E., Mortimer-Schutts, I., Rizzi, A., Rice, C. and Chakraborty, A. 2024. The role of data exchange in financial inclusion: Lessons from leading markets and emerging policy approaches. Center for Financial Inclusion at Accion. Available at: <https://www.centerforfinancialinclusion.org/wp-content/uploads/2024/09/The-Role-of-Data-Exchange-in-Financial-Inclusion.pdf>; OECD. 2023. OECD Guidelines for Multinational Enterprises on Responsible Business Conduct. Available at: <https://doi.org/10.1787/81f92357-en>

160 World Bank. 2017. Mobile technologies and digitized data to promote access to finance for women in agriculture. Available at: <https://documents1.worldbank.org/curated/en/855471513670397514/pdf/122110-WP-PUBLIC-DFSforwomeninagrireport.pdf>

161 Naouar, R., Ndaw, C., Oulai, R., Ramji, M., Savonitto, B. and Wensley, M. 2018. DFS for agriculture. International Finance Corporation. Available at: <https://www.ifc.org/content/dam/ifc/doc/mgrt/digital-financial-services-for-agriculture-ifc-mcf-2018.pdf>

162 Cornelli, G., Frost, J., Gambacorta, L., Sinha, S. and Townsend, R. M. 2024. Faster digital payments: global and regional perspectives. BIS. Available at: [https://www.bis.org/publ/bppdf/bispap152\\_e\\_rh.pdf](https://www.bis.org/publ/bppdf/bispap152_e_rh.pdf)

163 Central Bank of Brazil. n.d. Pix: Brazil's instant payment system. Available at: [https://www.bcb.gov.br/en/financialstability/pix\\_en](https://www.bcb.gov.br/en/financialstability/pix_en)

164 Hamilton, A. 2020. Central bank of Brazil plans launch of QR-based instant payments system Pix. FinTech Futures. Available at: <https://www.fintechfutures.com/instant-real-time-payments/central-bank-of-brazil-plans-launch-of-qr-based-instant-payments-system-pix>

165 Ayres, M. 2024. Brazil's Pix payments are killing cash. Are credit cards next? Reuters. Available at: <https://www.reuters.com/business/finance/brazils-pix-payments-are-killing-cash-are-credit-cards-next-2024-04-02/>

166 Sampaio, M. C. and Ornelas, J. R. H. 2024. Payment technology complementarities and their consequences on the banking sector: Evidence from Brazil's Pix. Available at: [https://www.bis.org/publ/bppdf/bispap152\\_c.pdf](https://www.bis.org/publ/bppdf/bispap152_c.pdf); Kempinsky, P. 2025. Fast payments in action: Emerging lessons from Brazil and India. Atlantic Council. Available at: <https://www.atlanticcouncil.org/blogs/econographics/fast-payments-in-action-emerging-lessons-from-brazil-and-india/>

167 Conduit. 2024. The ultimate guide to Pix. Available at: <https://conduitpay.com/guides/ultimate-guide-to-pix>

One trade-off is that public infrastructure can reduce the differentiation of individual firms. However, overall, it enhances consumer welfare and competition by lowering costs universally.<sup>168</sup>

The introduction of Pix provided a free, real-time payment option for all, and Brazil saw a big uptick in account usage, with small businesses accepting digital payments, and a “financial revolution” in the digitalization of the economy.<sup>169</sup> Similarly, Pakistan built a retail payments hub, RAST (1-Link), and required mobile money providers to connect, enabling transfers across providers.<sup>170,171</sup>

In India, competition has also been stimulated by national infrastructure. UPI, launched in 2016 by NPCI, is similar to Pix – a real-time payment scheme connecting banks and FinTechs.<sup>172</sup> UPI has developed in a manner allowing certain BigTech participants to operate (Google Pay, PhonePe by Walmart, and Amazon Pay became major UPI apps).<sup>173</sup> UPI saw exponential growth and by August 2025, over 20 billion transactions per month were occurring on the platform, with even small street vendors in cities accepting UPI QR codes. This has significantly increased financial inclusion, with India’s bank account ownership at approximately 89 percent as of 2024.<sup>174</sup> In addition, the proportion of those accounts being used for digital payments rose from 11 percent in 2014 to 35 percent in 2021 and 54 percent in 2024 (per Findex).<sup>175</sup> Competition wise, UPI created a level field – any app could initiate payments

from any bank.<sup>176</sup> While BigTech apps (Google, PhonePe) captured large user shares, the government imposed rules to prevent a monopoly (for example, a market share cap of 30 percent on UPI transactions per app).<sup>177</sup> Transaction fees on UPI are essentially zero for users and merchants, similar to Pix.<sup>178</sup> This has boosted inclusion but raised questions on the business model – as payment providers in India must generate revenue elsewhere (credit, data, etc.), as payments themselves are free, which is sustainable only if ancillary markets open up.<sup>179</sup>

Other forms of digital public infrastructure, such as digital ID systems and centralized credit registries, can also enable competition. Digital ID lowers onboarding costs for new entrants by simplifying KYC processes, while shared credit registries prevent data hoarding by incumbents, giving new lenders fair access to credit histories and enhancing market contestability.

The success of public infrastructure in improving competition can also differ based on the details relating to:

- > How the system is structured
- > How governance structures are designed
- > The relative power of different market participants
- > How prices are set (cost-based, regulated, set by market participants)
- > Whether the system reaches critical mass

This can be designed or reformed in a pro-competitive manner. Governance structures, for example, can ensure that decisions on entry and pricing are not controlled by incumbents but are instead made by independent bodies, such as regulators or dedicated boards, with clear dispute resolution mechanisms. As such, there are a range of considerations that collectively impact the extent to which public infrastructure benefits competition.

168 Sarkisyan, S. 2023. Instant payment systems and competition for deposits. Available at: [https://www.ssarkisyan.com/publication/instantpayments/instant\\_payment](https://www.ssarkisyan.com/publication/instantpayments/instant_payment); Sampaio, M. C. and Ornelas, J. R. H. 2024. Payment technology complementarities and their consequences on the banking sector: Evidence from Brazil’s Pix. Available at: [https://www.bis.org/publ/bppdf/bispap152\\_c.pdf](https://www.bis.org/publ/bppdf/bispap152_c.pdf); Central Bank of Brazil. 2023. Pix management report. Available at: [https://www.bcb.gov.br/content/estabilidadefinanceira/pix/relatorio\\_de\\_gestao\\_pix/pix\\_management\\_report\\_2023.pdf](https://www.bcb.gov.br/content/estabilidadefinanceira/pix/relatorio_de_gestao_pix/pix_management_report_2023.pdf)

169 Sampaio, M. C. and Ornelas, J. R. H. 2024. Payment technology complementarities and their consequences on the banking sector: Evidence from Brazil’s Pix. Available at: [https://www.bis.org/publ/bppdf/bispap152\\_c.pdf](https://www.bis.org/publ/bppdf/bispap152_c.pdf)

170 GSMA. 2020. Tracking the journey towards mobile money interoperability: Emerging evidence from six markets: Tanzania, Pakistan, Madagascar, Ghana, Jordan and Uganda. Available at: [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/08/GSMA\\_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/08/GSMA_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf)

171 D’Silva, D., Filkova, Z., Packer, F. and Tiwari, S. 2019. The design of digital financial infrastructure: Lessons from India (BIS Papers No. 106). Bank for International Settlements. Available at: <https://www.bis.org/publ/bppdf/bispap106.pdf>

172 Ibid.

173 Cornelli, G., Frost, J., Gambacorta, L., Sinha, S. and Townsend, R. M. 2024. The organisation of digital payments in India – Lessons from the Unified Payments Interface (UPI). BIS. Available at: [https://www.bis.org/publ/bppdf/bispap152\\_e\\_rh.pdf](https://www.bis.org/publ/bppdf/bispap152_e_rh.pdf)

174 World Bank. 2025. Global snapshot of indicators and enabling regulations. Available at: <https://digitalfinance.worldbank.org/country/india>

175 Klapper, L., Singer, D., & Ansar, S. 2021. The Global Findex Database 2021: India Country Brief. World Bank. Retrieved from <https://thedocs.worldbank.org/en/doc/4c4fe6db0fd7a7521a70a39ac518d74b-0050062022/original/Findex2021-India-Country-Brief.pdf>

176 Kempinsky, P. 2025. Fast payments in action: Emerging lessons from Brazil and India. Fintech Frontlines. Available at: <https://www.atlanticcouncil.org/blogs/econographics/fast-payments-in-action-emerging-lessons-from-brazil-and-india/>

177 Ghosh, A. 2021. India: Antitrust regulation in the UPI payments sector. Kluwer Competition Law Blog. Available at: <https://competitionlawblog.kluwercompetitionlaw.com/2021/07/07/india-antitrust-regulation-in-the-upi-payments-sector/>; Dubey, N. 2025. PhonePe outage rekindles debate on UPI market cap: Should NPCI finally act? Fortune India. Available at: <https://www.fortuneindia.com/personal-finance/banking/phonepe-outage-rekindles-debate-on-upi-market-cap-should-npci-finally-act/123072/>

178 National Payments Corporation of India. 2023. UPI is free, fast, secure and seamless. Available at: <https://www.npci.org.in/PDF/npci/press-releases/2023/UPI-is-free-fast-secure-and-seamless-Every-month-over-8-billion-transactions-are-processed-free-for-customers-and-merchants-using-bank-accounts.pdf?/>

179 Harihareswara, N., Miller, H. and Deb, A. 2021. India may not have as much digital financial inclusion as it seems. Center for Global Development. Available at: <https://www.cgdev.org/blog/india-may-not-have-much-digital-financial-inclusion-it-seems>

### INTEROPERABILITY MANDATES

Interoperability refers to different systems being able to work together. In DFS, this can mean, for example, that one mobile wallet can send money seamlessly to another wallet or a bank account, or that agents can serve customers across multiple wallets.<sup>180</sup>

Interoperability can be hugely important for competition by reducing the network advantages of dominant firms and lowering switching costs.<sup>181</sup> However, it can also have some drawbacks. It may limit differentiation and innovation, and increase homogenization as dominant companies may have less incentive to engage in research and development if they are required to share the benefits with competitors. This can harm longer-term innovation.

A recurring theme in terms of competition in payments is the importance of payment infrastructure and how it is governed. Countries have differing experiences depending on whether interoperability exists, and even where it does, the extent to which competition is enabled depends on features of the market switches. Key factors include:

- > **Ownership:** Infrastructure ranges from fully privately owned to government owned, and ownership can influence how competition develops.
- > **Governance and entry decisions:** The different ways that governance and market entry are designed has a significant impact on market dynamics.
- > **Pricing decisions:** In some countries, operators set prices, while in others they are mandated.
- > **Participation rates:** Mandating participation by larger institutions can help the system reach the minimum scale needed to function effectively.

Insights from interviews suggest that when dominant players or incumbents control features of the switch, including governance, entry, and pricing, there is a higher risk of dampened competition, restricted entry, and the potential for anti-competitive behavior or abuse. Furthermore, in some instances, government infrastructure can enable or crowd out private infrastructure. In response, many regulators have mandated interoperability in a phased approach.

- > **Tanzania**, an early adopter, had the industry agree to wallet-to-wallet interoperability by 2014-2015, supported by the Bank of Tanzania.<sup>182</sup>
- > **In the EU**, regulations historically mandated interoperability in banking (e.g. ATM networks, SEPA for cross-bank payments) and now extend to digital services to mitigate network effects.<sup>183</sup>
- > Regulators in markets such as **Tanzania, Ghana, and Indonesia** have pushed to integrate mobile money into national switches or create multi-provider switching hubs for wallets.
- > **Rwanda**, a smaller market, embraced mobile money via MTN and Airtel; regulators in the country moved early to mandate interoperability. In 2018, Rwanda adopted a national interoperability blueprint (RNDPS) to integrate mobile wallets, banks, microfinance, and even East African regional systems. An interoperability law took effect in 2021.<sup>184</sup> As a result, mobile payment usage increased sharply - the central bank reported a 25 percent jump in mobile payment subscribers from mid-2020 to mid-2021, growing from 4.9 million to 6.1 million, following interoperability and supportive policies.<sup>185</sup> However, concerns remain that the pricing formula favors large players. Rwanda's major operators agreed that each customer transfer carries a flat processing fee of 75 francs, regardless of transaction size, meaning small transfers (which make up 75 percent of volumes) impose disproportionately high percentage costs on FinTechs.
- > **In the Philippines**, the Bangko Sentral ng Pilipinas (BSP) implemented QR Ph, a national QR code standard that mandates all supervised payment providers adopt a common standard. This allows any merchant to accept payments from multiple e-wallets and banks using a single QR code, processed via the national real-time switch, InstaPay.

Interoperability can promote effective competition by lowering entry barriers, reducing network effects, and preventing vertically integrated firms from foreclosing potential competitors.<sup>186</sup>

180 Garcia Arabehty, P., Chen, G., Cook, W. and McKay, C. 2016. Digital finance interoperability & financial inclusion: A 20-country scan. CGAP. Available at: <https://www.cgap.org/sites/default/files/interoperability.pdf>

181 Negre, A. and Cook, W. 2021. Interoperability in DFS: Emerging guidance for funders. CGAP. Available at: [https://www.cgap.org/sites/default/files/publications/2021\\_01\\_Technical\\_Note\\_Interoperability\\_Digital\\_Financial\\_Services.pdf](https://www.cgap.org/sites/default/files/publications/2021_01_Technical_Note_Interoperability_Digital_Financial_Services.pdf); Bianchi, M. 2025. Interoperability and infrastructure investment: AFI - Competition Enablers Knowledge Exchange. Available at: <https://www.afi-global.org/wp-content/uploads/2025/04/4.-Interoperability-And-Infrastructure-Investment-TSE-AFI.pdf>

182 International Finance Corporation. 2015. Achieving interoperability in mobile financial services: Tanzania case study. Available at: <https://documents.worldbank.org/curated/en/740981531310065590/pdf/WP-TZ-Mobile-interoperability-10-03-2015-PUBLIC.pdf>

183 Bourreau, M., Krämer, J. and Buiten, M. 2022. Interoperability in digital markets. Centre on Regulation in Europe. Available at: <https://cerre.eu/publications/interoperability-in-digital-markets/>

184 Rattel, F., Bahia, K. and Wambugu, W. 2024. The impact of mobile money interoperability on financial inclusion: Evidence from five country case studies. GSMA. Available at: <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2024/01/The-impact-of-mobile-interoperability.pdf>

185 NewsPaper Africa. 2022. Rwanda finally rolls out mobile money interoperability. Available at: <https://newspaper.africa/2022/05/26/rwanda-finally-rolls-out-mobile-money-interoperability/>

186 GSMA. 2024. The impact of mobile money interoperability on financial inclusion. Available at: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2024/01/The-impact-of-mobile-interoperability.pdf>

However, there are trade-offs. Critics of mandatory interoperability argue it undermines investment as firms might not invest in building network infrastructure if they are required to share it immediately.<sup>187</sup> If implemented with a fee model that is too high, as seen in Uganda where interchange fees between mobile operators kept off-net fees high for consumers, interoperability may fail to deliver the intended benefits.<sup>188</sup>

Conversely, with reasonable cost-sharing or a neutral switch in place, interoperability can significantly increase usage and network utility. From an inclusion perspective, interoperability allows users to reach anyone with just one account, which encourages uptake, as people are more likely to join if they know they can connect across networks.<sup>189</sup> It also means new entrants focusing on a niche can still achieve reach via interoperability, encouraging specialized services. For example, a FinTech focusing on remittances can connect to recipients without building a full network.<sup>190</sup>

By ensuring universal interconnection, the regulator can prevent a dominant firm from isolating itself and force everyone to join its network.<sup>191</sup> Where voluntary interconnect fails, a regulatory mandate may be necessary to prevent market failure.

Other mechanisms can support interoperability in addition to interoperability in payments. This includes QR code standardization mandates. The standardization of QR codes promotes payment interoperability, reduces fragmentation, and enhances merchant participation. In the Philippines, the Bangko Sentral ng Pilipinas (BSP) implemented QR Ph, a national QR code standard covering both person-to-person (P2P) and merchant payments. Supervised payment providers offering QR-based services are required to adopt the QR Ph format. QR Ph transactions - particularly for use cases such as Bills Pay PH - are processed via InstaPay, the country's real-time payment system.



Digital payment method / lakshmi prasad S, Alamy Stock Photo

This approach allows any merchant to accept payments from multiple providers using a single QR code, reducing onboarding costs and promoting wider usage. The BSP's parallel efforts to regulate merchant discount rates (MDRs) further support fair access, especially for MSMEs. Similar initiatives exist elsewhere: Brazil's Pix system incorporates QR-based instant payments into its national real-time payment infrastructure, while Indonesia's QRIS requires all providers to use a unified QR format for merchant payments. These initiatives reflect a broader regulatory trend to align interoperability mandates with pricing reforms, aiming to level the playing field while promoting inclusive competition.

Such regulations often pit short-term provider revenues against long-term market growth. For instance, forcing interoperability may reduce the competitive edge of larger providers (and potentially some revenue from off-net fees), but overall transaction volumes in the market can rise as trust and convenience increase.<sup>192</sup> Interoperability has been linked to higher usage and lower consumer prices in multiple studies.<sup>193</sup> However, as with previous interventions, the competitive effects depend heavily on how key factors, such as pricing, dispute resolution, and interconnection rules, are managed.

187 GSMA. 2020. Tracking the journey towards mobile money interoperability: Emerging evidence from six markets: Tanzania, Pakistan, Madagascar, Ghana, Jordan, and Uganda. Available at: [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/08/GSMA\\_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/08/GSMA_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf)

188 Ibid.

189 Ibid.

190 Ibid.

191 Rattel, F., Bahia, K. and Wambugu, W. 2024. The impact of mobile money interoperability on financial inclusion: Evidence from five country case studies. GSMA. Available at: <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/wp-content/uploads/2024/01/The-impact-of-mobile-interoperability.pdf>

192 Ekmekci, M., White, A. and Wu, L. 2024. Platform competition and interoperability: The net fee model. SSRN. Available at: <https://ssrn.com/abstract=3945134>

193 GSMA. 2024. The impact of mobile money interoperability on financial inclusion. Available at: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2024/01/The-impact-of-mobile-interoperability.pdf>

## INTERVENTIONS AIMED AT PREVENTING ABUSES

### MANDATING ACCESS TO REQUIRED INPUTS (PROHIBITING EXCLUSIVITY)

Mandating access to required inputs is another tool to ensure competition. Regulators have mandated access to a range of inputs needed for DFS.

**Prohibition on exclusivity in agent contracts:** Many regulators explicitly ban exclusive agent contracts in mobile money and agent banking. For instance, Ghana's guidelines, Nigeria's recent framework, and Kenya's National Payment System regulations all have clauses stating that agents are free to serve multiple principals.<sup>194,195,196</sup> This immediately shifts the market dynamics, as a new entrant can sign up existing agents who also work for a competitor, rather than having to recruit and train entirely new agents. It thus accelerates both competition and service rollout.<sup>197</sup> This has had positive results. When Kenya implemented the ban on agent exclusivity from 2014-2016, Airtel and Equity's agent numbers grew, and rural coverage by non-Safaricom providers improved.<sup>198</sup> Non-exclusivity does not force agents to take on multiple providers, but it removes contractual barriers and generally leads to a more shared agent network ecosystem, which is more efficient for the market as agents can earn more by representing multiple companies, while providers do not have to each invest in separate agents in the same village.<sup>199</sup> Non-exclusivity has clearly improved agent coverage for competing providers in Kenya, Uganda, and Ghana.<sup>200</sup> Some regulators are now going further by exploring agent interoperability (for example, where an agent has the same infrastructure and equipment that can be used across companies) as a complementary measure to non-exclusivity. Tanzania, for instance, is currently considering a shift toward interoperable agent networks to improve competition and reduce duplication in agent infrastructure.

194 Bank of Ghana. 2015. Guidelines for E-Money Issuers and Agent Guidelines. Available at: <https://www.bog.gov.gh/wp-content/uploads/2022/03/The-Evolution-of-Bank-of-Ghana-Policies-on-the-Ghanaian-Payment-System.pdf>; Blay, C. 2016. Mobile financial services in Ghana. Presentation at the Sub-regional Workshop on Mobile Money in West Africa, Freetown, Sierra Leone.

195 Central Bank of Nigeria. 2023. Regulatory Framework for Agent Banking and Agent Banking Relationships. Available at: <https://www.cbn.gov.ng/Out/2023/CCD/Regulatory%20Framework%20for%20Agent%20Banking%20-%20Exposure%20Draft%20-%20Copy.pdf>efina.org.ng+2

196 Central Bank of Kenya. 2014. National Payment System Regulations. Available at: <https://www.centralbank.go.ke/images/docs/legislation/NPSRegulations2014.pdf>

197 Mazer, R. and Rowan, P. 2016. Competition in mobile financial services: Lessons from Kenya and Tanzania. AJIC. Available at: <https://journals.co.za/doi/pdf/10.10520/EJC-7cb8e4224?utm>

198 Mazer, R. and Rowan, P. 2016. Competition in mobile financial services: Lessons from Kenya and Tanzania. CGAP. Available at: <https://journals.co.za/doi/pdf/10.10520/EJC-7cb8e4224?utm>

199 Ibid.

200 Mazer, R., Pillai, R. and Staschen, S. 2016. Agents for everyone: Removing agent exclusivity in Kenya and Uganda. CGAP. Available at: <https://www.cgap.org/blog/agents-everyone-removing-agent-exclusivity-kenya-uganda>

### Prohibiting exclusivity between telecommunications providers and mobile wallets:

Some countries also extend non-exclusivity to other channels - for example, mobile phone airtime cannot be locked to one wallet (so customers can use any SIM airtime menu to access various services).<sup>201</sup> Regulators have to enforce these rules (spot-check contracts, punish violators) for them to be effective.

**Access to payment rails and platforms:** In some jurisdictions, regulators adopted formal access regimes - legal instruments that govern how dominant infrastructure providers must open up access to essential payment rails or platforms through fair, transparent, and non-discriminatory terms. For example, the Reserve Bank of Australia introduced an access regime for ATM switches to improve accessibility for smaller providers, lowering barriers to entry in the payments ecosystem.

**Access to bank accounts:** Another challenge that has occurred is banks blocking FinTechs that require a bank partnership or access to bank accounts. In Peru, where four banks control 80-85 percent of credit and deposits, regulators received reports that some banks were closing FinTech accounts as part of de-risking strategies, which limited competition from emerging FinTechs. In response, the SBS issued guidance requiring banks to evaluate FinTechs on merit - for example, based on licensing status or risk profile - and not to reject them outright without justification.

There can be some potential benefits to exclusivity. For example, in theory, agent exclusivity could encourage DFS providers to deploy more agents, as they cannot rely on shared networks and must establish their own physical presence.<sup>202</sup> This may lead to providers negotiating with different institutions and networks to provide agents rather than relying on existing networks (for instance, a new entrant may be incentivized to negotiate agency contracts with fuel stations, supermarkets, etc. thereby expanding options for customers). This may lead to more access points overall, especially in high-traffic areas. In addition, exclusivity may increase the incentive for agents to offer better customer service through their exclusive relationship with the provider, while also motivating DFS providers to invest in training and upskilling their agents.

201 Ibid.

202 GSMA. 2020. Tracking the journey towards mobile money interoperability: Emerging evidence from six markets: Tanzania, Pakistan, Madagascar, Ghana, Jordan and Uganda. Available at: [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/08/GSMA\\_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/08/GSMA_Tracking-the-journey-towards-mobile-money-interoperability-1.pdf)

However, generally, these benefits are highly context-dependent and must be weighed against the drawbacks of exclusivity.

## REGULATORY INTERVENTIONS AIMED AT PRICING

### Interchange fee caps and pricing regulations

In some cases, regulators intervene directly in pricing structures that are seen as anti-competitive or burdensome to inclusion. This primarily occurs where market failures allow for exploitative pricing. As discussed previously, this includes interchange and merchant discount rates.

As a result, the regulation of interchange fees occurs in a range of countries including the UK, Australia, Brazil, Canada, and South Africa. In most jurisdictions, these fees are set and regulated by a financial regulator (typically a central bank), though it is sometimes the result of competition processes and monitored by a financial regulator, as is the case in the United States and European Union.<sup>203</sup>

In DFS, interchange caps can be likened to caps on multilateral interchange or merchant discount rates for instant payments. A study on instant payments notes that countries with low merchant discount rates have typically had a far higher take-up by merchants, and thus consumers, in comparison to countries with high rates.<sup>204</sup> The study highlights that payment platforms with “must-have” characteristics have network effects and may therefore charge merchant discount rates above costs, which can inefficiently exclude smaller merchants who cannot afford them. As such, regulators are encouraged to ensure that low or even zero merchant discount rates are promoted or mandated.

Retail price caps are not typically encouraged from a competition perspective, as they can distort the competitive process and hinder innovation, reducing the incentives for firms to invest in new services when they cannot capture the full rewards of their efforts.<sup>205</sup> However, there is a strong argument that essential services, such as payments, should be low-margin utilities in any case, and that innovation will occur in value-added services where firms can differentiate.<sup>206</sup>



Cashless Transaction, Ghana / Roger Yebuah, Alamy Stock Photo

With respect to interchange rates, there are strong arguments that regulatory intervention is warranted to prevent the exercise of market power.

Beyond merchant discount rates and interchange, some regulators have implemented specific price cap measures in the interest of consumers:

- > **Encouraging digital payments during COVID-19:** Various regulators introduced legislation during COVID-19 to encourage digital payments, including temporarily waiving or reducing mobile money or EMI fees to encourage digital payments for relief funds. Some, like Kenya's CBK, later reintroduced fees but encouraged providers to maintain permanently low person-to-person charges for small transactions.<sup>207</sup>
- > **Consumer protection related to predatory lending:** Another price-related intervention focused on consumer protection is limiting interest or fees on digital credit - both Kenya and Tanzania at times imposed moratoria on exorbitant mobile lending rates to protect consumers.<sup>208, 209</sup> Although this measure primarily serves consumer protection objectives, it also carries competition implications by preventing dominant lenders from engaging in price-gouging.

203 Clearly Payments. 2024. An overview of interchange rates and payment processing in the EU. Available at: <https://www.clearlypayments.com/blog/an-overview-of-interchange-rates-and-payment-processing-in-the-eu/>

204 Hawthorne, R., Goga, S., Wills, N., Patel, Z and Macmillan, R. 2021. Principles for setting merchant discount rates and interchange. Fifteen Annual Competition, Law, Economics and Policy Conference. Available at: <https://www.compcom.co.za/wp-content/uploads/2021/11/Principles-for-setting-merchant-discount-rates-and-interchange.pdf>

205 Ibid.

206 Bianchi, M. and Rhodes, A. 2024. Digital payments interoperability with naïve consumers. Toulouse School of Economics Working Paper No. TSE-1559. Available at: [https://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2024/wp\\_tse\\_1559.pdf](https://www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2024/wp_tse_1559.pdf)

207 Central Bank of Kenya. 2022. Reintroduction of charges for mobile money wallet and bank account transactions. Available at: [https://www.centralbank.go.ke/uploads/press\\_releases/988888658\\_Press%20Release%20-%20Reintroduction%20of%20Charges%20for%20Mobile%20Money%20Wallet%20and%20Bank%20Account%20Transactions.pdf](https://www.centralbank.go.ke/uploads/press_releases/988888658_Press%20Release%20-%20Reintroduction%20of%20Charges%20for%20Mobile%20Money%20Wallet%20and%20Bank%20Account%20Transactions.pdf)

208 Central Bank of Kenya. 2020. Bank supervision annual report 2020. Available at: [https://www.centralbank.go.ke/uploads/banking\\_sector\\_annual\\_reports/1375903848\\_Bank%20Supervision%20Annual%20Report%202020.pdf](https://www.centralbank.go.ke/uploads/banking_sector_annual_reports/1375903848_Bank%20Supervision%20Annual%20Report%202020.pdf)

209 Alliance for Financial Inclusion. 2020. Digital credit regulation in Tanzania. Available at: [https://www.afii-global.org/wp-content/uploads/2024/10/AFI\\_DFS\\_Tanzania\\_CS\\_AW2\\_05.10.20\\_digital.pdf](https://www.afii-global.org/wp-content/uploads/2024/10/AFI_DFS_Tanzania_CS_AW2_05.10.20_digital.pdf)

- > In general, economists prefer not to directly regulate prices, but in markets with clear evidence of market power, price caps or controls can be a remedial tool to simulate competitive outcomes.<sup>210</sup>

### SCRUTINY OF MERGERS AND ACQUISITIONS

Mergers and acquisitions can inhibit competition by removing nascent competitors.<sup>211</sup> In many jurisdictions, financial authorities (typically central banks or prudential authorities) have jurisdiction over approving mergers in the financial sector. This varies across countries and may involve legislation that gives financial authorities sole approval power, or frameworks in which mergers in the financial sector are scrutinized by financial authorities together with competition authorities. Some non-bank financial sector mergers may be the sole remit of a competition authority, though these regulators usually give significant weight to submissions from financial regulators. Various mergers have been blocked internationally as a result of competition regulation.

In the UK, concerns over the loss of competition and removal of potential competitors have influenced numerous financial sector mergers, even in instances where the merger was ultimately approved.<sup>212</sup> Some mergers have been prohibited or required divestment - for example, when a merger created a combined 25 percent share in the retail investment platform market.<sup>213</sup> Another merger between firms focused on credit score checking and online loan and credit card selection was abandoned due to CMA concerns that it would stifle innovation.<sup>214</sup> As noted earlier, a merger between Visa and Plaid in the US was abandoned following regulatory scrutiny, as Plaid was likely to challenge Visa's monopoly on payments.<sup>215</sup>

Merger regulation can therefore play an incredibly important role in maintaining competition in a market and preventing innovative competitors from being acquired by dominant firms simply to maintain their market dominance.

### VERTICAL SEPARATION OF PLATFORMS

Where there is vertical integration or dominance in adjacent markets, requiring a measure of vertical separation can be used to promote competition. This is particularly relevant in instances when part of the value chain is a natural monopoly while others are competitive. Without careful monitoring, this can often lead to exclusionary behavior such as margin squeeze. In regulated industries such as telecommunications and energy, one response has been to unbundle or separate different parts of the value chain and regulate them differently. For example, price regulation or state provision may apply to non-contestable parts of the value chain that tend towards monopoly provision, such as transmission networks in energy, while competition is encouraged in contestable parts with lower barriers, which can be served by multiple players.

Separation can occur through a range of levels from accounting separation to full divestment (ownership and structural separation).<sup>216</sup> This can enhance competition in markets susceptible to cross-subsidization, self-preferencing, margin squeeze, or discriminatory pricing between on-net and off-net services. Regulations can require companies to treat their downstream subsidiaries in the same manner as downstream competitors, offering the same prices, terms, and conditions. Such approaches have been implemented in various regulated industries, including telecommunications.<sup>217</sup>

Such separation may be relevant in particular DFS markets, particularly in instances when a dominant firm controls a critical input and competes downstream. However, the drawbacks include impacts on coordination efficiencies, loss of economies of scope and scale, weakened incentives to upgrade, and limitations on bundling advantages.<sup>218</sup> Within the DFS space, there have been attempts to create separation by requiring companies to operate as legal entities. For example, Nigeria issued a payment service bank license to a subsidiary of MTN (MoMo PSB). Similarly, in many jurisdictions, mobile money licenses are granted to subsidiary entities that offer mobile money services rather than the parent telecom companies.

The effectiveness of such separation depends on how it is structured, what rules are in place to ensure access to downstream competitors, and the regulatory treatment of non-contestable parts of the value chain.

210 OECD. 2023. Competition and poverty: The role of competition authorities. Available at: [https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/05/competition-and-poverty-the-role-of-competition-authorities\\_05ef3610/69813097-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/05/competition-and-poverty-the-role-of-competition-authorities_05ef3610/69813097-en.pdf)

211 OECD. 2020. Start-ups, Killer Acquisitions and Merger Control. Available at: [www.oecd.org/daf/competition/start-ups-killer-acquisitions-and-merger-control-2020.pdf](https://www.oecd.org/daf/competition/start-ups-killer-acquisitions-and-merger-control-2020.pdf)

212 CMA. 2019. Completed acquisition by PayPal Holding Inc of iZettleAB. Available at: [https://assets.publishing.service.gov.uk/media/5cffa74440f0b609601d0ffc/PP\\_iZ\\_final\\_report.pdf](https://assets.publishing.service.gov.uk/media/5cffa74440f0b609601d0ffc/PP_iZ_final_report.pdf)

213 CMA. 2020. Completed acquisition by FNZ of GBST. Available at: [https://assets.publishing.service.gov.uk/media/60bdf95c8fa8f57ceec3c82b/Final\\_Report\\_2\\_-\\_FNZ\\_GBST\\_.pdf](https://assets.publishing.service.gov.uk/media/60bdf95c8fa8f57ceec3c82b/Final_Report_2_-_FNZ_GBST_.pdf)

214 CMA. 2019. News Story: Abandonment of credit-score checking merger. Available at: <https://www.gov.uk/government/news/abandonment-of-credit-score-checking-merger>

215 Department of Justice. 2021. Visa and Plaid abandon Merger after Antitrust Division's Suit to Block. Available at: <https://www.justice.gov/archives/opa/pr/visa-and-plaid-abandon-merger-after-antitrust-division-s-suit-block>

216 Cave, M. 2007. Network separation and investment incentives in telecommunications. Available at: [https://www.researchgate.net/publication/228982666\\_Network\\_separation\\_and\\_investment\\_incentives\\_in\\_telecommunications](https://www.researchgate.net/publication/228982666_Network_separation_and_investment_incentives_in_telecommunications)

217 Ibid.

218 Ibid.

## REGULATORY APPROACHES FOCUSED ON MONITORING AND ASSESSING COMPETITION

Monitoring competition and competitive barriers in a market can help prevent anti-competitive practices. There are a range of ways to assess competition and track the barriers that may impede it.

### MARKET STUDIES

Market studies are an important tool for understanding competitive challenges in a market. Many insights related to competitive enablers of DFS have emerged through market studies. This is particularly important as DFS is rapidly evolving and challenges that may impede competition during one phase of development (e.g. agent exclusivity) may become less relevant as the market evolves and new challenges emerge. It is, therefore, essential to take a proactive and evolving approach to market analysis.

Market studies are particularly relevant as they are tailored to a specific country context. Various market studies related to DFS, including banking, FinTech, and USSD, have been undertaken have been undertaken by competition regulators, sometimes jointly with financial sector regulators. For example, competition studies that touch on DFS have been conducted in countries such as Peru, the UK, Kenya, Jamaica, and South Africa. Many of these studies have pointed to challenges in markets such as access to financial infrastructure, including switches, interoperability, licensing barriers, and agent interoperability.

The benefits of such inquiries include the deep insights that can be gained into the competitive forces shaping a market and the inhibitors of competition. They are more useful than monitoring high level indicators because they allow for a more nuanced understanding of competition, particularly where competition spans different product types and license categories. A market study can also take into account qualitative factors such as the political economy landscape and the relative power of different market participants and regulators, which may also play an integral role in understanding the market. However, market studies can be a costly and time-consuming process.

For financial sector regulators wishing to understand competition within a market, a market study undertaken in conjunction with competition authorities, where appropriate, can be an extremely valuable tool in providing market-specific insights into sub-sectors facing competitive challenges and developing recommendations to resolve them. The specifics of such a study depend on the legislative framework, including whether there is a competition authority,

the relevant jurisdictions of financial and competition regulators, and the legal mandates of both regulators. Nevertheless, the insights gained from these in-depth studies can be highly beneficial in creating a stronger financial services sector.

Beyond formal market studies, some regulators continue to rely on market intelligence to collect information on market competition for ongoing assessment.

### MONITORING COMPETITION

Assessing competition within a market is typically very specific to the country context, as factors including legal and regulatory frameworks, ease of doing business, infrastructure, and customer behavior can differ significantly. As such, utilizing benchmarks or indicators to monitor competition can be challenging.

However, some indicators can be useful as a screening tool, while noting that deeper analysis is required to understand competitive dynamics in a meaningful way. Some indices that can be considered include:

- > **Concentration indices:** This measures the number of companies in a sub-segment, their market shares, and concentration ratios, such as the Herfindahl-Hirschman Index, which calculates the sum of the square of the market share of different companies or the n-concentration ratio. While static market shares can provide indications of concentration, changes in market shares over time can also provide insights into market dynamics. Care must be taken to ensure that groupings for which concentration indices are calculated are meaningful and link to actual competitors rather than categories (for example, a few providers of a particular service may be highly differentiated and not directly compete, so they should not be combined into a single category, while multiple categories that do compete should be considered together).
- > **Entry and exit:** Patterns of exit and entry can indicate whether high barriers to entry exist or if it is feasible for new entrants to enter a market. Exit rates can also reveal potential challenge within the market. Therefore, tracking the number of licensed providers across different categories over time can give regulators valuable guidance.
- > **Price patterns:** Analyzing pricing patterns over time, particularly when paired with data on exit and entry, can provide insights into the patterns of competition in a market. In addition, price dispersion or understanding the cost of products across providers can offer additional understanding.

- > **Switching behavior:** Data on switching between and across providers, churn rates, and multihoming users can assist in understanding the level of dynamism in the market.

There may also be specific indicators that can be used to monitor the outcomes of competition - particularly when viewed in conjunction with timelines of market entry and exit:

- > **On-net vs off-net transactions:** In the context of interoperability, these metrics can show the extent to which interoperability is being utilized.
- > **Affordability of DFS:** Affordability measures, particularly over time, can be an outcome of competition that is useful to regulators.
- > **Penetration and intensity of use:** Tracking the level of DFS penetration and the intensity of usage over time, alongside data on entry, exit, and market share, can help assess whether changes in competition and regulatory interventions are effectively promoting competition.

Regulators often face complex trade-offs when advancing DFS, as four policy goals frequently intersect: innovation, inclusion, stability, and consumer protection.

While each is critical, conflicts often arise. For example, promoting FinTech innovation may introduce risks that challenge consumer protection norms; rapidly expanding access can create fragility if safeguards or interoperability are not in place; and imposing stringent stability or KYC requirements may unintentionally exclude marginalized groups. There is no universal hierarchy among these goals. Instead, successful jurisdictions adopt a balanced and adaptive approach that evolves with market maturity and risk profiles.

TABLE 1: PRACTICAL BALANCING PRINCIPLES:

Principle	What it means
<b>Proportionality</b>	Apply rules based on the nature, size, and risk of the provider or product (e.g. lighter-touch regulation for low-risk e-wallets)
<b>Sequencing</b>	Introduce reforms in phases - e.g. enable access first, then introduce interoperability or supervision as uptake increases
<b>Coordination</b>	Align mandates and oversight across financial, competition, telecom, and data protection regulators
<b>Learning-based regulation</b>	Use sandboxes, pilots, and feedback loops to adapt rules as new risks or gaps emerge



M-pesa payment information is displayed at the checkout counter in Nairobi, Kenya / Imago, Alamy Stock Photo

## 6. CONCLUSION

Competition is a vital enabler of innovation and inclusion, incentivizing product differentiation, specialized solutions, lower prices, and improved quality. However, its effectiveness depends on market structure, technology, and the regulatory context.

Monopolistic or highly concentrated markets can deliver rapid inclusion gains through scale and network effects, but without appropriate regulatory checks, they risk poor outcomes such as high fees, stagnation in innovation, and the exclusion of competitors. Conversely, while competitive markets can spur providers to expand outreach, reduce costs, and develop tailored products, a larger number of competitors does not necessarily translate into effective competition, particularly where structural, regulatory, or strategic barriers undermine investment incentives or the ease of providing products and services.

A range of market features, regulatory barriers, and strategic behaviors can influence the level of competition in the market. Regulators must remain cognizant of the potential for monopolization along the value chain and continuously monitor and evaluate digital financial markets. Their role is to ensure fair entry conditions and take timely action where challenges to competition arise.

Minimizing the effects of these barriers on growth requires a mix of ex ante enabling measures and strong ex post enforcement to jointly improve competition. It is important to take a context-specific approach since market dynamics, layers, and features vary across contexts.

This report has highlighted the key competition challenges that shaped the first phase of digital finance, as well as current regulatory responses to address them. As technology and markets continue to evolve, regulators will need to stay alert to new risks while creating conditions that support innovation, inclusion, and fair competition. The next wave of change will require stronger collaboration, proactive policies, and continuous learning.

One major area of focus will be the growing use of artificial intelligence and big data in financial services. While these tools can improve efficiency and product personalization, they also risk giving large firms an outsized advantage, making it harder for smaller providers to compete, and could result in exploitative personalized pricing. Regulators will need to promote fairness through data-sharing frameworks, algorithmic transparency, and measures that prevent exclusionary practices.

Another important trend is the rise of integrated digital ecosystems, or “super-apps”, which combine payments, e-commerce, communications, and other services. These developments blur traditional market boundaries and complicate assessments of market power. Regulators will need to strengthen cross-sector cooperation across finance, telecommunications, and data protection, and coordinate with peers in other jurisdictions to address competition challenges.

Inclusive digital infrastructure, such as digital ID systems and interoperable payment platforms, has already proven to support competition and inclusion. As new infrastructure is developed, attention to governance, neutrality, and open access will be critical to ensure these tools do not become new sources of market dominance.

To meet these challenges, the competition regulatory toolkit itself must also evolve. Research and dynamic monitoring tools will be essential to track market health beyond traditional metrics and to assess the sustainability of emerging business models, such as zero-fee payment systems which are reshaping market incentives.

Ultimately, achieving a competitive and inclusive digital financial future will require regulators across relevant sectors to collaborate effectively, implement pro-competition policies decisively, and maintain a culture of continuous learning, adaptation, and proactive supervision.

## 7. APPENDIX: INTERVIEW LIST

Category	Stakeholder	Interviewee(s)	Date of interview
Financial Regulator	Central Bank of Sri Lanka	Manisha Wimalasuriya	12-Jun-25
Financial Regulator	Superintendency of Banking, Insurance and AFP (SBS)	Diego Zapater Peschiera, Alvaro Jose Merma Barron	23-Jun-25
Financial Regulator	Central Bank of Kenya	Corazon Kamaan	23-Jun-25
Financial Regulator	Banco de Moçambique	Eugénio Filimone João, Ivan Deolindo Chachuaio, Elda Monteiro	24-Jun-25
Financial Regulator	National Bank of Rwanda (NBR)	Songa Chris Musonera	26-Jun-25
Financial Regulator	Bank of Tanzania	Mutashobya A Mushumbusi	01-Jul-25
Financial Regulator	State Bank of Pakistan	Syeda Nimrah Adil, Waleed Nadeem	08-Jul-25
Financial Regulator	South African Reserve Bank	Annah Masonga, Pamela Vorster, Pearl Malumane	22-Jul-25
Financial Regulator	Bank of Uganda	Ritah Karungi Butime, Albert Ntege	23-Jul-25
Financial Regulator	Bangko Sentral ng Pilipinas	Maria Christina S. Masangkay , Bridget Rose M. Mesina-Romero	01-Aug-25
Financial Regulator	Central Bank of Seychelles	Brigitte Lucas, Liz Julienne, Pauline Raoul	12-Aug-25
Financial Regulator	Central Bank of Brazil	Lucas Iten Teixeira	17-Jun-25
Competition Authority	Competition Commission of South Africa	Daniela Bove, Salma Kajee, Beverley Chomela	08-Jul-25
Competition Authority	Competition Authority of Kenya	Joel Omari, Ninette Mwarania, Boniface Kamiti, Adano W. Roba	05-Aug-25
Subject Expert	CGAP, World Bank Group	Souraya Isabelle Laure Sbeih, Dylan Lennox	10-Jul-25
Subject Expert	CGAP, World Bank Group	Mehmet Kerse	22-Jul-25
Industry	Formerly Apple Pay	Ersin Kocal	01-Jul-25

## ACRONYMS

<b>AFI</b>	Alliance for Financial Inclusion	<b>IMF</b>	International Monetary Fund
<b>API</b>	Application Programming Interface	<b>KYC</b>	Know Your Customer
<b>AML</b>	Anti-Money Laundering	<b>MNO</b>	Mobile Network Operator
<b>ATM</b>	Automated Teller Machine	<b>MSME</b>	Micro, Small, and Medium Enterprises
<b>BCC</b>	Banco Central do Brasil (Brazilian Central Bank)	<b>NBER</b>	National Bureau of Economic Research
<b>BIS</b>	Bank for International Settlements	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>CAK</b>	Competition Authority of Kenya	<b>NPCI</b>	National Payments Corporation of India
<b>CBK</b>	Central Bank of Kenya	<b>NPS</b>	National Payment System
<b>CGAP</b>	Consultative Group to Assist the Poor	<b>P2P</b>	Person-to-Person
<b>DFS</b>	Digital Financial Services	<b>P2B</b>	Person-to-Business
<b>DMA</b>	Digital Markets Act	<b>PCH</b>	Payment Clearing House
<b>EMI</b>	Electronic Money Issuer	<b>PIX</b>	The Brazilian Instant Payment Ecosystem
<b>e-KYC</b>	Electronic Know Your Customer	<b>PMJDY</b>	Pradhan Mantri Jan Dhan Yojana (India)
<b>FCA</b>	Financial Conduct Authority (UK)	<b>POS</b>	Point of Sale
<b>FSD</b>	Financial Sector Deepening (Kenya)	<b>QR</b>	Quick Response (code)
<b>FSI</b>	Financial Stability Institute	<b>SARB</b>	South African Reserve Bank
<b>GSMA</b>	GSM Association	<b>SBS</b>	Superintendency of Banking, Insurance and AFP (Peru)
<b>GPFI</b>	Global Partnership for Financial Inclusion	<b>SIM</b>	Subscriber Identity Module
<b>ID</b>	Identification	<b>USSD</b>	Unstructured Supplementary Service Data
<b>IOSCO</b>	International Organization of Securities Commissions	<b>UPI</b>	Unified Payments Interface



**Alliance for Financial Inclusion**

AFI, Sasana Kijang, 2, Jalan Dato' Onn, 50480 Kuala Lumpur, Malaysia

t +60 3 2776 9000 e [info@afi-global.org](mailto:info@afi-global.org) [www.afi-global.org](http://www.afi-global.org)

 Alliance for Financial Inclusion  AFI.History  @NewsAFI  @afinetwork