



BIS Bulletin

No 45

Regulating big techs in finance

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2 August 2021

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The editor of the BIS Bulletin series is Hyun Song Shin.

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ISSN: 2708-0420 (online)

ISBN: 978-92-9197-501-2 (online)

Regulating big techs in finance

Key takeaways

- *Big tech firms entering financial services can scale up rapidly with user data from their existing business lines in e-commerce and social media, and by harnessing the inherent network effects in digital services.*
- *In addition to traditional policy concerns such as financial risks, consumer protection and operational resilience, the entry of big techs into financial services gives rise to new challenges surrounding the concentration of market power and data governance.*
- *The current framework for regulating financial services follows an activities-based approach where providers must hold licences for specific business lines. There is scope to address the new policy challenges by developing specific entity-based rules, as proposed in several key jurisdictions – notably the European Union, China and the United States.*

The centrality of data in the digital economy has enabled the entry into financial services and rapid growth of big tech firms. Big techs have existing businesses in e-commerce and social media, among others, from which they can expand into finance. Their business model revolves around the direct interactions of users and the data generated as an essential by-product of these interactions. The distinguishing feature of big techs is that they can overcome limits to scale by utilising user data from their existing businesses to scale up rapidly by harnessing the inherent network effects in digital services. In turn, the greater user activity generates yet more data, reinforcing the advantages that come from network effects. In this way, big techs can establish a substantial presence in financial services very quickly through the so-called “data-network-activities” (DNA) loop.¹ This gives rise to concerns about the emergence of dominant firms with excessive concentration of market power and a possibly systemic footprint in the financial system.

The rapid growth of big tech firms in financial services presents various policy challenges. Some are variations of familiar themes that lie squarely within the traditional scope of central banks and financial regulators, such as the mitigation of financial risks and the oversight of operational resilience and consumer protection. Assessing big techs’ resilience through a financial cycle will necessitate more systematic monitoring and understanding of big tech business models on the part of the authorities, for instance on whether learning algorithms may inject systematic biases to the detriment of financial stability.

As well as issues that arise from traditional financial stability concerns, there are new and unfamiliar challenges stemming from the potential for excessive concentration of market power, as well as broader issues concerning data governance. These new challenges lie outside the traditional scope of the central bank’s remit, but they can nevertheless impinge on the central bank’s core mission of ensuring sound money as well as the integrity and smooth functioning of the payment system. While some central banks’ oversight authority includes the competitive functioning and efficiency of the payment system, their mandates do not normally encompass the broad range of competition and data privacy issues that arise in relation to the activities of big techs in financial services. Nevertheless, since the central bank issues the

¹ See BIS (2019), Frost et al (2019) and Croxson et al (forthcoming).

unit of account in the economy, trust in the currency rests ultimately on the trust placed in the central bank itself. Any impact on the integrity of the monetary system arising from the emergence of dominant platforms ought to be a key concern for the central bank.

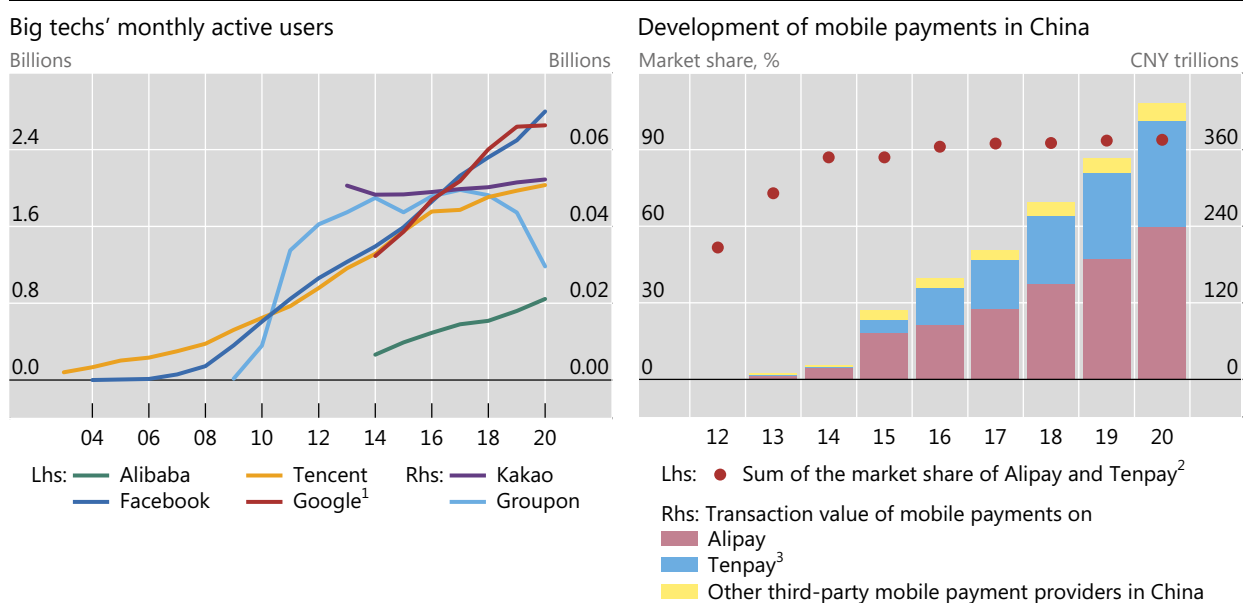
This Bulletin reviews the policy challenges for central banks and financial regulators in their oversight of the activity of big tech firms in financial services, especially as it relates to the payment system. Traditional demarcations that separate the roles of financial regulators from those of competition authorities and data privacy regulators may become blurred in the case of big techs in finance. Rules that were formulated with specific financial stability risks in mind (credit and liquidity risk, market risk etc) may be inadequate for addressing the unique combination of policy concerns to which big techs give rise. These concerns bear on the central bank’s core mission to maintain the integrity of the monetary system. In this regard, the central bank should work more closely with competition and data privacy authorities.

Big techs’ growing footprint in the financial system

The market for retail payments is a particularly stark example of the potential for rapid concentration. Graph 1 (left-hand panel) illustrates how rapidly the user base of big techs can take off through the DNA loop once a critical mass of users has been established. The growth of user numbers may also be reinforced through merger and acquisition activity whereby smaller potential competitors are absorbed into the ecosystem of services around the core big tech platform.

Big techs’ rapid growth in users underpins their dominance in some markets

Graph 1



¹ The number of Chrome users is used as a proxy for Google’s number of active users. ² Market shares for 2012 are estimated based on market evidence. ³ Tenpay includes WeChat Pay and QQ Wallet.

Sources: BIS (2019); Enfodesk; S&P Capital IQ, company reports, analysys.cn; Statista, Industries; BIS calculations.

In some jurisdictions, big techs have gained a substantial presence in the retail payment system (FSB (2019a,b)). For instance, in China the two big tech payment firms jointly account for 94% of the mobile payments market (Graph 1, right-hand panel). The rapid growth in payment transactions within a few years shows how quickly big tech firms can establish their footprints. Beyond payments, big techs have also become lenders to individuals and small businesses in some markets as well as offering insurance and wealth management services (Cornelli et al (2020)).

Even in those jurisdictions where big techs do not currently have a dominant position in the financial system, their potential for rapid growth warrants close attention from central banks. Stablecoin projects and other big tech initiatives could be a game changer for the monetary system if their entry leads to closed loop systems reinforced by network effects from data drawn from social media or e-commerce platforms. Strong network effects and the entrenchment of closed networks could lead to a fragmentation of payment infrastructures to the detriment of the public good nature of money. Given the potential for rapid change, the absence of currently dominant platforms should not be a source of comfort for central banks. Rather, they should anticipate developments and formulate policy based on possible scenarios where big tech initiatives may already have reshaped the payment system, instead of focusing on the market structure of the payment system as it currently stands.

Market dominance and data governance

Entrenchment of market power also carries implications for the high costs of payment services. High merchant service costs associated with credit and debit cards have remained one of the stubborn shortcomings of the existing payment system, although the costs vary across jurisdictions.² These costs are not immediately visible to consumers, as charges are usually levied on the merchants, who are not allowed to pass these fees on to consumers. However, the ultimate incidence of these costs depends on how much of the merchant fees are passed on to consumers through higher prices at the checkout (Mariotto and Verdier (2017)). A possible concern is that when big tech firms achieve a dominant position, the economics of platform competition may lead to merchant fees that are even higher than the high costs that exist currently. Merchant fees as high as 4% have been reported in some cases.³

Competition policy does not normally fall within the central bank's purview. Some central banks are directed to consider the competitive functioning of the financial system (eg Reserve Bank of Australia, Bank of England) or its efficiency (eg Bank of Korea, Netherlands Bank) in implementing their policies. In any case, the central bank's oversight of the payment system and its mission to ensure its efficiency mean that there is a strong case for the central bank to work closely with the competition authorities.

Another important policy imperative flows from issues surrounding data governance. Beyond the economic consequences of market dominance resulting from the concentration of data, there is arguably a more basic imperative of ensuring privacy against unjustified intrusion by commercial actors (and, for that matter, government actors). Data privacy therefore has attributes of a basic right. For these reasons, the issue of data governance has emerged as a key public policy concern.

When US consumers were asked in a systematic survey whom they trust to safeguard their personal data, the respondents reported that they trust big techs the least (Graph 2, left-hand panel). The surveys reveal a number of concerns, but the potential for abuse of data emerges as an important element that runs through the responses (Armantier, Doerr, Frost, Fuster and Shue (2021)). Similar patterns are present in other countries (right-hand panel).

Data governance lies outside the traditional policy scope of central banks. However, as with the competition imperative and the need for dialogue with competition authorities, the entry of big techs into financial services also necessitates close coordination on the part of the central bank with data governance regulators. Areas where central banks and data governance authorities can usefully contribute their respective analyses include:

- **Open banking and other data portability rules.** Central banks and regulators can assess whether there are asymmetries between banks and big techs regarding data access. They can assess whether differential regulatory treatment of data for different institutions creates competitive, consumer

² See BIS (2020, 2021).

³ See Reuters (2020).

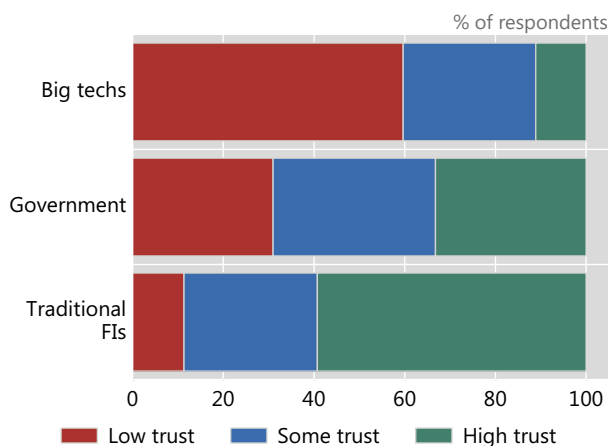
protection or systemic concerns. An example is the requirement in the EU under the revised Payment Services Directive (PSD2) that banks share payment data with big techs. Meanwhile, big techs, under the General Data Protection Regulation (GDPR), need not share their data with banks in a similarly useable format.

- **Protocols regarding data transfers.** Central banks and regulators can assess how barriers to data transfers from domestic regulation or from rules on cross-border data flows (data localisation) may affect the benefits and risks of big techs relative to traditional providers. They can also consider how big techs and traditional providers access personal data in the existing protocols of payment systems, credit registries etc.
- **Role of public infrastructures.** Central banks and regulators can assess how public policy objectives could be attained by public infrastructures that include rules on data governance. For instance, digital identity systems that underlie the design of fast retail payment systems and central bank digital currencies (CBDCs), and associated application programming interfaces (APIs) can be designed to ensure that user control over data translates into effective competition and robust data governance (BIS (2020, 2021)).

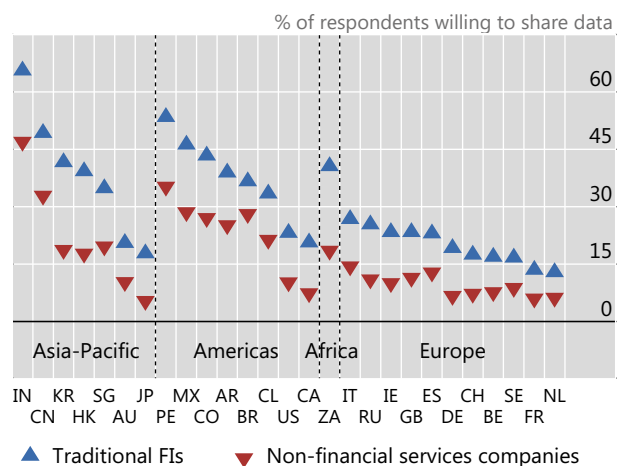
Consumers trust big techs the least to safeguard their data

Graph 2

US consumers' trust in counterparties to safeguard their data¹



Globally, consumers are generally more willing to share data with traditional financial intermediaries (FIs)²



AR = Argentina; AU = Australia; BE = Belgium; BR = Brazil; CA = Canada; CH = Switzerland; CL = Chile; CN = China; CO = Colombia; DE = Germany; ES = Spain; FR = France; GB = United Kingdom; HK = Hong Kong SAR; IE = Ireland; IN = India; IT = Italy; JP = Japan; KR = Korea; MX = Mexico; NL = Netherlands; PE = Peru; RU = Russia; SE = Sweden; SG = Singapore; US = United States; ZA = South Africa.

¹ Based on a representative sample of 1,361 US households, September 2020. The question reads "How much do you trust the following entities to safely store your personal data (that is, your bank transaction history, geolocation or social media data)? For each of them, please indicate your trust level on a scale from 1 (no trust at all in ability to safely store personal data) to 7 (complete trust)". Category "low trust" corresponds to values 1 and 2, "some trust" to 3 and 4 and "high trust" to 5 or higher. ² Based on a survey of 27,000 respondents, February–March 2019. BE includes LU. The question reads "I would be comfortable with my main bank securely sharing my financial data with other organisations if it meant that I received better offers from a) other traditional financial intermediaries, b) fintech companies, c) non-financial services companies".

Sources: Armantier, Doerr, Frost, Fuster and Shue (2021); Chen et al (2021).

Activities-based and entity-based regulation

The current framework for regulation in financial services outside the banking and insurance sectors follows an activities-based approach where providers must hold licences for specific business lines. In the case of payments, as with other business lines, the licensing requirements vary by jurisdiction. In the United States, the payments business is governed by "money transmitter" licensing requirements that set standards on the fitness of business owners and operators, but such requirements can vary considerably

across states. For the European Union (EU), licensing requirements are governed by rules that apply to payment institutions (PI) or e-money institutions (EMI) (Restoy (2021); Crisanto et al (2021)).

Activities-based regulation is grounded on the principle of “same activity, same regulation”. In principle, the consistent application of activities-based licensing requirements ensures that innovations aimed at regulatory arbitrage and exploiting gaps in the regulatory framework can be minimised.

Nevertheless, given the unique set of challenges that are thrown up by big techs’ entry into financial services, a purely activity-based framework for regulation is likely to fall short of an adequate response to these policy challenges. Arguably, the current licensing requirements on payment service providers, aimed at ensuring the fitness of directors and consumer protection, were formulated with small remittance service providers in mind and will fall short of addressing the very different and far-reaching challenges associated with dominant big tech platforms that can harness the DNA loop.

For these reasons, there is scope to address the policy challenges of big techs by developing specific entity-based rules that complement activities-based requirements (Restoy (2021); Carstens (2021)). Elements of an entity-based approach for big techs are already taking root in several key jurisdictions – notably in the EU, China and the United States. These initiatives have been led mainly by competition authorities and legislatures, but the issues they raise impinge deeply on the mission of central banks and financial regulators.

In the EU, the proposed Digital Markets Act (DMA) has specific requirements on the conduct of firms that are considered to be “gate keepers”. These requirements include obligations in areas such as interoperability, access criteria, equal treatment of vendors and data portability. In China, the State Council, especially the State Administration for Market Regulation (SAMR) issued anti-monopoly guidelines for “internet platforms”, and the People’s Bank of China (PBC) introduced specific rules preventing restrictive practices by non-bank payment service providers. In the United States, the US House of Representatives’ Subcommittee on Antitrust, Commercial, and Administrative Law released an antitrust report with recommendations to reduce anti-competitive behaviour of big techs. This has been followed by several legislative initiatives which are currently under discussion.⁴ The common thread running through these recent proposals are provisions aimed at preventing data concentration and anti-competitive practices by big techs.

For central banks, a natural follow-up to those initiatives would be to study the potential systemic relevance of big techs and the need to introduce specific safeguards to guarantee sufficient operational resilience. That may be especially relevant for big techs offering systemically important payment services to a significant section of the population. Currently, the designation of “systemically important financial institution” is almost exclusively applied to traditional financial institutions such as banks or insurers. In some jurisdictions, there are formal processes to designate financial institutions and financial market utilities as being systemically important. However, the current framework does not address the potential (possibly global) systemic impact of big tech operations and of possible spillover effects to the financial sector and across all of the activities that big techs perform. For these reasons, there is a need for close coordination among different financial and non-financial regulators, at both the national and global level.

Thus far, there have been limited regulatory actions in domains other than in competition. An exception is the revision of the regulation of financial holding companies (FHCs) in China towards requiring all companies holding two or more types of financial institutions (not necessarily including a commercial bank) that satisfy specific size thresholds to apply for an FHC licence. The PBC may also require the formation of an FHC in accordance with macroprudential regulatory requirements, even if the size thresholds are not met. FHCs are subject to capital requirements at the level of the holding company and the financial subsidiaries, as well as a capital replenishment mechanism and bail-in measures (eg transfer of equity). These rules are aimed at ensuring that the shock-absorbing resources of systemically important

⁴ Examples are the American Choice and Innovation Online Act (HR 3816) and the Platform Competition and Opportunity Act (HR3826).

big tech subsidiaries are in place where they are needed. FHCs must also satisfy a number of other requirements on risk exposures and governance. FHCs are supervised by the PBC, which will establish regulatory information-sharing arrangements between it and other relevant regulators.

The entry of big tech firms into the payment system has underscored how rapidly digital innovation can impinge on central banks' traditional concerns: sound money and the smooth functioning of the payment system. Given the multi-faceted nature of the public policy challenges that extend to competition and data governance imperatives, central banks and financial regulators should invest with urgency in monitoring and understanding these developments. In this way, they can be prepared to act quickly when needed. Cooperation with other domestic authorities and with counterparts in other jurisdictions will be important in this regard.

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