BigTech “banks”, financial stability and regulation

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Abstract

This paper considers the financial stability risks caused by BigTech's entry into retail banking and discusses alternative policy responses aimed at allaying those concerns. The entry of BigTech platforms may transform the retail banking industry in radical ways: while it may spur much-needed competition in the short term, it may also increase financial instability and lead to even more concentrated credit markets in the long-term. Importantly, traditional banks may be forced to transform into "narrow banks", limited to funding the loans originated and distributed by the BigTechs. The separation between origination and funding has proved problematic once and again, from the savings and loans (S&L) crisis of the 80s and 90s to the financial collapse of the Great Recession. This time need not be different. Whether this grim prospect materialises, though, will depend on several factors, including how regulators respond to the new challenges posed by the entry of BigTech "banks".

1 Introduction

In a previous paper,[1] written with Miguel de la Mano in 2018, we discussed the logic and likely effects of the entry of BigTech players – such as Google, Facebook and Amazon – into retail banking. We found that such entry may spur competition in the short term, which will be celebrated given that lack of competition has been a long-standing concern in the industry. However, it may also increase financial instability in the short term and even lead to more concentrated credit markets in the long-term. Whether this grim prospect materialises, though, will depend on several factors, including how competition authorities, privacy and financial regulators respond to the entry of BigTech into banking.

In this paper I consider in further detail the risks posed by BigTech banking on financial stability and, in particular, discuss some alternative policy responses. As discussed in De la Mano and Padilla (2018), the moral hazard and adverse selection problems that are common in retail banking markets are both more likely, and likely more costly, when the origination of loans and their funding are in different hands. This is precisely the market scenario that is likely to emerge after the entry of the BigTech platforms into retail banking, as they are likely be in a position to leverage their customer relationships, unlimited funds, superior data and AI capabilities, and extant regulatory asymmetries to monopolise the origination and distribution of loans to households and small and medium enterprises (SMEs). In that scenario,

1 De la Mano and Padilla (2018), Stultz (2019) and Frost et al. (2019).

traditional banks may simply fund loans originated by the BigTechs, and default rates are likely to increase, as too much capital gets allocated to dubious projects, overconfident entrepreneurs and big spending families.

Banning BigTech entry cannot be the right policy response to this. BigTechs' entry may facilitate financial inclusion and access to capital to households and firms that would be out of the market otherwise, and may extend cheaper credit to all those that were already in. Their entry will force traditional banks to compete to the ultimate benefit of their customers: lowering commissions, offering better terms and conditions, and launching new products and services. Traditional banks have been protected against entry for years, always in the name of prudential regulation. Such a protectionist policy is harder to justify today.

So, what can be done? One option is to empower traditional banks to compete with the BigTechs by (a) eliminating regulatory asymmetries, so that firms are regulated based on the activities they perform rather than according to their charter; (b) creating a level playing field with respect to data by requesting BigTechs to provide data to banks, as the latter are already asked to do; etc. A second option is to regulate the BigTech's activities in the credit market so that they stay away from predatory lending tactics and are requested to comply with the same fiduciary and investor protection obligations than traditional banks and other financial intermediaries. Last but not least, the solution may be to replace the private money created by traditional banks by public money created by central banks (i.e. sovereign money), so that loans are no longer funded by "run-prone" contracts, such as deposits and, hence, the separation between origination/distribution and funding no longer has systemic implications.

The paper is organised as follows. In Section 2 I explain why BigTech companies have the ability and incentive to enter successfully into retail banking, and discuss their many competitive advantages, especially those originating from the accumulation of soft information about potential borrowers. In Section 3 I consider the implications of their entry for traditional banks and competition and, in particular, I review the reasons why they may end up monopolising the origination and distribution of credit to households and SMEs. I move to discuss the potential effects of these likely market developments for financial stability in Section 4. I assess alternative policy solutions in Section 5. Section 6 concludes.

2 Barbarians at the gate

Unlike FinTech companies, which have attracted so much attention over the last few years, but which have made little dent in the profits of traditional banks, BigTech platforms possess significant competitive advantages that can be successfully leveraged onto the retail banking markets. Among other advantages, they have large

installed customer bases, established reputations, powerful brands, considerable earnings and unfettered access to capital markets. They can leverage superior information about consumer preferences, habits and conduct. They control the shopping experiences of many consumers and, recently, the distribution and commercialization of many suppliers. Furthermore, these platforms can take advantage of the explosion of big data on individuals and firms, as well as of the rapid advances in artificial intelligence, computing power, cryptography and the reach of the Internet. Their users may thus benefit through better functionality and quality as well as innovative financial products and services.

The likely impact of BigTech on retail banking is not speculative; their presence has already been felt in Asia. For example, China's most prominent online commerce company, Alibaba, launched in 1999, started Taobao in 2003 as a consumer e-commerce platform and added Alipay to Taobao in 2004 as a third-party online payment platform. Since then, Alipay (renamed Ant Financial in 2014) has played a vital role in Alibaba's success and has successfully built its standalone presence with a wide range of financial offerings, including: payments, wealth management, lending, insurance, and credit scoring. It is now one of the largest financial institutions in the world.

In the short term, the entry of these platforms into retail banking will likely increase competition to the benefit of consumers. This positive impact may take longer in Europe and the United States than in China and the rest of Asia. The different speed of entry may be explained by profound differences between Asian and Western retail banking markets, including in relation to supply side factors, demand side factors and regulatory frameworks. First, the lower level of banking penetration, coupled with the rise of an affluent class, has facilitated the entry of new financial institutions in Asia.[2] Second, socio-demographic factors may also have played a role in promoting BigTech banking in Asia, where the population is younger than in Europe. Younger generations are more likely to acquire banking services from BigTech companies than older generations. Finally, banking regulation is much more favourable to entrants and financial innovation in Asia.[3]

Padilla and Trento (2019) explained why none of these factors will prevent the entry of BigTech firms into the retail banking markets of Europe and the United States.[4] To start with, BigTech firms have already entered in those markets by providing payment systems. This is what happened in China: they first entered with payments and then expanded to other segments. Moreover, recent regulatory policies, such as Open

2 See World Bank (2015). See also McKinsey & Co. (2017a) and World Bank (2018). This last edition of the World Bank Findex shows that penetration of BigTech financing in Asia has not only resulted in more competition, but also in the transition of many citizens from the informal to the formal financing mechanisms, which may also have implications for financial stability.

3 Bilotta and Romano (2019).

4 Padilla and Trento (2019).

Banking in the UK[5] and the Payment Services Directive (PSD2)[6] in the EU, will facilitate their entry into consumer and SME lending.

Whether they enter on a stand-alone basis or through cooperation agreements with established banks may vary from country to country and/or from one product market to another. But the experience from other industries – from online advertising to software; from travel distribution to retailing – shows that when BigTech firms enter a new market they move fast. BigTech scale up their businesses very quickly, because they are able to leverage on their proven ability to tailor their services around customers' needs, to exploit economies of scope and data advantages, and to cross-subsidise their services with the services they offer in other markets.

So, within a few years, BigTech companies may succeed in monopolizing some segments of the retail banking industry. In particular, they are expected to conquer a significant share of the origination and distribution of loans to consumers and SMEs. According to Moody's, banks will likely "cede a portion of their distribution of retail financial services despite efforts to increase their presence in digital platforms".[7] This will be particularly troublesome for established banks, since these are their most profitable lines of business. According to a recent McKinsey report, the distribution business of banks represents 47% of their revenues but 65% of their profits and has a return on equity (ROE) of 20% (compared with an average ROE of 7-8%).[8]

BigTech platforms may enter as "intermediaries", in direct competition with incumbents, raising funds and lending them to consumers and firms, or as "marketplaces", offering customers the ability to engage with many financial institutions (banks and non-banks) using a single distribution channel.[9] As intermediaries, they may be able to offer new services by bundling their existing offerings (e.g. online advertising, e-commerce, etc.) with traditional banking products; e.g. offering cheap credit to customers who subscribe to their online services or purchases in their e-commerce sites. They may thus outbid incumbents, unable to replicate those bundles and benefit from associated demand and supply economies of scope due to their narrower product portfolios.[10]

As marketplaces, they may benefit from network effects by bringing together banks and borrowers. Banks may need join these platforms in order to reach out to borrowers. Borrowers will patronize them to obtain cheaper credit. Each of these

5 See UK Competition & Markets Authority (2016).

6 Directive (EU) 2015/2366 of The European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No. 1093/2010, and repealing Directive 2007/64/EC.

7 See Moody's (2018).

8 See McKinsey & Co. (2017a).

9 See Hagiu and Wright (2015a).

10 See Klemperer and Padilla (1997).

marketplaces likely will auction the loans it originates amongst all, or at very least a significant fraction, of the banks participating in its platform. Banks, having received soft and hard information about borrowers from the platform, will bid aggressively to succeed in these auctions. Relative to the *status quo,* where each borrower is *de facto* locked into the bank with which it has a relationship, borrowers joining a marketplace that is participated by many banks likely will benefit from increased banking competition.

BigTech platforms will benefit from a *regulatory asymmetry* when competing with established banks, especially in Europe. The European Union's PSD2 requires banks to allow authorized Third-Party Providers (TPPs) access to their customers' account information and make payments from customers' accounts. Banks are obliged to provide access to customer data to all authorized competitors in digital form and free of charge. Likewise, the UK Open Banking initiative requires the nine largest banks in the UK to allow their customers to provide access to their own bank data securely with third parties, using an open banking standard. The Competition and Markets Authority (CMA) requires banks to adopt and maintain a common and open Application Programming Interface (API)[11] standard that permits authorized intermediaries to access information about banks services, prices and service quality. In sharp contrast, under the General Data Protection Regulation (GDPR),[12] TTPs, including BigTech platforms, are obliged to facilitate data portability *only where it is technically feasible.*[13] As stated in a recent EY report, under GDPR BigTech platforms will *de facto* retain economic sovereignty over the data of their customers.[14] Instead, EU banks, due to PSD2, and UK banks, because of Open Banking, likely will not.

3 Implications for competition in retail banking

Whether BigTech platforms act as intermediaries or marketplaces, traditional banks will have to compete fiercely for the demand for credit of their hitherto most loyal and valuable customers: households and SMEs. They will also have to compete for talent, which will drive up the cost of recruiting the needed financial and technological skills.

Banks may find it difficult to offer differentiated services given that extant open data regulations limit, if not eliminate, any informational advantage they might have

11 APIs are methods of standardised data exchange that are widely used both within and between firms.

12 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation).

13 Strictly speaking, data portability requires direct transmission between companies (i.e. controllers) and such transmission is only compelled where technically feasible.

14 See EY (2018).

enjoyed regarding their customers. While their extensive experience and established customer relationships may protect them for a while, allowing them to offer better products at a more reasonable cost, BigTech competitors will have the incentive and ability to recruit financial talent and thus we expect them to bridge that gap relatively soon.

Crucially, some incumbent banks may be unable to compete technologically unless they partner with FinTech companies or even perhaps with the BigTech platforms that cloud their future. Banks may thus have to choose between Scylla, falling behind technologically by giving up collaboration with the tech companies, and Charybdis, losing control over costs and customer data if they choose to partner with them.

Traditional banks are thus likely to lose a significant portion of the market for the origination and distribution of loans to households and SMEs. In fact, they may end up transforming into "low cost manufacturers" or "narrow banks", accepting deposits from the public and investing them in products originated and distributed by others, including the BigTechs.

Of course, such narrow banks will see a decline in profit margins due to the commoditization of their businesses and may be forced to repurpose their distribution businesses to address the needs of special customer niches. Because most rents associated to lending are appropriated by those who originate and distribute, the negative impact on the traditional banks' profitability will be especially significant if, as it is likely, households and SMEs choose to concentrate their banking activity with a single tech platform (i.e. if they "single home" within a given ecosystem). In that case, some customers will bank with, say, Facebook, while others will conduct their business with Apple's, Google's or Amazon's banking branches. Each of those platforms will become a "gatekeeper" to a fraction of the borrowers' population,[15] and thus traditional banks will be forced to deal with each and every of the BigTech platforms (i.e. "multi home"). Banks will have to pay significant membership fees and/or transaction fees to do business with each of these "pivotal" platforms if they want to have a broad reach. Some banks, the most efficient ones, may be able to afford operating with very thin margins, but many others may be forced to exit. Recall that in Europe banks' ROEs are still insufficient to cover their cost of capital.[16]

Whether BigTech entry ends up fostering competition in retail banking in the medium and long term is at best uncertain. It will depend, among other things, on the ability of traditional banks to ring fence their loyal and highly profitable customer bases, exploit their informational advantages and reputation regarding data

15 See Armstrong (2006), Hagiu and Wright (2015b), Belleflamme and Peitz (2015) and Belleflamme and Peitz (2017).

16 See McKinsey & Co. (2017b).

protection, and/or bundle products with the current accounts of their customers. If they manage to do so, they might be able to stop people from shifting away to the BigTechs. The competitive effect of the entry of BigTech firms will also depend on how regulation treats these new entities in absolute terms but also in relation to existing banks.

4 Potential implications on financial stability

Those with a memory of the S&L crisis of the 80s and 90s[17] or the subprime crisis of the last decade[18] will be concerned about the developments described above. BigTech's unbundling of banking services may damage the charter value of traditional banks if they end up being limited to offering an essential, basic facility, very much like the utility industries of water supply, gas and electricity, while the more profitable segments and customers instead go to the BigTech firms with few or no layers of intermediation.[19]

As explained in De la Mano and Padilla (2018),[20] in a market scenario where BigTech platforms originate and distribute loans and banks simply fund the loans originated elsewhere, the proportion of bad projects, including those based on overly optimistic expectations of commercial success,[21] being funded may increase. Default rates may also increase in that scenario. This is because a retail banking market where the origination of loans and their funding are in different hands can be subject to significant moral hazard and adverse selection problems.

Moral hazard concerns. BigTech platforms may have little or no stake in the loans they help to originate and distribute and may, therefore, have incentives to reduce the quality of the loan pool to maximize loan origination volume and, in parallel, the volume of other products or services sold to borrowers through their (bundled) platforms.[22] They may also invest less in screening projects and borrowers.[23] Limited screening results in the origination of loans with poor soft information and high default rates.[24] For these reasons, the risks faced by banks after the entry of the BigTech platforms into their traditional origination and distribution markets will increase relative to the current scenario where they are active in loan evaluation and

17 See Curry and Shibut (2000).

18 See Bernanke et al. (2019).

19 Note, in particular, that banks' most basic service (current accounts) is nowadays provided (almost) for free due to fierce competition amongst banks and because regulation obliges banks to offer a "basic account" to those that do not have one for free.

20 See supra note 2.

21 See Manove and Padilla (1999).

22 See Vallee and Zeng (2018).

23 See Purnanandam (2011), who shows evidence that the screening incentives of lenders to collect soft information decrease under an originate-to-distribute model.

24 See Balyuk and Davydenko (2018). These authors show that default rates on loans handled by FinTech firms are higher than on other credits to consumers with similar credit scores.

fund only high-quality loans. Moral hazard may also increase even when the platforms fund the loans they originate, since they will have incentives to expand credit in order to bolster their other platform businesses – i.e. to sell additional products or services on their e-commerce platforms or to acquire complementary data to monetize through their advertising platforms.

Adverse selection concerns. BigTech platforms will typically enter retail banking adopting an "agency model", whereby they do not retain the risk of the loan they originate. Digital platforms make money on fees, charging both lenders and borrowers. Since they need both sides on board, profit maximizing fees must factor in the elasticity of demand for their intermediation services of each side. This requires charging comparatively more on the less elastic side of the market – typically borrowers – and even subsidizing the most elastic side – typically lenders. The combination of fee-based profitability, the need for a stable and possibly increasing source of lending, and network externalities, likely will push lending platforms to broker as many deals as possible. But this is bound to result in adverse selection on both sides of the market, lenders and borrowers.

Even if the entry of the BigTechs into retail banking fails to produce the change in banks' business model above, the *increased competition* resulting from their entry "may also intensify risk taking by eroding the franchise value of the bank and diminishing incentives to monitor loans and maintain long-term relationships with clients."[25]

The Financial Stability Board (FSB), which comprises ministries of finance, central banks, supervisory and regulatory authorities from 25 jurisdictions, expressed concern that entry of BigTechs in competition with traditional banks may generate financial instability as "heightened competition could […] put pressure on financial institutions' profitability. This could lead to additional risk taking among incumbents in order to maintain margins".[26] The FSB also noted that BigTechs' entry may also limit traditional banks' ability to cross-subsidize products.[27]

5 Policy alternatives

Banning BigTechs from retail banking is not a solution. Many economists, policymakers and industry commentators remain seriously concerned about the poor state of competition in the banking industry.[28] This state of affairs, it is argued, explains why the cost of financial intermediation remains high and has only declined

25 See Vives (2016).
26 Financial Stability Board (2019).
27 Id.
28 See note 26 and references therein.

marginally since the 2008 crisis. The negative implications for consumer welfare and economic growth are said to be significant.[29]

Entry by traditional players is unlikely to strengthen competition because incumbent banks enjoy considerable competitive advantages *vis-à-vis* new entrants using the same business model: a large and partly captive customer base, proven experience and reputation, superior knowledge of existing regulations, and access to cheaper capital funding due to their "too big to fail" (or TBTF) status.

FinTech companies are also unlikely to change the *status quo.* While they operate leaner businesses, benefit from state-of-the-art technologies, focus on those banking businesses (payments, advice and distribution) with higher ROEs, and, being funded with much more equity than traditional banks, possess a regulatory advantage, they also face some non-trivial competitive disadvantages *vis-à-vis* incumbent banks. Among others, the absence of an installed, loyal customer base; limited access to *soft* information[30] about potential customers, lack of reputation and brand recognition, and a relatively high cost of capital.[31] FinTech firms may play a significant role in payments and in the provision of advisory services in capital markets. But their ability to effectively compete in other retail banking markets, in particular in the origination and distribution of consumer and SME lending, is unclear, to say the least. Not surprisingly, the impact of FinTech firms has mainly materialised through collaboration and cooperation agreements with established retail banks.[32]

Given that banning entry by BigTechs is not an appropriate public policy, how could society take advantage of the benefits of BigTech entry while limiting the risks to financial instability mentioned in Section 4 above? We discuss three options: (i) levelling the playing field between BigTechs and traditional banks; (ii) a second option is to regulate closely the BigTech's activities in the credit market; and (iii) moving to a run-free banking system.

5.1 Levelling the playing field

It may be in society's interest that traditional banks find a way to compete with their digital-based competitors, but that may prove hard given the data advantages enjoyed by the BigTech companies which in addition can, and are likely to, cross-

29 See Bazot (2014) and Philippon (2015 and 2018).

30 As noted by Liberti and Petersen (2018), "hard information is quantitative, easy to store and transmit in impersonal ways, and its information content is independent of the collection process." Instead, "information that is difficult to completely summarise in a numeric score is what we call soft information." See also Thakor and Merton (2019).

31 See Buchak et al. (2018).

32 For a more optimistic view of the impact of FinTech companies, see Philippon (2020).

subsidize their banking operations with the high profits obtained in the adjacent platforms where they exert market power.

5.1.1 Dealing with BigTechs' data superiority

A necessary (though, as discussed below, not sufficient) condition for a levelled playing field is to limit the data superiority of BigTech platforms. This could be achieved in different ways: mandating data sharing, regulating privacy to prevent the bundling of multiple sources of data, etc.

Data sharing. Platforms above a certain size would have to grant access to others, including traditional banks, to a subset of their data. Any mandated data sharing scheme ought to respect the following principles.[33] Firstly, customers should be able to exercise control over the data about them and their transactions that is shared with third parties. Secondly, the nature and scope of the data exchange should be transparent to customers. Thirdly, the information exchange must happen through secure methods. Fourthly, the data should be accessible through standardized APIs, so that the exchange takes place efficiently and without undue delay. Finally, the sharing scheme must provide incentives so that the party in control of the data does share the data and the party which receives it builds value added propositions with such data.

Data banks. These would act as data repositories controlled by end users. The user would grant various access rights to her data depending on products or services sought. However, this model may not provide the right incentives for initial data collection and certification. By separating data ownership and control this policy option may give rise to agency problems and other inefficiencies. Finally, users may not be able to exercise their control rights over their own personal data in practice, since the option of not sharing their data may make them *de facto* second-class digital citizens: the best financial investments, credit opportunities or insurance premiums will only be available to users consenting to share their data with the predictive algorithms of the BigTech platforms.

Data unbundling. Another alternative would be to enhance privacy protection, limiting the ability of large tech platforms to gather and combine personal and transaction data and, therefore, setting a limit to their data superiority. This would require explicit regulation. Self-regulation is bound to fail. Firstly, while consumers do care about privacy,[34] they seem to be resigned about having to surrender their personal data in order to be able to make use of the largest and most popular tech platforms.[35] As a

33 World Economic Forum (2018).

34 See e.g. Jai and King (2016), Grossklags and Acquisti (2007), Acquisti et al. (2013) and Regner and Riener (2017).

35 See Turow et al. (2015).

result, they spend little or no time checking the privacy policies of online platforms and, even when they do so, they seem unable to understand their implications. Secondly, data on a user can be used not only to tailor the platform's products and services to satisfy the needs of that user, but also to adjust the service, including its price, to other users who are related. Hence, individual consent by a user may generate (positive or negative) externalities on other users. In other words, data have a social value.[36] As noted by Choi et al. (2019),[37] because this externality may be negative in many circumstances, "excessive loss of privacy emerges even with costless reading and perfect understanding of all privacy policies". In other words, informed consent may prove insufficient.

5.1.2 Mind the (regulatory) gap

The interventions above will likely prove insufficient to prevent the monopolization of the most profitable banking markets because, the BigTech platforms, free from capital requirements and the many other regulations constraining the ability of traditional banks to experiment with new products and business models, may out-invest and thence out-compete banks.

BigTech platforms enter retail banking remaining outside the scope of the existing regulatory framework. By functioning as intermediaries between clients and financial institutions, they may not be subject to the investor protection rules that ensure market integrity nor subject to measures that limit the level of interdependence between financial intermediaries in order to prevent the build-up of systemic risk.

According to the Institute of International Finance, this "asymmetry [in regulation] or lack of reciprocity [concerning data sharing] means that a regulation intended to facilitate the entrance of new players and promote competition and end-user choice in the payments market has created a competitive disadvantage for banks and other financial services firms *vis-à-vis* players from other industries. This risks contributing to the existing trend in digital markets towards the concentration of power in the hands of a few big technological players."[38]

For this and other related reasons, competition between traditional banks and BigTech entrants will not be levelled by simply eliminating or mitigating the latter's data advantages. It may require closing the "regulatory gap" that separates them at present. For example, if a BigTech platform has discretion in selecting potential borrowers or portfolios of borrowers for their clients, then it should be regulated as a portfolio manager. If it develops a secondary market for its products, and issues

36 See Bergemann and Bonatti (2019).

37 See Choi et al. (2019).

38 Institute of International Finance (2018).

tradable and non-tradable securities, it should be subject to security regulations. BigTech platforms should also be subject to the same sort of mandatory disclosure obligations and outright bans that apply to banks in Europe and the United States: e.g. being required to disclose whether their preselection of financial products is independent and neutral, and to act honestly, fairly and professionally in accordance with the best interests of its clients.

5.2 Regulating BigTech's tightly

The policy alternative just discussed may be criticised for three reasons. Firstly, data sharing may be considered deeply problematic from the viewpoint of privacy protection. Arguably, such a remedy could hurt users of BigTech platforms, whose data would be used and, possibly, misused by a greater number of firms. Of course, this need not be the case if the sharing is initiated by the customer. Secondly, data sharing may limit efficiency by preventing or disincentivising the creation of large and rich databases that could be mined in the interest of consumers and business users. Data unbundling may, in addition, prevent the efficient combination of data to provide new products and services. Finally, it may be argued that measures aimed at reducing the competitive advantages of BigTechs will deter or even blockade their entry, since traditional banks enjoy all sort of incumbency advantages, such as ownership of a large and partly captive customer base, proven experience and reputation, superior knowledge of existing regulations, and TBTF status.

An alternative is to limit intervention to the regulation of the BigTech's activities in the credit market, so that they stay away from predatory lending tactics and are requested to comply with the same fiduciary and investor protection obligations than traditional banks and other financial intermediaries. They would thus be able to retain all competitive advantages, including their data superiority, that are the result of their superior business foresight and/or skills, and would only be restricted in their ability to exploit the existing regulatory gap. Exploiting such a gap at the expense of their ultimate customers cannot be justified in any circumstance.

5.3 Moving to run-free banking

Now, it may well be the case that levelling the regulatory field proves insufficient to ensure that traditional banks can effectively compete with the BigTechs in the origination and distribution of loans to households and SMEs. By forcing the latter to behave in the best interests of their customers and adopt sound lending policies, financial regulators may restrict excessive risk taking, limit instability, and protect market integrity. However, the separation between origination/distribution and funding caused by the BigTech's entry may still result problematic from a prudential viewpoint. The reason being that traditional banks, transformed into narrow banks

funded with "run-prone" contracts, such as sight deposits and overnight debt, may prove too weak, and such vulnerability can pose a serious threat to financial stability and the whole economy.

Paradoxically, the solution to this problem may be to accelerate the process by which the economy becomes less dependent on traditional banks. To be more precise, one may consider replacing the private money created by traditional banks by public money created by central banks (i.e. sovereign money). This is a well-known proposal, first introduced in the 1930s by economists such as Irving Fisher,[39] and defended now by many economists,[40] policymakers,[41] and pundits.[42] The idea is to introduce a "reform to the banking system that would remove the ability of banks to create money, in the form of bank deposits, when they make loans. It would transfer the ability to create new money exclusively to the state…"[43]

A possible implementation of this idea is to require the (gradual or immediate) exchange of households' and firms' deposits in banks for central bank money, while the central bank passes its new funding sources to banks and other financial intermediaries, including the BigTechs, which will originate and distribute loans. The difference with the current situation is that the funding of those loans would no longer be made with run-prone contracts, but rather with run-free money. In this world, the cost of the poor loan screening decisions of a financial intermediary would be borne by its investors rather than taxpayers and the economy at large. Risky financial intermediaries would go bust, but their collapse would not cause a credit crunch. Investors, being exposed to the risk of default, as they would no longer be protected by deposit insurance or TBTF bailouts would have to pay extra attention to the riskiness of their investments. And, finally, the banking market would be subject to less controls and policymakers would no longer be justified in restricting competition between banks and other intermediaries in the name of prudential regulation.

Of course, the devil is in the details and, like any other drastic reform, this policy change may give rise to unintended consequences. This proposal, whatever its theoretical appeal, may indeed prove difficult to apply in practice. On the one hand, the transition from private to public digital money may be long and involve significant risks for financial stability. On the other, it will require reconsidering the scope and instrumentation of monetary policy interventions. Finally, in the context of the European Union, it is unclear to me whether a run-free banking system is feasible before a "banking union" is adopted. But the appeal of this somewhat radical reform

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39 See Fisher (1936). *Curiosum:* I was given a first edition copy of the book signed by Irving Fisher in 1937 for my birthday last December, for which I thank my wife.

40 See e.g. Cochrane (2014). See also Brunnermeier and Niepelt (2019).

41 See Fernández-Ordóñez (2020).

42 Dyson et al. (2016).

43 See Positive Money, available at https://positivemoney.org/our-proposals/sovereign-money-introduction/.

may be increased as a result of the entry of the BigTechs into banking, given its impact on the ability and incentive of traditional banks to play safe.

6 Concluding remarks

A full cost-benefit analysis of the policy proposals presented above is outside of the scope of this paper. They differ in terms of the way the balance competition and financial stability risks. The first proposal – levelling the playing field – may dominate the other two in terms of its procompetitive effects, but it may not be able to deal with the financial stability concerns described in Section 4. The second proposal – eliminating the regulatory gap – may be more successful from the viewpoint of financial stability, but it may not allow BigTechs to compete head-to-head with the established banks. The last proposal is possibly superior to the other two along both dimensions. However, I reckon that it is likely to be fiendishly difficult to implement.

Post scriptum: This paper has been written while confined at home due to the Covid-19 crisis. It is of course difficult to forecast the future. It may be too early to anticipate with any degree of accuracy the implications of this crisis for the issues considered in this paper. Yet, it is hard to deny that the crisis is accelerating the role of financial digitization of the economy and, in particular, of the retail banking industry. BigTech companies, which are playing a crucial role in a context in which many consumers are purchasing online and a significant proportion of people are working from home, are bound to grow their share of the payment system and may play a bigger role in financing households and SMEs. The Covid-19 crisis may, therefore, bring forward some of the developments, opportunities and risks discussed above. Thus, policymakers and financial regulators may have to react quickly to avoid the risk of joining the queue of those requiring a mechanical ventilator.

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