

# Big Tech Finance between Efficiency and Market Choices

by Nicola Bilotta, Fabrizio Botti\*



The banking industry is undergoing a process of deep transformation driven principally by technological innovations that at the same time have impacted not only the efficiency of the sector, but above all the competition involving various categories of new actors. In addition to *challenger banks* and fintech startups, the international market has seen the growth of big tech finance.

Unlike the new actors that have emerged in the banking industry, the large technological multinationals (including Amazon, Apple, Google, Facebook, Microsoft, Alibaba, and Tencent) could have comparative advantages that allow them to reach economies of scale more easily and rapidly. They already have a strong brand linked to their principal activities, that allows them to establish a solid relationship with a large base of consumers. Moreover, big tech companies can exploit some strategic characteristics: their considerable financial liquidity, their advanced technological capacity and capabilities, and the accumulation of data to develop a low-cost architecture. We also must consider the fact that these companies do not simply compete on the quality or price of the service offered, but they attempt to build an ecosystem of products and services which are interconnected, so as to generate and exploit the network effect and accumulation of data.

\* *Nicola Bilotta* is a Researcher at the Istituto Affari Internazionali (IAI) where he works on projects regarding international economic policy, digital economy, and geofinance. *Fabrizio Botti* is the head of research for the economy and finance area within the "Multilateralism and global governance" program at the Istituto Affari Internazionali (IAI) and a Researcher at the Guglielmo Marconi University.

### INFORMATION TECHNOLOGY AND CONSULTING SERVICES

According to the Bank of International Settlements, the core business of big tech companies is represented by technology information and consulting services, that make up 46 percent of their total revenues. The revenues relating to their financial activities remain a limited percentage, at around 11 percent. (1) Despite this, it can be observed that big tech companies are increasingly interested in the banking market, entering into competition with traditional bank operators or forming partnerships in the sector. More in detail, large technological multinationals tend to operate in some specific segments of the banking industry, focusing on the less regulated activities to avoid the strict regulations in the sector and the costs of compliance.

So it is no surprise that the first strategic move by big tech was to develop and launch online and mobile solutions on the payment market - such as PayPal or Alipay - that mitigated the risk of moral hazard, as a consequence increasing the trust between consumers and vendors in online transactions, and facilitating the consolidation of e-commerce activities. Positioning themselves as intermediaries between platforms and consumers, big tech companies have both reduced the costs of electronic payment transactions and begun to collect data on the purchasing behavior of consumers. With the exponential growth of mobile payments, the options available to consumers have also increased (such as Google Pay, Apple Pay, or Amazon Pay).

Unlike projects for private digital currencies, such as Libra or Gram, these mobile payment platforms continue to operate within a traditional payment infrastructure. Even when they use their own systems to process and settle transactions, users continue to connect their own bank accounts and credit/debit cards to the accounts in order to transfer the money.

The dynamism of big tech companies in the payment market has three main strategic motivations: it is a segment not subject to a strict regulatory framework, it does not require a banking license, and it does not impose strict requirements on the company's balance sheet. In addition, the data regarding payments is particularly important for big tech companies because it allows them both to accumulate information that increases their commercial value, and to consolidate their function as a cross-sector medium.

### THE NETWORK EFFECT AND THE VALUE OF DATA

The complementarity between payment services and the principal activities of big tech companies also helps explain the rationality of their business

model. By exploiting these network effects, these actors support their expansion of data-network-assets (2) in various sectors of the economy in order to become an almost indispensable bridge between consumers and suppliers of products/services. At the same time, they are able to accumulate additional data that adds value as it comes from the various activities in their ecosystem.

Following this logic, big tech companies can also offer banking services and products at a marginal price, or even for free, because they can exploit the networks they already possess and monetize the data they accumulate. In addition, as they are digital by nature and thus operate through a more flexible and efficient infrastructure than that of the banking system (which is based on old and costly operating infrastructure, that requires modernization), they can easily develop technological solutions to reduce the operating costs linked to their banking services and products.

### FROM PAYMENT SERVICES TO LOANS

After payments, some big tech companies began offering loan services. In particular, the e-commerce giants have begun to provide credit to small and medium-sized vendors on their platforms. Although the interest rates offered are on average higher than those on the relevant national market, they have succeeded in conquering this market niche because they can count on mechanisms that reduce moral hazard and a more efficient assessment of credit risk. By exercising a dominant position on the e-commerce market, the threat of expelling defaulting operators from their online stores represents a serious incentive to honor the debt. In addition, by accessing the sales data on the platform, they can combine traditional information with the data on their online activities in assessing creditworthiness.

With the incentive provided by the breakdown and complementarity of their various activities, big tech companies can also exploit network effects to expand into the markets of insurance, asset management, and investments. They can offer their products directly or act as intermediaries (agency model) to sell third party products.

### THE CHINESE PANORAMA

Without a doubt, the spread of big tech finance is proceeding at different speeds in different areas of the world. In China, for example, the mobile payments solutions offered by Alipay (controlled by Ant Financial, of which Alibaba possesses 33 percent of the capital) and WeChat (a Tencent company) respectively have 500 million users (36 percent of the total Chinese population) and 900 million users (65 percent),

together controlling 94 percent of the mobile payment market in the country. (3)

Also in China, Ant Financial has launched a 100 percent digital bank, MyBank, whose reference market is that of Chinese SMEs and micro-loans for individuals. When a consumer requests a loan online or through mobile, MyBank processes 100,000 indicators through 100 prediction models and 3,000 loan strategies, processing the request without any human intervention. In 2018, the bank lent 47,689 billion RMB (6.9 billion dollars). As for Tencent, the company owns 30 percent of WeBank, that in the same year provided 119.8 billion RMB (14.4 billion dollars) to SME and micro-credit clients. (4)

The Ant Financial ecosystem also includes Ant Fortune, a wealth management app that allows Chinese consumers to buy financial products from various Chinese companies - currently 900 financial products from 80 financial institutions. Ant Fortune has approximately 25 million users, 81 percent of whom are below 36 years old. An additional financial activity is Yu'e Bao, a money-market fund. With more than 120 million users and 210 billion dollars managed, in 2016 and 2017, Yu'e Bao was the largest money-market fund in the world, with an average investment of 3,329 RMB (475 dollars).

The Chinese experience in big tech finance is unique in terms of both size and importance, driven by specific internal factors such as the structure of the Chinese financial market and a less stringent approach on the part of national regulators. Despite this, big tech finance is growing at the global level, capturing niche markets in other countries. In Japan, Rakuten Bank lent 8.54 billion dollars in 2019. In Korea, the online Kakao Bank and KBank (Korea Telecom) lent a total

of 5.8 billion dollars; Mercado Pago, that operates in various countries in Latin America, approximately 127 million dollars; and Amazon exceeded 3 billion dollars in 2017. (5)

### PARTNERSHIPS WITH TRADITIONAL BANKING ACTORS

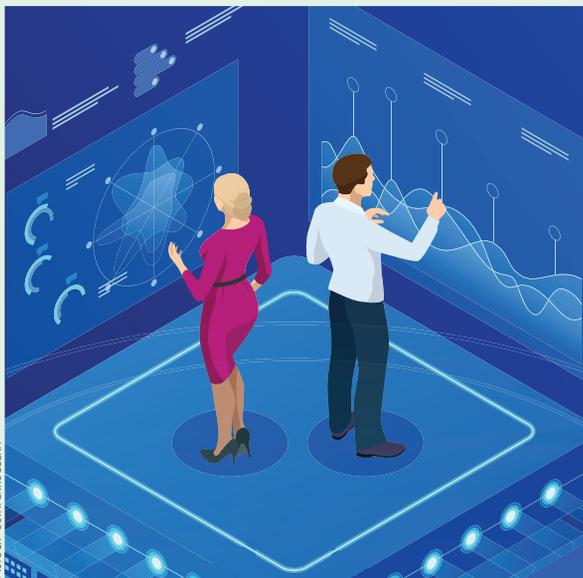
Big tech companies are also consolidating their presence on the bank market by launching partnerships with traditional banking actors. According to a study produced by KPMG, 26 percent of financial institutions have already developed a partnership with one or more big tech companies, and an additional 27 percent was planning to do so within twelve months. (6)

Based on the needs and opportunities offered by local markets, these partnerships can take different forms. For example, in Mexico, Amazon Rechargeable Service works together with Mastercard and Grupo Financiero Banorte. This initiative allows Amazon to attract a segment of consumers who traditionally do not have access to a bank account, offering an alternative to traditional credit and debit cards. This hybrid solution of a debit card can be refilled with cash and adapted to the needs of consumers in a country in which less than half of adults have access to electronic payment instruments. Grupo Financiero Banorte, on the other hand, uses the Amazon brand and is able to serve people who were previously financially excluded.

In a country with a high level of financial inclusion like the United States, Amazon and Bank of America have developed a synergetic relationship to increase the volume of loans to be provided to e-commerce platform sellers. Another example is that of Apple, that in partnership with Goldman Sachs, has launched its own credit card. While the American bank seeks to expand its retail business segment, Apple aims to incentivize Apple users to interact more with its ecosystem (offering 2 percent cash back when used with Apple Pay, 1 percent for transactions through the credit card, and 3 percent for Apple purchases).

These are only two examples of the growing number of partnerships between financial institutions and big tech. Although on the surface this could appear to be a win-win scenario, traditional operators could gradually lose their direct relationship with consumers, increasing the risk of being disintermediated and invisible. Moreover, by doing this, all of the risks of this activity would be placed on the books of the banks. Big tech companies are silently taking over shares of markets in which banks had a monopoly.

Yet the big tech companies have no interest in becoming regulated banks. According to a study published by Merrill Lynch, in the United States the tech-



nology and e-commerce industry is covered by 27,000 laws, while the banking industry has 128,000. The costs and risks of a banking license are too high, and it is strategically simpler and more effective to continue to expand peripheral banking activities and capture specific segments of the market. In addition, the return on capital in the banking industry (12.74 percent) is significantly lower than the rate to which big tech companies are used to (28.14 percent). (7)

### THE SALE OF TECHNOLOGICAL SERVICES

It is also important to stress the growing sale of technological services that the big tech companies offer the banking industry. Amazon, Microsoft, and Google are the market leaders in cloud-computing, a sector where banks are among the largest clients; but other segments exist that could potentially be profitable given an increasing technologicalization of the banking supply chain (artificial intelligence, machine learning, etc.).

Big tech finance could make the banking market more efficient, reducing transaction and information costs to facilitate financial inclusion in emerging econ-

omies, and to satisfy the demand and preferences of consumers in more mature markets. By entering into competition with traditional operators and challenging their privileged position, big tech finance could provide benefits for the system with lower priced products and services. However, by exploiting network effects, the accumulation of data, and their market power to consolidate their banking activities, this could have a negative impact on the industry, generation non-traditional risks.

Big tech finance is a challenge for the national and international oversight authorities because the actors involved have an exceptionally large market potential. Given the nature of their business models, the attention of regulators must be oriented towards a dynamic reflection that takes into consideration the interaction of different market factors such as the risks relating to financial stability, but also the problems relating to the management of personal data and the danger of monopolies. Only this way will it be possible to maximize the benefits of big tech finance, maintaining a level playing field in the sector and minimizing the non-traditional risks that it entails.

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- (1) *Bank for International Settlements*, Annual Report 2018, 23 June 2019, p. 56, <https://www.bis.org/publ/arpdf/ar2019e3.pdf>
  - (2) M. Iansiti, K.R. Lakhani, "Managing our Hub Economy," *Harvard Business Review*, September-October 2017 issue, <https://hbr.org/2017/09/managing-our-hub-economy>.
  - (3) *Bank for International Settlements*, BigTech and the changing structure of financial intermediation, 2019b, <https://www.bis.org/publ/work779.pdf>.
  - (4) The data was calculated by the authors using the annual financial statements of MyBank and WeBank.
  - (5) N. Bilotta, S. Romano, The Rise of Tech Giants. A Game Changer in Global Finance and Politics, Peter Lang, Pieterlen, 2019.
  - (6) KPMG (2017), Forging the Future. How Financial Institutions are Embracing Fintech to Evolve and Grow, *KPMG Insights*, 2017, <https://home.kpmg/it/it/home/insights/2017/10/forging-the-future-with-fintech.html>.
  - (7) Return On Equity Screening, CSIMarket, <https://csimarket.com/screening/index.php?s=roe>.
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## SYNOPSIS

- Big tech finance has the potential to consolidate its position on national and international markets very rapidly, thanks to the intrinsic advantages that large technological multinationals have in their business models.
- The financial services offered by big tech companies compete with those of traditional intermediaries, but in some cases, also create partnerships with them.
- Big tech finance could lead not only to benefits in terms of efficiency of the industry, but also non-traditional risks which regulators will have to face in order to maximize the implications of this phenomenon while minimizing the risks.