

# TRADITIONAL BANKING AND FINTECH DISRUPTION. PROJECTIONS, DYNAMICS, COMPETITION AND EFFICIENCY

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**Abstract:** *In recent years, financial innovation has accelerated greatly, new financial services have radically changed the banking environment. The main factors contributing to the dynamism of fintech are the development of IT and mobile communications infrastructure, pioneering financial services offered by new technology companies and the design of new financial services based on consumer needs. The fintech areas are: credit, deposits and capital raising services; payment, clearing and settlement services, including alternative currencies; financial investment and insurance services. However, in the near future many of the new financial services will not pose too much of a problem for banks. For example, P2P loans will reduce the market share of banks, but in no case will they eliminate bank loans because, on the one hand, the clientele that will go to the market for P2P loans will be the risky one, unapproved by banks. and on the other hand, because credit institutions still have the majority of resources and the majority of customers. Another example is payments, which continue to be carried out mainly by banks because alternative systems do not yet have a global infrastructure, and the completion of payments presupposes the existence of the legal tender issued only by central banks.*

**Keywords:** *fintech, banking, P2P loans, crowdfunding, alternative currencies.*

**JEL Classification:** *G21.*

## **1. Strategies for the bank of the future. The new fintech operators**

### **1.1. Modernization and digitization of existing banks**

In this scenario, existing banks are digitized and modernized to maintain the relationship with customers and basic banking services, using new technologies that allow them to change their traditional business models. Existing banks are generally under pressure to improve both the efficiency of operations and the relationship with customers. Due to their knowledge and greater investment capacity, today's banks have a great capacity to obtain new services and products by adopting new technologies or improving existing ones. Technologies such as cloud computing, big data, AI and DLT can be adopted or considered as a means of improving the current products, services and operations of banks.

Banks need to adopt new technologies to develop new service proposals that cannot be effectively provided with their current infrastructure. New technologies and processes used by non-banking innovators can also be employed by existing banks:

- New technologies such as biometrics, video imaging, chatbots or AI can help banks create sophisticated capabilities to maintain a long-distance relationship with customers, ensuring secure transactions and mitigating fraud and risk.

- Many innovations take into account secure customer identification solutions.

- Innovative payment services. Most banks have developed branded mobile payment services or payment services provided by third parties that integrate with the old platforms operated by the bank and thus, customers consider that their bank can offer a more secure mobile payment service than non-banking alternatives.

- Banks can offer robotic counselling services, digital wealth management tools, etc., with the intention of maintaining a competitive position in the retail banking market, retaining customers and attracting new ones.

- The digitization of loan processes is becoming increasingly important to meeting the requirements of the consumer in terms of speed, convenience and cost of credit. Digitization requires more efficient interfaces, integrated processing tools with older systems, document management systems, and sophisticated customer identification and fraud prevention tools. These can be achieved by an existing bank by developing its own

loan platform, purchasing an existing one or outsourcing these services to third party service providers. This scenario assumes that current lending platforms will remain niche players.

Although there are signs that traditional banks have made new investments in digitalization and modernization, it remains to be seen to what extent this scenario will be dominant.

### **1.2. Distributed banking**

In the scenario of distributed banking, the provision of financial services is fragmented between fintech companies and existing banks, financial services can be provided by traditional banking operators or other financial service providers, whether fintech or bigtech, which can "connect" with customers both on its own digital interface or on any platform owned by any of the players in the market. A large number of new companies are appearing to offer specialized services without trying to be banks, focusing rather on providing specific (niche) services. These companies choose not to claim ownership of the customer relationship, while banks and other financial players compete to fully own the customer relationship, as well as to provide basic banking services. In the distributed banking scenario, fintech banks and companies operate through associations, partnerships or other structures in which the delivery of services is shared between the parties. In order to further retain the customer, whose expectations in terms of transparency and quality have increased, banks may choose to offer products and services from third-party suppliers. On the other hand, consumers can use several financial service providers instead of remaining at the disposal of a single financial partner.

Proof that this strategy is the one that will be used in the near future is the growing penetration of the API banking market. But there is other evidence:

- Loan platforms become partners of banks and assign to the latter the marketing of credit products, as well as the approval process, financing and compliance management.
- Innovative payment services appear with partnerships between banks and fintech companies.
- Automatic counselling services (robo-advisor) are provided by fintech companies through a bank or as part of a joint venture with a bank.

### **1.3. The relegated bank**

Another scenario is that the traditional bank is downgraded to a lower category, that of a simple service provider, customer relations being owned by new intermediaries: fintech and bigtech companies

Fintech and bigtech companies use front-end platforms (the part of a computer system or application with which the user interacts directly) to provide customers with a variety of financial services from a diverse group of providers. They use existing banks because they hold licenses to provide basic banking services, loans, deposits, etc. The bank downgraded to a simple provider of services performed by others may keep the risk of these activities in its own balance sheet or assign it to fintech, depending on the contractual relationship with the latter.

In the relegated banking scenario, big data, cloud computing and AI are fully exploited on various front-end platform configurations, which innovatively and extensively use connectivity and data to enhance customer experience. Operators of such platforms have more opportunities to compete directly with banks for customer relationship ownership. For example, many data aggregators allow customers to manage accounts opened with multiple financial institutions on a single platform and thus, the consumer

position becomes much more comfortable than if they were to manage all those accounts on their proprietary platforms.

Although the downgraded banking scenario may seem unlikely, a number of examples from the current financial services industry show us how banks are downgraded to provide services created by other players who have a customer relationship:

- Growing non-bank payment platforms on which banks offer only assistance and back office operations, fintech companies being those that directly engage the relationship with the customer and manage the product. In fact, the bank, which holds the license for transactions with the customer, does nothing but authenticate the customer so that they can access funds from cards or bank accounts.

- Online lending platforms expand their range of services by becoming in fact an intermediary between customers (creditors), on the one hand, and banks, on the other hand, who only become providers of funds for these platforms and keep the account of the credited customer in which they receive the loan, plus any other adjacent services.

- The bank is the one that holds the funds of the client who appeals to the robo-advisor that directs their investments.

- Social networks focus on customer relationships and exploit customer data, while third parties, such as banks, are downgraded into product and risk management (e.g., China's WeChat instant messaging app uses customer data to provide its customers with personalized financial products and services from third parties, including banks, and the Tencent Group has launched WeBank, a licensed banking platform linked to the WeChat messaging application, to provide products and services to third parties).

#### **1.4. The disintermediated bank**

In this scenario, probably the darkest, the traditional bank loses its main function, that of intermediary, it becomes a disintermediated bank. In other words, banks become irrelevant because customers interact directly with individual financial service providers.

Existing banks are no longer a significant player in the disintermediated banking scenario, as the need for intermediation or a trusted third party is eliminated. Banks are eliminated as part of customers' financial transactions by more dynamic platforms and technologies, which provide services to end consumers according to their financial needs (loans, making a payment, raising capital, etc.).

In this scenario, customers directly choose both the service or services they need and their provider or providers. Customers no longer choose a single provider from which to contract a package of services, as happens in the example of the traditional bank. But this spread of financial services to a large number of providers may be accompanied by an increase in customer liability and, at the same time, the risks it bears (for example, the risk of bankruptcy does not come from one side, the bank where he keeps his account and provides him with a series of financial products, but in N parts, from the N financial service providers, as well as the probability of theft or loss of cash in the account).

#### **1.5. The new bank: challenger banks and non-banks**

In the future, according to another scenario, traditional banks will not be able to survive the wave of technological disruptions and will be replaced by new technology-based banks, such as neo-banks or banks set up by large technology companies that provide comprehensive financial services, through digital platforms. New banks are using advanced technologies to provide banking services in a more cost-effective and innovative way. New players can obtain banking licenses under existing regulatory regimes and have a relationship with customers or they can have traditional banking partners.

New banks are looking for a foothold in the traditional banking sector, but are using a modernized and digitized business model, moving away from the branch-centred customer relationship model. New banks no longer use old infrastructure, but capitalize on new technology at a lower cost.

Many of these new banks are called challenger banks. They are small banks, open to the retail public and competing directly with senior banks. Their origin is in the UK, where the new challenger banks entered the market, specializing in areas served by some of the large traditional banks or in some cases the new banks were created by large banking groups: TSB Bank from Lloyds Banking Group or they arose through the liquidation of a large bankrupt bank, as was the case with Virgin Money of Northern Rock.

Challenger banks differ from traditional banks through modern practices based on new financial technology, they have exclusively online operations, which avoids high costs, but also the complexities of traditional banking operations. But in order to be a "bank", the new company must be authorized to accept retail deposits by the financial regulator.

Neo-banks (BCBS, 2018) make extensive use of technology to provide banking services to the population and mainly through a smartphone application and an internet-based platform. This allows neo-banks to provide banking services at a lower cost compared to traditional banks. Neo-banks target individuals, entrepreneurs and small and medium-sized enterprises. They offer a wide range of services from checking accounts and overdrafts to deposit accounts, credit cards, financial advice and loans. They use scalable infrastructure through i-cloud providers or API-based systems to better interact through online, mobile and social platforms.

Their profitability is mainly based on: (a) commissions and, to a lesser extent, interest income, (b) lower operating costs and (c) a different approach to the marketing of their products, as neo-banks can use large data-based technologies and advanced data analysis.

Although it is estimated that neo-banks have high costs for attracting customers, they can be flattened through pricing strategies.

### **1.6. Bigtech**

Bigtech (BCBS, 2018) refers to large digital technology companies active globally. Bigtech companies typically provide web services (search engines, social media, e-commerce, etc.) to end users on the Internet and/or IT platforms or maintain the infrastructure (data storage and processing capabilities) through which other companies can provide products or services. .

Like fintech companies, bigtech companies have highly automated operations and a dynamic software development process, tailored to user needs. Bigtech companies have global operations and a large customer base. They can use a large amount of information about their clients to provide them with financial services tailored to their individual needs. Thus, bigtech firms have a considerable competitive advantage over their competitors, for example, existing banks, in providing financial services.

These companies can quickly gain significant global market share when they launch a new financial product or service. Given the size of their operations and their investment capabilities, bigtech can quickly influence markets. Many banks, financial institutions and fintech companies collaborate with bigtech companies, which then become relevant third-party suppliers in the financial system.

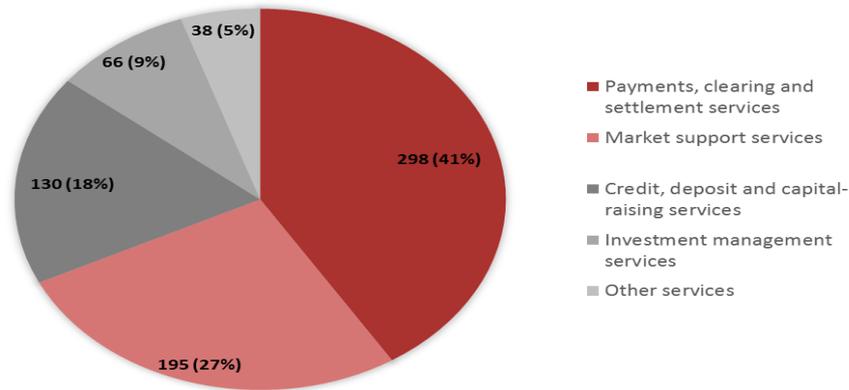
Examples of bigtech companies in the Western world are Google, Amazon, Facebook and Apple, collectively known as GAFA. Similarly, BAT refers to three of China's largest technology companies, namely Baidu, Alibaba and Tencent. In addition,

traditional companies such as Microsoft and IBM are also technology companies relevant to the financial system and can be included in any bigtech analysis.

## 2. Dynamics on the fintech services market

The Basel Committee on Banking Supervision (BCBS, 2018) conducted an informal survey among its members, asking them to identify significant fintech products and services in the countries they represent.

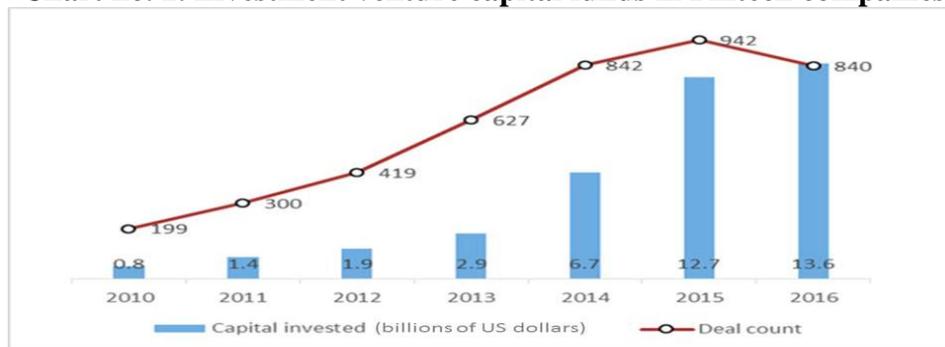
**Chart no. 1. Number of participants in innovative Fintech services**



Source: KPMG International, 2016

Respondents reported that the largest number of fintech service providers are in the category of payments, clearing and settlement, representing more than two-fifths, followed by credit services, deposits and capital raising, with less than one-fifth, the others categories (investment services, insurance, etc.) hold less than one-sixth. In the category of payments, clearing and settlement, retailers (which offer services to the end consumer) represented the majority of identified fintech firms, compared to payment service providers for enterprises, which have a much lower share. Second, size ranges support services, i.e. companies offering financial services to support re FinTech and representing, according to survey participants, close to 30% of all innovative enterprises.

**Chart no. 2. Investment venture capital funds in Fintech companies**

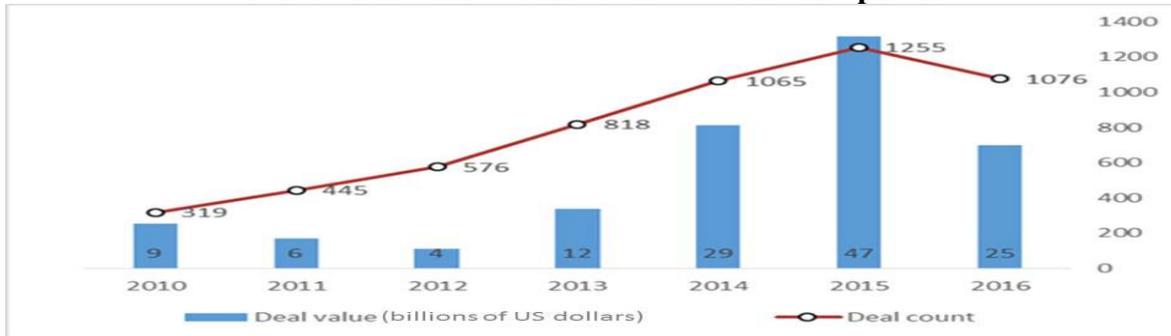


Source: KPMG International, 2016

It is difficult to quantify the size and growth of fintech and its potential impact on the banking industry, as statistical data are lacking. Opinions about the evolution of the field are based on indirect statistical data. For example, information about the dynamics of the sector may result from investments made by venture capital funds in fintech

companies. Thus, a KPMG report (2016) shows that in 2016 global investments in fintech companies reached \$13.6 billion, with 840 transactions (chart 2), noting that the real figure is much higher, because direct investments by venture capital funds are also made in many fintech companies, but also by financial institutions, banks and other institutional investors (chart 3).

**Chart no. 3. Total investments in fintech companies**



Source: KPMG International, 2016

Although the capital invested in Fintech companies continued to grow, the 2016 decline in volume and number of transactions led some to speculate that enthusiasm for fintech technology has peaked. In addition, it should be noted that volumes are still small in relation to the size of the global financial services sector.

### 3. Competition between banks and fintech

To see if new technologies are competitors for traditional banking, we need to start by analysing the similarities and differences between traditional finance, brokered by banks or other firms and fintech.

**P2P loans.** Let's start with the difference between bank loans and P2P loans. There is an opinion that a P2P lender is nothing more than a computer program that offers an investor-borrower association algorithm, so it is not a firm that maximizes its profit and for this reason it cannot be compared to a bank. But P2P lenders are also entities that maximize their profit and have opaque decisions that can erode users' trust.

If in its beginnings, P2P loans were indeed "peer-to-peer", now most investors are hedge funds and large financial institutions.

Banks have access to interest-bearing deposits and invest their own capital in loans. So they are "leveraged lenders." P2P platforms have no deposits and are full-fledged creditors. Because of this they need enough equity, so in their case there is a moral hazard. But this means that banks face higher operating cost than P2P platforms, due to the way of attracting resources and the regulation of their.

P2P loans will certainly reduce the market share of banks, but in no case will they eliminate the market for bank loans: On the one hand, the clientele that will go to the market for P2P loans will be the risky one, which is still not approved by banks and which is still addressed to non-bank intermediaries. On the other hand, the main reason why banks will remain the main lender, at least in the near future, is that they still have the majority of resources as well as the majority of customers, and the current figures cannot disappear overnight. The new P2P lending market is little known, only a minority use it and, more importantly, it is not associated with trust and collateral, qualities traditionally attributed to banks. In addition, it is very possible that banks will create their own P2P lending networks (or purchase or partner with P2P lending platforms) as a continuation of the process of disintermediation and withdrawal from risk-taking that banks began a few

decades ago (see vehicles through which banks outsourced their loan portfolios), but also as a result of legislation that almost forces banks to open their systems to fintech operators (see European directive PSD2).

**Payment, clearing and settlement systems.** Payments made through new payment processors are gaining ground, but most of them continue to be made through banks, because alternative systems do not yet have a global infrastructure, and the completion of payments requires the existence of legal tender issued only by central banks. Likewise, issuers of cryptocurrencies or tokens are on the rise, and holdings of such assets are increasing, but they also remain marginal, their functions being rather financial assets and still not having the utilities traditionally attached to the currency: they lack the standard role, due very high volatility, the means of payment function is limited, the volume of transactions being relatively small, being less accepted for payments, and their share as a saving tool is marginal. In addition, many central banks have initiated projects to issue digital currencies, which will in the future be a substitute for legal cash.

#### **4. FinTech and operational efficiency**

The use of new technologies has important implications for participants in the financial services market, materialized, on the one hand, in lower costs for loans, payments, financial advice and insurance, and on the other hand in better products for consumers (VIVES, 2020). Fintech creates efficiency in several ways:

1. It can more effectively select credit applicants through statistical models based on big data, thus overcoming the information asymmetries that underlie traditional lending banking. The important thing is that a lot of information can replace the guarantees behind the loans, and therefore fintech-based entities may be able to lend to businesses and households without asking for collateral. Moreover, fintech entities may be able to approve loans immediately because they process mortgage applications faster than other lenders.

2. Reduces the need for staff (e.g. loan officers and cashiers) and an extensive branch network (as customers use their personal computers and, more and more often, mobile phones for banking).

3. Allows for a more accurate determination of interest rates on loans because by manipulating and capitalizing on the information at their disposal they can estimate costs and risks with very high accuracy. For example, fintech lenders use interest rate models for higher-performing mortgages compared to those used by traditional banking institutions, estimating risk more easily and thus being able to set interest rates more accurately for borrowers (they may charge higher interest rates for low-risk borrowers, who are more likely to be less price sensitive and more time sensitive).

4. Can increase financial inclusion by opening up financial services, in less developed countries, to non-banked segments of the population and small and medium-sized enterprises (SMEs) that are not served or insufficiently served by banks.

5. Uses new technologies that allow for innovation, to create new banking products and services, much more compared to traditional banks.

#### **5. FinTech in Romania**

In the middle of 2019, it was estimated that in the last 10 years, 49 fintech companies were launched in Romania, which attracted a total local funding of 8 million € (Voinea, 2019). Most of this funding, almost 50%, went to fintech companies in the insurance area, while 23% of funding from 2008-2018 went to fintech companies to support SMEs, 20% to corporate banking, and the retail banking segment obtaining only 10%.

Of the 49 fintech companies active in Romania, 18 cover the retail banking area, 9 are technology, 8 banking for SMEs, 6 support services, 3 in insurance and 3 in corporate banking.

Among the fintech companies considered promising, are listed: Argentum, Confidas, Fintech OS, Instant Factoring, Minutizer, SymphoPay, ThinkOut, Smart Bill, Orange Money. But the services of other international fintech companies are also used in Romania, such as: Revolut, Monese, TransferWise, N26, Monzo and PayPal. Among the investors in fintech in Romania are mentioned venture capital funds: Gapminder, Early Game Ventures, Gecad Ventures etc. or accelerators: Techcelerator, Spherik Accelerator, Innovation Labs, Risky Business, etc., but also business angels, such as techangels.ro.

In terms of challenges, barriers to fintech in Romania are represented by: lack of trust, Romanians being reluctant when it comes to 100% digital financial services, low level of financial education and lack of regulatory framework for fintech activities. The same source mentions that the profile of the fintech client in Romania is represented by "people who make online transactions, from shopping to transport payment (Uber, Bolt) or consumer services, for active people, always updated and connected to new information, to technology. These are younger people, who grew with such technologies."

## 6. Conclusions

What will the financial world look like in the future? Some bet on modernizing and digitizing existing banks. Others consider that a plausible scenario is that of distributed banking, in which the provision of financial services is fragmented between fintech companies and existing banks, financial services can be provided by traditional operators (banks, etc.) or other financial service providers, whether they are fintech or bigtech, which can "connect" with customers either on its own digital interface or on any platform owned by any of the players on the market. Another scenario is that the traditional bank is downgraded to a lower category, that of a simple service provider, customer relations will be owned by new intermediaries: fintech and bigtech companies. The disintermediated bank is the darkest scenario, in which the traditional bank loses its main function as an intermediary. The traditional bank becomes a disintermediated bank. In other words, banks become irrelevant because customers interact directly with individual financial service providers. In the future, according to another scenario, traditional banks will not be able to survive the wave of technological disruptions and will be replaced by new technology-based banks, such as neo-banks or banks formed by large technology companies, which provide full-service built on digital platforms or **challenger banks**. New banks are using advanced technology to provide banking services in a more cost-effective and innovative way. New players can obtain banking licenses under existing regulatory regimes and can have a relationship with customers or may have traditional banking partners. But, we must not forget Bigtech, which refers to big, globally active digital technology companies. Bigtech companies typically provide web services (search engines, social networking, e-commerce, etc.) to end users on the Internet and/or IT platforms or maintain the infrastructure (data storage and processing capabilities) that other companies can provide products or services.

To see if new technologies are competitors for traditional banking, we need to start by analysing the similarities and differences between traditional finance brokered by banks or other firms and fintech. P2P loans will certainly reduce the market share of banks, but in no case will they eliminate the market for bank loans: On the one hand, the clientele aiming for the P2P lending market will be a risky one, which is not currently approved by banks and is still addressed by non-bank intermediaries. On the other hand, the main reason why banks will remain the main lender, at least in the near future, is that they still

have the majority of resources and customers, and the current figures cannot disappear overnight. Payments made through new payment processors are gaining ground, but most of them continue to be made through banks, because alternative systems do not yet have a global infrastructure, and the completion of payments requires the existence of legal tender issued only by central banks.

Fintech come on the market with extra efficiency and efficiency. Thus, credit applicants can be selected more efficiently through statistical models based on big data, thus overcoming the information asymmetries that underlie banking. Importantly, a lot of information can replace collateral behind loans, and therefore fintech-based entities may be able to lend to businesses and households without asking for collateral, and mortgage loan processing times are faster. Another advantage is that fintech reduces the need for staff (loan officers and cashiers) and an extensive branch network (customers use their personal computers and mobile phones for banking). Fintech technologies allow for a more accurate determination of interest rates on loans with a much more targeted price, because they make better use of the information they have to estimate the risks with very high accuracy. fintech can increase financial inclusion by opening up financial services, in less developed countries, to non-banked segments of the population and small and medium-sized enterprises (SMEs) that are not served or under-served by banks. Fintech companies use new technologies that allow them to innovate, create new banking products and services.

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