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FinTech—definition, taxonomy and historical approach

Patrycja Ratecka

SGH Warsaw School
of Economics, Poland

E-mail: p.ratecka@gmail.com
ORCID: 0000-0003-0978-9709

Abstract: For more than decade, the financial industry has experienced a continuous evolution in service delivery due to digitalization. Financial technology, commonly called FinTech, is now a highly used buzzword. FinTech brings about a new paradigm in which enterprises use modern technology to create innovations in the financial sector. This phenomenon, although widely discussed in modern literature, has many gaps in research. These special shortages are apparent in terms of its correct understanding. Therefore, the purpose of the article is to summarize FinTech in terms of definition, history and taxonomy. In the field of reviewing results, publishing and reporting results, as well as the results of the biggest consulting companies, a preview of various authors related to FinTech definitions was made. In addition, the stages of its development were grouped and discussed as well as criteria for types of FinTech phenomena were described. This is a review article.

Keywords: definition of FinTech, history of FinTech, taxonomy of FinTech

1. Introduction

New technologies play an increasingly important role in the financial services sector, facing a radical transformation. The information and communication technology revolution has made its presence felt in the provision of innovative financial services (Marcinkowska et al., 2014, p. 28). Over the last decade, besides financial intermediation institutions associated in their traditional sense, new entities providing services from the borderline of finance and technology have appeared. The presence of the latter on the financial services market has laid the foundations for a new phenomenon. In the history of economic sciences it is called FinTech.

Although the FinTech technology has only been mentioned in context, novelty and innovation for several years, the earliest mentions of it appeared in the American press at the beginning of the 1980s. They concerned solutions involving

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Correspondence to:
Patrycja Ratecka
Szkoła Główna Handlowa w Warszawie
Kolegium Nauk o Przedsiębiorstwie
al. Niepodległości 162
02-554 Warszawa, Poland
Tel.: +48 22 564 71 01

computerization and mass use of telecommunications in banks and financial institutions (Solarz, 2017, p. 236). FinTech's dynamic development is strongly correlated to the development of the Internet, which dates back to the early 1990s. However, the FinTech Revolution began for good with the mass spread of smartphones, i.e. after 2010.

FinTech offers innovative financial services on a subject-by-subject basis. It is particularly common or used in areas such as payments, financing and the provision of infrastructure using modern technologies to provide financial services (Big Picture, 2019a). According to the latest KMPG's report *The Pulse of Fintech 2018* (KPMG, 2019, p. 4), there were allocated 111.8 billion USD for global investments in FinTech entities in 2018.

Despite the growing interest in FinTech, the literature on the subject still lacks a theoretical order. Most of the knowledge in this area is based on some commercial publications and reports which were provided by the largest consulting companies (Gimpel, Rau and Röglinger, 2017, p. 246).

The aim of this article is to systematize and organize FinTech issues on three levels: definition and etymology, taxonomy and history. The structure of the article consists of an introduction, three parts and a summary. The first part explains the origin of the word FinTech. Based on the literature review, FinTech definitions were compared. The second part presents some criteria of FinTech division. The proposed typology of the FinTech phenomenon is a response to the lack of a uniform and consistent approach among numerous authors as regards the criteria used to classify the phenomenon. The last, third part is a historical description of FinTech divided into its three eras. The whole deliberations are summarized in the conclusion.

A detailed analysis of FinTech was provided by the latest Polish and foreign scientific publications and reports from the largest consulting companies.

2. The concept of FinTech

The etymology of FinTech derives from the combination of two English words: finance (financial services) and technology (information technology) (Gimpel, Rau and Röglinger, 2017, p. 245). English dictionary defines FinTech as "computer programs or other technology used to suport or enable banking and financial services" (Lexico, 2019). The phenomenon of FinTech has been discussed for several years in the context of innovation. However, at the begining of 1980s the American press provided the first references to FinTech (Solarz, 2017, p. 236). In many sources we can find information that the term *FinTech* was first used in the early 1990s in reference to the Financial Services Technology Consortium project which was implemented by Citicorp (Hochstein, 2015).[1] FinTech started to identify with an innovative business model from 2014 (Gimpel, Rau and Röglinger, 2017, p. 245).

FinTech, despite disscusion in the literature, has not yet been clearly defined. The modern nature of the FinTech issue makes the first attempts to describe it in scientific and popular science literature. An overview of the most popular definitions is presented in Table 1.

[1] In 1998, as a result of the merger of Citicorp and Travelers Group, Citigroup was established.

Table 1. Overview of FinTech definitions

Source	Year	Definition
D. W. Arner, J. Barberis, R.P. Buckley, *The Evolution of fintech: A new post-crisis paradigm*	2015	FinTech is an application of technology that supports the process of providing financial solutions. FinTech is not limited to specific sectors (e.g. the banking sector) or to a specific business model (e.g. peer-to-peer lending)[2], but covers all financial services and products in the traditional sense.
D. Huang, *Banks and fintech firms' relationship status: It's complicated*	2015	FinTech is a company that uses technology in the areas of banking services, payments, data analysis, capital markets and financial management.
Deloitte, *FinTech in CEE: Charting the course for innovation in financial services technology*	2016	FinTech are IT solutions developed internally by large financial institutions (banks, insurance companies or investment funds) or delivered to these entities by external suppliers (both large and small enterprises). The purpose of these solutions is to support financial institutions in the provision of basic services, but also to improve the product portfolio, develop a new business model, or improve the efficiency of processes. These solutions include API[3] (Application Programming Interface), data platforms, alternative insurance systems, alternative systems for trading financial instruments, currency exchange platforms (currency exchange offices) and others.
Y. Kim, J. Choi, Y. J. Parl, J. Yeon, *The Adoption of Mobile Payment Services for "Fintech"*	2016	FinTech is a service sector that increases the efficiency of the financial system through the use of information technology. In terms of entities, FinTech is a non--financial company that provides services in the area of payments and investments using innovative technology, without cooperation with a financial company (e.g. Apple Pay and AliPay).
P. Widawski, M. Borowik, P. Brewiński, M. Brakoniecki, P. Sterczała, M. Olczak, *FinTech w Polsce – bariery i szanse rozwoju*	2016	FinTech is a modern way of making various types of transactions that improve but also create the financial industry. FinTech solutions can be offered by innovative start-ups and mature, well-established financial institution.
D. Varga, *Fintech, the new era of financial services*	2017	FinTech is a company that is not regulated at all in the legal system or is only partially regulated. The task of FinTech entities is to provide innovative financial services through new technology. FinTech companies were established to provide modern financial services that go beyond the traditional scope.

[2] Peer-to-peer lending—social lending; one form of investment in which many investors jointly lend an individual the amount they need through an online platform.

[3] API (Application Programming Interface)—an application programming interface; a way, understood as a strictly defined set of rules and their descriptions, in which computer programmes communicate with each other. In the context of banking services, the purpose of API is to share business processes by creating value chains operated by many entities (including, in particular, entities that are not financial intermediaries in their traditional sense).

KNF, *Raport KNF z prac Zespołu roboczego ds. rozwoju innowacji finansowych (FinTech)*	2017	FinTech includes: – supervised entities (banks, insurance companies, payment institutions, investment funds) and – unsupervised entities (usually start-ups, i.e. entities that are just starting up their business).
Ernst & Young, *EY FinTech Adoption Index 2018*	2018	FinTech refers to an industry that includes new companies, scale-up companies and mature companies, including those providing non-financial services. FinTech entities focus their attention on two aspects: – understanding the customer's needs and – the use of technology in an innovative and unique way.
W. Szpringer, *Nowe technologie a sektor finansowy: FinTech jako szansa i zagrożenie*	2017	FinTech are companies that are a new, special category of para-banks. Technology companies use ICT[4] (Information Communication Technology) to provide financial services.
T. Nakashima, *Creating credit by making use of mobility with FinTech and IoT*	2018	FinTech is a technology that uses IT in the financial world. FinTech therefore refers to new technological solutions that will even initiate a revolutionary transformation in the world of finance.
BIS, *Sound Practices: Implications of fintech developments for banks and bank supervisors*	2018	FinTech is a technological financial innovation and results in new business models, applications, processes or products. They have a significant, material impact on the performance of financial markets and institutions and on the providing of financial services.
Financial Stability Board, *FinTech and market structure in financial services: Market developments and potential financial stability implications*	2019	FinTech is a technological innovation that can help to increase market access, introduce a new product offer and reduce costs for customers. Unlike traditional financial intermediaries, FinTech entities are not regulated.

S o u r c e: Author's own elaboration based on the sources listed in the first column.

The definitions in Table 1 raise an important issue, namely the disagreement on the subjectivity of FinTech. Some authors identify FinTech with the service (Arner, Barberis and Buckley, 2015, Kim et al., 2016; Widawski et al., 2016), others associate it with innovation and technology (Deloitte, 2016; BIS, 2018; Nakashima, 2018; Financial Stability Board, 2019), while others describe FinTech as a company (Huang, 2015; Ernst & Young, 2017; KNF, 2017; Szpringer, 2017; Varga, 2017). In foreign sources, FinTech is more often defined as technology and innovation. However, the authors stress in Polish literature the importance of FinTech as a company.

[4] ICT (Information Communication Technology)—a division of telecommunications and information technology, dealing with the technology of processing, collecting and transmitting information in electronic form.

Additionally, the presented definitions indicate a very important feature of FinTech, namely the lack of a clearly defined limit of its activity. FinTech's activity in two areas: financial and technological services, make it difficult to reliably assess its scale and identify the risks associated with it. Therefore, developing a single definition is particularly important because FinTech entities have been active players on the financial services market for a long time, and their activities are not subject to such restrictive legal regulations as traditional entities.

3. Taxonomy of FinTech

The term *taxonomy* is used alternatively with the term *classification* or *typology*. With the help of one external feature, systematics allows to organize and group the analyzed objects which do not have common features internally, i.e. among themselves (Cook, Goh and Chung, 1999, p. 320). Taxonomy is especially helpful when the available knowledge is small in a particular field (Haddad and Hornuf, 2018, p. 247) and little valuable information could be found about FinTech.

The existing deficit, or even lack of a consistent approach among researchers in the context of a single definition of FinTech, approved and shared (by both the scientific community and practitioners), determines similarly the gap in its classification. Based on the studied scientific materials and reports prepared by the largest consulting companies, Table 2 presents and discusses the taxonomy of FinTech.

Table 2. Taxonomy of FinTech

Classification	Field	Details
Duration	Innovative start-ups	Unsupervised entities, usually small enterprises just starting up.
	Mature, well-established financial institution	Supervised entities (banks, insurance companies, payment institutions, investment funds).
Customer orientation	Retail	Entities that provide financial services in the retail client segment.
	SME	Entities that provide financial services in the segment of small and medium-sized enterprises.
	Corporate	Includes sales and trading of securities, retail investments, current account deposits and asset management in the corporate client segment.
Scope of activity	Global	Digital platforms that create experience and higher value for clients than banks, insurers, investment firms, payment institutions and small start-ups on a global scale. As an example, BigTech entities are mentioned (referred to as GAFA—Google, Amazon, Facebook, Apple).
	International	Entities that provide technology and finance services within two or more countries.
	Local	Entities that operate within a single country.

Business model	Financing	A category which includes entities providing financing for a specific activity or project. Entities classified in this category provide crowdfunding, crowdlending, micro--credit and factoring services.
	Payments	FinTech entities whose business model focuses on providing innovative payment solutions, such as mobile payment systems, e-portfolios, crypto, etc.
	Asset management	This classification includes asset managers which, in particular, provide automated financial advisory services (robo-advisors), social trading, wealth management services, personal finance management applications or software.
	Insurance	Category that includes entities which accept contributions from a group of persons to cover risks (P2P insurance) and entities providing risk management services.
	Loyalty programmes	FinTech entities that use Big Data analytics in the process of providing customer loyalty programme services and work closely with payment institutions.
	Risk management	FinTech entities, which provide risk management services and support in the financial assessment of the debtor.
	Stock exchange services	FinTech entities that provide services on the capital market, such as trading in securities, derivatives or other financial instruments.
	Regulatory technology (*RegTech*)	Technology platforms that enable the automatic collection and analysis of a wide range of data in the context of regulatory requirements and reporting, which can be sent in real time to an appropriately wide group of entities (e.g. regulators and supervisors) thanks to distributed register technology. The term was first used by the British Financial Conduct Authority in 2015.
	Other	The category that includes entities offering training for investors, or the essence of their activity comes down to developing and then providing innovative solutions and business models, including for other FinTech entities.
Service provision	Interaction	Providing services and taking into account the mutual relations between the FinTech entity and the customer. It includes 7 areas: personalization, information exchange, types of interaction, user network, IT role, hybrids and service distribution channel strategy.
	Data processing	In this category, FinTech entities provide data processing services which consist of 4 dimensions: data source, time horizon, data use and data type.
	Monetization	This category includes FinTech entities explaining how services are converted into money (monetization). The approach includes 4 dimensions: payment schedule, user currency, partner currency and business cooperation.

Service area	The banking sector	FinTech services provided to the banking sector, including banking operations, deposits and loans, capital investments, payments.
	Capital investment area	FinTech services provided in the area of capital investments, including stock exchange services.
	The insurance sector	FinTech services provided in the insurance sector, including property insurance, life insurance, peer-to-peer insurance, insurance operations.
	Real estate market	FinTech services provided in the real estate market.

S o u r c e: Author's own elaboration based on Gimpel, Rau and Röglinger, 2018, pp. 250–252; Haddad and Hornuf, 2018, p. 2; McKinsey & Company, 2016, p. 7; Solarz, 2017, p. 237; Big Picture, 2019b.

Table 2 is an attempt to systematize and order the knowledge in the scope of the FinTech division criteria described so far in the literature. The authors who discuss FinTech in their publications most often use the following typologies: (1) duration, (2) customer orientation, (3) scope of activity, (4) business model, (5) service provision and (6) service area. Approaches 1–4 present scope of FinTech as an enterprise. Approaches 5–6 relate to the scope of the service provided.

On the basis of considerations concerning the concept of FinTech (discussed in the first part of the article) as well as considerations concerning the taxonomy of FinTech (discussed in the second part of the article), three basic characteristics of the definition of FinTech should be adopted: (1) definition approach: company, innovation and technology, service; (2) scope of activity: global, international, local; (3) service area: the banking sector, capital investment area, the insurance sector, real estate market. The three characteristics of the definition indicated above define accordingly: (1) the subjectivity and/ or objectivity of FinTech, (2) the size of its scale, and (3) the direction in which it provides its services. The main purpose of these characteristics is to achieve a single definition that is accepted and applied universally by all FinTech interested parties.

In view of the above discussion and its economic nature, the leading definition of FinTech is that FinTech is an enterprise (1) which has as its objective the provision of financial services in its own name or the provision of financial services to other entities, but is a financial intermediary in the classical sense. The financial services provided by FinTech companies must be characterized by their innovative, original character. FinTech should use the most modern technology in the provision of financial services. The scope of activity (2) can be global (usually large technology platforms defined by the term *BigTech*), international (mature, well-established entities) or local (usually small companies just starting their operations). According to the last characteristic (3), FinTech-companies can provide or deliver financial services in different segments of the financial market.

The above definition omits the issue of legal regulations concerning FinTech entities due to their economic consideration.

4. The evolution of FinTech

The beginning of innovations that gave rise to the FinTech industry can be seen in the financial revolution taking place in Europe at the end of the seventeenth century. It was a time of expansion of insurance, banking, capital companies, which significantly marked their role in the process of industrial revolution (Arner, Barberis and Buckley, 2015, pp. 6–7). FinTech is not a new phenomenon. Numerous publications attempt to describe and present it against the background of historical facts.

On the basis of a literature review, history of FinTech can be classified into three eras: FinTech 1.0, FinTech 2.0, FinTech 3.0. The authors of *The Evolution of FinTech*: A new post-crisis paradigm (Arner, Barberis and Buckley, 2015, pp. 15–18) additionally describe the FinTech 3.5 era.

4.1. FinTech 1.0 (1866–1967)

FinTech time should be considered from the 1860s. At that time Giovanni Caselli invented a device known as a panthelegraph, which was mainly used to verify signatures in bank transactions by sending and receiving transmissions via telegraph cables. This invention is considered by some as the first step towards the FinTech revolution (Getsmarter, 2018).

After the Second World War, a fast technological progress was observed after the second World War, especially in the field of communication and information technology. The first tools for breaking codes developed on computers provided by International Business Machines (IBM) that appeared in that time. The 1950s were the time when new credit card providers debuted on the American banking services market (Diners Club in 1950 and American Express in 1958). This consumer revolution was supported by the creation of the Interbank Card Association, now MasterCard, in the United States in 1966. The end of the FinTech 1.0 era is marked by the introduction of the first ATM in the United Kingdom in 1967 by the financial holding Barclays (Arner, Barberis and Buckley, 2015, pp. 6–7).

4.2. FinTech 2.0 (1967–2008)

Era FinTech 2.0 was characterized by the transfer of financial services from analog to digital areas. Here is a talk of a second financial globalization, related to the reaction of financial markets to the stock market crash in the USA in 1987. In the area of payments, in 1968 the Inter-Computer Office in the United Kingdom was established, which was the basis of today's automated interbank settlement services. The electronic payment system—Fedwire (Arner, Barberis and Buckley, 2015, pp. 12–15), originally established in 1918 by the Federal Reserve System in the United States (Getsmarter, 2019), was launched in the early 1970s. Recognizing the need to interconnect cross-border domestic payment systems, the Society for Worldwide Interbank Financial Telecommunication (SWIFT) was established in 1973.

In the 1970s, the fall of Herstatt clearly exposed the risks associated with the growing international links between finance and technology. This biggest crisis in the post-war history of the German banking sector caused the first serious discussions on regulatory issues (Arner, Barberis and Buckley, 2015, pp. 12–15). The breakdown of the Bretton Woods exchange rate

system in 1973 and a moment later the Herstatt crisis contributed to the creation of the Basel Committee on Banking Supervision (Szczepańska, Sotomska-Krzysztofik and Pawliszyn, 2004, p. 36) at the end of 1974 under the auspices of the Bank for International Settlements (BIS) (Koterwas, 2003, p. 56).

As computerization and technology development had progressed, the securities area also saw a gradual phase out of paper-based trading in favour of electronic trading. In the United States in 1980 and in the United Kingdom in 1983 online banking for customers was first introduced. Throughout the entire FinTech 2.0 period, financial institutions increased the use of IT in their internal operations, gradually replacing most paper-based mechanisms. In 1981 Michael Bloomberg founded Innovation Market Solutions (IMS). In 1984, financial institutions became more and more willing to use Bloomberg terminals which only proves that traditional financial services companies were the recipients of tools provided by FinTech.

In the late 1980s, financial services became largely a digital industry, based on electronic transactions between financial institutions, financial market participants and customers worldwide. The advent of the Internet began another stage of growth. In 2001, eight banks in the United States had at least one million customers online. By 2005, the first banks without physical branches (e.g. ING Direct, HSBC Direct, Egg Banking) had appeared in the United Kingdom. At the beginning of the twenty-first century the bank's internal and external processes were completely digitized. In addition, regulators increasingly used technology, especially in the area of stock exchanges, and computerized transaction systems and data logs became the most common source of information (Arner, Barberis and Buckley, 2015, pp. 12–15).

4.3. FinTech 3.0, FinTech 3.5

The financial crisis of 2008 is seen as a turning point and at the same time the beginning of the FinTech 3.0 era. After 2008, the market situation was encouraging the emergence of innovative entities that use financial and technological know-how in their activities (Arner, Barberis and Buckley, 2015, pp. 15–18). The basis for the dynamic development of technological innovations was the progress in technology (Gąsiorkiewicz and Monkiewicz, 2019, p. 97), such as artificial intelligence (AI) and machine learning, databases (Big Data), distributed computing, cryptography and mobile Internet access, which initiated the emergence of new applications for various financial instititons (Schmaus, Duran and von Steinaecker, 2019, p. 3). The most important reasons that made the dynamic development of the FinTech 3.0 era possible (Arner, Barberis and Buckley, 2015, pp. 15–18) include the following:

– social perception—new experiences and habits of consumers make FinTech entities challenging traditional financial institutions (Grzywacz and Jagodzińska-Komar, 2018, p. 78). In the digital world, customers expect from a financial service provider agility, flexibility, and continuous improvement of the quality of services offered;
– regulatory control—the global financial crisis has strengthened international confidence in the need to change the banking regulatory system (Pyka, 2014, p. 196). New regulations: CRD IV/CRR, PSD2, MiFiD II, IFRS9, RODO and amendments to the EMIR, are only one of the most important EU legal solutions for the financial sector, and in particu-

lar for the banking sector in terms of services provided (EBC, 2018, p. 3). The increasing complexity, costs and risks associated with the management of regulatory and legal obligations is a constant challenge for traditional financial services providers. The use of solutions provided by the FinTech industry such as artificial intelligence, machine learning and cloud solutions can help traditional financial institutions to assess, monitor and control compliance with regulatory obligations faster and more effectively;

– economic conditions—in response to the economic breakdown caused by the financial crisis in 2007–2009, central banks of the most economically developed countries of the world reduced interest rates to the historically lowest level (Kozak and Ochnio, 2017, pp. 65–66). At that time, interest rates were nearly zero, and in countries such as Switzerland, Denmark or Germany (Lister, 2018, p. 3) they even reached negative values. The environment of low interest rates strongly weakened the attractiveness of investing savings in bank deposits, and investors began to look for new alternative sources of wealth creation (Kozak and Ochnio, 2017, pp. 68). These macroeconomic conditions marked their presence in the process of transforming the functions of banks, only accelerating the emergence of financial innovations. Financial innovations introduced by FinTech entities have become a leading factor in the transformation of the financial sector on a global scale. The Internet and digitization, convergence of electronic media, interoperability and compatibility of hardware and software made it possible for FinTech entities to start their operations without opening physical branches, as in the case of traditional financial entities.

Era FinTech 3.0 showed that financial services are no longer provided only by regulated financial institutions (Arner, Barberis and Buckley, 2015, pp. 15–18). According to D. W. Arner, J. Barberis and R. P. Buckley (2015, pp. 15–18), the FinTech 3.5 era, which began in 2011, should be specified from the FinTech 3.0 era. The FinTech 3.5 era is an intense development of innovation by most researchers as defined by J. A. Schumpeter (1960, p. 27) in 1912 (Marciniak, 2010, p. 10).

The FinTech 3.5 era can be characterized as the blurring of the gap between FinTech and banks, and the emergence of digital service platforms (Szpringer, 2019, p. 10). Three important milestones stand out in this phase:

– establishment and implementation of blockchain network in 2009 (Hulicki and Lustofin, 2017, p. 31), bases for cryptovalent bitcoin. Cryptovaluted bitcoin was the first solution functioning in blockchain technology (Iansiti and Lakhani, 2017, p. 5). According to the report of the World Economic Forum, blockchain technology has been gaining in importance since 2015 (World Economic Forum, 2015, p. 6);
– implementation of mobile payments based on NFC (Near Field Communication)[5] technology (Milic-Czerniak, 2019, p. 56). One of the first such systems was the Google Wallet payment system created in 2011 (Getsmarter, 2019);
– development of biometric solutions based on face recognition (Zalewska-Bochenko, 2017, p. 280). In 2017 BigTech Alibaba implemented Smile to pay solution, which allows users to pay with a smile to the camera (Getsmarter, 2019).

[5] NFC is a technology that allows you to make contactless payments with your smartphone. This functionality is made possible by equipping smartphones with an NFC module.

FinTech 3.0 and 3.5 eras are also an intensive growth in the number of FinTech companies. The essence of the FinTech phenomenon in 2008–2017 is shown in Figure 1.

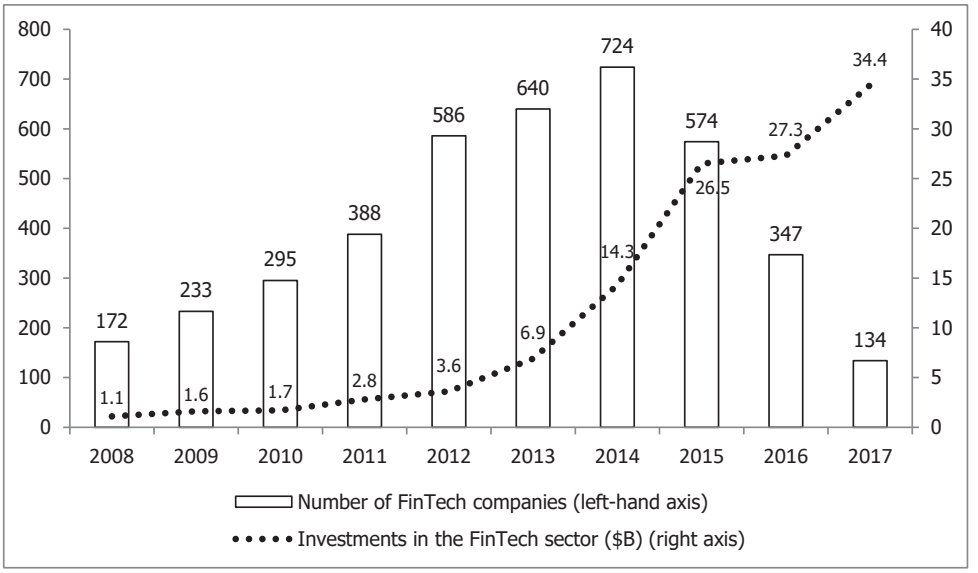

Figure 1. Number of FinTech companies established annually and investments in FinTech (in $B) in 2008–2017

S o u r c e: Author's own elaboration based on raport Deloitte, 2017, p. 6.

The data show that the highest number of newly established FinTech companies was in 2014 (724). The rising trend in the number of FinTech start-ups continued until 2015. Since then, a decrease has been observed, with simultaneous increasing investments in FinTech entities (from 26.5 billion USD in 2015 to 34.4 billion USD in 2017).

FinTech entities provide services in various areas of the financial sector. Therefore, they have adapted to market conditions to varying degrees and timescales. For example, FinTech entities providing insurance services achieved a phase of intensive growth in terms of the number of newly established companies only in the years 2013–2016 compared to previous years, while in the same period the banking services sector had seen a decline in this respect (Deloitte, 2017, p. 3). Some of the innovations created by FinTech are still evolving, some have not found specific applications or were not ready for implementation.

The whole consideration of the second part of the article is summarized in Table 3.

Table 3. Evolution of FinTech

Era	FinTech 1.0	FinTech 2.0	FinTech 3.0	FinTech 3.5
Date	1866–1967	1967–2008	2008–today	
Geography	Global Developed markets	Global Developed markets	Developing markets	Emerging markets Developing markets
Key elements	Computer	Internet	Smartphone Start-up New participants in the financial services market	
Shift origin	The Industrial Revolution	Digitization of processes	The financial crisis in 2008	Development of innovations

S o u r c e: Author's own elaboration based on Arner, 2016, p. 8.

5. Conclusion

For less than a decade, FinTech has been experiencing a boom. Despite the growing interest in FinTech, both from academics and corporate managers, many issues still require in-depth analysis. This issue creates new challenges for science and a field for inspiring inquiries and analysis requiring interdisciplinary studies and research projects.

The lack of definition consistency among the authors of numerous FinTech publications and the fact that there are many unordered FinTech taxonomies forced the need for an in-depth investigation.

On the basis of a review of the latest domestic and foreign scientific publications, as well as the analysis of the results of reports from the largest consulting companies, it was possible to identify the most recent:

– 3 definitions of FinTech: company, innovation and technology, service;
– 6 taxonomy of FinTech: (a) subject scope: duration, customer orientation, scope of activity, business model; (b) scope of service provided: service provision and service area;
– 3 eras of FinTech: FinTech 1.0, FinTech 2.0, FinTech 3.0.

The conclusions from the above considerations allowed to identify three key characteristics for the FinTech definition. These include: (1) subjective approach, (2) scope of activity, (3) service area. Their identification turned out to be necessary in the process of building the FinTech definition. Thus, FinTech was summarized and systematized on the definition and taxonomic grounds. The third part of the article, which focuses on the history of FinTech, completes the whole discussion.

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Zjawisko FinTech – ujęcie definicyjne, taksonomiczne oraz historyczne

Abstrakt: Od ponad dekady sektor finansowy doświadcza nieustannej ewolucji w zakresie usług z powodu digitalizacji. Technologia finansowa, potocznie nazywana FinTech, coraz bardziej zyskuje na znaczeniu. FinTech wprowadza nowy paradygmat, w którym przedsiębiorstwa przy wykorzystaniu nowoczesnej technologii kreują innowacje w sektorze finansowym. Zjawisko FinTech, choć szeroko dyskutowane we współczesnej literaturze, posiada wiele luk badawczych. Szczególnie braki te uwidaczniają się w zakresie jego poprawnego, spójnego rozumienia. W związku z powyższym celem niniejszego artykułu jest podsumowanie zjawiska FinTech na gruncie definicyjnym, taksonomicznym oraz historycznym. Na podstawie przeglądu najnowszych, krajowych oraz zagranicznych publikacji naukowych, jak również na podstawie analizy wyników raportów największych firm consultingowych dokonano zestawienia podglądów różnych autorów dotyczących definiowania zjawiska FinTech. Dodatkowo opracowano i omówiono typologię zjawiska FinTech oraz wyodrębniono i opisano etapy jego rozwoju. Artykuł ma charakter przeglądowy.

Słowa kluczowe: definicja FinTech, historia FinTech, taksonomia FinTech