DIGITALIZATION AND CHANGES IN BANKING BUSINESS MODELS[187]

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Abstract: *Digitalization changes the relations structure in the banking sector and the business model of traditional banking, which becomes unsustainable, as combinations of new technologies and processes tears down the barriers between industry sectors, thus opening the financial market. This requires a change in business models, with trust of customer being an important factor of innovations success. This paper discusses the change of business models in banking sector in the context of Digitalization.*

Keywords: *Digitalization, Traditional Bank, FinTech, Business Model*

1. INTRODUCTION

Innovation and Digitalization of products and services have created conditions for change of ecosystem and transformation of the business models in the banking sector. Once a stable industry has become fragmented by and highly competitive environment, new competitors, different from traditional banks, have significantly changed the structure of the banking sector and recorded a remarkable share of revenues. Between years 2005 and 2017, number of new bank market participants to the European banking market was 1400 and they earned 6-7% of all revenues for that period, totaling to 54 billion Euros in 2016, which represents one third of new all banking revenues [3]. Digitalization changes the importance of traditional banks and raises three key issues: Openness, Collaboration and Investing [1].

Openness means Open Innovation [6] and Open Banking. Open innovation, as defined by Chesbrough [5], is the core of the digital revolution. For established banks, this means engaging in external knowledge capital, assets, technology solutions and often opening up its own intellectual property, and expertise to other innovators such as FinTech and BigTech (GAFA - Google, Apple, Facebook, and Amazon). This helps them to create new ideas, change organizational culture, identify and attract new skills, and discover new growth areas.

The Rules for Open Banking were proactively set by the European Union, through the new version of the Payment Services Directive (PSD2). When implemented, PSD2 opens the banking market and client data to third parties, such as competing banks, FinTech or BigTech. In 2018, 68% of banks were considering to invest in monetizing customer data, in order to launch open bank initiatives by investing [2].

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Investing in venture capital has always been the core of the innovation and now it applies more than ever. Addressing these issues creates challenges for banks, as they need to adapt their strategies and business models to these changes.

The innovation of the business model for their use with digital platforms cause that open innovation and value innovations are overlapping in order to develop new value for customers, that are willing to pay. The use of **digital** technologies will usually cause a **breakdown** of the original, dominant, business model and if other competitors also adopt a new business model, the whole industry will transform.

The current development of financial services in the context of digitization is often assessed as disruptive [15], [16], [17], which is debatable in the context of the Theories of Disruptive Innovation. Disruptive innovation, term created by Clayton M. Christensen [7], describes a process where a product or service initially starts at the bottom of a market as simple solution and then progresses trough the market, eventually force out established competitors. Innovation should ideally focus on improving the core business (incremental innovation), transformation of the core business (sustaining innovation) and disruption of the core business, leading to creation of new business (disruptive innovation).

The aim of this study is to examine and evaluate dynamic changes in the market of financial services in the context of digitization and assess the key aspects of the successful transformation of business models. The following has been identified as a supporting research question: Are FinTechs disrupting the banking sector?

Paper is a result of analytical and syntactical approach to analyzed topic. Based on a review of available literature discussing business models and digital platforms, transformative business model proposed by Kavadias [13], was chosen as the theoretical basis for the creation of conceptual framework, as the model identifies key aspects of the successful innovation, based on the connecting technological trends and market requirements. Emphasis of this paper will be on the relationship between traditional banking institutions and new market participants. Results of studies done by renowned institutions such as PwC, Deloitte, Accenture, WEF etc., have been qualitatively and quantitatively analyzed in this paper.

2. DIGITALIZATION OF FINANCIAL SERVICES

Banking has always been a demanding industry and the future will be even more challenging. Technologically supported financial innovations that could lead to the emergence of new business models, applications, processes or products, that are associated with substantial effects on financial markets, financial institutions and the provision of financial services are defined as fintech (without capital letters). [10] Companies, that use fintech for the purpose of providing one or more financial services, are called FinTech (with capital letters).

Significant technologies in the digital era, in which fintech excel include [4]:

- Data technology (analytics, AI, sensors, biometrics),
- Front-end interface (intuitive interface, gamification, advanced and virtual reality),
- Technology to improve traffic (automation, chatbots, blockchain),
- Infrastructure technologies (platforms, clouds, open APIs).

These advances in technology and an ever-wider range of new market participants facilitate the division of the value chain and speed up creation of the gap between production and distribution, which complicates the control and management of hundreds of billions of transnational transactions around the world [12].

WEF [17] identified 11 clusters in 6 areas of innovation exerting pressure on traditional business models:

- Payments: Emerging Payment Rails, Cashless World
- Market Provisioning: Smarter, Faster, Machines, New Market Platforms
- Investment Management: Empowered Investors, Process Externalisation
- Insurance: Insurance disaggregation, Connected Insurance
- Deposits & Lending: Alternative Lending, Shifting Customer Preferences
- Capital Rising: Crowdfunding.

Successful innovations are those innovations that may qualitatively and quantitatively use customer data on digital platforms, while they are not held back by regulation costs. These changes in market trends intensify the pressure on the transformation of business models.

3. BUSINESS MODELS

The digital economy has set a trend towards usage of business models based on platforms that allow cognitive analysis of customer data, eliminate unnecessary costs, and promote free or low fees for products and services, which threatens traditional bank fees and revenue. The digital banking interface enables **ecosystem collaboration** and **asset sharing**. 80% of banks cite implementation of a digital transformation program as a business priority for 2018 [11]. Sharing reduces entry barriers to industry from other sectors. They do not have to own the assets, but still may share the selected assets within the supply chain. Sharing typically occurs at a bilateral marketplace, which makes available added value for both parties. At the same time, regulators' actions have contributed to opening the market and embracing competition.
Banks will have to choose whether they will own of the interface or take a different role in the banking ecosystem. This may also mean a shift, from the current revenue generation model based primarily on interest margin, to a model based on fees or profit shares, which also mean possible loss of control over the client interface due to product separation and distribution. Delliote identified 4 options of possible outcome [9]:

1. **Bank as provider of services.** This model is a status quo. This could be a good way only for several dominant players with strong brands.
2. **Bank as infrastructure provider.** In this model, an existing bank would no longer provide a user interface or bank products. Instead, banks would generate revenue from providing technology services for online platforms and banking service providers. Banks could, for example, provide service features such as Know Your Customer (KYC), although this may not be the preferred option for today's traditional banks, it may be a choice for banks without a strong established brand.
3. **Bank as a product provider**. In this model, the bank gives up control of the client interface and competes by using the strengths of its products. Banks gain access to clients through third-party platforms or competitors.
4. **Bank as a client interface provider.** In this model, banks retain control over the user interface and remain the main interface for clients and their financial needs. However, they will no longer provide their clients with their own banking products and services. Instead, they will offer products and services through their own interfaces from different providers, including other banks, new players and financial and technology companies, allowing clients to freely choose their preferred third-party products.

This is already happening today in the asset management sector with emergence of retail investment platforms. This option would require banks to adopt a new business model. Existing banks considering this route would benefit from their strong, established brands. This option, however, is the most demanding choice in terms of technologies necessary for real-time integration with the ecosystem of third-party providers as well as advanced data analytics capabilities. Banks can act as a combination of these options, with the strategic alliances of traditional banks and FinTech playing a significant role. Thanks to their strong brand, expertise and experience, traditional banks will benefit from entering this new the market early.

4. COLLABORATION

For FinTechs and traditional financial institutions, there are two basic options - to work together or make own way. FinTechs' cooperates with traditional banks mainly in order to gain access to bigger customer base. More than 70% of FinTech's investments are realized in segments of individuals and small and medium sized enterprises (SMEs) that accounts for around half of the profits in banking sector [2]. The focus is in particular on mobile applications such as mobile point-of-sale solutions, cross-border payments and lending, blockchain technology and wealth management. FinTech's offer is usually highly personalized.

Three quarters of FinTech still need and prefer co-operation with traditional banks. They consider it to be advantageous for the following reasons: greater visibility through partnership with a strong partner, obtaining economies of scale, gaining customer's trust, better distribution of own infrastructure, access to capital. Most of the FinTechs wants to work on its own, some want to be taken over by other fines and only a minority wants to be taken over by a traditional company. When it comes to co-operation, White Label solutions are preferred in 66.4%, integrated in-house solutions in 65%, full outsourcing is next, fintech using API and in-house solutions alone are last [4]. On the other hand, FinTech see following as the main obstacles to collaboration: rigidity of traditional banks, the unwillingness to co-operate, cultural differences, regulation, IT compatibility and product cannibalism.

Despite the fact that FinTech undoubtedly change the structure of the banking sector, they have not fundamentally disturbed the competitive environment, yet. Banks maintain market leadership due to three factors that work in their favor [8]:

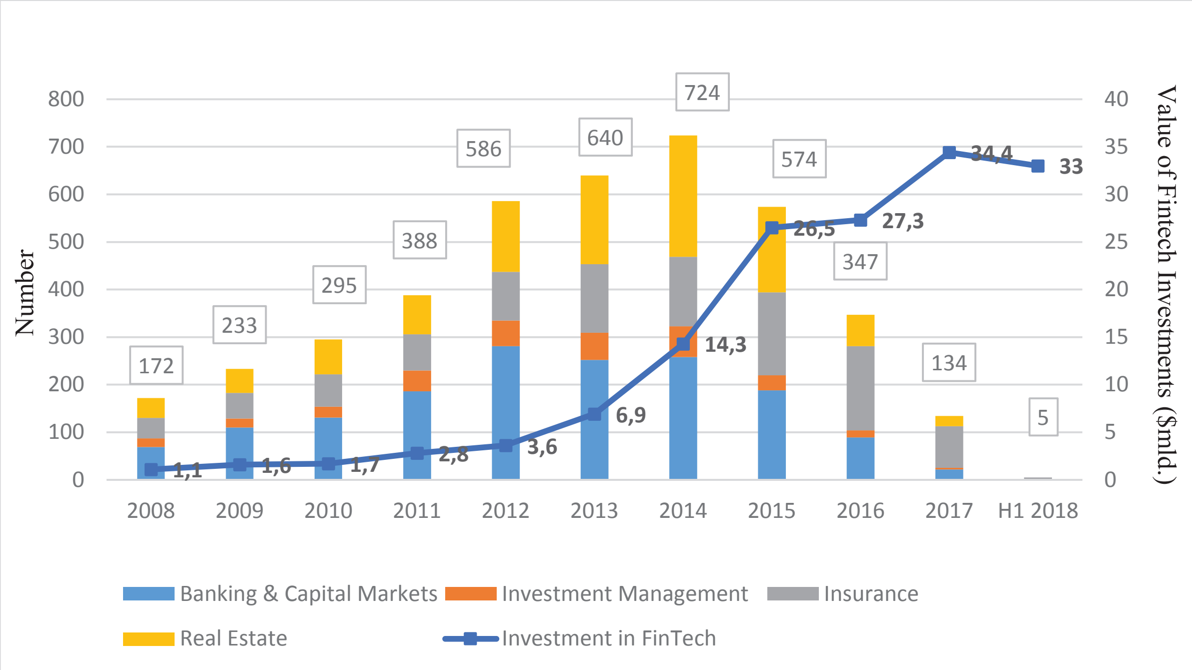
- Regulatory barriers to entry
- The natural inertia of customers to switch
- The capital to absorb, partner with, or replicate fintechs.

It is estimated that banks spend roughly 60% of their IT budgets for maintaining older IT systems, only 24% for development and 16% for innovation [14]. The strategic partnerships of traditional banks with fintech help banks differentiate not only by the quality of the online portal but also by the scope and nature of provided services. On the one hand, fintech represent opportunity for established banks to strengthen their market position and differentiate, while on the other hand they require banks to adapt to the agile workflow and innovative pace of new market players.

5. INVESTMENTS

Investment trends in FinTech changed significantly during 2008-2017. Between years 2008 and 2014, the number of newly founded FinTech rose from 172 in 2008 to 724 in 2014, which is more than 4 times increase [9]. In 2015, the first drop was recorded, this trend is still present (see Figure 1).

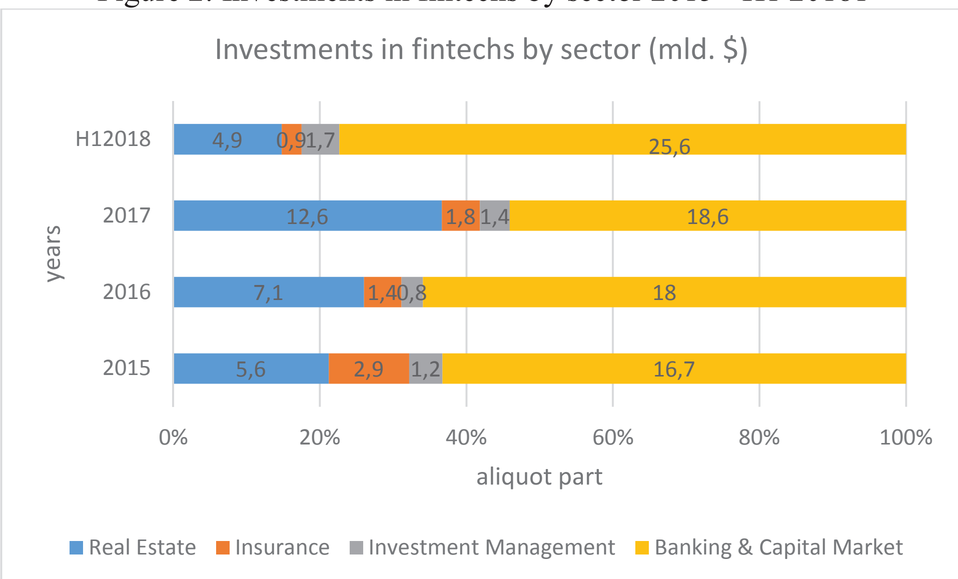
Figure 1: Number of FinTech companies founded by year, 2008–H1 2018



Source: Author based on [10]

In spite of the decrease in the number of new FinTechs, the volume of investments in FinTechs has significantly increased (see Figure 2). The biggest disparity between declining number of new FinTechs and volume of investments was recorded in the Banking & Capital Market sectors. The sharp drop in the number of newly founded Fintechs was caused by increased investors' demands, not only for technical and know-how but also for management. Investment focus shifts from "cool" generic ideas to comprehensive solutions, to specific issues and investing in experienced companies.

Figure 2: Investments in fintechs by sector 2015 - H1 20181



Source: Author´s based on [10]

FinTech's knowledge of technology and technical know-how still largely outweighs what they do not know about the financial industry and successful partnerships based on the fact, that each party has more to gain than to lose by cooperation. Successful partnerships require a holistic approach to challenges, ranging from understanding the challenges, focusing on innovation, agility and risk mitigation, common goals and clear visions.

CONCLUSION

Digitalization is not a one-time event, but rather a sustained pressure towards innovation, that will shape customer behavior and the long-term structure of the sector of financial services. The challenges resulting from Digitalization of financial services have opened up the banking ecosystem and changed the basic rules, which requires adequate transformation of existing business models.

We identified four key aspects of success in the financial sector, based on the Kavadias's transformative business model: personalization, asset sharing, cooperative ecosystems and agility. It confirms the real transformation changes in the financial services sector and offers commercial opportunities for banks.

Traditional banks proactively cooperate with FinTech, which really opens them with considerably more opportunities. Banks are mainly focusing on improving products and services for customers, reinforcing relationships with key customers. This could be considered as sustain innovation, yet not a disruptive innovation, according to the theory of disruptive innovation. FinTech tries to gain a customer base in the bottom parts of the financial market or try to create whole new market, but it is not enough to compete against traditional banks with an established brand history, an existing customer base and above all, experience in the industry. The biggest risk to the existing model so far presents global GigTech. Elimination of these risks depends on the regulations of the financial market, competition rules and safety standards of financial services.

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