

# *The main challenges facing the retail banking industry in the era of digitalisation*

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*Abstract.* Both the internal (micro) and external (macro) environment of banking institutions have changed significantly, redefining the competitiveness of the banking sector. The main changes observed lately, which will undoubtedly modify the view of future banks and banking, constitute: the new generation of bank customers and new client expectations, increasing competition from the FinTech, the digitalisation of the economy and the society, as well as new legal regulations - e.g. Payment Services Directive or Payment Accounts Directive. In this context, the aim of the article is to show the crucial changes in the internal and external environment of banking institutions and to identify the main challenges for banks in the near future. This paper examines the following research questions: (1) What factors and trends are the most disruptive for the modern banking industry? (2) What measures do banks have to take in order to meet both their new clients' expectations and increasing FinTech competition? The basic research method used in the study is a review and a critical analysis of the subject literature as well as the survey method.

*Keywords:* main banking challenges, disruption of the banking industry, digitalisation, Millennials, FinTech, customer centricity.

*JEL Codes:* G21, G23, D12, O33, G28.

## **1. Introduction**

Changes constantly occurring in the business environment necessitate their identification, monitoring and a continuous adaptation of business to new conditions. An appropriate adjustment of the companies requires them to notice and make a correct use of the possible chances and avoid or minimise potential threats. It seems that the environment of banking institutions has changed significantly in recent times, redefining the attributes of competition for the modern bank. The new circumstances force banks to change their activity in many areas.

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The main changes that have been observed lately, which will undoubtedly modify the view of future banks and banking, have been presented in Table 1.

*Table 1. The main changes in banks' internal and external environment*

<b>Micro (internal) environment:</b>	<b>Macro (external) environment:</b>
A new generation and new client expectations	The digitalisation of the economy and the society
Increasing competition from financial technology companies (FinTech)	New legal regulations, requirements and expectations

Source: Author's own elaboration based on [Capgemini, Efma 2016; SAP 2016].

Among the key changes identified in the bank's internal environment, there is the emergence of new generations of customers (the Y and Z Generations). This phenomenon is extremely important for banks, as the new customer generations, who grew up in different social, economic, cultural and religious realities, present behaviours different from those of previous generations, introduce new customer expectations and modern attitudes, also in the area of finance, thus creating new grounds for building and assessing banks' competitiveness levels. It seems that for the banking activities of today, it is extremely important to recognise the needs of Y Generation members, referred to as the Millennials. This generation includes people born between 1980 and 1995, who are now young adults and are becoming new customers of financial institutions, while the Z Generation (the so-called iGen) is younger and includes people born between 1996 and 2010. As of 2017, the Z Generation members are aged 7 to 21, so, at this moment, it is difficult to analyse their financial habits and behaviours. As of 2017, the Millennials are aged 22-37. At the close of 2014, the USA population of this group was estimated at 75 million people and it is expected to reach 85 million by 2050 – in other words, 21.4% of the total population [Nava, Karp, Nash-Stacey 2014, p. 1]. As of 31 December 2016, in Poland, this group had 9,314,128 members [GUS 2017, pp. 67-68].

Banks, as entities pursuing their customer focus, should therefore constantly monitor the financial behaviours of the Millennials – a generation significant both in terms of size and of their high demand for banking services – and, on this basis, aptly recognise the expectations of the latest wave of customers. It is also important to already start looking at the behaviours of the Z Generation, the youngest customers whose demand for banking services will surely grow gradually over the coming years.

Undoubtedly, the competitiveness of modern banks is and will be affected by the emergence of FinTech (Financial Technologies) companies. FinTech companies are usually start-up firms based on using software to provide financial services. According to the International Organisation of Securities Commissions (IOSCO), the term “FinTech” describes “*a variety of innovative business models and emerging technologies that have the potential to transform the financial services industry*”

[IOSCO 2017, p. 4]. FinTech firms are characterised by innovation and flexibility. The amenability of new generation members to non-bank financial institutions, as well as the lack of loyalty toward banks, allow FinTech companies to have a disruptive influence on banks and create a real threat for the future of these institutions within the nearest few years.

FinTech firms operate in many areas, for example: digital and mobile payments, personal finance, personal loans, traditional deposits/saving accounts, wealth management, bitcoin and cryptocurrency. As the data from World Retail Banking Report 2016 shows, “*nearly two-thirds of customers across the globe are using products or services from FinTech firms, ratcheting up the threat of the disintermediation of banks*”. It should also be emphasised that younger clients are more likely to use the non-traditional products of financial intermediaries, and considering the geographical location, a larger demand for those has been seen in the emerging markets [Capgemini, Efma 2016, pp. 17-19]. From the customers’ perspective, FinTech companies have value in being easy to use (81.9%), offering faster service (81.4%) and providing a good experience (79.6%).

The omnipresent digitalisation creates new basis for the attractive image of FinTech firms, enables to build a competitive advantage, while simultaneously influencing the financial behaviours and expectations declared towards bank institutions. As revealed by Pieriegud [2016], the digitalisation of the economy and the society is one of the most dynamic changes observed nowadays. On the one hand, it opens new possibilities for creating business models, on the other hand – uncertainty and different kinds of threat relating to the social effects of the automation of production processes or widely understood security, for instance. The author emphasises that digitalisation seen as a constant process of real and virtual world convergence becomes the crucial accelerator for innovations and changes in most economy sectors.

The main changes in the banks’ macro (external) environment also include new legal regulations, requirements and expectations. Taking into consideration the main area of discussion in this article, it will focus on the Payment Services Directive (PSD2) and Payment Accounts Directive (PAD) and their impact on the banks’ competitiveness level. The authors of World Retail Banking Report 2016 [Capgemini, Efma 2016, pp. 25, 28-29] emphasise the role of PSD2 in the context of application programming interfaces (APIs). They identify that the open architecture of APIs is essential to the future of banking. The open architecture of APIs offers the ability to take advantage of FinTech assets, such as speed and creativity, and enables banks to meet the expectations of modern clients.

This article deals with the problem of the crucial challenges facing the modern banking industry. In this context, the aim of the article is to show the crucial changes in the micro (internal) and the macro (external) environment of financial institutions and to identify the main challenges for banks in the near future. This paper examines the following research questions: (1) What factors and trends are the most challenging for the modern banking industry? (2) What measures do banks have to take in order to meet both their new clients’ expectations and increasing FinTech competition?

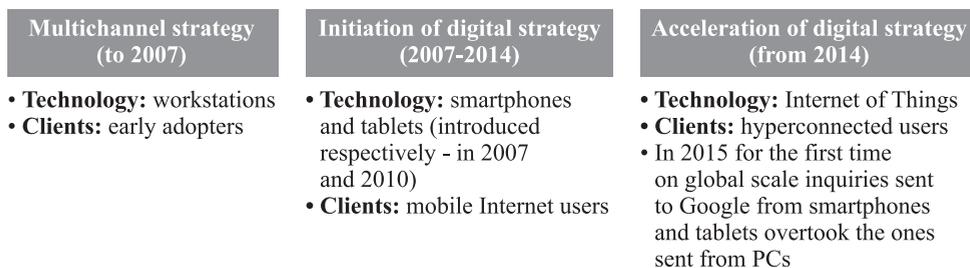
The basic research method used in the study is a review and a critical analysis of the subject literature and the survey method. In this paper, the author uses research, information and insights contained within reports, papers and interviews referring to the banks' future. In order to better understand the significance of the main changes in the internal and the external environment for the bank institutions, it is useful to show the crucial outcomes of a global study of 500 senior banking and insurance executives by Cognizant, Marketforce and Pegasystems [2016]. The analysis of the new generation of client expectations is based on the primary data derived from the results of a survey – I surveyed 300 students of the Wrocław University of Economics.

## 2. Crucial changes in the external environment - the omnipresence of digitalisation and the main legal regulations

As the digitalisation and legal regulations influence the change of the clients' attitudes, behaviours and expectation as well as the emergence and activity of FinTech companies, it is necessary to show these phenomena in the first place.

The crucial feature of digitalisation is its omnipresence. The authors of Deutsche Bank's report entitled: *Delighting Customers and Democratising Finance: Digitalisation and the Future of Commercial Banking* [Forest, Rose 2015, p. 3] remark that digitalisation impacts everything. They claim that the impact on digitalisation is transformative, especially with respect to finance, going far deeper than the cost-saving potential from innovative IT, or even from sourcing new revenue streams. In the financial services industry, the digital revolution is transforming the way customers access products. Moreover, new digital technologies are in the process of reshaping the value proposition of existing financial services [PwC 2016, pp. 3, 5].

*Diagram 1. The role of the smartphone – from multichannel towards digital strategy*



Source: Author's study based on [A.T. Kearney, Efma 2014; Dziejguć, Guzek, Olczak 2016].

One of most important factors, which have a strong impact on customers' behaviours in the area of finance, is the emergence of the smartphone. M. Dziejguć, M. Guzek and M. Olczak [2016] state that, nowadays, we may undoubtedly observe a big redefinition of using financial services, and its main catalyst is the smartphone.

The year 2015 was critical for using mobile devices because, for the first time on a global scale, inquiries sent to Google from telephones and tablets overtook the ones sent from PCs. In order to meet new client expectations, banks shift their activity from physical channels towards digital/mobile channels.

The role of the smartphone in the context of shifting firm strategy from multichannel towards digital is presented in Diagram 1. As shown above, digitalisation changes the feel and touch of financial services not only through the widespread availability of tablets and smartphones or the 24/7 Internet access, but also through the introduction of the Internet of Things (IoT). IoT basically means wearables, smart TV or smart home appliances. Among the other trends important for banks and related to digitalisation, there are also:

- public cloud infrastructure;
- big data analytics;
- Artificial Intelligence (AI): cognitive computing and machine learning (virtual assistants, Robo-Advisory, e.g. in wealth management);
- distributed ledger technology (DLT) – e.g. blockchain;
- biometrics and identity management systems (e.g. finger vein or selfie pay);
- APIs;
- software-as-a-service solutions (SaaS).

The crucial areas, which are accelerated by digitalisation, constitute: customer experience, technological development and economic benefits. In order to effectively use these opportunities, banking institutions have to implement a digital business model, so they should “*develop a clear strategy that optimises processes and costs, manages rising data volumes, connects data to the business and fulfils the growing number of regulatory requirements*” [Forest, Rose 2015, p. 4].

The sixth McKinsey’s annual report [McKinsey & Company 2016] on the global banking industry highlights the importance of digitalisation in the nearest future too and shows a reorientation towards the customer and the digital environment as one of the three themes on which senior banking executives must focus in order to successfully address the transformation needs of their institutions. The authors of this report think that banking institutions are forced to digitise the essential customer journeys to provide them with the same level of delight as in the case of FinTechs’ services.

The authors of the report: *Capital Markets and Investment Banking 2016: Time for Tough Choices and Bold Action* show that bank institutions can reduce front-office costs – through electronic onboarding, KYC (know your customer), e-CRM (customer relationship management) tools and automation. Other important kinds of cost, which can be reduced by digital innovation, constitute: operations, IT and risk & finance. Many banks have serious difficulties in adjusting IT systems in a certain time. The main problems constitute obsolete basic systems, the complex architecture of systems (often additionally complicated as a result of a bank merger), a dependence on IT service providers as well as the lack of adequate competences among workers

(data science, customer experience design) and a limited ability of the key decision-makers to introduce changes in the organisations that they manage.

If banks are to take full advantage of the opportunities brought by new technologies, in many cases, they still have to take measures leading to [A.T. Kearney 2014, pp. 3-10; Pyka, Sieradz 2015, p. 29]:

- real-time advanced analytics, enabling a real-time analysis of information about clients' behaviours and effectively offering the next best action, using a well-adjusted channel;
- changing the way of cooperation between marketing and IT departments – choosing an agile model, enabling permanent innovation;
- effective cooperation between functional areas, such as: distribution channels, marketing, purchases or IT;
- organisational flexibility;
- building competence within digital transformation (by gaining experts, trained in other sectors and by educating own staff);
- supporting digital transformation by CEOs (who become Chief Cultural Transformation Officers), since people's engagement is the key challenge.

The eight major obstacles that prevent banks from following the latest digitalisation trends include restrictions posed by their legacy systems, their lack of understanding of new technologies, disruption of their existing business models, a lack of trust in new technologies, legal barriers, perceived lack of scalability, customer behaviours, and costs [TFSA, Z/Yen Group Limited 2017, p. 23].

It is important to highlight that new technologies bear news risks for which there is no remedy yet. The dangers within cybersecurity rise significantly. Mobile devices seem to be a significant problem nowadays. One of the reasons is that the system of preparing and distributing mobile applications hampers the control over their security. It is very important, as safety is the most essential factor in a bank-client relation assessment [Zarzycki 2016, p. 16]. González-Páramo [2017] finds other two important risks. The advancement of automation and artificial intelligence also raises certain ethical and political dilemmas, which have yet to be resolved (e.g. social well-being, inequality and the stability of political systems, determine who is responsible for failings with serious consequences deriving from an incorrect behaviour of a robotic system). Moreover, the anonymity in the case of some possible applications of blockchain involve risk for the prevention of money laundering and terrorist financing. New technologies for storing and processing data (e.g. cloud computing) and data analysis techniques pose new challenges for data protection. Despite some kinds of risk, digitalisation undoubtedly accelerates the development of banking institution on the one hand, but fosters emergence and activity of FinTech companies on the other hand.

In the past few years, the legal environment of the banking sector saw many important changes, too. The prevailing trends in regulatory changes seem to cover:

1. consumer safety;
2. enhanced competitiveness on the banking services market;
3. popularisation of non-cash transactions within the European Union;

4. counteracting money laundering and terrorist financing;
5. strive to introduce caps on additional charges for customers.

The most important regulations include: PAD, PSD2, Directive on markets in financial instrument (MIFID2), Basel III; Mortgage Credit Directive (MCD), Regulation on Interchange Fees for Card-Based Payment Transactions, General Data Protection Regulation (GDPR), Foreign Account Tax Compliance Act (FATCA), Regulation establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund (SRM Regulation).

One of the most important regulations on the functioning of the payments market is PAD. One of the primary objective of the PAD is to ensure:

1. transparency and comparability of fees charged to consumers in respect of their payment accounts across the EU;
2. possibility of transferring payment accounts within a Member State as well as to establish the rules facilitating the opening of payment accounts abroad, including the setting of minimum standards to be met by such accounts;
3. universal consumer access to basic payment accounts in order to ensure that every consumer who legally resides within the European Union has cheap or free access to basic banking services.

The PAD provisions are intended to promote non-cash transactions within the European Union and to increase consumer awareness of the fees charged to them by payment service providers, which will help consumers compare offers and promote market competitiveness.

In the context of new opportunities and new challenges faced by banks, a legal act that has recently attracted much attention of both practitioners and academics seems to be the Payment Services Directive 2. The Directive will facilitate the emergence of new payment services: payment initiation services (PIS) and account information services (AIS). With PIS, the service provider will be able to log into the electronic banking system of the bank managing the customer's account and order a payment, while with AIS, the service provider will be able to obtain transaction history information and account balance. The key providers of both services will be Account Servicing Payment Service Providers (ASPSP).

In addition to the introduction of new payment services, the Directive strengthens the position of regulatory authorities by extending the scope of cooperation and information exchange between the Member States' regulatory authorities involved and by assigning a new role to the European Banking Authority (EBA). The most important tasks of the EBA under PSD2 will include [Gawroński, Szepietowski, Łukaszewski (2016), pp. 203-204]:

- developing regulatory technical standards for authentication and communication between specific payment service providers;
- defining a framework for cooperation and exchange of information on cross-border activities between the competent authorities of the originating Member State and the receiving Member State;

- management of a free, electronic and centralised registry, publishing the names of payment service providers;
- acting as the coordinator for the management of information on security incidents within the payment services area.

The latter task directly addresses the issue of improving the security of payments for customers. An additional aspect of the PSD2 contribution to improving customer security is strong customer authentication (SCA).

The Directive favours the idea of open banking. The incorporation of open APIs enables third parties to develop value-added solutions and features that can easily be integrated with bank platforms. The API perfectly matches the concept of Bank-as-a-Service (BaaS). The BaaS concept is about banks operating in practice more like a supplier and operator of banking technologies than a bank service provider. An example can be the Fidor Bank, which, by offering BaaS, enables its customers to use the services of more than 50 partners, thus significantly expanding their offer and improving the bank's competitiveness.

Thanks to the opportunities brought by the PSD2, customers will be able to use even more services - for instance, it will be possible to use a digital identity confirmed by the bank to log into e-government services. The API allows for an extensive enrichment of bank services with other financial services.

Despite the introduction of numerous new regulations in many areas, we still have to deal with the lack of proper regulations and a conservative attitude of regulators to implemented innovations. Nowadays, the regulatory authorities still face many challenges. As González-Páramo [2014] shows, the areas to which regulators and supervisors need to pay special attention constitute: new risks related to the proper functioning of new technologies and their vulnerability to external attacks (cybersecurity) as well as risks referring to new business models (e.g. P2P lending) involving consumer and investor risk protection and financial stability.

Undoubtedly, the new trends arising from digitalisation require new legal regulations. These are often areas that are not covered by any existing legislation due to their specific nature, or areas bringing about new risks associated with the implementation of new technological solutions. One of the important issues is to ensure the safety of customers and financial institutions who implement and use innovative solutions.

### **3. The emergence of FinTech and Millennials' expectations as the factors disrupting the banking industry**

One of the features, which are specific to Millennials, is that, in order to meet their financial needs, they turn to specialised FinTech players more willingly. FinTech is perceived as *“a dynamic segment at the intersection of the financial services and technology sectors where technology-focused start-ups and new market entrants innovate the products and services currently provided by the traditional financial services industry”* [PwC 2016, p. 3]. According to the report „The Future of FinTech

and Banking”, the funding of FinTech start-ups amounted to \$2bn in 2010, reaching \$12bn in 2014 and \$15.5bn in 2015 [Accenture 2015, p. 4]. In 2015, the total online alternative finance market volume for Europe reached €5,431m with an annual growth rate of 92%, whereas the UK’s market share was 81% [Cambridge Centre for Alternative Finance 2016, p. 24-25].

As mentioned in the introduction, FinTech firms operate in areas such as: digital and mobile payments, personal finance, personal loans, traditional deposits/saving accounts, wealth management, bitcoin and cryptocurrency. Particularly in the case of the payments industry, the high level of FinTech activities is determined by digitalisation. New technology-driven payment processes, new digital applications that facilitate easier payments, alternative processing networks as well as the increased use of electronic devices to transfer money between accounts would not be possible without the digitalisation [PwC 2016, p. 6]. FinTech firms use new technology to create innovative solutions, e.g. a peer-to-peer (P2P) lending platform or a crowdfunding platform.

In Poland, a few outstanding categories can be observed [Dziewguć, Guzek, Olczak 2016, p. 75]:

- payments (Poland is perceived as the country of a very fast development of new methods in this area) – e.g. iZettle, eCard, Dotpay, PayU, Blik, SkyCash, Blik;
- transfers and digital and mobile payments – e.g. Azimo, Valuto.pl;
- currencies – e.g. Cinkciarz.pl, internetowykantor.pl.

As shown by Capgemini’s 2016 survey of 16,000 bank customers in 32 countries, the benefits that FinTech service consumers can experience go far beyond the innovation capability as such. Customers appreciate these institutions primarily for the ease of use (81.9% of responses) and the speed of service (81.4% respectively). Then, the consumers pointed out such features as delivering positive customer experience (79.6%), lower fees (76.9%) and more numerous features than the traditional financial intermediaries can offer (63.5%). It should also be stressed that 54.8% of respondents stated that their motive for using FinTech services was non-existence of a specific service at banks, while another 47.7% appreciated the integration with social media. For comparison, it is worth pointing out that banks appreciate the FinTech competitors primarily for the ease of use (89.1%), the speed of service launch (74.3%), and lower fees (68.3%) [Capgemini, Efma 2016, p. 21].

Traditional financial institutions, including banks, are aware of the threats posed by the activities of FinTech companies. With reference to PwC’s research, it should be noted that up to 67% of the 435 respondents representing financial institutions other than FinTech companies pointed to margin squeezes as the main threat to their operations, which results from the emergence and operations of new technology providers within the financial market. Less frequently, the respondents pointed to the threat of losing a part of their market share (59%). Those most concerned with the possible loss of their market share to the benefit of FinTech institutions are the respondents operating in the money transfer and payment segment who estimate that they may lose up to 28% of their market share. While the surveyed banks

forecast a 24% reduction in their market share, the asset management and wealth management institutions expect a drop by 22% [PwC 2016, pp. 19-20].

Some innovative solutions are currently observed in other areas of financial services; however, together with the development of a digital ecosystem and technology, they should significantly accelerate, e.g. in such fields as [Dziewguć, Guzek, Olczak, 2016, p. 77]:

- the world of investment products (especially ones based on aggregation and artificial intelligence, which will provide wider access to high-quality aid, facilitating clients to make decisions, e.g. robo-advising);
- financial product for big firms and corporations, which while developing will also join the digital ecosystem – at present they are looking for solutions supporting automation and digitalisation as well as providing service security);
- solutions based on distributed ledger technology.

The PwC Global Fintech Report 2016 highlights that customer centricity is perceived as “*a shift that is being crystallised in the DNA of FinTech companies*”. It is confirmed by results of a global survey conducted by PwC in 46 countries among 544 respondents – players from the world’s top financial institutions. According to these outcomes, 80% of FinTech firms and only 53% of financial institutions believe that they are fully customer-centric. Meeting changing customer needs with new offerings and delivering tailored products are shown as the most important FinTech impact on activities of financial institutions by 2020. The other significant fields constitute, respectively: leverage of existing data and analytics, enhancing interactions and building trusted relationships as well as strengthening business with sophisticated operational capabilities [PwC 2016, p. 8].

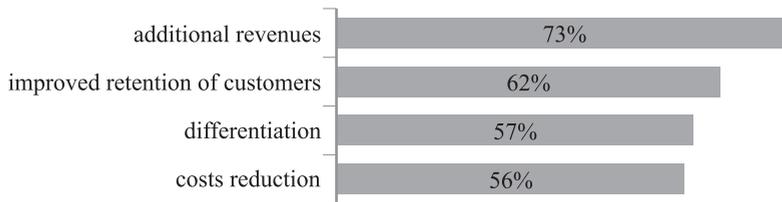
At present, many banks find it difficult to compete with their highly-specialised competitors. This would require numerous changes in their current administrative system, huge effort and commitment from the entire organisation, and constant tracking of new trends.

Results of a survey conducted in 2016 by Capgemini show that banks look at FinTech companies primarily as potential cooperation partners. Only 27.7% of the surveyed banks indicated that they saw FinTech firms as competitors, while 65.3% saw them as partners [Capgemini, Efma 2016, p. 27].

In accordance with the research results obtained by PwC, as presented in Figure 2, a significant majority (73%) of respondents saw cost reduction as the main benefit from FinTech companies’ development. Traditional financial institutions expect that thanks to collaboration they will be able to streamline their core processes, services and products, and reduce the actions that are consistently ineffective.

Other important aspects that could get strengthened through cooperation with FinTech institutions, include diversification of customer base, retention of customers, and additional revenue. Due to the observed improvement in speed and ease of payment-making, the expectations for additional revenue were particularly frequent (74%) with institutions operating in the money-transfer and payment segment.

Figure 2. Crucial benefits relating to emergence and activity of FinTech firms



Source: Author's own elaboration based on [PwC 2016, p. 21].

To sum up, FinTechs offer solutions that can better address customer needs by offering enhanced accessibility, convenience and tailored products [PwC 2016, p. 8]. As the authors of Global FinTech Report (2016) show the FinTech is more than technology. It's a way of thinking.

As research outcomes show, Millennials are more likely than other generation to purchase non-bank services and products. The Millennials, being a generation brought up in specific social, economic, cultural and religious environment, differ strongly from their predecessors. In 2014, as many as 30% of Millennials surveyed in the US declared that they were non-confessional, while research conducted in the UK showed that only 20% of Millennials identified with the views of any political party [Ipsos Mori 2017, pp. 18, 20, 24]. Millennials' scepticism about religious and political issues extends also to banks. A half of this generation's members believe that their bank is no different than any other [Nava, Karp, Nash-Stacey 2014, p. 6]. Pyka, Sieradz [2015] and Ptak [2016] reveal that the characteristic features of this generation, which have a strong impact on customers financial behaviours, are as follows:

- high absorption of new technologies and unlimited interaction with product and service supplier with the use of smartphone and/or internet (available 24/7);
- appreciate simplicity and comfort – rapidity and facility of using technology, integration with other services they use;
- expect rapid service – supply or activation;
- search, assess and compare on their own offers of many competing suppliers;
- get their friends' opinion and guidance;
- expect personalised offer – little tolerance to spam (i.e. wrong suggestions);
- are characterised by poor brand commitment – they choose better terms and service;
- perceive service providers in a different way – financial services do not need to be offered by banks;
- declare specific attitude to privacy – do not appreciate it as much as older generations and do not see so clearly potential threat relating to its loss.

Millennials are the first generation for whom the Internet is their natural environment (*digital natives*). They use the Web, mobile technologies and social media all the time. They use them to make transactions and share opinions about

products and services. Representatives of this generation are most likely to share their opinions about products, services and brands with: text messages - 44%, social media - 38% or instant messengers - 38% using desktop computers, laptops, tablets or smartphones [Goldman Sachs 2014].

In accordance with a survey conducted in the US in 2014, more than 70% of the Millennials have used mobile banking in the past 12 months, and about 94% of them were active users of online banking. In accordance with a study by Salesforce Research, which involved a sample of 1184 consumers in the US, as many as 82% of the Millennials are of the opinion that offering mobile banking products is, therefore, a solution extremely beneficial to banks. Only 13% of people belonging to the Millennials indicated that they did not use mobile banking applications [Salesforce Research 2016, p. 5].

Millennials expect real-time communication, with free choice of the communication channel that is most comfortable for them, and furthermore, they point out that it is important for them to get tailored offers from banks. Meanwhile, the research results presented in the “Millennial Banking Insights and Opportunities” report demonstrate that nearly a half of the respondents believe that the activities of banks still do not meet these needs. 40% of respondents stated that they did not receive personalised offers, and 46% - that the marketing materials offered by banks are not matched to their future plans [Fair Isaac Corporation 2014, pp. 7-8].

The amenability of new generation members to FinTech companies appears not only in the US, but in other regions of the world, too. Table 2 presents the comparison between Millennials and members of other generations.

*Table 2. Millennials and other age groups using financial products/services from FinTech firms by region, 2016*

<b>Region</b>	<b>Millennials</b>	<b>Other age groups</b>
North America	62.0%	47.0%
Western Europe	65.6%	53.2%
Central Europe	72.6%	63.1%
Latin America	83.2%	72.9%
Middle East & Africa	71.2%	57.4%
Asia-Pacific	60.9%	53.0%

Source: Author’s own elaboration based on [Capgemini, Efma 2016, p. 19].

The features attracting young clients constitute technology, simplicity, transparency and anti-bank rhetoric. Conducted surveys indicate that half of Millennials consider their bank no different than other banks and four biggest brands in the banking

industry are among the “*least loved*” by members of Millennials [Nava, Karp, Nash-Stacey 2014, pp. 4-6]. According to PwC’s study [2016], it is necessary to emphasise that Millennials’ preference for a state-of-the-art customer experience, speed and convenience will further accelerate the adoption of FinTech solutions in the near future.

Over 50% of Millennials are already using or considering payment companies like PayPal or Venmo and 32% of them - mobile payment providers like Apple Pay, Google Wallet and others. Compared to the age 50+ demographic, members of Millennials are over ten times more likely to consider the use of peer-to-peer lenders (2% vs 23%); however, it is not surprising when we take into account the fact that Millennials are coming of age in the sharing economy [Fair Isaac Corporation 2014, pp. 3-5].

The Millennials are not a generation of loyal customers. The simplicity of comparing offers and switching bank accounts make people become less loyal. The internet does not promote permanent relations because clients are tempted by various innovations. Moreover, in order to guarantee the competition transparency some governments create the infrastructure facilitating the choice of the best bank offer as well as switching account [Zarzycki 2016, p. 15].

#### **4. Financial institutions’ opinions on the most important challenges for banking in the coming years vs. the expectations of new generations of bank customers acquired on the basis of own research**

According to the study “Digital Business Transformation” [Wade 2015], 40% of today’s leading companies will be displaced from their market position by a digital disruption in the next five years. Nowadays, clients expect the same level of digital experience from financial service providers as offered by companies such as Google, Amazon, Facebook or Apple, so customer centricity has become a main priority enabling to meet the needs of digital native clientele [PwC 2016, p. 8].

The results of a global study of 500 senior banking and insurance executives by Cognizant, Marketforce and Pegasystems [2016] highlight that banks are aware of the necessity of changes in many areas of their activity. According to findings of this report, the challenge that all organisations face is that there is no single technology to which they must adapt but instead a series of disruptions assaulting them almost simultaneously (digitally-savvy new entrants, followed by the peer-to-peer model, the IoT or DLT). The feedback from 500 respondents allowed the authors to identify crucial challenges. If we order the identified challenges by the percentage of responses, this produces the following list:

1. IoT: moving from price, to value;
2. wearables: payments on the go;
3. full omni-channel integration;
4. self-service customers;
5. customer experience: staying relevant;

6. virtual assistants and avatars;
7. personalisation;
8. blockchain.

Taking into account long-term success, the great majority of interviewees (93%) believe that finding innovative ways to provide value-added services to customers based on data-driven insight will be crucial in the nearest future (wearables, smart TV or smart appliances). Moreover, 91% said that making a financial transaction using wearables will be common for the consumer by 2020. This amount declines in case of smart TV and smart home appliances (reaching respectively 87% and 68%).

89% expect to achieve full omni-channel integration by 2020 (73% expect to integrate wearables into their channel strategy, while 70% expect video chat to largely replace branch appointments). Relating to need of the development of mobile banking, the authors of the analysed study highlight that, for the generation that has their smartphone close at hand (even during sleep), technology solutions must be user-friendly, secure and reliable – always. Moreover, the report proves that, survey after survey, it is shown that consumers, particularly Millennials, have an appetite to switch to smart digital solutions that offer a frictionless end-to-end experience.

85% of interviewees perceived using of computer-generated recommendations in contact centres as a way to reduce errors and ultimately improve customer outcomes, while 79% of respondents find that their organisation will have to change its operations significantly to keep pace with customers aged 18-25.

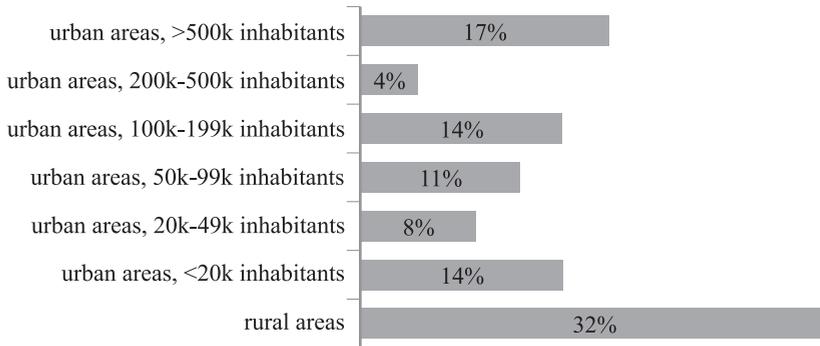
The results presented in report prove that virtual assistants and a human-like avatar, as well as personalisation, are another important trends. According to the opinion of the vast majority of respondents – 76% - *“widespread use of virtual assistance (such as Siri on the iPhone) means customers are more willing to engage with automated assistance and advice”*. Nearly 75% respondents stated that, in the future, customers will interact with a human-like avatar until they reach the point of needing to speak to a real person. The respondents recognise the need for personalisation too – 75% of examined financial institutions expecting to offer full personalisation and 83% planning to predict individual requirements by 2020.

60% of interviewees perceive blockchain as the most significant technology referring to financial services. Only one in five believe that holding most of their financial assets in a blockchain wallet will be a mainstream practice for consumers by 2020, but 45% find that combination of this distribution ledger technology and peer-to-peer lending could herald the end of modern banking. It is interesting to note that 35% examined financial institutions have never heard of the blockchain.

In order to complement the survey results cited in the article and focusing on the opinions of the surveyed financial institutions, I conducted my own survey to hear the voices from the other side – the customers. Since, in the aforementioned survey, almost 80% of respondents find that their organisation will have to change their operations significantly to keep pace with customers aged 18-25, in February 2017 I surveyed 300 full-time students of Wrocław University of Economics who

belong to this age group (and thus represent the Millennial and Z generations) to recognise their financial behaviours, needs and expectations. The survey included students of Finance and Accounting. All the surveyed students use the services of banking institutions. With the gender criterion taken into account, the structure of sample was as follows: 71.3% were women and 28.7% - men. Figure 3 presents the structure of the sample in terms of the population of their place of residence.

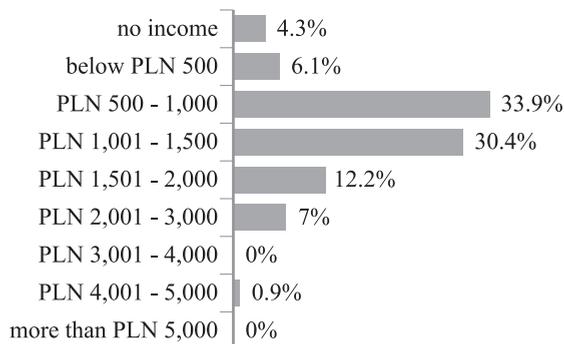
*Figure 3. Breakdown of the respondent group by population size of their place of residence*



Source: Author's own study.

Figure 4 shows a breakdown of the sample by monthly net income (lack of response 5.2%). The amount of monthly net income received by students includes money/financial resources coming from all income sources (work, grants, money from parents/legal guardians). In the sample 4.4% of students declared that they had a permanent job and 29.2% indicated that they worked temporarily.

*Figure 4. Breakdown of the respondent group by net income (%)*



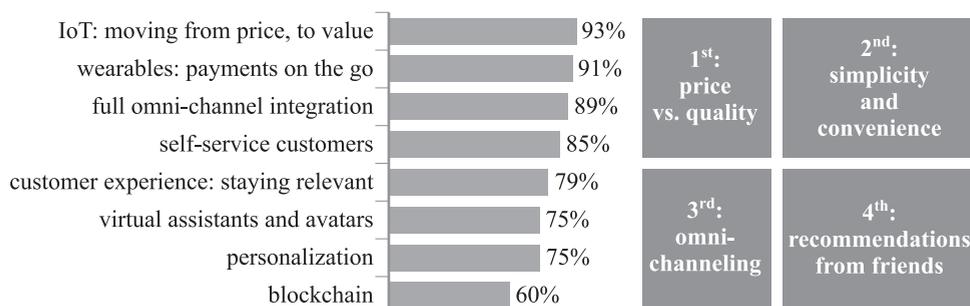
Source: Author's own study.

The question relating to new generations of banking customers expectations from banking was as follows: “Show which features are significant for you in case of bank services and mark three most important ones putting numbers 1 (the most important) to 3 next to them:

- Personalised service;
- Opinions on institution or service which I find on the internet;
- The fact I know the bank or I have already heard its name;
- Recommendations from friends;
- Omni-channel;
- Price;
- Price vs quality;
- Immediate services (providing or activation);
- Simplicity and convenience;
- Unlimited 24/7 interaction with a product and services provider with the use of smartphone and/or internet;
- Innovativeness of services”.

As the most important features emerge, respectively: price vs quality, simplicity and convenience, as well as omni-channel and recommendations from friends. The number 1 was assigned to the feature “price vs quality” most frequently and this choice was made for 25% of respondents (in the case of “simplicity and convenience” – 14%, “omni-channel” – 10% and recommendations from friends - 9% of respondents). Figure 5 presents a comparison of responses given by financial institutions, derived from a survey conducted by Cognizant, Marketforce and Pegasystems, and students - bank customers, derived from own study.

Figure 5. Crucial challenges for banks – comparison of responses from financial institution (by response share; left panel) and from bank customers aged 18-25 (ranked by importance; right panel)



Source: Author’s own elaboration based on own study and [Cognizant, Marketforce and Pegasystems 2016].

The students surveyed pointed out that the driver most important in their choice of a banking service is the “value for money” aspect. This means that banks that want

to look attractive to their youngest customers should take steps first to thoroughly understand their expectations and then equip the banking services with the values most important for the new generations. Some guideline as to the expected features that a bank service should have so as to be attractive to people aged 18-25 is provided by two more response groups. The surveyed students pointed out that the other two most important drivers of their choice of a banking service are simplicity and convenience (speed and ease of use of the technology) as well as omni-channel communication related to the service. Taking into account the responses provided by financial institutions, it seems that banks recognise the needs of new generation customers and most of the key challenges identified by these institutions address precisely the need to ensure simplicity and ease-of-use of the services offered (IoT: moving from price to value, wearables: payments on the go, self-service customers, virtual assistants and avatars), while the third most significant challenge recognised by financial institutions, in full compliance with the students' opinions, was omni-channel communication.

However, since the new generations are characterised by a lack of loyalty to their bank (considered no different from other banks), by their openness to non-traditional financial services, and – as some believe – an anti-bank attitude, another question that the students were asked in my survey was to demonstrate the level of their loyalty to their bank. In this case, the students were to tick all the statements applicable to themselves. Table 3 presents the responses obtained.

*Table 3. Responses to question about students' loyalty to banks*

<b>Responses ranked by response percentage:</b>	<b>%</b>
I choose product looking at price and quality, so I often change brands	73.9
When, in the future, I buy some products and services, I will not only base on my bank's offer but, first of all, look at the price	59.1
So far, I have used only one bank's services	58.3
While shopping, price is more important than brand	50.4
I am satisfied with my bank's services and when, in the future, I need to buy new bank products, I will rather use my bank's offer	32.1
I am a loyal consumer - I am attached to brand	8.7

Source: Author's own study.

The students' responses seem to confirm the lack of brand loyalty among young consumers. The habitual behaviour of a large part of older generations, i.e. buying another banking service from the bank where the consumer already holds a current account, no longer prevails among the members of the Z and Millennial generations. Students declare their purchases to be driven by price and quality which frequently results in switching between brands. Although nearly 60% of respondents have used

only one bank so far, only 8.7% of them describe themselves as loyal consumers. Their use of a single bank's service to date is associated with their young age and low demand for banking services in general.

The author also intended to ask the students about their loyalty to banks as institutions, and about their readiness to embrace FinTech services. Therefore, the preparatory question was aimed to establish the students' knowledge of the FinTech concept and their ability to give an example of a FinTech firm. As the responses demonstrated low levels of their knowledge of the subject, the subsequent responses demonstrating their openness to FinTech services were deemed to have no cognitive value.

Referring to statements about FinTech the situation presented as follows:

- I know what a word FinTech means (34.8%);
- I am able to show FinTech areas or an example of FinTech institution (33.0%).

As the use of smartphones and the absorption of new technologies by members of the Millennial and iGen generations undoubtedly set new directions in the development of financial services, in my survey I also asked students about their use of smartphones. The part of the question relating to this area was as follows (responses ranked by response percentage):

*“Mark the statements characteristic for you:*

- *I never leave my smartphone (88.7%);*
- *While shopping online, I more often choose my computer than smartphone (71.3%);*
- *To use the internet, I far more often choose my smartphone rather than computer (65.3%);*
- *When I use a search engine, I more often choose my computer than a smartphone (34.8%)”.*

Nearly 90% of respondents said they never part with their smartphones. Students are much more likely to use the Internet via smartphone than via computer, but in their online shopping, computers are definitely popular. Tracking specific behaviours in this area within a new wave of consumers would allow tailoring services to the established consumer preferences. However, there is no doubt that in order to meet expectations of the new consumer generations, banks must shift their activity from physical channels towards digital/mobile channels.

It is interesting to highlight that, similarly as in the case of the global survey by Cognizant, Marketforce and Pegasystems [2016], I asked a question relating to knowledge about blockchain, and about FinTech - additionally. In line with outcomes of the study, 35% examined financial institutions have never heard of Blockchain and in the case of students this answer was given by almost all of respondents (excluding 24 students).

## 5. Conclusions

Using the information presented herein, which was collected on the basis of research, information and insights contained within reports, papers and interviews

referring to the banks' future, as well the primary data derived from the results of an own survey, the author has attempted to identify the key challenges faced by banking institutions.

The key challenges that arise from the identified major changes in the banks' technological environment are involved with the use of new technologies in bank service offer:

1. in order to meet customers' expectations, mainly in terms of convenience, simplicity and speed, e.g.
  - development of mobile channels;
  - voiding financial transactions using wearables, Smart TVs and via home appliances;
  - using Artificial Intelligence: cognitive computing and machine learning (virtual assistants, Robo-Advisory e.g. in wealth management).
2. in order to reduce costs, e.g.
  - public cloud infrastructure;
  - big data analytics (BDA).
3. in order to guarantee transaction security:
  - use distributed ledger technology (DLT) – e.g. blockchain;
  - providing biometric authentication systems.

An efficient use of the opportunities offered by digitalisation process allows banks not only to tailor their services to customer expectations, streamline processes and reduce costs, but also to increase transactional security. It is important to highlight that the new electronic identification mechanism is directly related to the prevention of money laundering and terrorist financing, too.

Taking into account the regulatory environment, the crucial challenges for banking institutions refer to:

1. compliance with regulatory requirements and expectations,
2. taking advantage of the opportunities brought by new legal regulations.

New legal regulations allow to enhance banks' competitiveness by offering the open architecture of APIs or SaaS solutions.

The main challenges that arise from the identified major changes relating to new generations and new client expectations are as follows:

1. customer centricity;
2. staying relevant to new expectations of the customer, e.g.
  - providing simple, comfortable and personalised products;
  - achieving full omni-channel integration;
  - shifting toward non-physical or virtual channels;
  - offering a streamlined product application processes;
  - increasing use of computer-generated recommendations in contact centres (self-service customers);
  - using social media.

While analysing the challenges arising from the arrival of new customer generations, banks should definitely strive for full customer focus and stay relevant to new

expectations in order to improve the customer experience. In fact, all challenges referring to other parts of the banks' environment are involved in enhancing the customer experience.

In this context, the crucial challenges referring to increasing competition from the FinTech firms are:

1. effective co-operation with FinTech firm;
2. enhanced competitiveness in all business lines to become a worthy competitor of innovative FinTech companies, e.g.
  - transforming legacy systems with more agile and scalable systems;
  - offering peer-to-peer lending;
  - providing new options for funding, such as crowdfunding.

It should be emphasised that the banks with extensive structures are constantly constrained not only by systemic limitations, but also by their low capacity for fast and innovative moves, which may hamper their ability to face the challenges posed by specialised FinTech firms in the future. In this context, banks' ability to collaborate with non-traditional players will become essential to banks' survival and development. Banking institutions will need to choose where they will specialise and where they will leverage external partners [WEF 2016, p. 17].

Relating to mentioned challenges facing modern banking industry, it is important to emphasise that flexibility will be *“the dominant gene in the DNA of traditional banks”* in order to rebuild operating models in a digital world [A.T. Kearney, Efma 2014, p. 4].

Regardless of the fact if a given bank is a digital leader or follows other bank institutions' activities, the success factors are the same: operational perfection, transparent value added, client-oriented organisational culture, continuous improvement of products and services (now together with clients) [Pyka, Sieradz 2015, p. 29]. Based on information about: clarity of vision, digital banking leadership ambition, customer experience, organisational transformation, IT agility and cultural transformation, the authors of the report *“Going Digital: The Banking Transformation Road Map”* [A.T. Kearney, Efma 2014] show three main groups of digital approach: followers (digital is a project), advanced (digital is a business) and boosted (digital is a core value). It is important to highlight that banks' commitment to digital strategy and their progress on *“the digital transformation roadmap”* affect the level and kind of gained advantages.

It is useful to quote the statement of Pyka and Sieradz [2015]: *“A modern bank must adjust the way of interaction with clients, its internal processes, technology and workers to changing client requirements and its environment. In other words – it must become the digital bank”*. To sum up, banks willing to develop must be able to *“address customer needs more precisely, continually track technology developments, actively collaborate with external partners, engaging wholeheartedly in this collaboration, and incorporate digitalisation into their corporate DNA”* [PwC 2016, p. 22].

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## Abbreviations

AI – Artificial Intelligence; AIS – account information services; APIs – application programming interfaces; ASPSP – Account Servicing Payment Service Providers; BaaS – Bank-as-a-Service; BDA – big data analytics; CRM – customer relationship management; DLT – distributed ledger technology; DLT – distributed ledger

technology; EBA – European Banking Authority; FATCA – Foreign Account Tax Compliance Act; GDPR – General Data Protection Regulation; IOSCO – International Organisation of Securities Commissions; IoT – Internet of Things; KYC – know your customer; MCD – Mortgage Credit Directive; MIFID2 – Directive on markets in financial instrument; PAD – Payment Accounts Directive; PIS – payment initiation services; PSD2 – Payment Services Directive; SaaS – software-as-a-service solutions; SCA – strong customer authentication; SRM Regulation – Single Resolution Mechanism and Single Resolution Fund.