# Dilemmas of financial consumer security

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Abstract. The prevalence of the financial sphere over the real economy is on the increase in the contemporary economy. The financial market's significance and impact on non-financial entities' operation is growing. Financial markets affect the economic policies adopted by governments and households. Is it possible for consumers to make rational choices and satisfy their needs in this era of a growing dominance of the financial system over the real economy, constantly changing the economic reality, tangle of innovative financial products offered to them by financial intermediation institutions and novel technologies? Can consumers feel safe and can their economic interests be safeguarded and financial security be ensured now and in the future? This paper identifies the financial security determinants (pillars) for buyers of financial services. The Author proves that financial education and an increased volume of information provided to consumers is not sufficient to protect them as the recipients of financial services.

Keywords: consumer risk, big data, financial education, consumer protection.

JEL Codes: I22, G01, D18.

#### 1. Introduction

In the pervasive process of financialisation, the development and promotion of financial education are aimed to improve the consumer economic security. Education in this area is one of the requirements for increased consumer's strength in relations with financial institutions. The purpose of this study is to identify the necessary synergy of the impact of the four pillars of the financial service consumer economic security: (1) Promotion and adequate level of financial education of the society, (2) Transparency and clarity of the financial products so that the consumer can make adequate choices, (3) Consumer protection afforded by institutions dedicated to do so, which include: the Office of the Polish Financial Supervision Authority (KNF), the Arbitration Court at the KNF, the Consumer and Competition Protection Authority (UOKiK), the Financial Ombudsman (FO), which guard the business ethics, (4) Activities of the consumer organisations such

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as: Consumer Federation, Association of Polish Consumers, whose activity in the field of consumer protection in Poland, compared to highly developed countries, can be rated as insufficient. Only with the consistent use of the four pillars can the security of financial service consumers be enhanced. An individual consumer, even if educated in the area of finance, will not win with the financial system and its institutions of financial intermediation. The findings identified in reports of the Financial Ombudsman and numerous well-founded decisions taken by the UOKiK support this approach, and so does a review of numerous cases of the asymmetric position of financial service consumers who pursue their claims from financial institutions before courts. The author's research method consists of an analysis and critical evaluation of professional literature and other source materials.

# 2. Financial education – a pillar of consumers' economic security

As consumers, we live in conditions of the significantly changing national economy, which is enhanced by the process of globalisation and internationalisation of the financial markets. At the same time, we observe fast technical and technological advancement, which the financial system benefits from. For customers to make reasonable choices of financial products, adequate to their needs and risk appetite, they should have the minimum knowledge of economics and finance. Consumers usually have a broad variety of financial services to choose from, which is constantly increased with new products sold through different distribution channels. The increasing level of financial product complexity makes it difficult for consumers to assess the related risks.

What is the scope of financial expertise required to freely move around the jungle of financial services? When is the best time and what is the best method to convey knowledge in the area of finance? Who is to handle this task? In Poland, since the times of system transformation, no minimal standards for economic and financial knowledge have, in fact, been developed, addressed to the society as a whole or to selected groups of customers. Successive changes of the educational programmes and reforms have addressed the issue of the scope of economic knowledge to be available and conveyed to students at different levels of education to a minimum extent. The school is the right place to learn the rudiments of economics and finance. Teenagers, or even children, can and should be offered the minimum rudimentary knowledge by discussing topics in the area of finance and economics during classes such as mathematics, civics, family life, entrepreneurship (being a separate school subject) or even during the weekly tutorial hours. The Ministry of Education seems to have forgotten that preparation of young people to live as family should also include the skills of managing their money and, in the future, their personal finance and financial planning.

Various non-governmental organisations such as the Kronenberg Foundation, the Civil Development Forum (FOR), Insurance Education Foundation (FEU) or some institutions such as the National Bank of Poland (NBP), the Polish Financial

Supervision Authority (KNF), the Polish Bank Association (ZBP), the Polish Economic Society (PTE), have operated dedicated educational programmes and supported financially and substantively various educational efforts. They deliver courses on economics, addressed primarily to young people in junior and secondary schools. The KNF, as part of the CEDUR projects, administers training, seminars and workshops, which are, however, primarily targeted at the financial market participants wishing to improve their knowledge of economics [Education Centre (*Centrum Edukacji*) 2017]. The NBP offers education at the NBPPortal.pl, which is designed and created with a view to the needs and expectations of junior, secondary and university students, as well as teachers and adults.

The research conducted in 2012 by the Kronenberg Foundation and PZU Foundation showed that out of 3 thousand student respondents only 10% considered their knowledge of finance sufficient. The others felt the information they possessed was insufficient. All respondents indicated school as the best place to learn the rudiments of finance, but they expected easy and attractively conveyed information instead of the run-of-the-mill forms of education [Edukacja... 2015, p. 53]

As is rightfully emphasised by Sławomir Dolecki of the Kronenberg Foundation, the positive effects of financial education can only be expected in the time frame of a dozen or several dozen years, because it is the creation of certain habits and behaviours that is important, such as the use of a bank account, a bank card or the tendency to save money, etc. Consumers having sufficient level of financial knowledge should be able to search for, compare and assess financial products and make an informed choice of the best one, which is most adequate to their needs. More advanced consumers would rather need the knowledge about the risks so that they could wisely use the innovations offered by the financial system.

When planning the educational efforts addressed to young people, one must not forget about other groups of the Polish society, including the silver generation, which is increasingly more numerous in Poland (the estimated 9 million people) and whose representatives were taught in another reality of the centrally planned economy. For this reason, their knowledge of the contemporary finance may not be sufficient. Also, the ways, forms and channels of conveying knowledge to various groups of the society, the baby boom generation (BB), generations X, Y, and Z should be different.<sup>2</sup> The various groups of clients have varying expectations. Generations X and Y are most educated in the area of forms and ways to acquire financial knowledge. The Z generation (also known as transformers) is considered the most open to new solutions and innovations.

The research entitled "Generations on Finance" done in November 2015 by 4P Research Mix at the request of Bank Zachodni WBK shows that the sources of knowledge on finance differ for various age groups. Generations X and Y look for this type of information primarily on the Internet. Generation Z seeks the opinions

<sup>&</sup>lt;sup>2</sup> The baby boomer generation (BB) are people born between 1946-1964, the X Generation: people born between 1965-1979, the Y Generation (millennials): people born between 1980-1995, the Z Generation: in the period of 1996 to 2015.

of their acquaintances, family and friends as well as social media. Baby boomers source their information from the media, TV, radio and leaflets. The research shows that all the above generations find it most challenging to understand the intricacies of agreements concluded with financial intermediation institutions. Given the foregoing, it comes as no surprise that as many as 53% of the respondents would like to increase their knowledge in the area of finance. 43% of respondents indicated the knowledge of the rules of saving, and 38% - the rules of investing as the main areas of finance which Poles would like to get to know<sup>3</sup>.

50% of respondents of the "Generation on Finance" research indicated that financial education should be accomplished by secondary schools and universities, and every fifth respondent indicated that it should be the responsibility of junior and secondary schools. Representatives of the young generation Z indicated that the school should assume responsibility for financial education. The research showed that knowledge acquired during education was used by 9% of BB Generation and X Generation, 18% of Y Generation and as many as 35% of Z Generation [BZ WBK 2016].

Low economic awareness and financial knowledge is one of the reasons for financial exclusion. However, there are many more conditions for this form of exclusion. Apart from the lack of economic knowledge, these include: low income, income originating from the black market, which may also involve the lack of trust in financial intermediation institutions, negative experience in contacts with such institutions, as well as digital exclusion of limited access to the Internet [Alińska 2011, pp. 9-10].

Specific requirements concerning the financial education of the society are set by the European Union, whose directives indicate that the financial education should be a complement to legislative measures intended to provide the consumer with the relevant information, advice and proper protection on the financial market [Penczar 2014, p. 12]. "Financial education should empower consumers to take the best decisions from the perspective of constructing smart and relevant products" [European Commission 2007].

It seems that the measures taken in the area of financial education since the beginning of the system transformation in Poland should be considered insufficient in the light of the requirements set by the EU, because of, among other things, the lack of standards defining the minimal economic and financial knowledge, the lack of extensive financial education programmes, as well as disappearing educational function of the public TV.

### 3. Misselling and the role of consumer protection institutions

When buying a financial product, the consumers, even if they have the relevant financial knowledge and experience, may experience negative effects of misselling, as a consequence of activities of the financial service providers. When making the purchasing choices, the consumers may, in some situations, have insufficient

<sup>&</sup>lt;sup>3</sup> The research was done in November 2015 on a group of 1017 respondents selected by age.

knowledge. They may also emulate or be driven by emotions fuelled by the seller. Additionally, they may be deliberately misled or provided with incomplete or even false information by the seller with respect to e.g. the risks and costs related to the financial product, which abuses the customer's trust.

Misselling consists of dishonest sale, unethical selling practices, frequently doubtful in legal terms (abusive clauses). The sellers, even if they have the required information, may offer financial products, which are useless for the consumers, fail to meet their needs, and may deliberately withhold information about the risks involved in the purchase of the financial products, thus grossly infringing the consumer's economic interests [Wierzbicka 2015, p. 72]. Consumers are often purposefully misled by being provided with incomplete, unclear or even false information about the way an instrument to be purchased works, and about the rights of the customerowner. [Cichorska 2017, p. 21].

Unethical selling practices still, unfortunately, are quite common in the Polish financial system. The research performed by the Polish Chamber of Insurance and Finance Intermediaries (PIPUiF) in 2013 shows that 20% of insurance agents (who in Poland are dominant as insurance intermediaries) use misselling and sell insurance products to customers, which the latter do not want or need.<sup>4</sup>

A number of irregularities were observed in sales of group insurance, the so-called insurance on third party's account, by banks within the framework of bancassurance, where the bank acted as the policyholder and insurance intermediary. Under such agreements, the insured paid the premium, but were not a party to the agreement, their position in the agreements on third party's account was weak, they were not provided with the GCI, and experienced problems to have the premium for an unused period of insurance refunded. It was the bank that was entitled to the insurance cover provided by the insurer, and the insurer could have a recourse claim to the insured for damage sustained by the bank e.g. if the loan was not repaid. This was partly eliminated when Recommendation U came into force on 31 March 2015. Banks were forced to change the business model of cooperation with the insurers and switch to individual insurance agreements within the framework of bancassurance. Despite the significant role of the soft law (recommendation of good practice in bancassurance) in Poland, issued by the KNF and PIU, misselling has not been eliminated.

The use of aggressive advertising campaigns by financial intermediation institutions in Poland, containing unreliable information and misleading customers, still constitutes a problem. Disinformation, which occurs in online selling, through the Internet or the following forms of reaching the consumer: smartphones, social media as well as various mobile applications, poses an additional threat to the consumers. Such practices are used by various financial intermediation institutions, not only banks, insurers or non-bank lending entities whose customers<sup>5</sup> are not protected

<sup>4</sup> Research by PIPFiU and SGH done in 2013: "Zarządzanie wartością i przez wartości - doświadczenia światowe i polskie".

<sup>&</sup>lt;sup>5</sup> Non-bank lending institutions are not supervised by the KNF and are not subject to deposit guarantees afforded by the BGF, the KNF website contains a list of public warnings.

by the Bank Guarantee Fund, and consequently, they are not subject to the KNF' supervision. The total sum of loans granted to customers by lending companies in 2015 was PLN 5.2 billion. The fastest growth is observed in the segment of loans granted via the Internet. Diagram 1 shows the groups of entities providing the basic financial services, both supervised by the KNF and those which are beyond such supervision.

Accepting deposits Lending activity Entities subject Banks. to KNF's oversight: Cooperative Saving and Credit Unions (SKOK), Insurance Companies. Investment Fund Societies Entities outside Lending Peer-to-peer **Pawnshops** the KNF's oversight: companies Ponzi Grey market grey schemes ending entities economy:

Diagram 1. Main entities providing financial services to individual customers

Source: Author's own elaboration based on [PwC 2013].

Apart from insufficient economic and financial knowledge on the part of consumers in the consumer-financial intermediary relations, there are also situations where the intermediaries lack professional approach and their employees selling financial products fail to exercise due diligence, which is proven by complaints lodged with, among others, the Financial Ombudsman. Misseling undermines confidence in the financial system and reputation of the financial entities. Those who engage in practices indicative of misselling forget that "...the care of customer's interest means: making all efforts with a view to the customer's interest; acting in good faith, which includes respect and belief that one's knowledge was used to the best possible end; competent and responsible customer service" [Chmielowiec 2015]. The customer should be provided with a competent service at all stages of the contractual relation with the financial institution. The quality of service includes transparency through a comprehensive presentation of reliable and true information about a product and the risks involved, as well as listening to customers and analysing their needs. This enables the financial intermediaries to present offers of products, which are the most beneficial for customers.

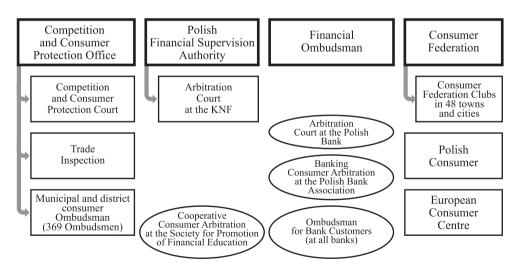
In Poland, institutions acting for the sake of consumer protection include, among others: UOKiK, KNF, FO, Trade Inspection (reporting to the UOKiK), the European Consumer Centre. Also, non-government institutions assist consumers and represent

their interests. These include: the Consumer Federation, the Association of Polish Consumers, and other. Additionally, regional consumer protection organisations act in compliance with the Competition and Consumer Protection Act. The UOKiK cooperates with municipal and poviat consumer ombudsmen. At the moment there are 369 Consumer Ombudsmen. Disputes between consumers and banks may be resolved by arbitration courts at the KNF and the ZBP (see Diagram 2).

The UOKiK, assisted by the Competition and Consumer Protection Court, regularly checks template agreements prepared by entrepreneurs such as insurance companies and banks, to be concluded with consumers. Provisions of those agreements, which are found infringing the collective consumer interests, are recorded on the register of abusive clauses [Act 2015a].

Despite the existence of numerous institutions designed to protect consumers, there are still numerous unresolved problems. The report of the Supreme Audit Office (NIK) regarding the financial market customer protection in Poland, based on research done between 2011-2013, indicates that during the said period the protection was ineffective, and it did not afford insufficient security for the interests of customers of financial institutions in Poland [NIK 2014]. The primary reason was an unclear division of competences between the institutions and inadequate cooperation between the major consumer protection institutions.

Diagram 2. Consumer (financial institution customer) Protection Institutions and Organisations in Poland



Source: [Wierzbicka 2016, p. 322].

The insurance sector and other divisions of the financial sector feature a high rate of defective contract templates. During the period investigated by NIK (2011-2013), the number of complaints lodged with the Insurance Ombudsman and the UOKiK

about financial market entities was on the increase. The absence of a clear-cut division of competence between the institutions responsible for consumer protection deterred the aggrieved parties from asserting their rights. NIK believes that closer liaison is required for better efficiency of activities of the consumer protection institutions in Poland. The institutions and organisations dedicated to protecting the customers of financial intermediation institutions in Poland are presented in Diagram 2.

In its assessment of operations of the consumer protection institutions, NIK identified the following irregularities, which require improvement [NIK 2014, pp. 7-10]:

- 1. insufficient activity of the arbitration courts, which gives rise to the postulate for actions necessary to intensify and improve the effectiveness of arbitration tribunals as an alternative method of dispute resolutions;
- 2. during the reported period, more than 60% of template agreements used by financial sector entities included provisions non-conforming to the provisions of law or infringing the consumer interests<sup>6</sup>;
- 3. penalties imposed on financial market entities did not reduce the scale of infringement of the consumer rights (penalties can be imposed by the UOKiK). NIK is of the opinion that the measures taken by the KNF and the Insurance Ombudsman (currently Financial Ombudsman) were not painful enough to improve the consumer protection. Therefore, NIK believes that it is necessary to e.g. publicise the fact of imposing penalties on certain financial institutions<sup>7</sup>:
- 4. the functionality of the abusive clauses register is limited, as it contains several thousand entries and calls for improvement of its transparency and usefulness<sup>8</sup>.

Some of the irregularities identified by NIK were taken into account in the new legal regulations. Generally, a number of new regulations have been adopted recently, which strengthened the position of consumers against that of the traditional financial intermediation institutions. What is essential for consumers is the Act of 5 August 2015 on the examination of complaints by financial market entities and on the Financial Ombudsman [Act 2015b]. The ultimate objective of the Act is to enhance the protection of financial service users. The Act implemented the notion of a complaint, for which no sufficient legal basis had previously existed.<sup>9</sup> A complaint can be lodged in various forms: orally, in writing, electronically, with

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<sup>&</sup>lt;sup>6</sup> Three institutions: the UOKiK, the UKNF and the Insurance Ombudsman diligently controlled template agreements used by market participants, each year 10% of agreements were checked over the period of 2011 to 2013. (Since 11 October 2015 the Insurance Ombudsman was replaced by Financial Ombudsman).

<sup>&</sup>lt;sup>7</sup> It became possible only upon an amended Competition and Consumer Protection Act which took effect on 17 April 2016.

<sup>&</sup>lt;sup>8</sup> Since 17 April 2016, in new cases, the resolutions concerning abusive clauses in contracts have resulted from a decision of the President of the UOKiK and have been published in the decision based on the official website of the authority.

Omplaints can only be lodged by natural persons.

each unit of a financial market entity. Defining the rules of the complaint procedure (including the deadlines for response to a complaint) had a positive influence on the level of consumer protection, and the Financial Ombudsman became entitled to impose a pecuniary penalty upon a financial institution, which fails to timely respond to a complaint lodged by the consumer. For the consumers to be able to use the complaint procedure, they must be adequately informed about their rights as customers of financial institutions.

A number of findings identified in the NIK's report are addressed by the changes implemented on 17 April 2016 upon the amended Competition and Consumer Protection Act, which is intended to enhance the consumer's protection on the financial market [Amendment 2016]:

- the new model for auditing the contractual clauses the President of the UOKiK resolves whether a contract template contains abusive clauses (by an administrative decision) and if so, prohibits its subsequent use. The President of the UOKiK keeps a register of abusive clauses, which contains template contracts considered unlawful and infringing the consumers' collective interests. The UOKiK can impose penalties of up to 10% of turnover for applying abusive clauses.
- a ban on offering financial services to consumers if the information available to the financial intermediary indicates that the services do not meet the consumer's needs and on offering the consumers such services for sale in a way, which contradicts their nature;
- the President of the UOKiK may express a view in a matter related to competition and consumer protection before a common court for reasons of public interest.
- a 'mystery client' solution was implemented, which is to facilitate obtaining information, which may be used as evidence for infringement of consumers' collective interests, which will make it possible to control the information provided to consumers before any contracts have been signed.

The consumer protection measures taken by the UOKiK are supported by the Financial Supervision Authority, which is to provide a regulatory framework, and exercise micro- and macro-prudential oversight to counteract crises in the financial sector. The KNF's oversight of the financial market is intended to ensure proper operation of this market, its stability, security and transparency, as well as to protect the interests of the market participants by the provision of reliable information on the operation of the market entities and other measures. Macro-prudential oversight includes ensuring that each financial market entity to which customers (product buyers) entrusted their funds in various forms (deposits, participation units, unit-linked insurance policies, etc.) is solvent.

The increased scale of operations of the new-generation entities, which provide financial services based on new technologies, poses a new challenge for the institutions, which provide financial oversight and for consumer organisations.

# 4. Big Data and FinTechs create changes in financial services

Big Data denotes a revolutionary turning point in the area of accumulation and analysis of sets of information characterised by extremely large volume, variety and variability. The information making up the data sets originate from, among other things, modern devices, sensors, internet applications, social media, etc. Due to the volume of the information and relative limitations on its processing, the processing is becoming increasingly more difficult, and the time needed to obtain the expected results necessary for business entities, including financial institutions, to make decisions, is increasingly longer. Therefore, improvements are made to the forms of processing data originating from different sources, including various information in diverse formats. Alongside technological development, the possibilities to collect information about clients multiply [Andruszkiewicz, Betcher 2015, p. 90].

Big Data features several essential attributes, namely: volume, variety, complexity, velocity, variability and value<sup>10</sup>. Research shows that by 2020 the volume of data is going to increase by 40% of zeta-bytes, i.e. 50 times from the beginning of 2010, and since some data flows very fast and in streams, additional power is required for its real-time analysis [Tabakow, Korczak, Franczyk 2014, p. 141].

Financial institutions must aggregate enormous volumes of data originating from various sources, and subsequently interpret it in business terms. The analytical tools for information processing and artificial intelligence used in business determine the competitive advantage of banks, insurance companies and other financial intermediaries in the area of digital transformation.

Contemporary consumers rely on various forms of communication with financial service sellers, both traditional and digital, and consequently, they leave increasing volumes of data. The synergy of the major technological trends enhances the knowledge left by the consumers with banks, insurance companies, mobile phone operators, social media. Hence, the Big Data technology combines and compares data from various sources, and consequently the knowledge about consumers - financial service clients is much greater and more exhaustive based on big data sets.

It is still a problem to process and precisely evaluate the data, which offers a possibility to create behavioural profiles of clients and identify buyers' expectations, and subsequently to customise the product offer. As an example, based on the information concerning the client's life situation, his transactional decisions contained in the bank's internal data, change of the customer's income at a given stage of life, contained in external sources, the bank may prepare a customised offer of banking or insurance services. Contemporary IT technology permits automatic personal data processing consisting in the creation of the customer's profile and anticipation of the consumer behaviour, attitude and preferences adequately to his economic situation, reliability, health condition, purchasing decisions or location, etc.

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<sup>&</sup>lt;sup>10</sup> In 2001, an analyst employed by Gartner, identified the following qualities of Big Data: volume, variety, fast processing. In 2012 Gartner added two more parameters.

The possibilities offered by Big Data lead to increasing information asymmetry between financial intermediation institutions and consumers. The information asymmetry occurs when one business entity has better and broader information about a given type of goods or services than the other party – in this case – the consumer. The information asymmetry in the relations between the customer and the bank or the customer and the insurance provider is disadvantageous to the customer. The customers cannot make the best choice because they lack sufficient knowledge and information about a product. An aggressive advertising campaign conducted by an insurer or a bank, and sometimes an inaccurate message, misleading advertisement, one-sided information provided by agents, brokers or other intermediaries etc. may hinder adequate recognition of a product and evaluation of the extent to which it satisfies the consumer's needs.

An advantage enjoyed by financial intermediation institutions in access to information and the customer's significantly restrained control over the conditions of agreements concluded with intermediaries are conducive to such institutions taking advantage of their privileged position.

Only after the changes in personal data protection act enter into force in Poland in 2018, as necessary to implement the Regulation (EU) 2016/679 of the European Parliament and of the Council of April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, will the consumer data be subject to greater protection, because each enterprise, each financial institution processing personal data of customers, employees, etc. will have to develop data security management system documentation [Act 2016] (the data security is overseen by the General Inspector of Personal Data Protection – GIODO).

FinTechs, which dynamically enter the financial sector, combine financial and digital services, which includes processing and use of Big Databases. W. Szpringer emphasises that FinTech usually: "consists of new forms of mobile payments, virtual currencies (bitcoin), advanced transaction banking and B2C and B2B banking, as well as innovations in the area of investment funds, data and database management. FinTech's characteristic feature is the fact that products are designed by shadow banking entities - online companies, which are not banks, insurance companies or investment companies. They offer alternative ways to access various services, ranging from online transfers to comprehensive financial planning" [Szpringer 2016].

Another problem faced by financial intermediaries, oversight institutions as well as consumers consists of the fact that FinTechs activity contributes to consumer migration to mobile channels. FinTech businesses are not subject to financial oversight in Poland and in a number of other EU countries, and consequently, they may provide the payment services cheaper. It is estimated that in five years, mobile channels will become the main channel of communication with clients, because "already now the number of self-service banking outlets grows globally at a two-digit pace" [PwC 2017].

<sup>&</sup>lt;sup>11</sup> J. Kazankiewicz's statement in [PwC 2017].

FinTechs effectively cooperate with banks, but they also become bank competitors. The innovations initiated by FinTechs force banks and other financial intermediation institutions, including insurance companies and investment fund societies, to change their business models. In Poland, as many as 17% of banks cooperate with FinTechs, while globally the figure is higher and accounts for 31% of banks. Such cooperation helps reach new groups of clients, build the expected values for a client, which also leads to enhanced relations with customers. Table 1 shows the major priorities of the financial sector institutions in cooperation with FinTechs, based on PwC's FinTech Survey 2017 with 1308 respondents from 71 countries.

Table 1. Priority areas of cooperation between banks and FinTechs (% of indications)

	World	Poland
Data analytics	74%	64%
Cybersecurity	32%	45%
Mobile applications	51%	41%
Robotisation of service processes	30%	45%

Source: [PwC 2017].

Banking in Poland is modern, and in a number of disciplines, the level of services is ahead of the conservative European banking. The results of cyber-security and financial process robotisation survey show that more respondents in Poland indicated these areas of cooperation with FinTech (cf. Table 1) than the world average.

Financial oversight bodies in a number of countries such as the UK, Germany, the Netherlands track innovations implemented by FinTechs because they are responsible for ensuring the stability of the entire financial system as well as protection of consumers of FinTech services. However, no sufficient legal framework has so far been developed with respect to a number of innovative areas, e.g. digital cryptocurrency (such as bitcoin), the use of artificial intelligence in preparation of customised product offer and even crowdfunding. In Poland, and in other EU countries, they are not subject to financial supervision.

Financial intermediation institutions such as banks, insurance companies are public trust institutions and they are subject to strict micro- and macro-prudential regimes. If banks or insurance companies are to be able to compete with FinTech, the latter should be subject to equal rights and financial oversight. Only then, equivalent conditions of competition can be ensured, and the customer security will increase.

Another stage of financial service technological development affecting the security of financial service users is a gradual promotion of the role of cloud computing

and blockchain technology.<sup>12</sup> Technological advancement and changes triggered by technological synergies in the way financial services are provided are another challenge in the area of consumer security on the financial market.

In the coming years, another impulse for the growth of the business of data collection and processing results from the development of the Internet of Things (IoT). As a consequence, this trend in digital technology development will lead to creation of new intelligent devices, machines or services, as well as new ways to reach consumers with a product offer. An intelligent house, through its integrated system of alarm sensors, will inform directly the insurer about a failure and damage. An intelligent refrigerator will pay for purchases ordered through its control panel by the owner, and an intelligent car will not only remind the user of the upcoming technical inspection but will also pay the liability insurance premium [Król 2016 pp. 94-95].

### 5. Summary

As a result of employing new technologies to provide financial services, banks do not withstand competition with new payment platforms, such as FinTechs in the area of providing payment processing services. Google and Amazon take over some of the banking services, while FinTech services are cheaper than those offered by banks and they have a competitive advantage in numerous aspects of customer service. The synergy of impact of the aforementioned four major pillars of the economic security of financial service consumers, such as: adequate level of consumer financial education, transparency and clarity of financial products, protection of consumers by dedicated institutions as well as operation of consumer organisations, make it possible to reduce the negative effects of the consumer's asymmetric position and access to information between the financial institutions and financial service consumers.

Banks, insurance companies, investment fund societies and other financial intermediation institutions, as well as new generations of IT-based financial intermediaries (who must as soon as possible be subjected to financial oversight), should build up the customers' confidence in the financial market. The products and service procedures must be transparent and comprehensible for consumers representing various levels of financial knowledge. Customers develop their confidence and trust in financial intermediaries relying on their own experience, and in doing so they also take into consideration the evaluation and assessment made by supervisory institutions and institutions offering protection of customer interests, which monitor the behaviour of financial market entities and intervene if required. Hence, obtaining and sharing information in these areas should increase the scope of consumer protection.

Acquiring and sharing consumer details, which are then processed for various needs of financial institutions, including the creation of the consumer profile, should

<sup>&</sup>lt;sup>12</sup> Blockchain – technology used to process transactions denominated in virtual currency (Bitcoin). It is based on a chain of data blocks, i.e. transactions in bitcoin network.

be legally protected. The consumer autonomy and free will may be endangered by the use and processing of details, which are subsequently used in the process of automatised decision-making by smart IT devices. On 25 May 2018, an important EU regulation will take effect: the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, which is intended to increase the consumer data security<sup>13</sup>.

Nowadays, the classic determinants of the asymmetric position of the consumer versus the financial intermediation institutions are enhanced by determinants resulting from the synergy of the impact of new technologies (Big Data, Cloud, Blockchain etc.). Today, apart from initial direction-setting suggestions, there are no answers to the question in what conditions the financial supervision institutions, consumer protection institutions (UOKiK, FO) and consumer organisations should operate. The issue of the consumer's asymmetric position, access to information and stateof-the-art IT probably cannot be solved by intensification of traditional methods of financial oversight. This requires a new outlook on the possibilities and ways of using new technologies to protect consumer data and interests. It is necessary for the supervisory institution to develop new methods and tools for it not to act ex post but to take decisions in anticipation of the future behaviour of financial institutions and their customers. In this context, development and promotion of financial education is a must, but education in this area should be complemented with the knowledge of the effects and types of risks involved in the use of new technologies in relations between the consumers and financial intermediaries.

Nowadays, the negative consequences of the traditionally asymmetric position of the customer versus financial intermediaries i.e. asymmetry in terms of capital, knowledge and access to information, are reinforced by the asymmetric access to novel technologies and the possibilities of their use. In this situation, it is not only the significance of economic and legal education that is increasing but also of technological education. Additionally, the aforesaid phenomenon of asymmetry reinforcement by new technologies imposes new obligations upon the consumer protection and educational institutions.

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<sup>&</sup>lt;sup>13</sup> According to the EU Regulation, personal data breach means a breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorized disclosure of, or access to, personal data transmitted, stored or otherwise processed.

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#### **Abbreviation**

BB – baby boom generation; FinTech – Financial Technology; FO – Financial Ombudsman (*Rzecznik Finansowy*); FOR – Civil Development Forum (*Forum Obywatelskiego Rozwoju*); FEU – Insurance Education Foundation (*Fundacja Edukacji Ubezpieczeniowej*); GIODO – General Inspector of Personal Data Protection (*Główny Inspektor Danych Osobowych*); KNF – Polish Financial Supervision Authority (*Komisja Nadzoru Finansowego*); NBP – National Bank of Poland (*Narodowy Bank Polski*); NIK – Supreme Audit Office (*Najwyższa Izba Kontroli*); PIPUiF – Polish Chamber of Insurance and Finance Intermediaries (*Polska Izba Pośredników Ubezpieczeniowych i Finansowych*); PTE – Polish Economic Society (*Polskie Towarzystwo Ekonomiczne*); UOKiK – Consumer and Competition Protection Authority (*Urząd Ochrony Konkurencji i Konsumenta*); ZBP – Polish Bank Association (*Związek Banków Polskich*).