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Digitalization trends in insurance and their impact on the functioning of the insurance market entities¹

Digitalization is one of the main issues accompanying financial companies, including the insurance-related ones and is rapidly transforming the way in which financial markets are operating. The main digital trends in insurance include: cooperation of the intermediary with the insurance company, omnichanneling and digitization of documents, process automation, increase in the role of artificial intelligence, increase in self-service, use of external data sources and ecosystems.

This paper aims to examine how, as a result of digitalization, the functioning of the market participants such as insurance companies, insurance intermediaries, and customers is changing. The goal will be achieved through research on what solutions are introduced as a part of the specified digitalization trends and how they affect the functioning of market participants. In addition, it will be determined what factors influence the implementation of the indicated solutions, what difficulties there appear in their implementation and their effects, including the negative ones, especially in the context of data security, loss of sense of community, and dehumanization.

Keywords: digitalization, insurance market, InsurTech

Introduction

Innovation, which is an effect of use new technologies, is pointed out as a key driver of change in the financial sector². The insurance sector, which, at the beginning of changes taking place

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1. „The project financed within the Regional Initiative for Excellence programme of the Minister of Science and Higher Education of Poland, years 2019–2022, grant no. 004/RID/2018/19, financing 3,000,000 PLN”.
 2. *Technology and innovation in the insurance sector*, OECD 2017, <https://www.oecd.org/pensions/Technology-and-innovation-in-the-insurance-sector.pdf> [7.09.2020], p.7.

in other sectors, applied caution, became a powerful creator and beneficiary of the new technologies. The use of digital technologies in this sector gives the possibility to achieve efficiency gains, allows the new possibility of service provision, better opportunities for data collection, mitigation measurement and fraud prevention. The whole phenomenon of use of the new technologies in insurance is called InsurTech³ and according to the definition offered by OECD "*InsurTech is the term being used to describe the new technologies with the potential to bring innovation to the insurance sector and impact the regulatory practices of insurance markets*"⁴.

Digitalization relies on integration of digital technologies into everyday life. This process is performed by the digitization of everything that can be digitized and relies on conversion of analog information in any form to the digital form with suitable electronic devices with the aim to process, store, and transmit the information through digital networks, equipment, and circuits⁵. The analog information can come from text, photograph or voice. Digitalization is one of the main issues accompanying financial companies, including the insurance-related ones⁶. Thanks to the use of new technologies and demand for digitization, the digitalization processes are observed in almost all insurance companies and are the source of many challenges and successes. According to the report prepared at the end of 2018 by the Accenture consulting company in cooperation with the Polish Chamber of Insurance, the main digital trends in insurance may include the following areas: cooperation of an intermediary with an insurance company, omnichanneling and digitization of documents, process automation, increase in the role of artificial intelligence (AI), increase in self-service, use of external data sources and ecosystems⁷. Insurance companies introduce changes in their structures in the indicated areas and use the solutions provided by InsurTech companies. KPMG highlights that in the face of the COVID-19 pandemic situation and the need to resign from many standard cooperation models, insurers with more advanced digital sales, underwriting, claims, and administrative processes are in a much better position than others⁸. There is no doubt that the trend of digitalization is and will develop among insurance industry, but there is a question referring to the effects, predicted and received, of this development. The aim of this paper is to examine how, as a result of digitalization, the functioning of the market participants, such as insurance companies, insurance intermediaries, and customers is changing.

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3. Kurek R., *InsurTechowe trendy na rynku ubezpieczeniowym*, „Prace Naukowe UE we Wrocławiu” 541/2018.
4. *Technology...*, op. cit., p.3.
5. *Digitization*, Businessdictionary, <http://www.businessdictionary.com/definition/digitization.html> [7.09.2020].
6. Eling M., Lehmann M., *The impact of digitalization on the insurance value Chain and the insurability of risks*, “The Geneva Papers on Risk and Insurance – Issues and Practice”, 3 vol. 43/ 2018, pp. 359–360.
7. *Cyfryzacja sektora ubezpieczeń w Polsce*. Ministry of Digital Affairs, Accenture & PIU, Warsaw 2018 pp. 5–6.
8. *COVID-19 insurance operations challenges*, KPMG 2020. <https://home.kpmg/xx/en/home/insights/2020/04/covid-19-insurance-operations-challenges.html> [13.09.2020].

1. The specificity and digitalization trends in the insurance industry

The role of the insurance sector in economy is significant. Insurance provides safety and security for individuals and companies⁹, generates financial resources and savings, spreads risks, gives medical support to the society, provides employment, increasing gross domestic product, effects positively on economic growth¹⁰, stability of the financial system and balance of payments¹¹. Due to these significant roles of insurance in economy, it is important for the insurance sector to be characterized by high stability and safe operation. Considering the specificity of insurance and the insurance market, there are several challenges that may accompany the digitalization processes. Some of the insurance companies are specialized only in one line of business (mono-line insurers), but others offer more products. Every insurance product must be well-designed and developed, especially in accordance with the law and customer expectations, the risk must be well priced, and the product should be sold, which requires cooperation with insurance intermediaries and providing them with access to the IT system. One of the most important parts of every insurance product lifecycle is claim management and the processes can differ drastically depending on the product. Therefore, when designing a given solution, insurers are confronted with a decision whether to create it only for one product, or maybe it can be created in a more universal manner and applied to a wider group of products.

While introducing new solutions and using technological solutions insurers need to take into consideration the profitability of the aforementioned. In the case of niche insurance products or the need for their detailed adaptation to the needs of customers the possibility of applying the effect of scale may be reduced. The insurers who want to be in constant contact with their clients must overcome the perception of a contact with an insurer as an event limited to two instances: conclusion of an insurance agreement and the possible occurrence of damage. Some processes, even despite the development of technology, are not or should not be digitalized due to the high costs of such activities or the need to wean customers from practices that function quite well and to which they are used to and attached. Digitalization also creates the risk of leakage or loss of data, especially personal data. Insurers are obliged to ensure the protection of personal data, as well as in cases of irregularities, they are exposed to penalties, lawsuits, loss of customer trust, and loss of reputation.

Digital technologies used in insurance industry can be divided into the three following areas: technologies for data acquisition and analysis, technology for data storage, and technology for communication and sales (see: Table 1).

9. *The Importance of Insurance Companies for Financial Stability*, Financial Stability Review, December 2009, European Central Bank, <https://www.ecb.europa.eu/pub/pdf/fsr/financialstabilityreview200912en.pdf> [10.09.2020], pp. 160–161.

10. Bednarczyk T., *Insurance development as a factor in long-term economic growth*, „Wiadomości Ubezpieczeniowe” 4/2013, pp. 44–45.

11. *The Importance ...*, *op. cit.*, pp. 160–161.

Table 1 List of digital technologies used in insurance industry

Area	Technology	Application
Technology for data acquisition and analysis	Artificial intelligence	Artificial intelligence (AI) and machine learning (ML) ¹² allow for advanced data analysis and as a result are used especially for automation of decision making.
	Big data and fast data	Big Data is the type of analysis which allows to analyse large data sets (from many sources and of many types, e.g. text, picture, audio) and make conclusions, also based on unstructured data derived, e.g. from telematics and smart devices. Fast data is big data analysis in which it is additionally important to quickly process data, also in real time. These data sets need powerful IT tools to be analysed, including AI and ML.
	Internet of things (IoT)	Ecosystems, where sensors and devices can communicate with each other and send and receive information. Most frequently used in smart devices, telematics, smart homes, cities, factories.
Technology for data storage	Blockchain	Possibility to create a decentralized database of transactions, contracts can be stored and executed automatically (smart contracts).
	Cloud computing	Fields are stored in online databases and are accessible anywhere.
Technology for communication and sales	Mobile devices with apps	People have devices such as mobile phones and tablets which replace desktop computers and allow to be online all the time. Insurers create their apps for customers and intermediaries.
	Chatbots and robo-advisory	Communication with customers via website or mobile communicator by software that uses artificial intelligence to answer questions, advise and support. Robo-advisors are used to automatically manage assets and trade.
	Social network	Platforms such as Facebook, Messenger or WhatsApp allow to communicate with customers easily and directly, especially in FAQs. Insurance companies have their accounts on Facebook or Instagram, use them to show everyday life of insurer and to convey its PR message.
	Video calls	Visual phone-calls via, e.g., Skype or FaceTime where sales materials, <i>inter alia</i> , can be presented.
	Video platforms	Videos are made available, e.g., on YouTube and Vimeo, insurers present product-related information, instructions, manuals and their activities.
	Website	Insurance companies present various information about their activity, company, products, contact data. Some insurers sell policies via the Internet.

Source: Based on: Eling M., Lehmann M., *The impact of digitalization on the insurance value Chain and the insurability of risks*, "The Geneva Papers on Risk and Insurance – Issues and Practice", 2018 [43] No. 3, pp. 364–365.

In each of these groups several examples of digital technologies were listed and explained, as well as their possible applications described. In addition, based on an analysis of use of these

12. See also: *Machine Learning in Insurance*, Accenture 2018, https://www.accenture.com/_acnmedia/pdf-84/accenture-machine-learning-insurance.pdf (17.10.2021).

technologies in insurance, Martin Eling and Martin Lehmann¹³ introduced three general types of changes in the insurance sector, which are the results of digitalization:

- change of the way how insurers and customers interact (use of social media, robo-advisory and chatbots),
- automation and standardisation of business processes aimed at improving the effectiveness and efficiency (online insurance distribution and claim settlement),
- creation of opportunities to modify insurance products and to develop new ones (e.g. related to cybersecurity).

2. Impact of digitalization on insurance market entities

2.1. Insurers' perspective

The development of new technologies changes the world and the ubiquitous results of digitalization are new challenges and risks. Cybersecurity incidents are occurring on an increasing scale, and digitized processes are vulnerable to such attacks¹⁴. Insurance protection against such events is increasingly sought after and insurance companies, which see the rising demand, introduce solutions addressing that threat. There are cyber insurance products available on the market which cover the first-party and third-party financial and reputational costs in case of loss of data or electronic systems as a result of damage, theft or blackmail¹⁵. Cyber risk is important for insurance companies also in the context of doing business, because as the research by Accenture from 2016 shows, a typical financial institution is an object of attack of cybercriminals about 100 times a year, as many as one-third of which are successful. Importantly, one-third of all attempts of attacks go unnoticed by the targeted institutions¹⁶. International Monetary Fund points out that cyber threats are highly dynamic, because in 2018 cybercrime costed businesses up to 300 billion USD annually compared to 445 billion USD two years earlier¹⁷. That risk is a substantial threat to stability of financial institutions and the financial sector, hence the need to take care of cyber security in those companies.

Digitalization processes in insurance companies may be introduced in the areas of primary activities and support activities, and in each of them they have several consequences for insurers. Underwriting, product development, sales, marketing, customer service, claims management, asset and risk management¹⁸ can be indicated as primary activities of an insurer.

13. Eling M., Lehmann M., *The impact ...*, *op. cit.*, p. 363.

14. *Innovation in Financial Services, Balancing Public and Private Interests*, L. Gąsiorkiewicz, J. Monkiewicz (eds), Routledge, London 2020, p. 9.

15. *What is Cyber Insurance?*. Hiscox, <https://www.hiscox.co.uk/business-insurance/cyber-and-data-insurance/faq/what-is-cyber-insurance> [12.09.2020].

16. *Building Confidence – facing the cybersecurity conundrum*. Accenture 2017, https://www.accenture.com/_acnmedia/PDF-131/Accenture-Building-Confidence-Facing-Cybersecurity-Conundrum-Video-Transcript.pdf#zoom=50 [17.10.2021].

17. *Cybersecurity Risk Supervision*. International Monetary Fund 2019, <https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2019/09/23/Cybersecurity-Risk-Supervision-46238> [12.09.2020], p. 3.

18. Eling M., Lehmann M., *The impact ...*, *op. cit.*, p.362.

Underwriting

As regards the area of underwriting, digitalization can facilitate the processes of applications handling or risk assessment. That is the effect of application of technologies such as blockchain, cloud computing, Big Data, AI and ML and IoT, which allow an insurer to gain a lot of data and process them in an effective and efficient way. Underwriting process can be automated, insurers have more sources of data, the data sets are bigger and more varied which affects the greater certainty of inference. The risk can be accurately assessed, also in relation to single risk, which allows for personalization of insurance products. Insurers obtain certainty about the risks that are covered by the insurance, which results in higher stability of results. The whole process of underwriting is faster, more efficient and accurate and makes the insurance pool wider.

Product development

The introduction of digital solutions in insurance products means that insurance can be personalized, and the insurance coverage can be provided within a strictly defined period. Technologies such as IoT, AI and ML or blockchain enable solutions such as usage-based or pay as-you-drive insurance¹⁹. Insurance products can be personalized and tailor-made to a higher extent and better meet the requirements of customers (e.g. single invoice cover in trade credit insurance segment, car insurance only during a ride). Such products can be more competitive and attract new customers.

Sales

Online conclusion of insurance contracts (via websites and mobile apps) is gaining popularity. Because of the use of AI and ML, contracts are concluded also with the use of chatbots, and thus the sales process can be partly or fully automated. The information received from the customers can then be analysed and thanks to the use of robo-advisory, customers can immediately obtain the information and products they need. This allows an insurer to serve more customers and spare some of the costs of distribution. Customers who use that sales channel and their behaviours constitute an additional data source to be used in big data analysis. Thanks to the development of social media insurers gain new distribution channels²⁰.

Marketing

Analysis of data related to customer activity in mobile applications, on websites and social media allows insurers to build effective marketing campaigns. Ads can be personalized and based on previous customer's choices or interests. Video platforms and social media allow insurance companies to create their own message about the company building a brand and good PR. Broker or agent is thus no longer the only link between an insurance company and a customer, the contact is more

19. See wider: Cieślak B., *Zastosowania telematyki w ubezpieczeniach komunikacyjnych*, „Roczniki Kolegium Analiz Ekonomicznych SGH” 45/ 2017, pp. 82–83; Manikowski P., Broniowska A., *Kalkulacja składek w Usage Based Insurance a złote reguły ubezpieczeniowe*, [in:] I. Kwiecień, P. Kowalczyk-Rólczyńska (eds), *Ubezpieczenia. Wyzwania rynku*, C.H. Beck, Warszawa 2019.

20. Manikowski P., Owsiniński K., *Innowacje w ubezpieczeniach komunikacyjnych w Polsce*, „Ruch Prawniczy, Ekonomiczny i Socjologiczny” 3/ 2020, pp. 239–240.

direct. Insurers also use social media such as Facebook or Instagram to warm up their image by showing a more “human face”, highlighting charity activities or organizing contests.

Customer service

During the time of insurance coverage there are sometimes situations when a policyholder or an insured needs to contact with an insurer e.g. in order to change the contract data or scope of insurance coverage. These processes are also improved thanks to digitalization. Notification of risk can be done via mobile app or customer’s account on insurer’s website. Queries can also be handled by a chatbot or via video call. These solutions allow insurers to automate some processes, to involve customers more in the contract service process and because of that save money and use employees to handle other processes.

Claims management

The claims handling process is one of the most important processes in an insurance company, as clients are very sensitive to its quality. The speed of reaction to a claim report, fair damage assessment and approach to a client are of utmost importance here. Insurers often use online forms or mobile apps to receive reports of damage events. More and more often the claim reporting process takes place during a conversation with a chatbot. These solutions allow for faster claims report and partial or complete automation of that process. Greater participation of customers in the contract service process and their use of mobile and web applications increase their loyalty. There are examples of blockchain uses in order to perform automatic claims report at the moment of loss occurrence, e.g. with the use of smart contracts. Distributed ledger technology can also be helpful for automatic pay-outs. Big data analysis combined with AI is used by insurers to detect insurance frauds²¹ and to automate the process of calculation of compensations. All these solutions contribute to improving the claims handling process²².

Asset and risk management

The use of big data analysis combined with robo-advisory and AI allows to automate the process of decision-making in asset allocation and risk management.

When considering the impact of digitalization on the functioning of insurance companies, one should also take into account the support activities, among which there are the following: general management, IT, human resources, controlling, legal department and public relations²³. In these areas digitalization helps to streamline and increase efficiency within the company by, e.g., automation of data analysis and reporting, information transmission and communication methods, e.g. video calls. There are examples of use of chatbots during recruitment processes, e.g. by Allianz²⁴. Social media become one of the main channels of communication in public relations matters, like marketing.

21. *Insurance fraud – not a victimless crime*, Insurance Europe 2019, <https://www.insuranceeurope.eu/publications/703/insurance-fraud-not-a-victimless-crime/> [17.10.2021].

22. Manikowski P., Owsiniński K., *Innowacje...*, *op. cit.*, pp. 240–244; *Cyfryzacja...*, *op. cit.*, pp. 58–62.

23. Eling M., Lehmann M., *The impact...*, *op. cit.*, pp. 362.

24. *I want to talk to Allianz Careers: Google Assistant im Bewerbungsprozess*, Queb 2018, <https://www.queb.org/blog/i-want-to-talk-to-allianz-careers-google-assistant-im-bewerbungsprozess/> [13.09.2020].

2.2. Intermediaries' perspective

Two basic issues from the perspective of intermediaries are considered below: new competition and intermediary activities.

New competition

The main elements that a typical customer notices in an insurance product are the distribution method or the delivery method, and this constitutes about 25% of the value chain²⁵. Due to the fact that insurers' activities such as underwriting or risk pricing are highly regulated and require much capital, most of the new InsurTech solutions focus on insurance distribution. Digitalization in the insurance industry, in addition to its many advantages, may also pose a challenge, especially for the traditional style of operation of insurance intermediaries.

One of the main threats for insurance agents and brokers can be direct sales. This channel is becoming more popular especially within most popular and easy insurance products. Direct sales can be a problem for intermediaries in developing countries, where the network of intermediaries is not dense enough²⁶. In such areas the possibility of using existing and common means for insurance distribution is sought after, for example, insurance is sold via Messenger. A solution in such a situation may be the specialization of an agent or broker in specific product categories not offered online, which are difficult to understand by clients or which require an individual approach, e.g. adding additional clauses or negotiations with insurer.

Online insurance comparison websites are a popular solution, especially in the case of common insurance, such as car insurance. Websites which allow to compare car insurance quotes within a few minutes are, e.g., [confused.com](https://www.confused.com) or [comparethemarket.com](https://www.comparethemarket.com) (examples from the UK market). These websites, apart from finding the cheapest insurance offer on the market, offer their customers additional bonuses, such as coupons for gas stations, pizzeria and cinema tickets. Compare the Market²⁷ has also prepared an additional AutoSergei application for its clients, the task of which is to automate some processes in peoples' lives, e.g. to remind about home or car insurance when it is time to renew, with the list of better deals²⁸. Depending on the insurance law in a given country and the way in which comparison websites operate, they may operate as an insurance agency or only as a tool creating sales leads that mediates between a client and an insurance company and redirects the client to the insurance company's website after finding the best offer. On the one hand, insurance comparison websites create a new online insurance

25. Lloyd-Jones T., *With Digital Disruption Will Insurance Brokers Adapt or Die?*, 2020, <https://blogs.lexisnexis.com/insurance-insights/2016/12/with-digital-disruption-will-insurance-brokers-adapt-or-die/> [13.09.2020].

26. Olano G., *Direct sales threatening brokers and agents in India – study*, 2019, <https://www.insurancebusinessmag.com/asia/news/breaking-news/direct-sales-threatening-brokers-and-agents-in-india--study-179029.aspx> [13.09.2020].

27. This price comparison website has had success offering free meerkat mascots to new customers as a means of driving footfall and retention. It compares a wide range of trusted insurance, energy and finance brands to help clients find a provider that suits his/her individual needs.

28. *Keep life simples. Allow me to automate away your life admin*, Comparethemarket 2020, <https://www.comparethemarket.com/autosergei/> [20.09.2020].

intermediary, and on the other hand, they may exclude one from the process and reduce the need to use the human factor in intermediation.

Intermediary activities

Considering solutions in areas such as AI or Big Data, insurance intermediaries, depending on the scale of operations and the resources they have, can use them, e.g. to conduct market analyses. Social network, video calls, video platforms or websites are used by brokers and agents in the same way as by insurance companies, but in the work of intermediaries, they may be of greater importance. In the case of absence of direct online sales by an insurance company, intermediaries are the only option for insurance distribution. If they still had not used mobile forms of communication with customers before, then during the lockdown related to the COVID-19 pandemic, remote selling was their only option. The new standards thus developed are expected to be cultivated in the future. The work of an intermediary is normally combined with visits to clients, and then it is necessary to use technological solutions prepared by the insurance companies they work for. Cloud computing is also a popular solution used by intermediaries, which allows them to view documents relating to a given client from anywhere, e.g. by using customer relationship management (CRM) software, which is often a cloud-based technology.

2.3. Customers' perspective

The growing role of digitalization, not only in business, but in everyday life of each of us, results in changing a customer's role into the one of a digital customer. According to Deloitte's research, excellent customer service demands fast and professional response to clients' needs. Customers expect availability of contact with the service provider at any time, wherever they are, and the company's readiness for these actions is the basis of their loyalty to the brand²⁹.

The growing popularity of the use of mobile devices and the Internet means that the possibilities and expectations of their users are expanding. People get used to the fact that more and more matters, for example banking, can be dealt with via the Internet, and those expectations are transferred into other industries, such as insurance. The number of insurance products that can be purchased online, directly on an insurer's website or via comparison websites and mobile applications is increasing. Thanks to the possibilities related to the collection of data about customers and the advanced possibilities of their processing, the possibility of service customisation increases, customers are more engaged in processes which result in the introduction of solutions such as usage-based or pay-as-you-drive insurance. In case of such products people can participate in their functioning, as well as feel the impact of their behaviour on the amount of the premium, which makes people understand more about the functioning of insurance products. They know that insurance protects them when they need it, and is priced fairly in accordance with the risks to which they or their property are exposed to.³⁰

29. *Digital customer. Making every connection matter*, Deloitte 2019, <https://www2.deloitte.com/global/en/pages/strategy-operations/solutions/digital-customer.html> (20.09.2020), p. 2.

30. See for example: A. Śliwiński, Ł. Kuryłowicz, *Usage – based insurance and its acceptance: An empirical approach*, "Risk Management and Insurance Review", 2021 Volume 24, issue 1, pp. 71–91.

Among benefits from interacting with computer-based applications rather than with a human advisor customers point out as follows: availability anytime, less biased, faster to engage, faster to provide service and more polite communication³¹. These advantages are used in insurance especially in areas where building relationships is not of great importance and the insurance product is so simple that understanding its function does not require contact with a specialist. Customers can get information online and compare insurance products and prices directly via aggregator platforms³².

There is no doubt that the digitalization ensures unquestionable benefits, but it should be remembered that there are some threats that people are aware of. According to Accenture research 90% of people find the security of online financial transactions important or very important, but their confidence in security of their online data has decreased over the past few years³³. Enterprises, especially the financial ones that use digital channels to communicate with clients, must be aware of importance of trust in matters as sensitive as personal data and finances of their clients. Cybersecurity is important for enterprises which process their clients' data in case of loss of data or electronic systems as a result of damage, theft or blackmail.

Conclusions

There is no doubt that the digital age in insurance has already started and is developing rapidly, bringing with it a number of benefits for insurers, insurance intermediaries and customers. Solutions in the areas of AI, Big Data, Internet of Things, distributed ledger technology, cloud computing, robo-advisory, social networks or video platforms are not only in the testing phase of insurance companies' activities, but are becoming more and more important in the way they operate. Their impact is visible in almost every aspect of functioning of the insurance market and is visible in the way insurance products are created, their marketing, distribution, and customer expectations and experiences.

To recapitulate, there are plenty of advantages of digitalization for insurance companies. It allows them to reduce costs of functioning, reduce the number of employees in some areas, increase profits. Insurers have the possibility of obtaining and analysing large sets of data, which results in the possibility of a more accurate risk evaluation and product quotation, and thus results in greater stability and certainty of the results achieved. Technologies such as blockchain or cloud computing allow to expedite the processes such as claim management, and the use of AI and robo-advisory provides a fast and unlimited way to communicate with an insurer at all times. In the areas of marketing and public relations the digital channels allow to collect data about customers, whereas the use of advanced methods of their processing allows to formulate relevant and personalized advertising campaigns, significantly increasing their effectiveness compared to traditional methods. The use of social media allows to directly reach a wide audience and communicate with them and create a desired image, e.g. by publicizing charity or ecological activities.

31. *Dynamic Digital Consumers. Ever-changing expectations and technology intrigue*. Accenture 2017, https://www.accenture.com/us-en/_acnmedia/pdf-39/accenture-pov-dynamic-consumers.pdf (17.10.2021), p. 6.

32. Eling M., Lehmann M., *The impact ...*, *op. cit.*, p. 366.

33. *Dynamic ...*, *op. cit.*, pp. 17–18.

Insurance products can be personalized (e.g. usage-based insurance) in order to meet the specific requirements of customers, which results in their greater satisfaction and loyalty to the company. Digitalization also influences the increase in demand for insurance products related to data and cybersecurity and allows for the improvement of already existing insurance products, where some options were not available, e.g. due to insufficient data for risk assessment or the lack of tools enabling their analysis.

The progressive digitalization in insurance also has a large impact on the functioning of insurance intermediaries. In some areas, their business may be partially replaced by direct online sales or the insurance aggregator websites, but they should find a place in brokerage that requires interpersonal relationships or focus on products that are not available online. Their work is also needed in the case of more complex insurance products, the content of which is largely shaped by an intermediary and depends on the special conditions of a given client or company seeking insurance protection. Digitalization also facilitates the work of insurance intermediaries, who gain new methods of acquiring customers and communicating with them, as well as technologies, as in the case of businesses, offering marketing and branding opportunities.

The number of people who use mobile devices and the Internet on a daily basis, as well as other digital solutions, is very large, which was noticed by insurance companies that want to benefit from this as much as possible. Digitalization makes insurance products much more accessible for customers, and their personalization makes them attractive to people who previously accused them of being maladjusted to their individual needs. The use of certain devices in cooperation with insurers, such as devices monitoring driving style, apartment or health parameters, is an added value for customers who receive an additional bonus along with insurance.

The digitalization causes the world to change; the world of insurance, too. At the moment, it can be seen that the changes resulting from the development of digital technologies improve the insurance market and ensure its continuous progress. However, the threats posed by digitalization, such as the dangers for cybersecurity, the possibility of digital exclusion and getting rid of the human element from processes should not be ignored, and it is up to us whether the positive, not negative results of digitalization prevail in the insurance sector.

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Trendy cyfryzacji w ubezpieczeniach i ich wpływ na funkcjonowanie podmiotów rynku ubezpieczeniowego

Cyfryzacja jest jednym z głównych problemów towarzyszących firmom finansowym, w tym ubezpieczeniowym, i szybko zmienia sposób funkcjonowania rynków finansowych. Główne trendy cyfrowe w ubezpieczeniach to: współpraca pośrednika z towarzystwem ubezpieczeniowym, omnikanałowość i digitalizacja dokumentów, automatyzacja procesów, wzrost roli sztucznej inteligencji, wzrost samoobsługi, wykorzystanie zewnętrznych źródeł danych i ekosystemów.

Celem artykułu jest zbadanie, jak w wyniku cyfryzacji zmienia się funkcjonowanie uczestników rynku, takich jak zakłady ubezpieczeń, pośrednicy ubezpieczeniowi i klienci. Cel zostanie osiągnięty poprzez zbadanie, jakie rozwiązania są wprowadzane w ramach określonych trendów cyfryzacji i jak wpływają one na funkcjonowanie uczestników rynku. Dodatkowo zostanie ustalone, jakie czynniki wpływają na wdrożenie wskazanych rozwiązań, jakie są trudności w ich realizacji i ich skutki, w tym te negatywne, zwłaszcza w kontekście bezpieczeństwa danych, utraty poczucia wspólnoty i dehumanizacji.

Słowa kluczowe: Cyfryzacja, rynek ubezpieczeniowy, InsurTech

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