“Change of business models of Ukrainian insurance companies in the conditions of COVID-19”

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CHANGE OF BUSINESS MODELS OF UKRAINIAN INSURANCE COMPANIES IN THE CONDITIONS OF COVID-19

Abstract

Insurance companies form their own business models based on the interests of stakeholders. Changes in business models are due to the impact of COVID-19, deepening digitalization and customer orientation. Accordingly, the aim of the study is to systematize the approaches to business models of insurance companies using emerging market country (Ukraine) as an example, and to show the change in a business model according to the CANVAS approach under the influence pandemic. In accordance with the purpose of the study, business models of insurance companies were systematized and grouped into blocks: value-based, structural, complex, and strategic. The strategic block identifies strategic changes in the activities of insurance companies and reflects trends on the insurance market. With this in mind, business models of insurance companies should reflect the set of strategic decisions, their architecture, structure and facilitate the management of value creation operations on the insurance market. Business models have changed from traditional to innovative, hybrid and digital-oriented. The main changes in the business models of insurance companies are omnichannel communications, the launch of chatbots, Big Data, Mobile ID, Bank ID, online access to registers, Blockchain. The COVID-19 pandemic has led to a shift in business models towards socially responsible business and adherence to sustainable development goals.

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INTRODUCTION

During the first waves of the pandemic, most countries tried to fight it by introducing quarantines and social distancing. This had enormous economic and financial consequences. As a result, there emerged risks that prompted businesses to reconsider their strategies (Harris et al., 2021). The COVID-19 pandemic has negatively affected equality, women's and men's pay, digital literacy and access to technologies among different age groups, equal access for all social groups to quality health care and information. It also hinders progress. However, it stimulates the development of digitalization, distant work and access to online services, reducing air pollution due to declining economic activities (Gercheva, 2020).

Insurance companies are forced to quickly change business models in response to the crisis and customer preferences. Some see it as a path to development, while others see it as a path to degradation and bankruptcy (Kamiński & Polinkevych, 2020, 2021; Polinkevych et al., 2021). The COVID-19 pandemic affected the development of the insurance market. In 2021, Ukraine continued to reduce the number of insurance companies due to voluntary renunciation of licenses and exit from the market on their own initiative. Thus, in the last 11

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months of this year alone, the number of insurers has decreased by 24 companies. One of the reasons is the pandemic and the deteriorating financial condition of insurance companies (Ukrinform, 2021a). Nevertheless, the National Bank of Ukraine sets quite ambitious goals. Thus, according to the strategy of development of Ukraine's financial sector till 2025, the share of insurance in Ukraine's GDP should increase to 2% by 2025 (NBU, 2021a). In 2021, the crisis situation led to an increase in tariffs by 25-30% for reinsurance programs, which made it difficult to negotiate with reinsurers. The annual volume of insurance and reinsurance premiums due to aircraft downtime decreased significantly, but there was no proportional decrease in insurance and reinsurance payments. The crisis led to the fact that the rates of reinsurance programs increased by 25-30%, which significantly complicated negotiations with reinsurers in 2021. In addition to the impact of COVID-19 restrictions, the aviation insurance market is forced to hold more than USD 2 billion in reserves due to the cessation of Boeing 737MAX flights following two accidents in Indonesia and Ethiopia. The amount of this reserve can be compared with the annual reinsurance premium that the market collects from all airlines in the world. Under the COVID-19 conditions, the aviation insurance market should have a reserve of more than 2 billion dollars. This is due to the suspension of flights of Boeing 737MAX after two crashes in Indonesia and Ethiopia. Its amount is similar to the annual reinsurance premium collected by the market from all airlines in the world (Forinsurer, 2020). The pandemic has negatively affected aviation insurance, green card insurance, travel insurance, etc. The pandemic has negatively affected aviation insurance, green card insurance, life insurance, property insurance, but most of all health and travel insurance. Only in 2020, due to the negative impact of COVID-19 on tourism, a significant part of air travel not only took place with delays, as previously reported by Prymak et al. (2020), but was completely canceled, while more and more tourists began to prefer domestic short-term travel (Valyukh et al., 2021).

COVID-19 has had the greatest impact on health insurance. Insurance and reinsurance tariffs have changed. The crisis is reducing the solvency of the population, which reduces the demand for insurance. Exceptions are countries where the insurance culture is developed, unfortunately, in Ukraine it is low (Rotova & Trynchuk, 2004). The analysis of the insurance market's dynamics in Ukraine showed that the pandemic encourages the development of digitalization in insurance. Insurance companies are more active online, which eliminates the need to meet in the office to enter into certain types of contracts or to settle losses. They began to adjust and find different solutions for normal and stable operation under quarantine restrictions. The business models of insurance companies change from year to year. Only in 2020, compared to 2019, there were significant changes in the structure of types of insurance, customer categories of about 20 insurers (Ukrinform, 2021a).

The aim of the study is to systematize the approaches to the business models of insurance companies, as well as to show the change in the business model of the CANVAS approach under the influence of the COVID-19 pandemic.

1. LITERATURE REVIEW AND THEORETICAL BASIS

Researchers have studied various aspects of insurance companies' business models. One aspect of the business model concept that has caused much debate is its definition. Business models help explain a firm's competitiveness by highlighting and identifying the approaches and methods by which a firm builds and uses its resources to offer its customers better value while making money (Tullio et al., 2018). They are a conceptual tool that includes a set of elements and their relationships and reflects the logic of how a company makes money (Osterwalder & Pigneur, 2010). A business model reflects the logic of the activity and demonstrates how the business creates and proves value to customers. It also reflects the architecture of income, expenses and profits that occur in connection with the creation of value. After creating a business model, firms try to change it (Teece, 2010). A business model is a reflection of a set of interrelated variables in a company's strategy, architecture and economic characteristics to create a viable advantage for a

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product or a company in certain markets (Morris et al., 2005). They are a set of actions, methods and time of their implementation to create the highest value for the client, as well as to secure a position to absorb the value (Afuah & Tucci, 2003). A business model is a description of the content, structure and management of value creation operations through the use of business opportunities. It is "designed to create value through the use of business opportunities" (Amit & Zott, 2006). A business model is a collection of products, services and information flows that includes participants in business processes, their roles, potential benefits and sources of revenues (Timmers, 1998).

The overall configuration of a business model determines the success potential of product commercialization (Chesbrough, 2010). In this sense, a business model and product must meet the best characteristics of the product. Thus, the same product may have different economic value depending on a chosen business model. Innovative business models with mobile money agents are divided into three business models that used the FSA to create and deliver value. The first is an exclusive and non-exclusive model, the second is a model with a selection and a non-selected model, and the third is a model with one location and several locations. Agents who choose any unused, non-exclusive and multi-model or a combination of these models are more innovative and better positioned to be profitable and sustainable than those who use any model among single, exclusive or specialized models (Iheanachor et al., 2021). When building business models, insurance companies should take into account the impact of the insurance market on macroeconomic indicators, patterns of development of the industry in the conditions of digitalization (Ostrowska-Dankiewicz & Simionescu, 2020; Tworzydło et al., 2020; Mustafina et al., 2020). Successful insurance, financial and investment activities are the key to ensuring the financial stability of a financial institution and influence the formation of a competitive business model of insurance companies. The "novelty" provided by Solvency II, which is related to the use of internal models, is an important step in a different understanding of assessing the performance of insurance companies. This assessment is dominated not only by quantitative parameters, but also by the problem of generally accepted risk to which it is exposed and which this insurance company is ready to take (Yermoshenko, 2016; Achkasova, 2019; Bakalova, 2020). An important element of insurance companies' business models is social responsibility and a marketing strategy (Horyslavets et al., 2018; Polinkevych & Kamiński, 2018). The description of business processes in the model is carried out using a system of rules. Such is the Business Model Canvas (Smerichevsky & Klimova, 2017). It describes the current activities of a company and the steps that need to be taken. The visual format of this model is well suited for many companies.

Due to the COVID-19 pandemic, insurance companies have changed their business models based on digitalization, innovation and insurance culture (Zakharchenko & Yavir, 2000).

The variety of approaches to understanding business models is presented in Table 1.

Table 1. Approaches to understanding business models

Approach	Indication	Authors
Value-based	An instrument for representing value created by the company	Osterwalder and Pigneur (2010), Amit and Zott (2006)
Structural	Systematic description of how the company works, its products and services, information flows	Timmers (1998), Chesbrough (2010), Tullio et al. (2018), Zakharchenko and Yavir, (2021), Kamiński and Polinkevych 2021), Polinkevych et al. (2021), Ostrowska-Dankiewicz and Simionescu (2020), Mustafina et al. (2020), Tsvetkova et al. (2019)
Complex	A set of actions, methods and time of their implementation, which create the highest value for the client	Afuah and Tucci (2003)
Strategic	A set of variable solutions in the company's strategy, architecture and economic characteristics	Morris et al. (2005)

The most popular approach is to describe how a company operates, the value of which is in the fact that one can use a business model to ensure strategic coherence between different types of activities.

The spread of digitalization (Volosovych et al., 2021; Pukala et al., 2021) influences the evolution of business models in different contexts and calls into question the established innovation trajectories of firms. In the process of digitization (Tilson et al., 2010), the traditional modular architecture of products, which is based on fixed boundaries at product levels (Henderson & Clark, 1990), expands multilayer architecture, which is typical for digital products without fixed boundaries (Yoo et al., 2010). With the change in the product architecture associated with specific digital technologies, there is also a need for changes in a business model. That is, business model configurations must be different. There are physically-oriented business models, hybrid business models and digitally-oriented business models (Weill & Woerner, 2013).

Business models of insurance companies should include key activities, customer segments, value proposition, key partners, customer relationships, key resources, channels, cost structure, competitor overview and revenue flows (Iheanachor et al., 2021) (Table 2). This conclusion is based on the material of a number of researchers on the main components of business models of insurers. It is agreed that all of these components are appropriate. Elements such as customer segments (Osterwalder & Pigneur, 2010; Hamel, 2001) and value proposition (Osterwalder & Pigneur, 2010; Shafer et al., 2005; Richardson, 2008; Yunus et al., 2010; Bocken et al., 2014) are the most common in the works of scientists. Therefore, it is advisable to consider these elements when building business models of insurance companies. The CANVAS model takes into account most of them.

A slightly different approach is proposed to building a business model for insurance companies in the LIFE segment (Studiousguy, 2021) using the CANVAS model (Table 3).

The difference between these business models of insurance companies lies in the core business element, which is presented by the customer segment in the StudiousGuy model (2021). Also, the content of each of the elements is different. Iheanachor et al.'s (2021) model describes costs in detail, and the Studiousguy (2021) model describes revenues. In essence, the elements of cost structure, revenue flows and channels are identical.

The CANVAS model describes customer satisfaction. It is measured in terms of meeting the requirements

Table 2. CANVAS models for insurance companies

Key partners	Key activities	Value proposition	Customer relationships	Customer segments
Financial Services Providers (Banks, MMOs, Payments providers) Utility Providers Airtime aggregators	Financial service operations Liquidity/float management/ settlement Customer service Reconciliation Issue management/resolution Provider relationship management Operator training/development Fraud prevention/management	Access: Proximity/Convenience Service delivery – access to cash, transaction completion, efficient Availability: longer operating hours Financial products and services: diversity, customer onboarding Channels/instruments: optionality Integrity: transaction confirmation/proof Pricing: affordable	Word of mouth Personal assistance Service sweeteners – water	Adult Nigerians (banked, under-banked & unbanked) -Cattle farmers -Civil servants (Teachers, etc.) -Salary earners -Teachers -Physically challenged persons
	Key resources Physical: storefront/kiosk Human: people/staff Technology: connectivity, devices (POS, mobile phone, computer) Financial: Startup costs (float), Working capital Intellectual: customer data Machinery: power (generator)		**Channels** Service Distribution: Direct (face-to-face) via POS, USSD, Mobile App, PC Service Communications: Branded signage, word-of-mouth Service Support: Direct: face-to-face; Secondary: FSI call centre/ helpline, WhatsApp, SMS, in-person (FSI bank branch/office), Email	
Cost structure			Revenues flows	
OPEX: Rent, Wages (labor) Commercial costs: telcom fees, float, consummables (POS rolls), transportation, stamp duty, mobile telephony (airtime), mobile data CAPEX: POS, IT equipment Other business: CoGS			Transaction commissions Trade income	

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Table 3. CANVAS models for LIFE insurance companies

Key activities	Customer segments	Value proposition	Key partners	Customer relationships
Marketing Underwriting Administration Investments Reinsurance Legal and Regulatory issues Claim adjustments	Household customers Trade sector Industrial sector Institutes Rural sector	Security and mental peace Risk coverage Insurance plans for business, companies and employees Additional benefits or services Saving plans for long-term benefits Guaranteed minimum return on investments	Channel & Distribution partners Vendor & supplier partners Strategic & Alliance partners Community & Social partners	Personal assistance Wide range o services through online portal FAQs
	Key resources Insurance agents & brokers Website or online portal Mobile app		**Channels** Website Mobile app Parent company or banks Agents & Brokers Branches Social Media Call centers	
Cost structure and competitor review			Revenues flows	
Cost structure: Loss and loss-related adjustment expenses. Acquisition expenses. Administrative cost. Taxes **Competitor review:** Risk Retention Groups. Government. Self-insurance			Underwriting income. Income from investment. Cash value cancellation. Coverage lapse. Loss ratio. Premium Loading	

of a product or service and is the result of creating value based on a business idea (Gupta & Shri, 2018). The Kano model makes it possible to explore the components of product or service quality through the evaluation of attributes that directly affect customer satisfaction, as well as the role of such features in the perception of quality (Fajriyati et al., 2020).

The research developed with the use of the Kano and CANVAS models does not show the existence of hybridization of both models (particularly relating to the use of the Kano model's results as input in different blocks of CANVAS structuring and systematization to value business ideas) (Vicedo & Rodríguez, 2015).

Montenegro et al. (2021) tried to enrich CANVAS by hybridization with the Kano model (Table 4). The Kano model enriched the CANVAS model, where various attributes were cataloged in modules as a value proposition with a 75% probability, as an income flow with 8,3% probability, and as a customer relationship with a 16,66% probability. Based on the analysis of the four main CANVAS questions, the following attribute indicators that generate customer satisfaction were identified: "What?" identified by 75%, "Who?" identified by 16,66%, and "How much?" identified by 8,33% (Montenegro et al., 2021).

The proposed business models of Montenegro et al. (2021) and Iheanachor et al. (2021) are economically justified, perform basic tasks, allowing one to predict and diversify risks. Therefore, this study follows the approach related to the feasibility of building business models of insurance companies based on the approach of Kano and CANVAS.

The main characteristics of business models defined by the National Bank of Ukraine are as follows:

- clients (insurance contracts) – individuals and legal entities, reinsurers;
- products (product lines) – Compulsory civil liability insurance, Comprehensive Cover, transport insurance, property insurance, personal, liability insurance, credit and guarantee insurance, commercial insurance, other "risk" insurance;
- sales channels (method of communication with customers) – direct sales, insurance agents, insurance or reinsurance brokers, non-insurance intermediaries, other insurers.

A business model for insurance companies was developed in the Non-Life segment, with a volume of activity of up to UAH 5 million. The National Bank of Ukraine distinguishes five types of business models such as universal, retail, corporate, reinsurance and captive (Table 5) (NBU, 2021b).

Table 4. Combination of Kano and CANVAS models

Key partners	Key activities	Value proposition	Customer relationships	Customer segments
-Software and hardware providers -Universities Payment gateway	-Design process in CAD / CAM systems -Continuous monitoring of customer satisfaction -Search for continuous improvement in the value	-Low cost design (A 1) -Service swiftness (A2) -Preparation of construction plans (A3) -Generation of 3D drawings or video (A4) -Production of a specialized report (A5) -Eye-catching, dynamic and interactive interface (A7) -Service performance status control (A8) -Simple form for requesting services (A9) -Drawing as a design guideline supplied by customer (A 10)	-ABG website -Technical visit for the completion of the project -Non-disclosure agreement (A12)	Main Segments: -SMSEs of the aeronautical, aerospace and metalworking sector in the city of Bogota, Colombia. Other segments: -Companies in any sector that require the design of parts or tools
	Key resources Software Applications Hardware Human talent		**Channels** ABG website Online platform Tele-marketing Social media Email	
Cost structure			Revenues streams	
-Design service -Salary expenses -Depreciation of fixed assets -Customer assistance -Marketing expenses			-Income from design services and specialized consulting -Payment is made prior to acceptance of the service quote by the customer. -Payment method: debit card, bank transfer, mobile banking, credit card, PayPal, PSE(All)	

Table 5. Business model of NON-LIFE insurance companies according to the National Bank of Ukraine in 2020

NON-LIFE	BUSINESS MODEL				
Basic characteristics	**Universal**	**Retail**	**Corporate**	**Reinsurance**	**Captive**
			Clients		
Physical persons Legal entities (except reinsurers) Reinsurers	does not belong to any of the other groups	physical persons + personal insurance: individual insurance contracts – not less than 70% of insurance premiums	(legal entities + incoming reinsurance) + personal insurance: corporate and other group insurance contracts – not less than 70% of insurance premiums	incoming reinsurance – not less than 40% of insurance premiums	premiums from related and affiliated physical and legal entities not less than 70% of insurance premiums
			Products (product lines)		
Compulsory civil liability insurance Comprehensive Cover (hull insurance or comprehensive insurance)	1. Mono-product (1 product line, not less than 70% of insurance premiums)	1. Mono-product (1 product line, not less than 70% of insurance premiums)	1. Mono-product (1 product line, not less than 70% of insurance premiums)	1. Mono-product (1 product line, not less than 70% of insurance premiums)	
Other transport insurance Property insurance Personal insurance Liability insurance Credit and guarantee insurance	2. Specialized (falls outside the characteristics of mono-product if at least one of the defined combinations of product lines in total is not less than 70% of insurance premiums)	2. Specialized (falls outside the characteristics of mono-product if at least one of the defined combinations of product lines in total is not less than 70% of insurance premiums)	2. Specialized (falls outside the characteristics of mono-product if at least one of the defined combinations of product lines in total is not less than 70% of insurance premiums)	2. Specialized (falls outside the characteristics of mono-product if at least one of the defined combinations of product lines in total is not less than 70% of insurance premiums)	–
Other commercial insurance Other "risk" insurance	3. Diversified (falls outside the characteristics of monoproduct and specialized)	3. Diversified (falls outside the characteristics of monoproduct and specialized)	3. Diversified (falls outside the characteristics of monoproduct and specialized)	3. Diversified (falls outside the characteristics of monoproduct and specialized)	

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Table 5 (cont.). Business model of NON-LIFE insurance companies according to the National Bank of Ukraine in 2020

NON-LIFE	BUSINESS MODEL				
Basic characteristics	**Universal**	**Retail**	**Corporate**	**Reinsurance**	**Captive**
Sales channels					
Direct sales; Insurance agents (physical persons); Other insurers; Insurance / reinsurance brokers (with assistance)	1. Monochannel (not less than 70% of insurance premiums come from 1 sales channel)	1. Monochannel (not less than 70% of insurance premiums come from 1 sales channel)	1. Monochannel (not less than 70% of insurance premiums come from 1 sales channel)	–	–
Non-insurance intermediaries	2. Multi-channel (several sales channels, none of which provides more than 70% of insurance premiums)	2. Multi-channel (several sales channels, none of which provides more than 70% of insurance premiums)	2. Multi-channel (several sales channels, none of which provides more than 70% of insurance premiums)		

Note: * Compiled according to data.

Table 6. Business model of LIFE insurance companies according to the National Bank of Ukraine in 2020

LIFE	BUSINESS MODEL			
Basic characteristics	**Universal**	**Retail**	**Corporate**	**Captive**
Clients				
Physical persons; Legal entities (except reinsurers); Reinsurers	does not belong to any of the other groups	not less than 70% of insurance premiums under individual insurance contracts	not less than 70% of insurance premiums under corporate and other group insurance contracts	premiums from related and affiliated physical and legal entities not less than 70% of insurance premiums
Products				
Life insurance	1. Accumulative (not less than 70% of insurance reserves fall on accumulative insurance contracts)	1. Accumulative (not less than 70% of insurance reserves fall on accumulative insurance contracts)	1. Accumulative (not less than 70% of insurance reserves fall on accumulative insurance contracts)	–
	2. Risky (not less than 70% of insurance reserves fall on insurance contracts other than cumulative insurance contracts)	2. Risky (not less than 70% of insurance reserves fall on insurance contracts other than cumulative insurance contracts)	2. Risky (not less than 70% of insurance reserves fall on insurance contracts other than cumulative insurance contracts)	
	3. Mixed (does not belong to the previous categories)	3. Mixed (does not belong to the previous categories)	3. Mixed (does not belong to the previous categories)	
Sales channels				
Direct sales; Insurance agents (physical persons); MLM; Insurance / reinsurance brokers (with assistance)	1. Monochannel (not less than 70% of insurance premiums come from 1 sales channel)	1. Monochannel (not less than 70% of insurance premiums come from 1 sales channel)	1. Monochannel (not less than 70% of insurance premiums come from 1 sales channel)	–
Non-insurance intermediaries	2. Multi-channel (several sales channels, none of which provides more than 70% of insurance premiums)	2. Multi-channel (several sales channels, none of which provides more than 70% of insurance premiums)	2. Multi-channel (several sales channels, none of which provides more than 70% of insurance premiums)	

The business model of LIFE insurance companies is presented in Table 6 (NBU, 2021b).

The proposed elements of the business model of insurance companies for NON-LIFE and LIFE segments in 2020 do not describe the activities of insurance companies and do not indicate value proposals, key partners, customer relations, cost structure and competitor overview. According to the Kano and CANVAS models, only certain elements are reflected: main activities (Compulsory civil liability insurance, Comprehensive Cover, other transport insurance, property insurance, personal insurance, liability insurance, credit and guarantee insurance, other commercial insurance, other "risk" insurance, life insurance), customer segments (physical persons, legal entities, reinsurers), sales channels (direct sales, insurance agents (physical persons), MLM, insurance/reinsurance brokers (with assistance), non-insurance intermediaries), and key resources (insurance premiums for individual, corporate and other group insurance contracts, premiums from related affiliated physical and legal persons, individual, corporate and other group insurance contracts). In addition, according to the National Bank of Ukraine, business models of LIFE insurance companies have the same distribution channels – multi-channel and mono-channel for universal, retail and corporate models. All of these models are risky, mixed and accumulative. In fact, they differ only in one parameter – customers and products. The same goes for insurance companies with NON-LIFE. The business models of NON-LIFE and LIFE insurance companies built in this way do not fulfill their main purpose – risk forecasting and diversification.

2. GENERALIZATION OF MAIN STATEMENTS

The COVID-19 pandemic has changed business approaches in the world. The negative aspect of the impact of the COVID-19 pandemic on insurance companies in Ukraine is shown in Table 7 (NBU, 2021b; Ufu, 2020).

The COVID-19 pandemic, the change in the regulator on the insurance market had a negative impact on the activities of insurance companies. Their number in both NON-LIFE and LIFE sectors decreased by 27.2% and 39.4%, respectively. However, insurance premiums increased by 4.15% in 2020 compared to 2017. The growth of insurance premiums is a positive phenomenon that contributes to the development of the insurance market.

The business model of an insurance company involves the conclusion of an agreement between the insurance company and the insured. The basis of the business model of insurance companies is the forecasting and diversification of risks. It is a risk-sharing model in which the risk is pooled from individuals and redistributed among a larger group of people.

The National Bank of Ukraine has obliged insurance companies to submit their own business models in order to determine changes in their dynamics. For example, the business model of the Cardiff insurance company is considered in Table 8. Although the model is built according to the requirements of the National Bank of Ukraine, which lists customers, products and sales channels, but it is not grouped by elements of CANVAS.

The company offers cooperation in the field of bank insurance. It specializes in life insurance for borrowers/payment card holders and other types of insurance to protect the interests of partners' customers. The components for the success of the business model of the Cardiff insurance company are many years of experience on the international insurance market, professionalism of the team, innovative approach to

Table 7. Performance indicators of insurance companies in Ukraine in 2017–2020

Indicator	Year				Deviation 2020/2017	
	2017	2018	2019	2020	+/–	%
Number of insurance companies, including	294	281	233	210	–84	–28.57
-NON-LIFE	261	251	210	190	–71	–27.20
-LIFE	33	30	23	20	–13	–39.39
Insurance premiums, billion UAH	43.4	49.4	53	45.2	1.8	4.15

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Table 8. Business model of Cardiff Insurance Company

Key partners	Key aspects of activity	Value proposition	Relations with customers	Segments of customers
BNP Paribas International Financial Group	Monitoring of customer satisfaction Development of life insurance products	Synergy of interests of insurance company's employees with partner's employees Mutually beneficial relationships with partners	Personal help Strategic partnership Socially responsible business	Borrowers/ payment cards holders
	Key resources Software Human capital		**Channels** Website Social networks Lack of sales channels Profit centers for partners	
Cost structure			Income flows	
Payments of insurance sums and insurance indemnities under insurance and reinsurance contracts; Costs of servicing the insurance and reinsurance process; Customer support Marketing costs			Insurance premiums under corporate insurance contracts Premiums from related legal entities	

product development and marketing strategy (BNP Paribas Cardif, 2021). Cardiff focuses on building mutually beneficial relationships with partners, working with them based on the B2B model. In turn, the company's partners directly sell insurance products through their own network to end users – their customers (B2C model). The success of work and the leading positions on the global insurance market is provided by the unique business model – B2B2C, which consists in the absence of the company's own sales channels. The result of this approach is the synergy of interests of the insurance company's employees with the partner's employees due to the work in one area. Using the proposed business model, a profit center for the partner is created resulting in the maximum commercial effect for the participants of such cooperation. To ensure the functioning of this business model, Cardiff Insurance Company provides maximum support to the partner at all levels by training employees not only on the "product line", but also on the specifics and methods of selling insurance products. Motivational programs for partner employees are also organized on a regular basis (BNP Paribas Cardif, 2021).

The main technological trends that will change business processes are: omnichannel communications, the launch of chatbots, analysis and processing of large amounts of information about policyholders and victims, the transition to a digital form of insurance policy (Mobile ID, Bank ID, online access to registers), Blockchain.

Given the changes in digitization for insurance companies, the business model for NON-LIFE (Table 9) and LIFE Insurance (Table 10) should be used.

Before the COVID-2019 pandemic, insurance companies built their business models on the following principles: focus on development and increasing the number of contracts; determining priorities in activities; establishing lasting partnerships with clients without the use of digitalization.

Important elements of the Kano and CANVAS business models are customer segments, value proposition, promotion and sales channels, customer relationships, income cash flows, key activities, cost structure, key resources, key partners. All of these elements are interconnected.

During the COVID-2019 pandemic, insurance companies changed their approaches to forming business models. However, the main ones remained: focus on increasing the number of insurance premiums; proportional development of individual market segments; deepening the customer-oriented approach and the use of digitalization.

Today, business models of insurance companies reflect their development with an emphasis on customer orientation and digitalization. More than 200,000 Ukrainians have already used hotline resources and, by avoiding trips to insurance companies' offices, communication with agents and queuing at checkouts, have purchased insur-

Table 9. Business model of insurance companies from the LIFE segment

Key partners	Key aspects of activity	Value proposition	Relations with customers	Segments of customers
Software and hardware providers Institutions of higher education Payment systems	Customer satisfaction monitoring Finding ways to improve the quality of the insurance product Transactions with other financial services (redemption lending) Training and development of operators Fraud prevention Development of life insurance products	Safe activity Risk coverage Additional benefits or services Guaranteed minimum return on investments Speed of service (A2) Attractive, dynamic and interactive interface (A7) Service efficiency monitoring (A8) Simple form of request for services (A9)	Personal help Channel development and distribution Strategic partnership Socially responsible business	Government employees Persons with disabilities Tourists Employees in various sectors of the economy
	Key resources Software Applications Hardware Human capital		**Channels** Website Mobile application Parent company or banks Agents and brokers Branch Social networks Call centers Ewa – insurance marketplace Hotline.finance	
Cost structure			Income flows	
Payments of insurance sums and insurance indemnities under insurance and reinsurance contracts; Costs of servicing the insurance and reinsurance process; The cost of maintaining the insurance company. Designer service Customer support Marketing costs			Insurance premiums under corporate, individual and other group insurance contracts Premiums from related individuals and legal entities	

Table 10. Business model of insurance companies from the NON-LIFE segment

Key partners	Key aspects of activity	Value proposition	Relations with customers	Segments of customers
-Software and hardware providers -Institutions of higher education -Payment systems	Customer satisfaction monitoring Finding ways to improve the quality of the insurance product Operator training/ development Preventing the risk of fraud Development of risk insurance products: Compulsory civil liability insurance Comprehensive Cover Green card Other types of property insurance Personal insurance products Liability insurance products etc.	Safe activity Risk coverage Additional benefits or services Guaranteed minimum return on investment Speed of service (A2) Attractive, dynamic and interactive interface (A7) Service efficiency monitoring (A8) Simple form of request for services (A9)	Personal help Channel development and distribution Strategic partnership Socially responsible business	Employees in various sectors of the economy Industrial sector Agro-industrial sector Service sector
	Key resources Software applications Hardware Human capital Chatbots		**Channels** Website Mobile application Parent company or banks Agents and brokers Branch Social networks Call centers UKASKO – online insurance platform Ewa – insurance marketplace Polis.ua – a searcher for insurance companies Hotline.finance Epolic	

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Table 10 (cont.). Business model of insurance companies from the NON-LIFE segment

Key partners	Key aspects of activity	Value proposition	Relations with customers	Segments of customers
Cost structure			Income flows	
Payments of insurance sums and insurance indemnities under insurance and reinsurance contracts; Costs of servicing the insurance and reinsurance process; The cost of maintaining the insurance company. Designer service Customer support Marketing costs			Insurance premiums under corporate and individual insurance contracts Premiums from related individuals and legal entities	

ance policies. In 2018, it became possible to conclude insurance contracts online, and in 2019 insurance policies on paper and electronic media received the same status. The volume of sales of electronic policies is constantly growing: the monthly increase reaches 5-10%. As early as 2021, half of the compulsory automobile liability insurance policies are sold online. In 2019, the number of purchased health insurance policies has doubled. A great role in this growth was played by native advertising, which was distributed by mobile operators, who have access to information about the location of users. To date, about 70% of insurance policies are issued offline, and only 30% online. According to Google Ukraine, about 70% of search queries go through mobile traffic. There are more inquiries about online insurance (Ukrinform, 2021b). Undoubtedly, digitalization completely changes the business process model of insurance companies, which also applies to key partners, which are online insurance platforms, marketplaces and search engines. The COVID-19 pandemic has changed the focus of insurance companies' business models. The main objectives of the activity were to conduct business in accordance with the principles of social responsibility and sustainable development goals.

3. DISCUSSION

The main purpose of the paper is to systematize the business models of insurance companies and show their change in the course of a number of factors, one of which is COVID-19. It was discussed first that COVID-19 had the greatest impact on health insurance, along with aviation, green card and travel insurance. It was noted that the business models of insurance companies change from year to year, despite pandemics and crises. Only in 2020 compared to 2019, there were significant changes in the structure of types of insurance, categories of insurers' clients. Further, analyzing the literature, holistic, structural, comprehensive and strategic approaches to the concept of a business model were identified. The most numerous is the structural approach, which describes products, services, information flows and how an insurance company works. Using the approaches of Gupta and Shri (2018), Montenegro et al. (2021), Osterwalder and Pigneur (2010), Shafer et al. (2005), Richardson (2008), Yunus et al. (2010), Bocken et al. (2014), Osterwalder and Pigneur (2010), Hamel (2001), and Iheanachor et al. (2021), a business model of insurance companies was built, based on the CANVAS model, for the insurance company Cardiff (Ukraine), for the LIFE and NON-LIFE segments. This breakdown by insurance segment is suggested because life insurance has been hit hardest by COVID-19. Therefore, it is natural that the business models of these insurance segments should differ in terms of channels, customers, key resources and key aspects of operations.

When determining the business models of insurance companies, it is necessary to take into account the following key points:

- Business models of insurance companies should have a clear and simple building methodology like CANVAS. Prior to the COVID-19 pandemic, the business process methodology in Ukraine was purely descriptive, which included customers (insurance contracts), products (product lines), and sales channels (customer communication methods) for NON-LIFE and LIFE segments. However, the pandemic and the intensification of digitalization caused a reassessment of the business model approach and the involvement of key partners, key aspects of activities, value proposition, customer relations, customer segments, key resources, channels, cost structures, revenue flows;

- Financial Service Providers (FSPs) and Financial Services Agents (FSAs) are rethinking their business models, especially with regard to distribution channels. New distribution channels are emerging that were not common before the pandemic: social networks, online insurance platforms, chatbots, omnichannel communications, the transition to a digital form of insurance policy (Mobile ID, Bank ID, online access to registers), Blockchain. Traditional banking and insurance branches, which were the main means of providing financial services, are the thing of the past;

- Growth of information arrays about policyholders, insured and third parties using Big Data;

- FSAs do not have formalized business models, but they understand what it takes to create and gain value for both their customers and their business. Prior to the pandemic, the main values of insurance companies were accessibility, proximity and convenience for customers and service providers with physical offices, access to cash, completion of transactions, longer office hours, affordability. After the COVID-19 pandemic, the values of insurance companies have changed towards safe operations, risk coverage, speed of service, drawing attention to dynamic and interactive interfaces, simple forms for requesting services.

The continuation of Chesbrough's (2010) research is the creation of innovative business models for insurance companies, where financial service agents are increasingly innovative to be profitable and sustainable in providing financial services to customers. FSAs create value by offering additional services, developing new means of serving their customers, and building relationships that create customer engagement and increase process efficiency.

The scientific discourse about business model development was enriched by the National Bank of Ukraine, which segmented it into Non-Life and Life. However, they do not correspond to the essence of business processes. There is no description of the structure and management of value creation operations, as emphasized by Amit and Zott (2006). There are controversial issues in determining the appropriateness of certain elements in the business model of insurance companies. However, a change in business philosophy is becoming apparent. The COVID-2019 pandemic not only negatively affected market development, reformatting the business model of insurance companies, but also contributed to the development of digitalization, focusing on business customer orientation, ensuring sustainable development goals. Each business model is a reflection of the business philosophy in a particular country. An insurance culture is being formed in Ukraine, due to which approaches to the activities of insurance companies are changing.

Insurance companies' business models must be built using the Kano and CANVAS approaches. Accordingly, they are used to develop business models of insurance companies for the NON-LIFE and LIFE segments. The difference between these models lies in the specifics of the insurer, the features of its product line, technical and other customer segmentation. It is worth introducing the main online insurance platforms into the distribution channels without using the physical presence of the client. Today in Ukraine there are platforms such as UKASKO, Ewa, Polis.ua. Digitalization optimizes business processes and improves interaction with customers, saves time on insurance of insurance policies, introduces a new innovative level of contactless service, which is especially relevant during COVID-19, encourages the purchase of products online with discounts and bonuses, optimizes communications. Insurance companies are increasingly offering to buy their products online. But much of online sales is still the merit of aggregators and marketplaces.

The proposed business model of insurance companies is the result of changes under the influence of COVID-19 and the development of digitalization. Search and online insurance platforms are the key partners. The main costs are directed to the development of online business, work with clients and the creation of information, economic and financial security systems.

In conclusion, it should be noted that the change in the business models of insurance companies will intensify under the influence of pandemics and crises,

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which have become more frequent and deeper in the world. This paper proposes business models for insurance companies based on the CANVAS model, which is the most common among scientists, and identifies key points of the models to which attention should be paid, in the opinion of most researchers.

CONCLUSION

The study systematizes the business models of insurance companies. The main approaches to this process are identified. In particular, the definition of the business model is grouped into four approaches such as value-based, structural, complex and strategic. The most common in academia is the strategic approach, which involves a set of variable solutions in a company's strategy, architecture and economic characteristics. The business model of insurance companies shows the logic of activity creating and proving value to customers, suppliers and other stakeholders. The business model should describe the content, determine the structure, elements of management of operations to create value through the use of business opportunities available on the insurance market. The insurance market is changing dynamically. Moreover, one of the factors that changed it is the COVID-19 pandemic. This was facilitated by customer orientation, omnichannel communications, digitalization (launch of chatbots, Big Date, Blockchain, transition to digital insurance policy, Mobile ID, Bank ID, online access to registers). This has led to the formation of innovative hybrid business models of insurers.

The description of business processes of insurance companies was carried out using the CANVAS model and the hybridization of CANVAS with the Kano model, the approach of the National Bank of Ukraine that is considered purely descriptive.

The CANVAS model is the most widely used and defines values and controls in detail. The main elements in the CANVAS model are key partners, main aspects of activity, value proposition, customer relations, customer segments, resources, channels, cost structure, revenue flows.

The approach to insurance business is changing, in particular, online insurance platforms, marketplaces and search engines are becoming key partners in insurance activities, the role of marketing and social responsibility is growing.

AUTHOR CONTRIBUTIONS

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