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Marketing management risks of online business: taxonomy, verification and assessment

Abstract. *Introduction.* Digital transformation, which is characterized by the rapid pace of changes in the marketing environment, aggressive actions of competitors, high heterogeneity of consumer requests and preferences, has a significant impact on the business, namely, it requires the generation and implementation of new approaches to solving business problems, as well as achieving the set goals. In order to effectively conduct and develop an online business, it is necessary to follow new tendencies and trends in meeting the constantly growing requests, needs and preferences of online buyers, simultaneously levelling or eliminating risks that may arise in the short and long term with the greatest probability, as well as have negative effects for business.

Purposes of our research are to develop the taxonomy marketing and management risks of online business by using multidimensional systematization and decomposition methods; to substantiate the scientific and methodical approach to verification and qualitative assessment of probability of the marketing and management risks for online business; to formulate recommendations regarding the formation of an intelligent IT security system for levelling and / or eliminating the risks of online business in the context of the implementation of the relevant risk management plan; to develop and test applied tools for effective risk management of online business.

Methods. The symbiosis of general and specific methods is used to achieve the purposes, including: methods of dialectical cognition, generalization and systematization, abstraction, synthesis; statistical, dynamic and cluster analysis; formalization method; expert survey; calculation-analytical and comparative methods; matrix method.

Results. The marketing management risks of online business in the digital transformation context are explicated and concretized. The taxonomy of marketing-management risks of online business is developed and represented like a multi-dimensional risks systematization as a result of their decomposition. The scientific and methodical approach to verification and qualitative assessment of the probability of the marketing and management online business risks is substantiated. The algorithm for the identification of the online business risks status is proposed. It reflects the consecutive stages of the qualitative risks groups assessment and determines the choice of a method for its levelling and / or elimination. The framework of the risk management plan for online business is developed. This framework takes into account triggers and consequences of risks onset. The matrix for monitoring the implementation of the risk management plan for online business is compiled. The phases of the intelligent IT security system development are substantiated.

Conclusions. The proposed scientific and methodical approach and the developed applied tools are tested by the example of Ukrainian retailers' online businesses. The testing results reflect the significance of the authors' developments and proposals, as well as the expediency of their implementation for the successful set up and development of online business in the digital transformation context.

Keywords: Online Business; Risk; Marketing; Security; Retailer; Marketing and Management Risk Taxonomy; Framework of the Risk Management Plan; Matrix for Monitoring the Implementation of the Risk Management Plan; Intelligent IT Security System

JEL Classification: G32; L8; M1

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Маркетинг-менеджмент ризики онлайн-бізнесу: таксономія, верифікації та оцінка

Анотація. У статті експліковано та конкретизовано маркетинг-менеджмент ризики онлайн-бізнесу в контексті цифрової трансформації, розроблено їх таксономію на базі багатовимірної систематизації та декомпозиції груп ризиків, що корелюють із різними аспектами ведення та розвитку бізнесу в Інтернет в умовах цифрової трансформації.

Обґрунтовано науково-методичний підхід до верифікації та квалітативної оцінки ймовірності настання маркетинг-менеджмент ризиків онлайн-бізнесу, які є компіляцією п'яти систематизованих груп ризиків. Інтерпретовано консеквентні етапи квалітативної оцінки груп ризиків онлайн-бізнесу з використанням методу експертних оцінок. Розроблено алгоритм ідентифікації статусу ризиків онлайн-бізнесу, що детермінує хід розробки та реалізації плану ризик-менеджменту.

Запропоновано фреймворк плану менеджменту ризиків онлайн-бізнесу та запропоновано матрицю моніторингу його реалізації, що дозволяє в динаміці відслідковувати хід виконання запланованих заходів і, за необхідності, коригувати план менеджменту з огляду на особливості бізнес-процесів, технологічну інфраструктуру та цінності онлайн-культури.

Інтерпретовано фази розробки інтелектуальної системи ІТ-безпеки щодо нівелювання та / або ліквідації ризиків онлайн-бізнесу.

Результати апробації запропонованих науково-методичного підходу та прикладного інструментарію на прикладі українських ритейлерів підтверджують доцільність їх систематичного застосування для успішного ведення й розвитку онлайн-бізнесу в умовах цифрової трансформації.

Ключові слова: онлайн-бізнес; ризик; маркетинг; безпека; ритейлер; таксономія маркетинг-менеджмент ризиків; фреймворк плану ризик-менеджменту; матриця для моніторингу імплементації плану ризик-менеджменту; інтелектуальна система ІТ-безпеки.

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Маркетинг-менеджмент риски онлайн-бизнеса: таксономия, верификации и оценка

Аннотация. В статье эксплицировано и конкретизировано маркетинг-менеджмент риски онлайн-бизнеса в контексте цифровой трансформации, разработано их таксономию на базе многомерной систематизации и декомпозиции групп рисков, которые коррелируют с разными аспектами ведения и развития бизнеса в Интернет в условиях цифровой трансформации.

Обосновано научно-методический подход к верификации и квалитативной оценке вероятности наступления маркетинг-менеджмент рисков онлайн-бизнеса, которые являются компиляцией пяти систематизированных групп рисков. Интерпретировано консеквентные этапы квалитативной оценки групп рисков онлайн-бизнеса с использованием метода экспертных оценок.

Разработано алгоритм идентификации статуса рисков онлайн-бизнеса, что детерминирует ход разработки и реализации плана риск-менеджмента. Предложено фреймворк плана менеджмента рисков онлайн-бизнеса и предложено матрицу мониторинга его реализации, что позволяет в динамике отслеживать ход выполнения запланированных мероприятий и, в случае необходимости, корректировать план менеджмента учитывая особенности бизнес-процессов, технологическую инфраструктуру и ценности онлайн-культуры.

Интерпретировано фазы разработки интеллектуальной системы ИТ-безопасности по нивелированию и / или ликвидации рисков онлайн-бизнеса.

Результаты апробации предложенных научно-методического подхода и прикладного инструментария на примере украинских ритейлеров подтверждают целесообразность их систематического использования для успешного ведения и развития онлайн-бизнеса в условиях цифровой трансформации.

Ключевые слова: онлайн-бизнес; риск; маркетинг; безопасность; ритейлер; таксономия маркетинг-менеджмент рисков; фреймворк плана риск-менеджмента; матрица для мониторинга имплементации плана риск-менеджмента; интеллектуальная система ИТ-безопасности.

1. Introduction

In the context of digital transformation, it should be emphasized that in order to set up and develop online business, it is necessary to follow new tendencies and trends in meeting the constantly growing requests, needs and preferences of online buyers, simultaneously levelling or eliminating risks that may arise in the short and long term with the greatest probability, as well as have negative effects for business.

2. Theoretical Background and Brief Literature Review

The essence, components and features of marketing risk management in different spheres are described in the works of leading scientists, among which: Kou, Chao, Peng, Alsaadi and Herrera-Viedma (2019); Boutang J. and De Lara (2016). Special attention should be paid to the study of the entrepreneurs risks in the process of entering new markets (Wu & Knott, 2006), where the authors focused on the enterprises refusal to carry out a certain type of activity if identifying the risks associated with it. Despite the significant contribution to the study of this issue, there is a certain fragmentation of opinions among the authors regarding the types of marketing risks. In addition, attempts to systematize marketing risks are still not undertaken by the authors.

The specifics of online trading risk management are reflected in the works by Vos et al. (2014); Hsieh and Tsao (2013). Risk management in the digital transformation era is described by Masuda, Shirasaka, Yamamoto and Hardjono (2017). Also, Crespo, Bosque and Salmones (2009) in their article interpreted the risks influence on the online shopping functioning. However, the methodology for assessing the online shops' risks is remained without the attention among scientists.

Key aspects of risk perception by online buyers when making decisions about purchases in an online shop are highlighted by Kamalul Ariffin, Mohan and Goh (2018); Forsythe (2003). The impact on the online buyers' behaviour of IT and security risks is justified in the works by Bach, Silva, Souza et al. (2020); Kure, Islam and Razzaque (2018); Pappas (2016). Practical recommendations for reducing market risks for offline businesses can be found in the articles by Ivanov and Dolgui (2019); Milne and Culnan (2004). It is necessary to emphasize the absence of similar recommendations for online businesses.

The analysis of the literature confirms the lack of the unified approach to systematization, assessment and management of online business risks. This determines the relevance of the research topic.

3. Study Purposes

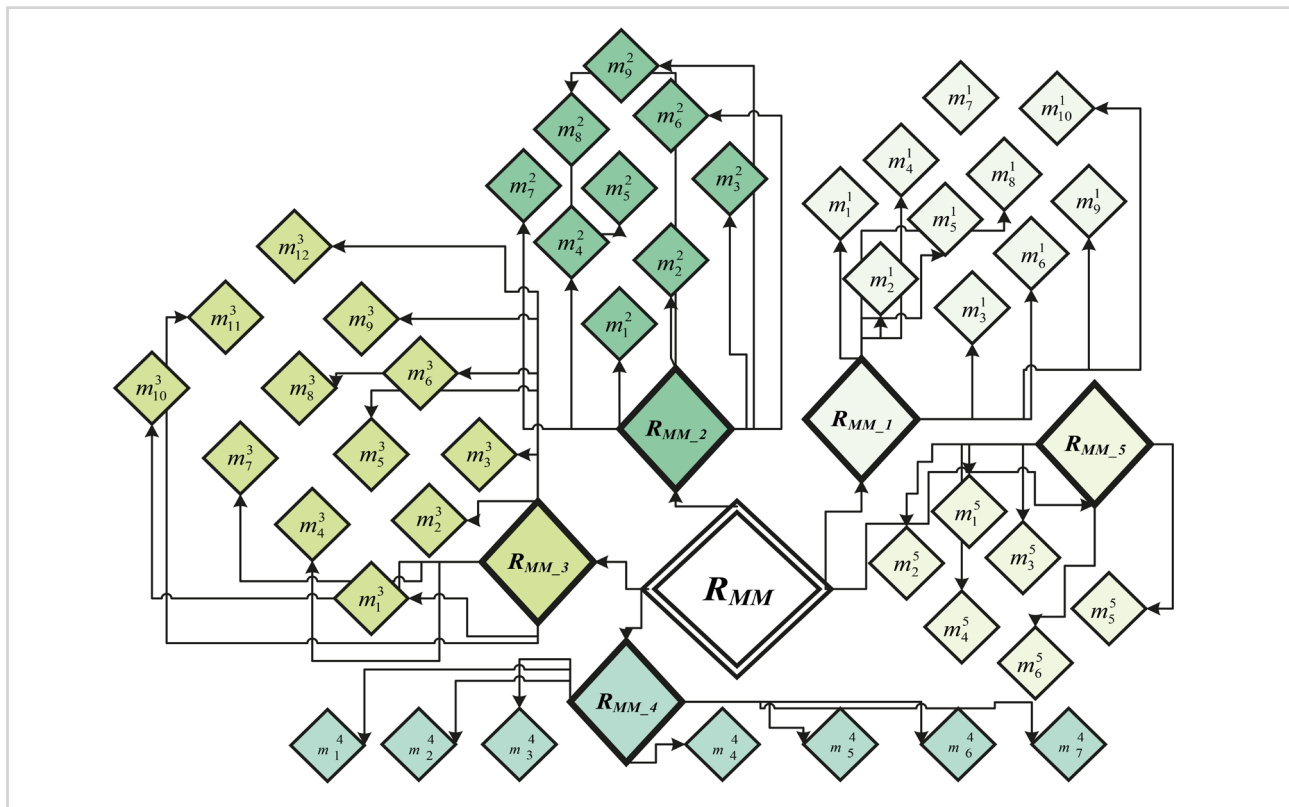
1. To develop the taxonomy marketing and management risks of online business by using multidimensional systematization and decomposition methods.
2. To substantiate the scientific and methodical approach to verification and qualitative assessment of probability of the marketing and management risks for online business, which determines the development and implementation of the risk management plan based on identification of their status.
3. To formulate recommendations regarding the formation of an intelligent IT security system for levelling and / or eliminating the risks of online business in the context of the implementation of the relevant risk management plan.
4. To develop and test applied tools for effective risk management of online business.

4. Methodology

4.1. Taxonomy of marketing and management online business risks

Based on the detailed study and comparative analysis of scientific works and publications of foreign leading scientists and economists (Bach, Silva, Souza et al., 2020; Kou et al., 2019; Boutang & De Lara, 2016; Wu & Knott, 2006; Kure, Islam, & Razzaque, 2018; Pappas, 2016), the set of risks for business on the Internet is explicated. Risks that relate directly to online business running in the context of digital transformation are concretized, their list is updated and expanded as part of the development of the taxonomy of marketing and management online business risks (Figure 1).

According to Figure 1, the developed taxonomy of marketing and management online business risks (R_{MM}) is the multidimensional risks systematization as a result of their



Notes: **R_{MM_1} - Group 1. Risks of marketing commodity policy:**

m_1^1 - decreased satisfaction with online buyers; m_2^1 - decrease in the online orders volume;
 m_3^1 - inability to satisfy the requests, needs and preferences of the target audience;
 m_4^1 - lack of the online buyers' sustainable behavior of; m_5^1 - low quality of service support of the goods;
 m_6^1 - loss of regular online buyers; m_7^1 - non-competitiveness of the product portfolio;
 m_8^1 - inability to compete in the market;
 m_9^1 - formation of a product portfolio that is irrelevant to the requests, needs and preferences of online buyers;
 m_{10}^1 - filling the product portfolio without taking into account the current and projected standards for pricing.

R_{MM_2} - Group 2. Risks of marketing communication policy:

m_1^2 - deterioration or loss of business reputation;
 m_2^2 - lack of integration and interactive interaction of communication channels;
 m_3^2 - low level of awareness of online buyers; m_4^2 - irrational communication support;
 m_5^2 - lack of integration with bank payment services; m_6^2 - unsatisfactory website customization;
 m_7^2 - incorrect operation of the online ordering system;
 m_8^2 - low level of information awareness of potential online buyers; m_9^2 - defective marketing communications system.

R_{MM_3} - Group 3. Risks of marketing sales policy:

m_1^3 - inability to satisfy the varied demands of online buyers;
 m_2^3 - low level of predictability of requests, needs and preferences of online buyers;
 m_3^3 - insufficient marketing penetration; m_4^3 - unsatisfactory structure of marketing logistics;
 m_5^3 - lack of provision of omnichannel sales; m_6^3 - paralyzing the work of the automated inventory management system;
 m_7^3 - low level of business partners reliability (economic agents of the market);
 m_8^3 - lack of stable cooperation with permanent business partners;
 m_9^3 - decrease in the volume of trade transactions with business partners; m_{10}^3 - limitation of the goods sales volume;
 m_{11}^3 - static nature of online sales channels; m_{12}^3 - lack of use of progressive methods of online trading.

R_{MM_4} - Group 4. Risks of marketing pricing policy:

m_1^4 - ineffective choice of the market development trajectory; m_2^4 - incorrectly chosen price strategy;
 m_3^4 - rejection of prices by online buyers; m_4^4 - non-competitiveness of prices; m_5^4 - unprofitable online activity;
 m_6^4 - insufficient diversification of business partners; m_7^4 - changes in the online buyers price priorities.

R_{MM_5} - Group 5. Risks of HR management:

m_1^5 - insufficient staff competence; m_2^5 - limited labor resources;
 m_3^5 - low level of staff awareness about the usage of effective mechanisms and tools to satisfy the requests, needs and preferences of online buyers;
 m_4^5 - reducing the positive impact of the personnel liability system for offenses;
 m_5^5 - low staff productivity; m_6^5 - inert functioning of the personnel motivation system.

Figure 1:
The taxonomy of marketing and management online business risks

Source: Developed by the authors

decomposition into 5 groups (*group 1*, R_{MM_1} - risks of marketing commodity policy; *group 2*, R_{MM_2} - risks of marketing communication policy; *group 3*, R_{MM_3} - risks of marketing sales policy; *group 4*, R_{MM_4} - risks of marketing pricing policy; *group 5*, R_{MM_5} - risks of HR management), each of which takes into account different aspects of online business setting up and developing in the digital transformation.

The risks verification and formation of the risks register (database) that based on the developed taxonomy will allow us to:

- 1) study the frequency of risks in dynamics;
- 2) determine the dependence of risks on the specifics of the methodical tools implementation in the terms of following a certain marketing policy;
- 3) continuously monitor contextual changes during setting up and developing of online business, including identification of threats and possible negative consequences for the business;
- 4) carry out regular qualitative assessment of the probability of risks;
- 5) make justified correct management decisions at different hierarchical levels regarding the further trajectory of online business development.

4.2. Verification and qualitative assessment of online business marketing management risks

Scientific and methodical approach to the verification and qualitative assessment of the probability of marketing and management risks for online business, which are a compilation of five systematized risks groups, is substantiated; and identification of the status of these risks, which is an indicator of the relevant method of levelling (reduction, transfer) and / or liquidation (elimination) of risks for the effective management plan development. Below in the text, the consequent stages of the qualitative assessment of online business risks groups are interpreted by the expert method usage:

- determination of the significance (weight W_k) of the k -risk of online business in the context of their groups (R_{MM_1} , R_{MM_2} , R_{MM_3} , R_{MM_4} , R_{MM_5}) based on the results of a survey of experts and specialists in the relevant field;
- assessment of the probability of online business risk (X_k) on a scale from 1 to 3 points, where 1 point shows an unlikely risk, 2 points - likely, and 3 - very likely;
- calculation of weighted (X_{z_k}) and average weighted (\bar{X}_{z_R}) rating of online business risks (1-2):

$$X_{z_k} = \sum_{k=1}^n W_k * X_k, \quad (1)$$

where:

n - total number of online business risks.

$$\bar{X}_{z_R} = \frac{\sum_{R=1}^p X_{z_R}}{\sum_{k=1}^n W} = \sum_{R=1}^p X_{z_R}, \quad (2)$$

where:

p - number of online business risks groups.

According to the proposed scientific and methodical approach, \bar{X}_{z_R} is an identifier for the status of online business risks groups, namely:

Status 1 «Accept» ($0 < \bar{X}_{z_R} \leq 2$) indicates the expediency of following the current vector of actions within the framework of the marketing policy implementation and does not require the introduction of fundamentally new strategic changes, significant operational improvements and the business model construct reconfiguration.

Status 2 «Change» ($2 < \bar{X}_{z_R} \leq 3$) demonstrates the need to implement strategic and operational-tactical measures by levelling the risks and / or eliminate the negative effects for online businesses as a result of their occurrence. *Status 2* indicates the need to implement radical changes in the online business, which are viewed through the prism of innovative and secure IT technologies, the internal business environment with a mandatory focus on maximum satisfaction of heterogeneous requests, needs and preferences of online buyers. In particular, this will lead to an increase in the ability of online businesses to change quickly and be ready to implement large-scale initiatives, to make and implement informed innovative

management decisions in accordance with a detailed risk management plan, which, among other things, will guarantee the flexibility of online businesses in bifurcation and uncertainty conditions.

Figure 2 represents the algorithm of the online business risks status identification, which determines the development and implementation of the risk management plan.

According to Figure 2, *Status 2 «Change»* divided into *statuses 2.1, 2.2 and 2.3*, as it provides for the choice of the optimal method of levelling (reduction, transfer) and / or elimination (liquidation) of online business risks groups at the appropriate hierarchical levels, in particular:

1) in the context of a diversified online business - corporate level / business level / functional level / operational level;

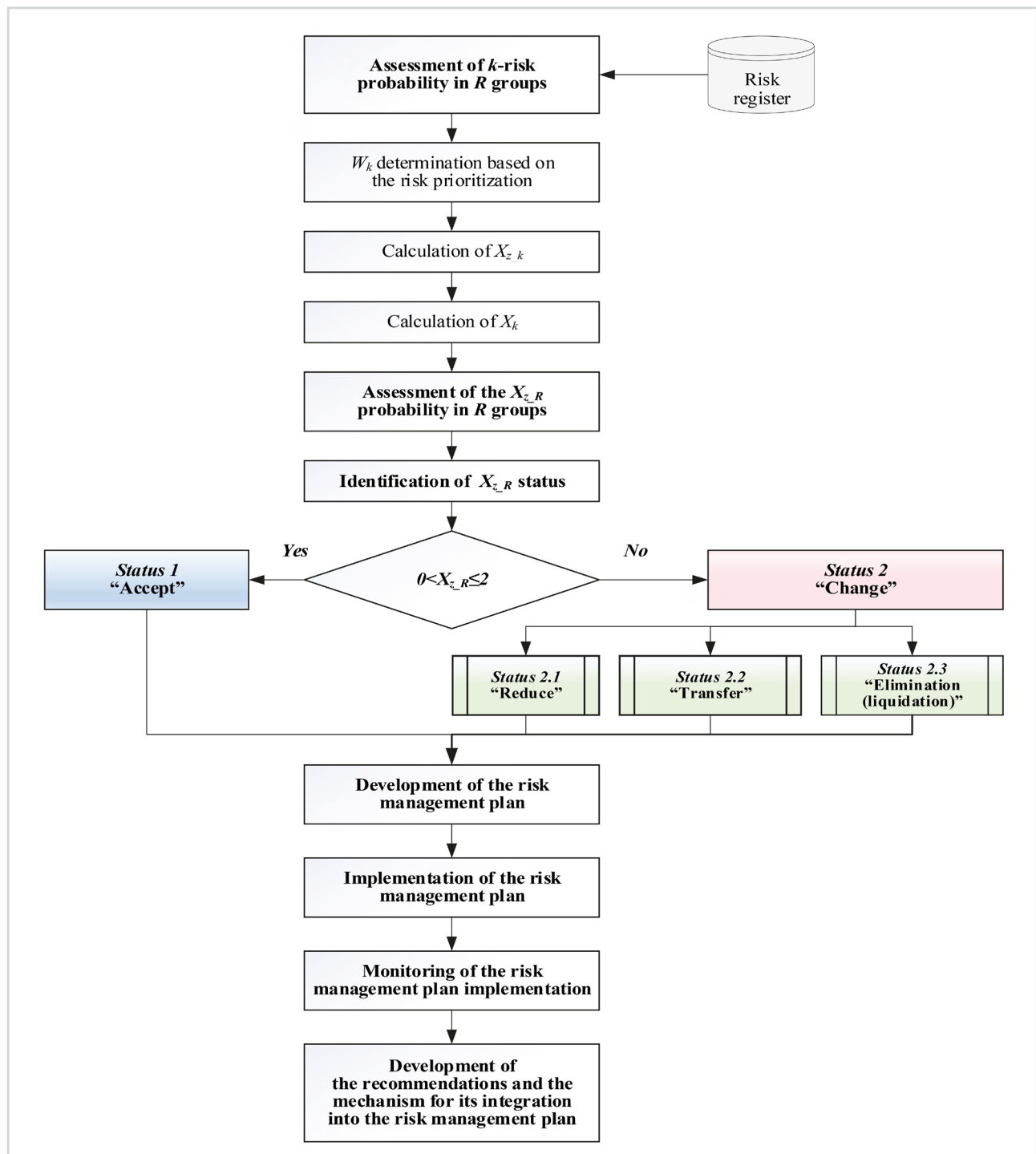


Figure 2:
The algorithm of the online business risks status identification

Source: Developed by the authors

2) in the context of a narrow-profile online business - business level / functional level / operational level. Implementation of measures in the case when the risks of online business have *Status 2* is a complex process and requires the program-targeted approach implementation.

4.3. Online business risk management tools

The online business risk status is a prerequisite for developing the management plan, framework of which is given below (Table 1).

Table 1:
The framework of the online business risk management plan

Risks group	Risks group status	Risks triggers	Time cycle of the risks	Consequences of the risks	Measures to change the risks status	Required resources / Responsible	Term of the measure realization	Indicators of the measures implementation

Source: Developed by the authors

The proposed plan framework allows, in accordance with the identified status of the risks group, to choose the relevant way to change it by developing and implementing a set of measures that take into account the risks triggers; the time cycle of the risks onset and reduce their negative consequences for online business setting up and developing. It can be stated that the online business risk management plan includes a system of preventive relevant measures to level and / or eliminate negative consequences for the online business set up and development from the onset of risks.

It is important to note that the framework of the online business risk management plan shows the resources required to carry out planned measures, allows fixing the responsibility for their realization, and visually illustrates the results of the planned measures implementation in a certain period according to specific indicators. It is recommended to monitor the implementation of the online business risk management plan using the matrix below (Table 2).

According to Table 2, the matrix includes fields that allow dynamically tracking the progress of each planned measure to level and / or eliminating a certain group of online business risks. It takes into account the degree of the desired results achievement and formulate further practical recommendations and a mechanism for their integration into the overall management plan risks with specifics of business processes, technological infrastructure and values of online culture. Moreover, this, in turn, allows optimally adjusting the plan and increasing its practical value by providing integrated risk management for online business.

Table 2:
The matrix for monitoring the implementation of the risk management plan for online business

Risks group	Measure to change the risk status	Indicator of the measure implementation	Actual results of the measure implementation	Measure implementation metrics:		Percentage of achievement the planned measure implementation results
				at the beginning	at the end	

Source: Developed by the authors

4.4. Intelligent IT security system for levelling and / or eliminating online business risks

The realization of the online business risk management plan should be carried out simultaneously with the formation of the intelligent IT security system for levelling and / or eliminating online business risks by ensuring operational and technological IT security (Figure 3).

According to Figure 3, **Phase 1. Interpretation of risks and threats. Standardization of business operations to ensure online business IT security:**

- 1) identification of threats to the conduct and development of online business due to the risks onset;
- 2) development of the mechanism for the rational choice of effective applied tools to ensure online business IT security;
- 3) standardization of business operations to ensure online business IT security.

Phase 2. Contextualizing of online business risks. Integration and maintenance of technological and operational online business IT security:

- 1) determination of threats and consequences for running and development of online business due to the risks onset, which are based on contextual risk analysis;

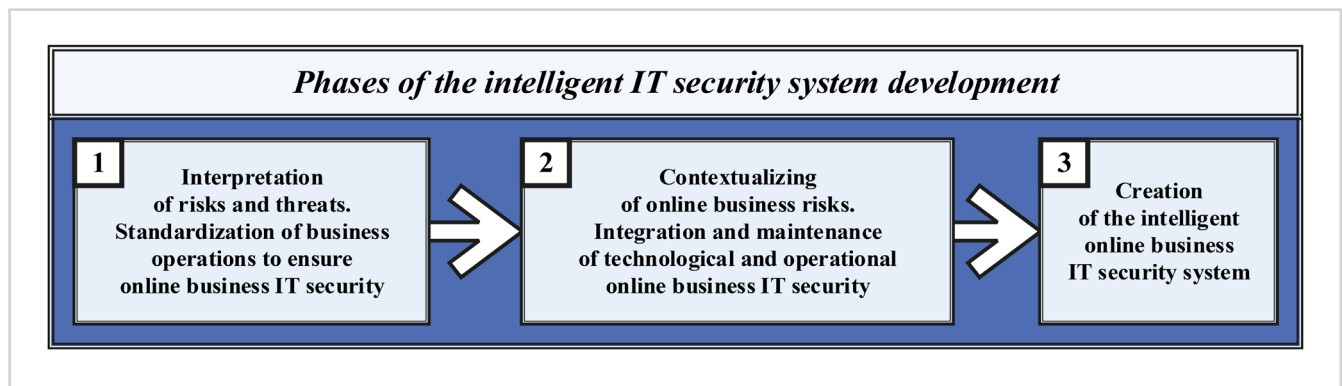


Figure 3:
**Phases of the intelligent IT security system
for levelling and / or eliminating online business risks development**
Source: Developed by the authors

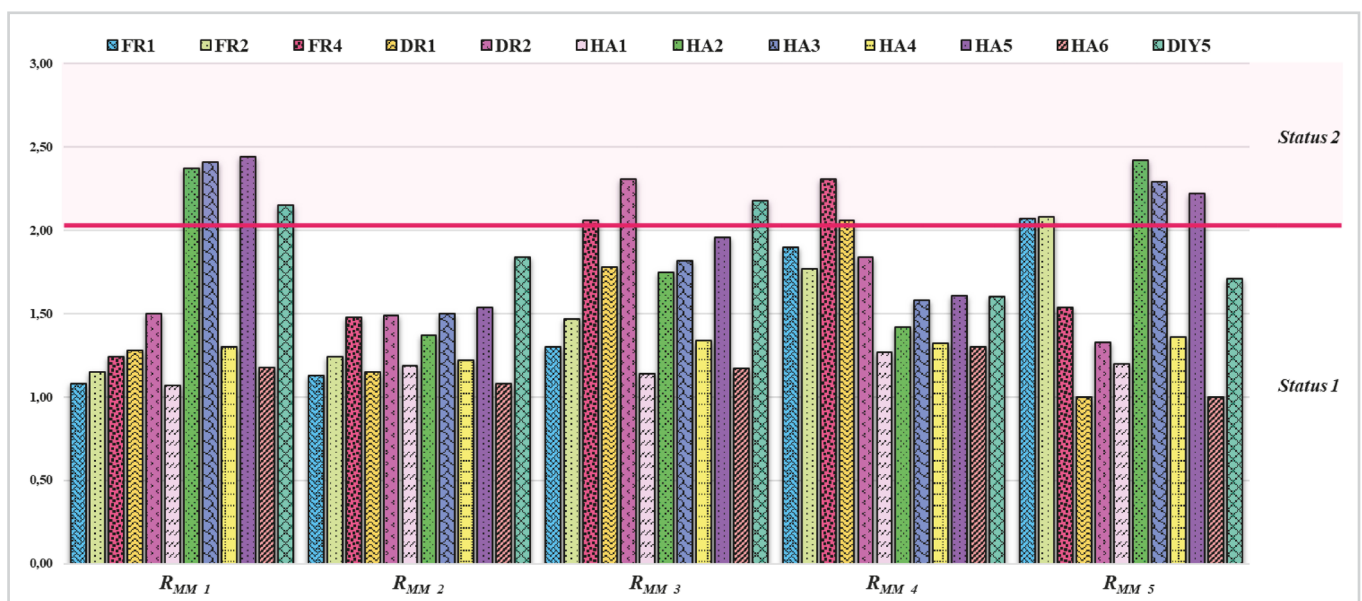
- 2) implementation of relevant analytical tools, taking into account the impact of risks on the online business setting up and development in order to increase the IT security level;
- 3) optimization and automation of technologies and business processes with the IT security focus;
- 4) integration and maintenance of technological and operational IT security.

Phase 3. Creation of the intelligent online business IT security system:

- 1) providing the flexible IT security system for online business with a priori multiple options for solutions to emerging risks;
- 2) development and systematic updating of the alternative measures set that reduce the possible risks and their negative consequences for the online business running and development;
- 3) creation of the intelligent IT online businesses security system to level and / or eliminate risks.

5. Empirical Findings

A substantiated scientific and methodical approach is tested on the example of Ukrainian retailers who have an online business and are described previously in the article (Natorina, 2018). The Figure 4 demonstrates summary results of expert assessment of marketing and management risks of Ukrainian retailers' online business in 2020.



Notes: FR1 - [auchan.ua](#); FR2 - [metro.ua](#); FR4 - [novus.ua](#); DR1 - [yves-rocher.ua](#); DR2 - [eva.ua](#); HA1 - [allo.ua](#); HA2 - [foxtrot.com.ua](#); HA3 - [eldorado.ua](#); HA4 - [comfy.ua](#); HA5 - [ringoo.ua](#); HA6 - [citrus.ua](#); DIY5 - [leroymerlin.ua](#).

Figure 4:
Results of assessment of Ukrainian retailers' online business marketing and management risks, 2020
Source: Calculated and developed by the authors

According to Figure 4, among retailers of household appliances and electronics, the highest $\bar{X}_{z_{RMM_1}} = 2.44$ at the same time as $\bar{X}_{z_{RMM_5}} = 2.22$ has the retailer HA5. This, in turn, underlines the necessity and urgency of developing and implementing the risk management plan to change the status of risks for online business. Marketing commodity policy online with a rational and correct organization of HR management have a significant impact on the online buyer's decision about purchase and catalyze the dynamic development of online business as a whole. Considering the above, for the formulation of the risk management plan for HA5 online business it is developed a continuum of measures to change the risks status of R_{MM_1} and R_{MM_5} taking into account their triggers and the consequences of the offensive (Table 3).

In order to systematically track the progress of the planned measures to change the risks group status, indicators of the measures implementation and the percentage of achieved results, as well as based on a comparative assessment of metrics, the matrix for monitoring the implementation of the risk management plan for HA5 online business is developed. Table 4 presents the fragment of the matrix.

Based on data in Table 4, it can be argued the effective implementation of the planned measures to eliminate (liquidate) R_{MM_1} (Status 2.3) and achieve metrics, as evidenced by 100% implementation of measures $E1_{R_{MM_1}}$, $E2_{R_{MM_1}}$, $E4_{R_{MM_1}}$ and by 75% - $E3_{R_{MM_1}}$. It is important to note, that partial implementation of $E3_{R_{MM_1}}$ contributed to the growth of HA5 online sales based on creating a positive experience for online buyers by personalizing the value of 17 out of 23 SKUs added to the product portfolio in the category «Smartphones». Moreover, permanent monitoring and analysis of contextual online sources about variable requests, needs and preferences of online buyers served as the basis for personalizing the value of commodity items.

Table 3:
The fragment of the risk management plan for HA5 online business

Risks group	Risks group status	Risks triggers	Consequences of the risks	Measures to change the risks status
R_{MM_1}	2.3	<ul style="list-style-type: none"> inability to satisfy the requests, needs and preferences of the target audience; low level of satisfaction of online buyers; non-competitiveness of the product portfolio; formation of a product portfolio that is irrelevant to the online buyers needs 	<ul style="list-style-type: none"> low attractiveness of the online buyers' value proposition; increasing number of dissatisfied online buyers; loss of online buyers share; decrease in goods demand; decrease in the online orders volume; decrease in the rate of goods turnover; failure to achieve planned metrics of product online sales; failure to sustainably develop online business; unprofitable online business 	Formation of multidimensional variability of propositions in the product portfolio ($E1_{R_{MM_1}}$) Creation of personal product value for different segments ($E2_{R_{MM_1}}$) Development and implementation of a plan to ensure personalization of the product value ($E3_{R_{MM_1}}$) Correction of long-term and short-term plans for the formation of the balanced product range ($E4_{R_{MM_1}}$)
R_{MM_5}	2.3	<ul style="list-style-type: none"> low level of staff awareness about the usage of effective mechanisms and tools to satisfy online buyers; low staff productivity; inert functioning of the motivation system 	<ul style="list-style-type: none"> low level of online buyers' satisfaction; decrease in the audience of loyal online buyers; increase in conflict situations among staff; deterioration of the image; reputational crisis; deterioration of business results; - regressive development of online business 	Correction of the communication model between staff and online buyers ($E1_{R_{MM_5}}$) Development of an algorithm for relational actions for long-term profitable interaction with online buyers ($E2_{R_{MM_5}}$) Creation of a plan to coordinate actions and improve the speed of response to online buyers' requests ($E3_{R_{MM_5}}$) Realization of measures to improve the efficiency of informing online buyers about current activities ($E4_{R_{MM_5}}$) Implementation of a plan to build and maintain long-term relationships with online buyers ($E5_{R_{MM_5}}$) Development and realization of internal HR measures taking into account the status of risks group ($E6_{R_{MM_5}}$) Changing the style of management interaction ($E7_{R_{MM_5}}$)

Source: Developed by the authors

Table 4:
The fragment of the matrix for monitoring the implementation
of the risk management plan for HA5 online business

Measure to change the risk status	Indicator of the measure implementation	Actual results of the measure implementation	Measure implementation metrics:		Percentage of achievement of the planned measure implementation results
			at the beginning	at the end	
$E1_{R_{MM}_1}$	Added SKUs to the product portfolio that are in demand among online buyers	Added 23 SKUs to the product portfolio, which are in demand among online buyers (category «Smartphones»)	Integration of 15 SKUs into the category «Smartphones»	Integration of 23 SKUs into the category «Smartphones»	100 %
$E2_{R_{MM}_1}$	Formed the set of personal value propositions in the most profitable segments	Formed the set of 4 personal value propositions in 2 the most profitable segments	1. Identification of the most profitable segments. 2. Development of personal value propositions	Determination of 4 personal value propositions in 2 the most profitable segments	100 %
$E3_{R_{MM}_1}$	Provided value personalization of the added SKUs in the product portfolio	Provided value personalization of 17 planned added SKUs from 23 SKUs in the product portfolio (category «Smartphones»)	Formation of the value personalization of 10 added SKUs in the product portfolio (category «Smartphones»)	1. Formation of the value personalization of 17 planned added SKUs from 23 SKUs in the product portfolio (category «Smartphones») 2. Personalization of the value of 17 planned added SKUs from 23 SKUs in the product portfolio (category «Smartphones»)	75 %
$E4_{R_{MM}_1}$	Corrected the short-term and long-term plans for the formation of a balanced product range	Corrected the short-term and long-term plans for the formation of a balanced product range	1. Creation of the short-term plan for the formation of a balanced product range. 2. Creation of the long-term plan for the formation of a balanced product range	1. Harmonization of the short-term and long-term plans for the formation of a balanced product range. 2. Correction of the short-term and long-term plans for the formation of a balanced product range	100 %

Source: Developed by the authors

6. Conclusions

It is developed and graphically interpreted the taxonomy of marketing and management risks for online business, which is based on multidimensional systematization and decomposition into several risks groups that are associated with various aspects of setting up and developing of on-line business in the context of digital transformation.

The scientific and methodical approach to verification and qualitative assessment of the probability of online business marketing and management risks (compilation of five systematized risks groups) is substantiated. The consequent stages of the qualitative assessment of online business risks groups with the usage of the expert assessments method are interpreted. The algorithm of the online business risks status identification is developed. It determines the development and implementation of the risk management plan. The framework of the risk management plan for online business is created, which, among other things, takes into account the triggers and consequences of the risks onset, the measures to change the risks status and indicators of the measure implementation. The matrix for monitoring the implementation of the risk management plan for on-line business is developed. It allows to dynamically track the progress of planned measures realization and, if necessary, correct the risk management plan taking into account the specifics of on-line business processes, technological infrastructure and the online culture values.

The phases of the intelligent IT security system for levelling and / or eliminating online business risks development are substantiated and interpreted.

The results of approbation of the scientific and methodical approach and the developed tools are confirmed the feasibility of their systematic usage for the successful online business set up and development in the digital transformation context.

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