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CONFERENCE PAPER

# General Aspects of Bank Strategy on the Digital Transformation in North Macedonia

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***Abstract***: *Change management in banking becomes more complex with a strong accent on the non-financial aspects to preserve sustainable development. The objective of this research paper is to promote powerful market interactions in the evolution of banking business models by exploiting the business model canvas method. The major banking business models in North Macedonia, identified by the method of cluster analysis in this paper were analyzed from the marketing perspective in order to present a generalized canvas of the commercial banking digital transformation aspects and strategy at the country level. The analysis was conceptualized over eight key strategic aspects. The visualization method was chosen to approach the relevance of stakeholders in the banking strategy and the value creation for society. Finally, this study concludes with the existence of substantial digitalization capacity of the banking institutions in North Macedonia, confirming its positive linkage with size, social responsibility, and international aspects.*

***Keywords:*** banking business model canvas; strategy; innovations; social responsibility; sustainability

***JEL classification:*** G21, G30, L14, M14, O31

## Introduction

During the pandemic commercial banks have changed their roles in society. Banks have been the stability anchor in the Covid-19 crisis (maintaining low-interest rates to support the liquidity requirements of the real sector, pursuing relationship lending policies). While providing at least temporary regulatory and supervisory adjusted relief for banks, the crisis may accentuate the digitalization tendency, which may lead to substantial changes in the sector going forward [3]. Second, the health crisis from 2020 revealed other social perspectives in banking, which led to the development of greater awareness of the broader context of the social aspects, which could

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bring some extra insurance requirements against health risks for the credit holders in the future. And third, the unprecedented global disruption may provoke a new era in technological development emphasizing the urgency for digital transformation in banking toward an open banking model as a new banking concept mitigating social (health) risks in finance and bringing better customer experience for the new generations. The banking industry became an applicable example of a business directly influenced by the degree of corporate social responsibility [5][16].

In a reply to the technological and socio-economic developments in the previous decade, in the world commercial banks have developed new core activity in banking – information processing to maintain a better performance model as well as a customer-oriented focus, customized services, and ultimate customized experiences. That implies an even greater social focus on banks in the forthcoming period. By developing fintech-intensive business models, banks once more will confirm their unprecedented social role in strengthening the financial inclusion aspects. Customer-oriented development of banking business models in North Macedonia will enforce their competitiveness as far as the information security requirements are being met. Otherwise imprudent growth of the fintech processes in banking inevitably could lead to exposure of general distrust in the banking system potentially leading to a financial crunch. Therefore, the digitalization of services is seen as a social responsibility determinant in banking[26].

According to the Survey conducted by NBRSM in 2020, the actual situation on digitalization of financial services is predominantly focused on automation, innovation in payments, and big data analysis, while blockchain technologies are not present yet. When collaborative innovation is discussed[25], most banks declared they are developing their own solutions independently, closely collaborating with clients/partners from the country, but also with partners from abroad or public institutions. The core banking strategy is slightly evolving to the next level preparing for fast-track middle and back-office transformation. However, still, silo structure is generally present even among the most profitable banking models, therefore performing "defensive" digital strategies. Collaborative innovations are present, but still, generally, innovations within the banking sector are created independently. So our banking sector is somewhere on the second level on the digitalization path ready to intensify the transformation of the traditional core just when the ecosystem is ready to absorb.

There are a growing number of debates [22][1][29] on digitalization and platform-enabled fin techs forcing banks to reconsider their corporate boundaries and make them more permeable to market interactions. Because of a lack of legal infrastructure, as well as a comparatively lower level of organizational complexity, fintech firms are often enabled with greater agility, they innovate faster, and can be far more radical in how they are approaching innovation [2]. That consequently can drive bank–fintech interactions and alliances under the premise of mutually beneficial transactions between them [29] enhancing the bank's market value through the application of financial innovations [7], especially when it comes to large and listed banks interacting with more fintech companies than small private banks.

The main listed factors according to the economic literature for the occurrence of the interactions are the political integration processes, banking performance motives, supply, and demand for digitalization (customer's needs and expectations[8] on the transition between traditional and direct banking). The respective circumstances are determining the commercial banks' competitiveness in the process of digitization of services relative to tech firms. A simplified review regarding customer data, capacity/barriers for innovations, and access to sources of funding [1] would be as follows:

- Large banks possess verified and reliable customer data with a long history and "soft" information on customers, maintaining high standards on data privacy that supports trust by/in society. When it comes to the fintech companies, they provide data on many customers, but with potentially less reliable data with shorter history and data privacy protection lower on the scale of the priorities, therefore provoking potential distrust in the community.
- Regarding the economies of scale of many financial activities that banks already offer, they can easily introduce new activities in their business as long as the regulator's requirements are met. On the other hand, tech companies need many customers to exploit network gains. Still, their captive ecosystem will realize significant network gains.
- Another competitive advantage of banks is their direct access to sources of funding when introducing new banking activities, as well as high-margin products (requiring personal interaction) and risk management experience. On the other hand, banks face barriers to using existing data for new services and therefore can't produce high economies of scope. Contrary, tech firms can easily support new commoditized services at a meager marginal cost.

When it comes to investing in fintech and RegTech, financial institutions' strategies can be broadly considered as falling into three categories: defensive, progressive, and reinvention strategies[20]. In the field of information technology, 2021 was marked by a series of activities related to the implementation of Decisions adopted primarily by the NBRNM, the Government of RNM, and other institutions in the country – therefore could be qualified as defensive[19].

## Research goal and hypothesis

In this early transition phase in North Macedonia, we can still discuss only the digital transformation capacity of the banking strategy. The research goal of this paper is to discover some correlations of the general aspects that are relevant to the digital transformation capacity of commercial banks. How are the key aspects of the bank strategy correlated with the digitalization capacity? This research aims to propose adequate shifts in corporate governance for the successful implementation of the digitization processes and rethinking the bank business model. And finally, the aim is to open questions for future research such as is the traditional corporate governance model suitable for building digital transformation capacity[5]? The accomplishment of the main research goal is conceived over the examination of mainly three proposed hypotheses focussing on banks' commercial, social responsibility, and ownership profiles.

Financial performance, social responsibility, and foreign ownership were already investigated in some other research internationally. In the world, there is a growing body of literature recognizing digitalization as a powerful solution for increasing financial performance through efficiency. The relationship between a bank's strategic vision on digitalization and performance is determined by entrepreneurial orientation [21]. Digitalization investment has contributed to substantial production efficiency improvement for commercial banks; however, heterogeneity exists across banks [35]. There are contributions to the service science literature [30] by using size to dissect banking strategies and performance. Information technology (IT) plays a key role in applying each strategy, but as banks move toward customer intimacy in general, the challenge is to grow without undermining service quality[28]. Some academics [33] argue about the correlation between performance and digitalization and the specific areas that should be managed to maintain performance on the path of digitalization. Other researchers [14] have explained well the positive correlation between bank size and performance. According to some research [7], large, listed, and universal banks are more likely to establish alliances with at least one fintech than smaller, unlisted, and specialized banks. In this regard, the first hypothesis specifies that:

H1: Banks' financial performance, size, and digitalization are positively related.

Digitalization is seen as a powerful tool for financial inclusion and projects where predetermined conditions should be strictly met for the achievement of socially responsible goals. Corporate sustainability and digitalization complement each other, providing a combined effect on performance that exceeds that of each of them individually considered[11][12]. Companies' digitalization may have a beneficial impact by adopting 'smart' technologies that allow for the efficient use of natural resources and reduce pollution, enabling the transformation of business models into sustainable ones within the circular and digitized economy[17]. The linkage between digital transformation and sustainable business model innovation is reinforced by the CRM benefits of digitalization[15]. Some authors [18] observe how the digital performance of the EU affects the main sustainable development components: economic, social, and environmental. The combination of RCS and digitalization facilitates transforming the organizational nature of banks, reputation generated by corporate sustainability (RCS) may offset potential digitalization drawbacks[11][12]. Therefore, the second hypothesis is approximating digital transformation with social responsibility:

H2: Digital transformation and social responsibility are positively related.

In the case of foreign ownership, digitalization is a highly valued concept for complex cross-border operations, thus effectively supporting foreign presence among financial markets. Leading banks, which can be classified as digital banks, are majority owned by foreign capital [5]. Blockchain technology has great potential to make global cross-border financial operations faster, cheaper and safer [23]. Operational resilience regarding international banking operations in terms of COVID 19[31]. The third hypothesis is presented as follows:

H3: Foreign ownership, foreign presence, and internationalization are positively related to digitalization

## Research Methodology

The research is done on two subsequent levels: financial data collection and five steps clustering operation that provided a solid base for the second step examining the general transformative capacity of the banking industry using the respective bank cluster as a focus group[10].

In the case of North Macedonia, the given aspects were analyzed on a sample of banks selected through a hierarchical cluster analysis, a complete linkage method. The research was based on the previous research of the author[10], adjusted, and extended for the purposes of this current research. The main variables are

- Capital and reserves in relation to total assets
- Cash and securities in relation to total assets
- Loans to deposits ratio
- Loans to non-financial institutions and households in relation to total assets
- Operating costs in relation to total assets
- Return on assets (ROA)
- Rate of return on equity (ROE)
- Deposits to total liabilities ratio.

The respective data is collected from the financial reports of the banking institutions in the period 2010-2019. For the purposes of this research, the cluster of big 5 banking institutions was selected as relevant to investigate the potential and capacity for digitalization of the MBS. Namely, the cluster of big 5 commercial banks represents about 85% of the activities of the MBS and 91% of the profit – exceeding 147 mil EUR in 2021.

The cluster analysis identified two major bank clusters in North Macedonia: large banks that are part of an international banking group as a high-performance bank cluster and lower risk profile banks; on the opposite side of the risk matrix pattern is the small local bank business model – in the further text called focus groups. It is assumed that a lower risk profile identifies a more prominent risk management capacity, and therefore sufficient prudent capacity for transformative innovations.

The second level of the research is based on an Integrated Management Concept [4] used for the selection of the key elements of the strategy for further evaluation in the case of the respective bank cluster. The evaluation data were collected from the officially disclosed information by the relevant institutions in their official reports and additionally discussed within a survey with individual banking representatives, in order to determine key elements. The addressed key elements are actually the building blocks of the bank strategy, including scores in gradation from 0 to 2 evaluating the significance of the element in the respective institution. The total number quantifies the capacity of the reviewed institution.

When individual elements were defined and evaluated it was based on previous theoretical knowledge. Corporate responsibility was chosen to be inspected as a key value in line with H2 of this research. Customers segmentation and digitalization, market presence/partners and complexity and digitalization, and revenue per employee/ processes are in line with digitalization and efficiency. Finance could be excluded because of the demonstrated presence of abundant financial resources because the observed cluster is represented by the large 5 banking corporations ample with funding, it was contained for the convenience of future research when possible inclusion of other banking/ nonbanking clusters. The internationalization aspect was captured within the following key elements: market and partners.

Table 1: Key strategic elements evaluation scheme

| **Inspected key elements of the strategy** | **Score values** | **Description of score values** |
|---|---|---|
| CR Value | 0 1 2 | not recognizable – recognizable – outstanding |
| Customers | 0 1 2 | retail focussed – retail/corporate – corporate focussed |
| Market | 2 1 0 | global/regional/local |
| Revenue | 0 1 2 | low-medium-exceptional (revenue per employee) |
| Processes | 2 1 0 | digital/ hybrid/traditional |
| Partners | 2 1 0 | international /regional /local |
| Finance | 2 1 0 | exceptional/average /poor leverage |

Source: O. Filipovska 2022

## Research Findings

The maximum score value of the banking strategy digitalization potential could be 70 points. The evaluation count scored 49 points for the big five banking institutions or 70% in relative terms. Bank 1, 2, and 4 achieved the highest rank against their digitalization capacity. At the same time, as highest ranked strategic elements are considered: finance, partners, revenue per employee, markets, and value. Only to elements: customers and processes got an average rank of 5. There isn't any element ranked below 5.

Table 2: Evaluation findings od key strategic elements of the cluster of 5 largest banks in North Macedonia

| **Strategy/ large banks cluster[1]** | **Bank1** | **Bank2** | **Bank3** | **Bank4** | **Bank5** | **TOTAL** |
|---|---|---|---|---|---|---|
| Value | 1 | 1 | 0 | 2 | 2 | 6 |
| Customers | 1 | 1 | 0 | 1 | 2 | 5 |
| Markets | 2 | 2 | 1 | 2 | 0 | 7 |
| Revenue/employee | 2 | 2 | 1 | 1 | 2 | 8 |
| Processes | 1 | 1 | 1 | 1 | 1 | 5 |
| Partners | 2 | 2 | 1 | 2 | 1 | 8 |
| Finance | 2 | 2 | 2 | 2 | 2 | 10 |
| Total | 11 | 11 | 6 | 11 | 10 | 49/70 |

Source: the author

## Discussion and Conclusion

Finally, the digital transformation capacity of the MBS is depicted by a canvas – consisting of the respective building blocks of the bank strategy of commercial banks, part of complex international banking groups operating in more than five different markets, high revenue per employee, and transparent social responsibility disclosure procedures. The dark gray building blocks of the canvas (key activities, key resources, customer segments, and revenue streams) weigh more toward the traditional core, the light gray ones (value propositions, key partners, customer relationships, cost structure, and channels) are the digitalization drivers. The color scheme is derived from the total value for the respective strategy element for the bank cluster as a representative sample of the MBS.

Table 3: MBS Banks' Key Strategic Elements Canvas

<table>
<tr><td rowspan="2">KEY<br>PARTNERS<br><br>BANKING<br>GROUP</td><td>KEY ACTIVITIES<br><br>TRADITIONAL<br>ACTIVITIES</td><td rowspan="2">VALUE<br>PROPOSITIONS<br><br>PROFITABILITY<br>SUSTAINABLE<br>FINANCE</td><td>CUSTOMER<br>RELATIONSHIPS<br><br>DEMAND<br>DRIVERS</td><td rowspan="2">CUSTOMER<br>SEGMENTS<br><br>RETAIL<br>FOCUSSED</td></tr>
<tr><td>KEY RESOURCES<br>(deposits, capital)</td><td>CHANNELS<br><br>HYBRID<br>PAYMENT<br>CHANNELS</td></tr>
<tr><td colspan="3">COST STRUCTURE<br>EFFECTIVE</td><td colspan="2">REVENUE STREAMS<br>TRADITIONAL</td></tr>
</table>

Source: the author

Banking institutions in North Macedonia perceive the importance of digitalization. The canvas business model as a cognitive tool can be used in banking to guide managers in obtaining the cognitive structure of the organization, the structure and internal governance of the bank, and most importantly, to create a better vision of the value within the bank and throughout society. This model can promote greater transparency of the banking strategy through "the stakeholder's approach" and more enthusiastic feedback and interaction from the public on the path of digitalization of its services. Modern banking institutions should be seen as partners by the public – not only business. The proper governance of the digital transformation processes in banking is crucial for the future economic and social development and overall stability in the country. Though banking institutions can be seen as further digitalization drivers in society, enhancing the overall effects of its social responsibility and achieving adequate inclusion on the path of economic development. The public agents can adequately support these strengths of the banking corporations by timely providing the necessary legal infrastructure. Even though typologies can oversimplify the choices firms make [30], they can be quite useful for rethinking the banking concepts.

The main conclusion of this study is that the commercial banks in North Macedonia have sufficient capacity for digitalization. The three hypotheses were positively tested. Their digitalization capacity is a positive correlation with size, social responsibility, and internationalization aspects.

The main barriers remain outside the banking sector:

- Regulation
- Financial Literacy
- The comfort zone of the consumers in traditional banking proved resilient to the global financial crisis in 2008, the COVID-19 crisis
- The uncertainty of the current political and economic crisis

The benefit of this research is to:

- Address the business model as a cognitive tool in banking that can be used to guide managers in obtaining the cognitive structure of the organization, the structure and internal governance of the bank, and most importantly, to create value in the bank;
- To highlight the potential for adoption of digital technologies in areas of market failures;
- To encourage even greater social responsibility within the most profitable institutions through digitalization;
- To encourage collaborative innovations for greater competitiveness of the banking services in the future, structured collaboration, nurturing collaborative mindset, on the path of breaking the silos.

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## Declarations

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### *Conflicts of interest/Competing interests*

There is no conflict of interest/Competing interests

### *Availability of data and material*

The data that support the findings of this study are openly available in the website of Github (www.github.com).

### *Code Availability*

The computer program results are shared through the tables in the manuscript.

*Authors' Contributions*

Not applicable.

## NOTES

[1] In 2020 the banking sample consisted of 6 commercial banks, now there are 5 large banks, because of a merger.

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