TARGETS OF DIGITIZATION IN THE CREDIT PROCESS OF CORPORATE BANKING

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AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF

BUSINESS ADMINISTRATION

(INTERNATIONAL PROGRAM)

GRADUATE SCHOOL OF BUSINESS

SIAM UNIVERSITY

2019

Title of research: Targets of Digitization in the Credit Process of Corporate Banking

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Degree: Master Business Administration (International Program)

Academic: 2019

This Independent Study has been approved to be partial fulfilment of the requirements for the Degree of Master of Business Administration

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Abstract

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For many banks, credit business with corporate customers is an important source of hope in times of economic risks, regulatory pressure, low interest rates and increasing competition. Digitization marks a radical change for corporate banking, which at the same time represents an opportunity to realign the corporate customer business. Due to the huge number of manual processes, the credit process of large corporates and multinationals in particular offers a high potential for automation. As a result, the study identified the most important goals of digitization in the credit process of corporate banking. In the context of the documentary research, it was found that a digitized credit process had a considerable share in fulfilling customer requirements and needs. Through the digital transformation of existing processes, efficiency increases are achieved with respect to lead times and processing times of the credit process, which consequently contribute to the increase in customer satisfaction. Implementing process optimizations solve cost efficiency issues and improves financial institutions' pricing capabilities. The bank analysis is shown to be improved by modeling the credit risk model and provides more transparency, consistency and control in the credit process to meet regulatory and supervisory requirements.

Keywords: corporate banking, digitization, credit process

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1 Introduction

In Corporate Banking, around 30 percent of corporate customers worldwide are loss-makers (Bain & Company, 2017). Especially when looking to German banks the income and profits have continued to decline in recent years. Responsible for this negative development are the low interest rates that have persisted for years, rising risk and administrative costs (Leichsenring, 2018), the regulatory pressure and economic risks, the weak commission business, as well as increasing competition that leads to pressure for change in the banking sector (Slodczyk, 2018). The long-term challenge for the financial industry will be the process of digital transformation (Baumgarten, 2018).

1.1 Research Background

In the banking sector, one third of the revenue pool consists of corporate customers' turnover which is about 27 billion euros per year. Out of the 27 billion euros 18.2 billion is for lending business and, after deduction of costs, only 5.7 billion is left in profit (Slodczyk, 2018; Habdank, 2018). In view of the growing German economy in the last few years, the leading banks are striving for earnings growth of 10 percent in corporate customer business. These growth plans are not only ambitious but untenable, as the market is growing at an a yearly rate of 1.4 percent (Habdank, 2018; Bain & Company, 2019). Net interest income and credit margin decline across the industry despite growing credit volumes in Corporate Banking (Bain & Company, 2019). Some institutions would completely forego margins to push through their aggressive expansion plans. Financial institutions in Latin America and the USA have double-digit returns on equity in corporate banking, while the ratio in Western Europe is four percent and 72 percent of German banks do not even manage to earn their cost of capital (Slodczyk, 2018).

Digitization marks a radical change for the financial sector, which requires high investments in the modernization of IT (PricewaterhouseCoopers, 2018; Leichsenring, 2018). As a result, the digital transformation offers banks the opportunity to realign their corporate customer business (PricewaterhouseCoopers, 2018). In the first wave of digital adoption, many banks have launched uncoordinated digital initiatives - in the second wave it is time to develop a clear vision with a comprehensive strategy of digital initiatives in the corporate sector (Baumgärtner, van den Berg, Casale, Dany, Goyal, & Haug, 2018). Lean, flexible and preferably digital processes were identified as the success factor for profitable growth in corporate customer business (Habdank, 2018).

1.2 The Problem to be Investigated

For many banks, credit business with corporate customers is an important source of hope in the search for income (Leichsenring, 2018). At present, growth in German banks is also being limited by increasing competition from US banks such as Citi, JP Morgan and Bank of America Merrill Lynch in the European corporate customer business. Due to the more favorable refinancing conditions, mostly better ratings and the higher interest rate environment, American financial institutions can finance themselves through deposits (Backhaus, 2019). Furthermore, today's corporate customers demand the efficiency and convenience they experience every day on websites such as Amazon or eBay. However, most banks are lagging behind retailers in introducing digital tools for good reason. The procedures for customer identity verification, credit analysis, credit risk management and the corporate product universe are very complex (Strauß, Gottenberg, Kude, & Heggtveit, 2018). Especially in the credit business, the mass of data and processes to consider is enormous and lost trust due to data loss is difficult to restore. For this reason, digitization projects in the financial sector are observed with caution (Rehfisch, 2018). On the other hand credit processes need to be digitized in order to withstand regulatory pressures, investor expectations and innovative competition (Bahillo, Ganguly, Kremer, & Kristensen, 2016). Due to the multitude of manual processes in the corporate customer business, especially the credit business offers a high and often unused automation potential (Rehfisch, 2018). Paperless digital processes enable automated and efficient processing and, therefore, competitive prices (Sumper, & Merker, 2017). The time savings potential for corporate loans is particularly high for large companies, as the analysis as part of the credit process requires numerous documents. As a result, 60 percent of credit institutions are able to make a credit decision for small enterprises within five days. In contrast, 65 percent of banks are not able to make a credit decision in the medium-sized business customer segment during this period, and 89 percent are not able to make a credit decision at all in the large enterprise segment (Schwebe, 2018; PricewaterhouseCoopers, 2017).

1.3 The Objective of the Study

The automotive industry has shown how to deal with change in order to ensure annual increases in efficiency through change processes (Best, & Jacobi, 2018). Especially noteworthy is Toyota's production system, which combines design principles, methods, instruments and ways of thinking (Börsen-Zeitung, 2018b). Process transparency is a fundamental prerequisite in banks' lending business for establishing lean production principles to increase efficiency (Börsen-Zeitung, 2018a).

The main objective of this research is to identify the targets of digitization in the credit process of corporate banking. This research also intends to investigate the factors that influence the credit process. In addition, this paper uses a documentary research to examine the relationships and implications between the keywords.

Research question:

- What are the targets of digitization in the credit process of corporate banking?

1.4 The Scope of the Study

The target group of this paper is primarily the decision makers of a bank in the field of corporate banking and digital strategy. However, the digital transformation in the credit business affects a large number of employees, so that a comprehensive innovation is only possible with the help of all those involved.

1.5 Research Significance

The expected scientific finding is that digital process steps in particular can make a significant contribution to reducing processing times or improving quality in the credit process of corporate banking. In addition, the focus of digitization will be on improving the customer experience in order to retain customers in the long term through customer satisfaction. The challenge for individual banks will be to transfer existing digital solutions to their own credit landscape or to modify existing solutions in order to successfully establish them in IT.

2 Literature Review

Corporate Banking distinguishes different clusters according to customer relationship, business volume and internationality. In the following, the focus of this paper is on clients with high sales, since large corporates and multinationals still have a high potential for standardization and digitization in processes with more complex commitments (PricewaterhouseCoopers, 2017; Hientzsch, 2017). As a result, corporate clients with an annual turnover of between EUR 250 million and EUR 500 million are large customers for most banks. As the size of the company increases, the earnings potential per customer relationship for the banks increases steadily, as the product range widens further and the financing requirements of the companies increase. In Germany, there are already 642 companies with annual sales of EUR 500 million to EUR 1 billion and 516 companies with multinational groups with sales of more than EUR 1 billion, which accordingly form the most demanding customer group (MOONROC Advisory Partners, 2018; Hientzsch, 2017).

2.1 Corporate Banking

Corporate banking is a key activity of banks worldwide and plays a central role in the banking sector. By definition, corporate banking is the business in which banks provide funding (e.g. credit products and liquidity lines), transaction services (e.g. payments, cash management and trade finance), risk management products (e.g. interest rate swaps, foreign exchange or commodities) and corporate finance services (e.g. brokering to markets and investors) (Schnarr, & Pfeiffer, 2015).

According to the study by Ernst & Young (2018), banks see the best prospects in mass and corporate banking. This continuing trend is confirmed by the study by Horváth & Partners (2017), in which 97 percent of the participants recorded an increase in customer numbers of up to 10 percent and 80 percent of the test persons an increase in loan volumes of up to 20 percent. The expected development of corporate banking up to the year 2020 in terms of customer numbers and credit volumes showed that over 90 percent of the participants expect an increase of 20 percent in each case. At the same time, the Ernst & Young Bank Barometer shows that 97 percent of the banks surveyed rate the current operating business development as positive and look forward to the coming months with confidence. Despite an optimistic increase in customer numbers and loan volumes, only a moderate increase in profitability can be expected in a competitive market with declining margins (Wagner, & Müller-Tronnier, 2018; Horváth & Partners, 2017).

In many areas of the financial services industry, the two forces of regulation and digitization have led to worrying developments. The study report by Schnarr and Pfeiffer (2015) shows that regulation is having a significant impact on corporate banking. On the one hand, increased capital and liquidity requirements lead to a reduction in profitability by holding more capital or maintaining a liquidity buffer. On the other hand, the banks are burdened by ongoing market changes and new reviews of customer treatment, which result in a lot of bureaucracy. In addition, the study points to seven drivers and their impact on return on equity (RoE). Customer and segment selection in the corporate banking business leads to an increased return on capital resulting from lower risk costs and higher returns. Moreover, pricing capability plays an important role for commercial banks due to falling margins and increasing competition. Automation and service industrialization, resource efficiency, product platforms, international presence and strategic financing are further drivers of return on equity (Schnarr, & Pfeiffer, 2015). The analysis of the Bosten Consulting Group (2018) also shows that banks with high profits focus on the sale of non-lending products. In addition, leading players are concentrating on careful management of the credit margin, investments in the sales force and at the same time successfully moving between earnings and cost growth (Baumgärtner, van den Berg, Casale, Dany, Goyal, & Haug, 2018).

Further studies investigate customer requirements and customer needs in the Corporate Banking segment. MOONROC Advisory Partners (2018) identifies new depth and quality in business relationships with customers, multi-product customer relationships with high technical integration, selective target group identification and differentiation through specific industry or product excellence as the most important customer requirements in the German corporate customer market (MOONROC Advisory Partners, 2018). An overview of the specific customer needs of corporate customers is divided by Oracle Corporation into customized consulting, end-to-end solutions, innovative products and services, solutions for specific industry and business requirements, price competitiveness, transparency and a first-class digital experience (Oracle Corporation, 2018).

With regard to the challenges already described for corporate banks, it should be emphasized that their customers value the fundamental principles of security, trustworthiness, reliability and sustainability of traditional financial service providers (Hientzsch, 2017). The survey conducted by PwC (2018) also confirmed that large companies make the selection of their banking partner dependent on the most important criteria such as trust relationship, competitive pricing, global reach, service level, product catalogue and credit rating (Wackerbeck, Bischhof, & Brecht, 2018).

2.2 Digitization

In this essay, the term digitization is used to describe a digital service that is tailored to the needs of the customer, is offered through all relevant channels on the basis of high process efficiency, and is based on interactive communication/consultation with the client and the collection, integration and use of data, regardless of time and place (Hientzsch, 2017). Banks that have initiated the digital transformation are achieving a 10 percent increase in sales of digitized products and a 20 percent reduction in costs in various parts of the value chain of corporate banking. In addition, the results of the McKinsey (2015) survey point to a digital undersupply of large customers of EUR 250 million to EUR 1 billion, as the range of services is largely limited to payments and cash management. Furthermore, the survey shows that currently 45 percent of banks do not pursue a digital strategy and only 18 percent of corporate banks actually implement the project. Digital initiatives along the value chain have the potential to increase revenues by about 10 percent and reduce costs by about 20 percent. In particular, online applications with fast processing and credit increases/extensions can lead to sales increases of up to 20 percent. At the same time, process automation, including rating support tools, can reduce costs by up to 35 percent (Buhler, Lemerle, Chiarella, Lal, Heidegger, & Moon, 2015).

The analysis by Nitescu and Duna (2018) emphasizes the need to consider the digitization process as a strategic project for banks. Moreover, the digitization process resembles a transformation project for the operating model of banks, which is associated with the following strategic tasks and challenges. Increasing efficiency by transforming existing processes, changing customer behaviour, technological innovations, data management and reporting requirements, improved solutions for bank analysis, cyber security, regulatory and supervisory requirements, use of human capital and technological knowledge, strategic cooperation partners, as well as dynamic developments in the bank's information and communication technology (Nitescu, & Duna, 2018).

Similarly, banks will have to focus on the corporate customer business model in order to add value, rather than serving all segments on average (Juchem, & Löber, 2017). Banks should focus on the areas with the highest value added and follow the strategy of the digitization process step by step so that transformation costs remain controllable and results are tangible. According to Buhler (2015), the advantages of digitizing corporate banking include lower cost-to-serve through new coverage models, economies of scale and automation that lead to cost reductions and significant revenue opportunities, increased customer satisfaction through a digitized banking relationship, and cross-sell opportunities for a better understanding of customer transaction behavior (Buhler, Lemerle, Chiarella, Lal, Heidegger, & Moon, 2015).

The corporate bank of the future will focus on strong relationship management and the digital revolution (Comarch, 2018). The study by Juchem and Löber (2017) distinguishes between three main options. Firstly, the relationship expert maintains a close customer relationship and provides advice on all financial issues. The second option is a product expert with selected financial products and services, which can offer leaner and more efficiently on the bank's platforms. Third one is, to position as a technology service provider focusing on technical interfaces and system solutions. The key to the banks' success in corporate banking will be a clearly identifiable unique selling position (Juchem, & Löber, 2017).

2.3 Credit Process

The term credit process encompasses all bank processing steps of a credit exposure and is regulated by the Minimum Requirements for Risk Management (MaRisk). According to MaRisk, credit processing is subdivided into the granting of credit, which includes all the steps involved in initiating a business transaction, from credit analysis and rating through to contract execution and disbursement. During all further credit processing steps ongoing review and monitoring is in place. The central element in the credit process is the credit decision, which is made by the relevant key decision-makers by taking up, continuing or expanding a credit commitment. The credit decision in the credit process requires special attention in the process design, since most sub-processes are carried out in preparation for a credit decision. The relationships are shown in the following diagram for a uniform understanding of the new and existing customer process (Frankfurter Allgemeine Zeitung, 2010).

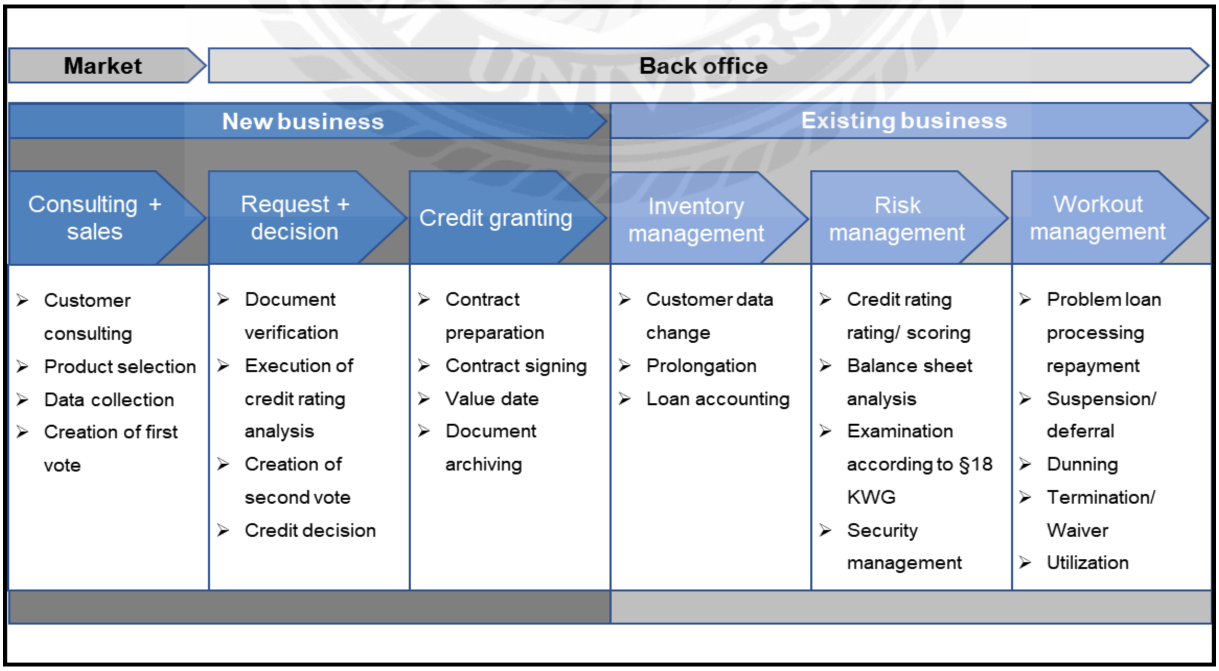

Figure 1: Credit process (PricewaterhouseCoopers, 2017; Kastner, & Rosenlehner, 2017)

The banks primarily use the following parameters as efficiency indicators for managing their lending business:

Based on the definition of PWC (2017), the processing time is regarded as the effective time taken by an individual employee to process a credit case without taking transport and idle times into account. On the other hand, the lead time is defined as the time taken from the beginning of the application processing to the notification of the final credit decision to the customer. In addition to the processing time, the transport time and wait time, as well as the time required to request additional documents and internal coordination times are also taken into account (PricewaterhouseCoopers, 2017).

More than 40 percent of banks show dissatisfaction with the overall lead time, as well as with the costs and complexity (30 percent each) of the process. In the PPI survey (2017), 63 percent of those surveyed see further opportunities for improvement in the IT integration of customers with extended online offerings and institution-wide data links. A partial outsourcing of risk management was carried out by 33 percent of the institutions, while a reintegration of already outsourced functions is not planned (Kastner, & Rosenlehner, 2017).

In a similar way, PWC (2017) shows in the survey on lead times in corporate banking with large corporate customers that 67 percent of banks need ten days or more to conclude a corporate loan. Depending on the customer segment, processing times vary widely, as the number of interfaces increases in the course of the credit process, especially in new customer business. With regard to the application and decision-making process of most financial institutions, digital interfaces are predominantly to be found across segments. In contrast, there is a smaller number of interfaces in existing customer business, but these are predominantly analogous to those in private customer business (PricewaterhouseCoopers, 2017).

The implementation of an adequate process optimization resolves conflicts in the areas of digitization, cost efficiency and compliance with regulatory requirements. Historically grown gaps between business areas and departments can be overcome with the changes of the gradual initialization of the digital transformation as well as the commitment of the top management and the targeted know-how development of the employees (Knecht, Varnholt, & Witter, 2018). The article by Begg (2016) sets out five reasons for modernizing and improving the credit process in the company. The process efficiency, the raising of standards (transparency and consistency), the data, better credit decisions and an improvement in customer service, which Rehfisch (2018) will supplement with the regulatory requirements (Begg, 2016; Rehfisch, 2018).

To assess their own in-house process transparency, three-quarters of bank managers state that process transparency is not very good in any area. In fact, eight out of ten decision-makers rate the creation of process transparency in their institutions as a major challenge, since, for example, important prerequisites for assessing product costs and profitability are lacking and only about one third of financial institutions can show the contribution of a product to the total contribution margin (Ohlen, 2017).

In Alexandar (2018), credit institutions should focus on technologies that deliver higher productivity, improved risk management and a better customer experience in terms of the business experience. The straight-through process (STP) approach ensures that automation of a business process or service (e.g. recording, serving and switching) is possible from start to finish. Relevant information about new customers is captured only once and stored in a central database, so all sub-processes, tasks, assignments, exchanges, calculations, reporting, communications, subtasks and other results can be performed without manual conversion. Any kind of system merger or unification to reduce or eliminate manual processing is a logical consequence of STP (Alexandar, 2018).

One of the largest ways to reduce the cost of recruiting new customers is customer retention. By digitizing the entire credit process, it is possible to increase customer satisfaction. Based on the reduction of administrative effort and the automation of processes, efficiency increases and cost reductions in credit processing, shorter lead times and the expansion of the customer and service portfolios are achieved (LendFoundry, 2018).

In addition, paperless digital processes enable efficient processing and, accordingly, competitive prices. Changes in market conditions and regulations have put financial institutions under pressure to re-evaluate credit risk platforms. A central legal requirement is the verification of the creditworthiness and debt service of the bank customer, which is established within the framework of the analysis of information and data on customer creditworthiness (e.g. income statement or annual financial statements) and securities (real estate, deposits, guarantees, etc.). A functional credit risk platform has a strong impact on all critical risk management processes such as underwriting, capital allocation and regulatory reporting (Balachander, & Zacharias, 2017; Sumper, & Merker, 2017). Akhadov (2018) listed six keys for modelling the credit risk model for the digital age in the academic report. A fully integrated platform, data management with traditional and alternative data sources, analytics for proactive insight, a coherent model risk management platform, automated delivery of credit decisions, and transparency and control (Akhadov, Rogers, & Filipenkov, 2018). Finally, risk management plays a key role in digital transformation to achieve sustainable growth and competitive advantage (Watson, 2018).

2.4 Past Researches

Previous studies in corporate banking have shown that there is a high and often untapped potential for standardization and digitization in the credit process of large corporates and multinationals. As a consequence, the customer's digital experience is lost and lags behind customer requirements and needs (MOONROC Advisory Partners, 2018; Oracle Corporation, 2018). For this reason, the tasks and challenges associated with the strategic project of digital transformation serve not only to increase the efficiency of processes, but also to meet the requirements and needs of customers (Nitescu, & Duna, 2018). The implementation of an adequate process optimization resolves conflicts in the areas of digitization, cost efficiency and compliance with regulatory requirements (Knecht, Varnholt, & Witter, 2018). Credit institutions should take advantage of digitization and focus on technologies that lead to higher productivity, improved risk management and increased customer satisfaction (Alexandar, 2018; Buhler, Lemerle, Chiarella, Lal, Heidegger, & Moon, 2015). The main reasons for modernizing and improving the credit process can be summarized in process efficiency, raising standards, data, better credit decisions, improved customer service and regulatory requirements (Begg, 2016; Rehfisch, 2018).

3 Findings

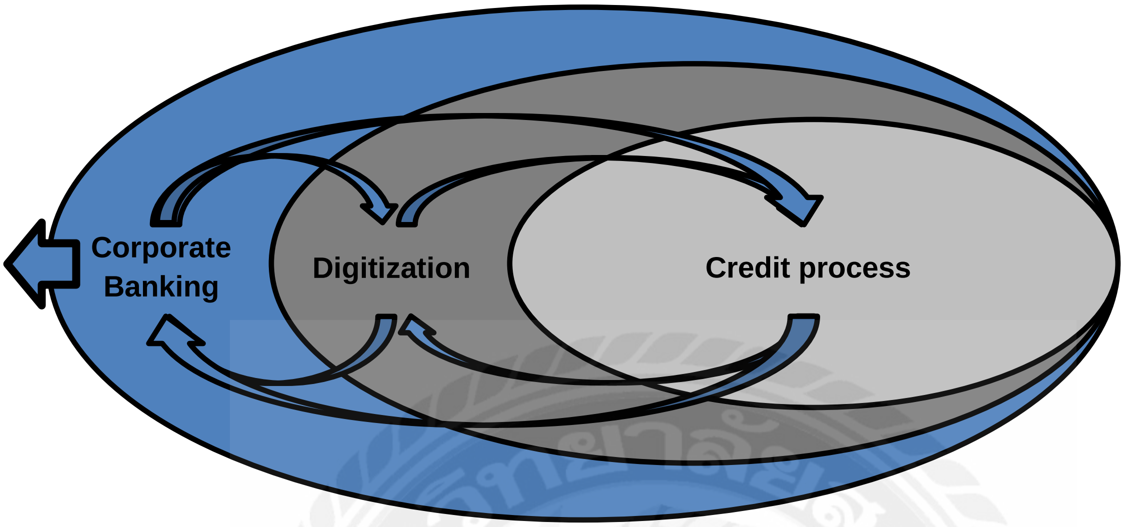

Figure 2: Model used as a guideline for this research

Corporate Banking	Digitization	Credit process
→ **Impact on RoE** (Baumgärtner, van den Berg, Casale, Dany, Goyal, & Haug, 2018; Schnarr, & Pfeiffer, 2015) → **Customer requirements** (Oracle Corporation, 2018; MOONROC Advisory Partners, 2018) → **Customer needs** (Oracle Corporation, 2018; MOONROC Advisory Partners, 2018)	→ **Strategic tasks and challenges** (Nitescu, & Duna, 2018) → **Exploiting the benefits and achieving the objectives of digitization** (Buhler, Lemerle, Chiarella, Lal, Heidegger, & Moon, 2015)	→ **Implementation of an adequate process optimization** (Knecht, Varnholt, & Witter, 2018; Begg, 2016; Rehfisch, 2018) → **keys for modelling the credit risk model** (Akhadov, Rogers, & Filipenkov, 2018; Balachander, & Zacharias; (Sumper, & Merker, 2017)

Findings from the study about the targets of digitization in credit process of corporate banking can be summed up as:

- Fulfilment of customer requirements and needs
- Compliance with regulatory and supervisory requirements
- Increased efficiency through digital transformation of existing processes
- Improved solutions for bank analysis
- Transparency, consistency and control of the credit process

4 Conclusion and Recommendations

The continued challenges in the financial sector demand high investments in the digital transformation of banks in order to realize growth plans in corporate banking. The advantages of digitization in the credit business satisfy customer needs and requirements through innovative products and a first-class digital experience for corporate customers. Furthermore, the strategic tasks and challenges in the complex world of large corporates and multinationals contribute to the fulfilment of regulatory and supervisory requirements. Through the digital transformation of existing processes, efficiency increases in processing times and lead times in the credit process are achieved, which accordingly contribute to increased customer satisfaction. As a result, implementing process optimization solves cost efficiency issues and improves financial institutions' pricing capabilities. In addition, modeling the credit risk model improves bank analysis while increasing transparency, consistency and control in the corporate lending process.

Recommendations for Corporate Level

Increasing competition in the industry is leading to declining earnings and profits for banks. The pressure to change thus offers banks the opportunity to realign their corporate customer business with the help of digital transformation. Decision-makers are therefore urged to initiate the strategic tasks and challenges associated with digitization step by step in order not to lose touch with the competition. High investments in the digital transformation enable long-term growth and satisfy the customer requirements and needs of corporate customers. The digital processes also simplify the implementation of regulatory and supervisory requirements, as well as the minimum requirements for risk management (Nitescu, & Duna, 2018).

Recommendations for Managerial Level

The digitization process for banks should be seen as a strategic project requiring cooperation between business units and departments. It is therefore management's task to initiate the coordination and implementation of the gradual initialization of the digital transformation. In cooperation with the Corporate Level, long-term strategies and plans should be developed, which are implemented in the form of sub-projects in the process world of the banks. In view of the complex process landscape of financial institutions, different areas should implement the sub-projects one after the other in order to maintain the quality of ongoing operations and to keep an overview of resource allocation. By increasing the efficiency of existing processes in connection with digital transformation, more transparency and control is achieved at the functional level to coordinate the employees at the corporate level (Buhler, Lemerle, Chiarella, Lal, Heidegger, & Moon, 2015).

Recommendations for Functional Level

The involvement of employees at the operational level is indispensable in order to implement digital processes. In addition, digital processes support the daily work of employees, who can therefore focus on their core competencies and give recommendations for improvements to higher hierarchies. In particular, improved solutions for bank analysis can contribute to the reduction of processing and lead times in the credit process, as especially the verification of creditworthiness and debt service of bank customers offer a high and often unused automation potential. A digital credit risk platform has a strong impact on all risk management processes and promotes transparency, consistency and control of the credit process. It is important to follow the recommendations from the functional level at the corporate and managerial level, because digitization has a strong impact on employees' tools. In particular, it is important to promote the development of know-how among employees, so that the banks' transformation project can be successfully implemented together through the targeted changes in the digitization process (Balachander, & Zacharias, 2017; Begg, 2016; Rehfisch, 2018).

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