

# Financial Services Innovation in Estonia

Ly Hõbe

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**FINANCIAL SERVICES INNOVATION  
IN ESTONIA**

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by  
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## LIST OF ORIGINAL PUBLICATIONS

- Elenurm, T., Hõbe, L., Liikane, K. 2002/2003. *Opportunities and Challenges in Managing the Process of Knowledge Sharing in Different Learning Environments*, EBS Review, No.15, pp. 44-56
- Hõbe, L. 2014. *Impact of Regulations to Financial Services*. SGEM Conference on Political Sciences, Law, Finance, Economics & Tourism. Conference Proceeding. Volume II. Finance, Bulgaria: SGEM, pp. 319-326
- Hõbe, L. 2015. *Technology Challenges in the Financial Services Sector*. International Journal of Business and Management Study. Volume 2, Issue 1.
- Hõbe, L., Alas, R. 2015. *Management Challenges for the Financial Services Sector*. Abstracts and Conference Materials for the 3<sup>rd</sup> Conference on Management, Leadership and Governance. Edited by Ingley, C. and Lockhart, J. UK: Academic Conferences and Publishing International Limited.
- Hõbe, L. 2015. *Banking Regulations - Two-Edged Sword?* Journal of Management and Change (accepted)
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## LIST OF PRESENTATIONS AT CONFERENCES

- Hõbe, L. 2014. *Impact of Regulations to Financial Services*. SGEM Conference on Social Sciences and Arts. Bulgaria, 02-07.09.2014
- Hõbe, L. 2014. *Technology challenges in the financial services sector*. 2<sup>nd</sup> International Conference on Advances In Social Science, Economics and Management Study (SEM), UK: Birmingham, 16-17 November 2014
- Hõbe, L. 2014. *The Changing Landscape of the Financial Services*. International Conference on Marketing, Business and Management, Italy: Milan, 20-21. November 2014
- Hõbe, L., Alas, R. 2015. *Management Challenges for the Financial Services Sector*. The 3<sup>rd</sup> Conference on Management, Leadership and Governance, New Zealand: Auckland, 12-13 February 2015

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## **ABSTRACT**

In the 21st century economy, innovation is one of the key growth and profitability drivers for companies and societies.

In this study, innovation is defined as a process whereby a new or improved idea or an invention becomes a new marketable product, service or process that increases customer value. This means that an innovation does not have to be a tremendous change for the world or the sector. It can exist merely in terms of combining existing techniques in an original way that is new for a company or business unit.

The author focuses on incremental financial services innovation in Estonian banking sector defined as companies, which have received a license as a credit institution from the Financial Supervision Authority.

The research problem of the thesis is how to manage financial services innovation. The main objective is to construct a financial services innovation management model ensuring stable development and sustainability of the banking sector and using banking in Estonia as a source of information.

The theoretical part of the study analyses the basic definitions and concepts of innovation, explores the main components of financial services innovation management, analyses the role of banks in a modern society, the importance of banks in financial systems, and the reasons and objectives of strong public regulation of credit institutions.

The key component of the innovation management model is the stage-gate innovation process that breaks innovation into a predetermined set of phases, each stage consisting of a set of prescribed, cross-functional and parallel activities, influenced by external and internal factors. Inputs to the innovation process are needs and ideas. The process itself consists of three stages (idea analysis and approval, activity planning and approval, launch planning and approval) that enhances the predictability of project outcomes, makes a positive contribution to the speed of implementation and reduces risk in relation to uncertainty, timing and budgeting. The output of such a stage-gate innovation process is a new or improved financial service, which creates new value for the customer.

The most influential external factors are macroeconomic conditions, technological development, legislation, and sociological and cultural factors. For example, regulations and financial supervision can inhibit innovation, but on the other hand, some form of regulation (e.g. legislation for digital signing) can support the creation of more convenient processes. Technology is one of the main driving forces for innovation that generally influences service products and production processes

and institutional development that describes the general trend of evolution of regulations and political institutions and social force.

The most important internal factors of the model are the organisational structure for innovation, innovation action plan, corporate strategy and mission and vision. The optimal organizational structure for innovation will depend on factors like the size of the company, and the innovation action plan. Innovation decisions should be based on consistency and should be made by the decision-making body who will have a clear understanding of its potential value, including the impact of uncertainty and risks. Minimizing uncertainty, mitigating risks and compliance with regulations help to prevent costly problems down the line.

The innovation action plan is a roadmap that provides a clear direction and objectives for the business and service innovation efforts, and identifies the strategic arenas (markets, industry sectors, service types and technologies) of focus and allocated resources. The innovation of services should be aligned with the overall business strategy to plan the use of financial, human and IT resources and to find the right balance between customer needs, market requirements and the strategic objectives of the company.

The empirical part of thesis describes a study of financial services innovation management in Estonia conducted by the author to clarify the perception of concepts identified in the innovation management literature and to understand the current situation and best practices in financial services innovation management in Estonia. The study concentrates on three main topics: the development of financial services in Estonia, innovation in a financial service organisation and personal details about the respondent.

Based on this research it can be said that the current state of financial services innovation is good and companies have concentrated on innovation in the last three years. It has been the only way to be sustainable and to survive in a rapidly changing environment with growing competition from new entrants, technology advances, stringent regulations and consumer requirements. It is vital to find smart solutions to meet customer expectations in different channels.

The major challenges in financial services innovation management for the next three years are business model innovation and electronic channels (including mobile) innovation. The first of these is required for understanding your market position and possibilities for earning revenue in an environment of stringent regulations and low interest rates. The second is vital to keep and win new customers.

Empirical study of financial services innovation can be partially considered as validation of the model developed by the author, and expected to meet the following requirements:

- support sustainable innovation in a constantly changing environment;
- meet the requirements of the financial services public law framework;
- make consistent evaluation of potential opportunities arising from the external environment possible (e.g. macro-economical factors, development of technology, changes in customer expectations and behaviour);
- take into account internal components of the innovation process;
- make it possible to measure the achievement of innovation objectives and give feedback about the process;
- keep potential ideas within the innovation action plan framework.

The study proved that the financial services innovation management model meets these requirements, is easily usable in practice and creates value for the banks.

**Keywords:** innovation, services innovation, financial services, innovation process, internal and external components of innovation, innovation management model, public law framework for financial services, Estonian banking, technology advances, customer expectations.



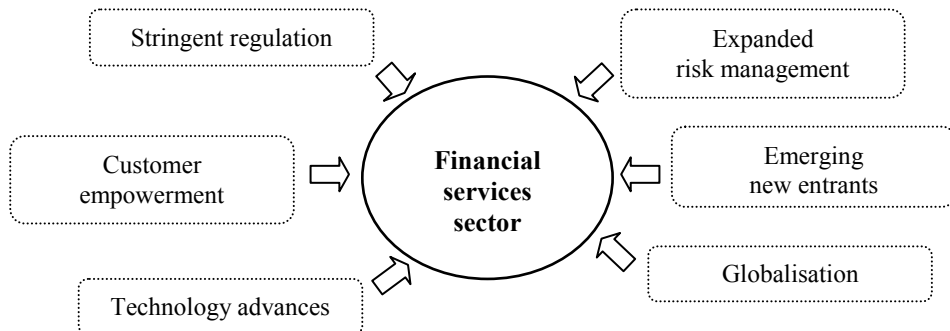


## INTRODUCTION

In the 21st century economy, innovation is one of the key growth and profitability drivers. Innovation is becoming increasingly decisive for competitiveness and performance as it is at the heart of the companies competitive game (Siimon *et al.* 2000, Tidd *et al.* 2006, O’Sullivan and Dooley 2008, Kotsemir *et al.* 2013). In order to survive, stay competitive and reduce the costs of production in times of fierce competition and stringent regulations, companies need to innovate continuously (Land 2010).

Development activities and innovation are closely linked, but in this study, innovation is defined narrower than development as a process whereby a new or improved idea or an invention becomes a new marketable product, service or process that increases customer value. This means that an innovation does not have to be a tremendous change for the world or the industrial sector. It can exist merely in terms of combining existing techniques in an original way that is new for a company or business unit. Innovations are considered to include product, service, process and business model innovations among others, but this study concentrates on financial services innovations (Gadrey *et al.* 1995, Vermeulen and Dankbaar 2002).

Although the financial services sector is primarily influenced by the economic system, it is also affected by changes in other subsystems (see Figure 1).



**Figure 1. Disruptive factors impacting the financial services sector 2015**  
(author’s illustration)

Looking at these subsystems and based on different sources (Vlerick Business School, Peverelli and Feniks 2010, Balaceanu 2011, Capgemini 2012), some significant strategic challenges and disruptive factors can be identified for the financial services industry ahead. For example:

- increase of number of introduced regulatory changes and regulatory burdens for financial services;
- the emergence of new risks in banking and the on-going need to improve risk management;
- growing competitive threats from new financial service providers and new business models;
- competition from non-banks enabled by improvements in technology (notably electronics);
- evolving customer demands and the loss of customer confidence towards the banking.

Most notably, technological advantages are rapidly redefining information flows and allowing new competitors from outside of the traditional banking sector to emerge. At the same time regulations will increase capital requirements and consolidation will continue to play an important role. Therefore, banks should solve the question of how to cope with all these challenges while ensuring further growth and profit making. One of the answers is continuous innovation of financial services.

Author focuses in this study on incremental financial services innovation in Estonian banking sector and specifies the area by the companies whose the principal and permanent economic activity is to receive cash deposits and other repayable funds from the public and to grant loans for its own account and in its own name and provide other financing. These companies should also have received a license of a credit institution from the Financial Supervision Authority (Finantsinspektsioon).

### **Motivations and assumptions**

Motivational factors underlying the study include bringing together discussions from a wide range of academic and applied researches. The aim is to combine and select answers from various research approaches, on the one hand, to introduce theoretical knowledge to the practical banking world and on the other hand, in return, to introduce challenges and insights from practical corporate experience to the academic discussion.

The need for practical solutions emerges from by the observation that not all theoretical aspects of financial services innovation management from the academic literature seem relevant from the practical corporate point of view. The present study, being a qualitative study, serves to offer a new approach to financial services innovation management to discover ways in which companies could, through continuous innovation, to ensure a stable development and sustainability and to introduce practical corporate needs into theoretical discussions through constructive research.

The author has accumulated these assumptions over a banking career spanning almost 19 years, starting from the customer service side and being responsible for developing new products and services for different areas (credit, business banking and customer administration), and the author's teaching experience since 2001, which requires the conceptualisation of bank-related topics for university and college students who see their future in banking, but do not have their own experience or respective wisdom from books.

Secondly, although, nowadays innovation is already important part of the management plans, where is often insufficient ability to execute. The ability to reach consistent, repeatable and high-impact innovation performance is low (Verweire and Van den Berghe 2008, Accenture 2008, Accenture 2011b). In many cases development efforts seem to consist of quick solutions of emerging customer complaints, learning by doing and experimentation rather than a well-established and smoothly running process with measurement of results (Apilo 2010). Innovation requires not only fixed amount of usual resources (people, time, money), but also a strategic commitment to adopt mindset, attitudes and values of the organisation toward innovation. Managers should be aware of management processes and systems that help create and develop new businesses and business models, but also associated threats and opportunities (Tidd *et al.* 2006, Verweire and Van den Berghe 2008).

The above explains in part why understanding an innovation as the implementation of a single idea does not fully illustrate how innovation should be managed in a company. An innovation is never the product of a single person; instead an organisation generates innovation through the different components and antecedents (Apilo 2010).

Thirdly, one of the background assumptions to be addressed in the view of inequality in the size of the companies, is that challenges differ for smaller banks and larger banks (Capgemini Consulting 2012). Smaller banks are able to focus on specific customer segments and can innovate their propositions more easily and more quickly. It is not easy for the leading banks to radically change their business models, as typically they are serving a diverse range of customers. By contrast, when it is necessary to implement sizable regulatory changes, this can sometimes take all the development resources of smaller banks, and it does not always create value for the business.

The final background assumption to be declared is the author's view of development and innovation activities and their impact. The author agrees with Apilo (2010) that individuals in companies are willing to improve their own work, products, services and processes if given the opportunity and time to do so. Moreover, companies with more experience of development activities are quicker and better at development than those whose normal processes do not include a developmental aspect.

Last but not least the reason for studying financial services innovation in Estonia is that the Estonian financial system functions differently and has different problems even in the context of small open economies (Listra 2001).

Nevertheless, there are always financial systems that have very similar problems. It is important for Estonia to find financial systems more similar to its own in order to share experiences with less developed economies.

### **Research objectives and questions**

Based on the preceding the research problem of the doctoral thesis is how to manage the financial services innovation. The main objective is to construct a new financial services innovation management model with a practical and theoretical basis to complement existing knowledge, to ensure a stable development and sustainability of banking sector and use banking as example in Estonia.

To achieve the goal the author combines extensive theoretical literature, applied researches and conclusions of financial services innovation management research in financial services organisations conclusions (May-June 2015) in Estonia conducted by author. There is much literature about financial services and academic materials about innovation, but rather less has been written about financial services innovation and especially in Estonia.

According to the research problem the research questions are composed.

It is important to understand the nature of the principal components contributing to financial services innovation:

**Research question 1 (R<sub>1</sub>)** – What are the principal components that should be taken into account in financial services innovation management model?

Having understood the nature of the principal components of financial services innovation management the impact of external components is worth analysing and exploring.

**Research question 2 (R<sub>2</sub>)** – How have the three main external components – regulations, technical advances and customer behaviour – influenced the development of the banking sector and financial services innovation during the period 1988–2015?

In addition to the theoretical background and impact of external components, it is essential to understand the current situation and the best practices of the market in order to propose new solutions.

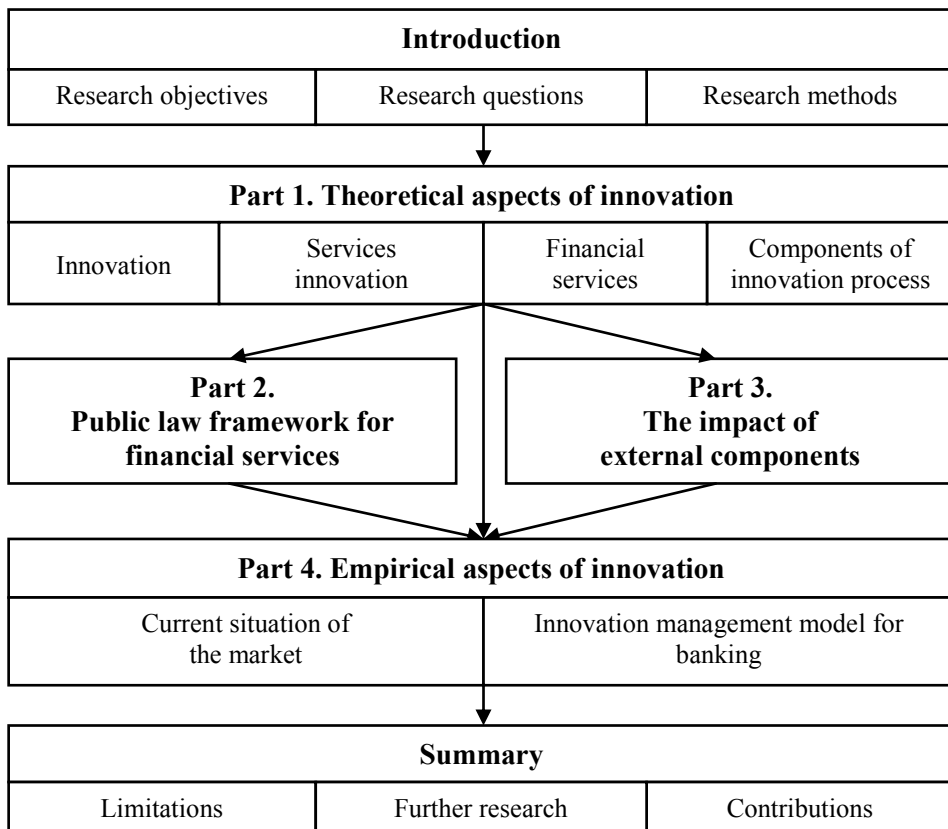
**Research question 3 (R<sub>3</sub>)** – What is the current situation of financial services innovation management in Estonia?

Based on the current understanding of the situation, it is important for determine the future trends and consequently research question number four:

**Research question 4 (R<sub>4</sub>)** – What are the major challenges in financial services innovation management for the next three years?

**Structure of the doctoral thesis**

The following is a brief outline of the content and structure of the doctoral thesis (see Figure 2).



**Figure 2. Structure and logic of the doctoral thesis (author’s illustration)**

**The introduction** outlines the goal-setting, research questions and research approach and methods.

**The aim of part one** is to explore the theoretical aspects of innovation management. The author describes the basic definitions and concepts of innovation and explores the main components of financial services innovation management (Research question 1 – R<sub>1</sub>).

**In part two** the public law framework for the financial services sector is presented. In addition, the author introduces a theoretical discussion of the role of banks in modern society, the importance of banks in financial systems and an analysis of the reasons and objectives of strong public regulation of credit institutions.

**In the third part** the author examines the external components of the financial services innovation management and development of financial services and banking in Estonia since 1988 to figure out the influence of three main factors – regulations, technological advances and customer behaviour for the banking sector (R<sub>2</sub>) and to determine the main trends for the next period.

**In the fourth part** the empirical analysis and background to innovation are given. On the basis of a review of existing academic literature and existing surveys, a empirical study of financial services innovation management was conducted by the author to clarify the concepts identified in innovation management literature and to understand the current situation and best practices in financial services innovation management in Estonia. The current state of innovation (R<sub>3</sub>) and the state of innovation after three years is presented (R<sub>4</sub>) based on the opinion of executives responsible for the innovation from financial services institutions in Estonia. Additionally, based on the theoretical literature and empirical study, an innovation management model of financial services will be devised by the author.

**The conclusions** describes the limitations, proposes further research options and evaluates the study and its findings from the perspective of theoretical and practical contributions.

## **Research methodology and approach**

As the main aim of the dissertation is to generalize the experience and to create an innovation management model for the banking sector, the author has used both theoretical and empirical research methods using a cross-sectional timeframe. The aim of the theoretical research is to define and outline conceptual models, structures and components of innovation with the help of theoretical literature and to understand their practical applicability.

The aim of the empirical research is to explore innovation on the basis of real experiences and best practices in the financial services sector in Estonia. Accordingly, the multi-method was chosen for the research methodology, and qualitative and quantitative research approaches have both been used. Qualitative research makes it possible to increase the overall understanding of the background, aims and meanings of innovation and allows greater spontaneity and adaptation in regard to the interaction between the researcher and the study participant. In addition, the relationship between the researcher and the participant is often less formal than in quantitative research, which allows participants to respond more elaborately and in greater detail in their own words rather than forcing them only to choose from fixed responses. In turn, the researcher has the opportunity to respond immediately to what the participant says and to explore initial participant responses; that is, to ask why and how (Mack *et al.* 2005). Quantitative research helps to explain what was observed through numerical variables and statistics, to observe some causalities and correlation between different components of innovation.

The author has chosen an interpretive theoretical perspective to study financial services innovation. The author agrees with Gray (2013), who says that interpretation gives more than explanations and descriptions in order to achieve deeper levels of knowledge. Walsham (1995) has indicated, that through interpretative research researchers attempt to access other people's interpretations, filter them through their own concepts and provide them to others.

### **Constructive research**

In terms of epistemology, the interpretive theoretical perspective is closely linked to constructive research, which must combine problem solving and theoretical knowledge (Gray 2013). Therefore, constructive research is interested in problems, the resolution of which could have a positive impact on the current situation (Lehtiranta *et al.* 2015). In this study, constructive research was applied after empirical data were collected using semi-structured interviews. Constructive research was used to compile data generated in previous sub-studies with the aim of creating a financial services innovation management model for banking.

Constructive research enables the combination of practical real-world problem solving and academically appreciated theoretical contributions with the purpose of building new, functional solutions or constructions and to link them to existing knowledge. It is essential in the constructive approach to create something new by developing something that differs from existing solutions, thereby creating a new reality for a particular type of a problem. The research proceeds by obtaining a widespread understanding the relevant theories that may contribute to constructing the solution (Apilo 2010, Lehtiranta *et al.* 2015). Kasanen *et al.* (1993) defined

the constructive approach to management research as managerial problem-solving through the construction of processes, practices, models, organizations, etc. The constructive research approach is a type of applied study that aims to define a construction as an entity producing a solution to an explicit problem and produce new knowledge as a normative application. That is, the results of constructive research should express how one should act in a current situation to achieve a desired state. Constructive research can also fail if the construction is not adopted. However, if the construction fails at a practical level, it may nevertheless yield valuable theoretical information (Apilo 2010, Lehtiranta *et al.* 2015).

### **The semi-structured interview method for company research**

Designing a survey research project is certainly not a linear process. Good survey design requires theoretical expertise, a professional and ethical attitude, clear questions, and among many other things, also a research plan (Andres 2013). The plan for surveying financial services innovation in Estonia is presented in Table 1.

**Table 1. Research plan for studying financial services innovation in Estonia**

<b>Stage of the survey</b>	<b>Analytical goal</b>
Phase 1	Identification of the research problem and questions
Phase 2	Compilation of the sample and its size
Phase 3	Conducting pilot interviews
Phase 4	Data collection through interviews
Phase 5	Analysis of results
Phase 6	Assessment of the results and comparison with similar research

Source: author

All survey research projects begin by stating the purpose of the study, specifying research questions, and developing the survey items to be administrated during the data collection phase (Aarma and Vensel 1996, Andres 2013).

The empirical data for the research was collected using semi-structured interviews with CEOs, and development and sales executives responsible for innovation from various commercial banks in Estonia to uncover and understand current innovation best practices and activities in financial services organisations, their attitudes to the same, and to obtain input for the creation of the innovation management model. The analysis is presented in chapter four of the thesis.



Semi-structured interviews are just one way of getting information from people, usually involving posing direct or indirect questions. The topic of the questions in this case fell into two main categories: questions about opinions and judgements and questions of fact (Gillham 2008). There are several issues that should be taken into account when framing research questions. For example, the type and scope (broad or narrow) of the questions (King and Horrocks 2010). Some of the questions were closed questions with a narrow scope, where the possible answers are predetermined and asked the respondents to place their responses on a seven-point balanced Likert rating scale, with “highly significant” and “no impact” as anchors to probe deeper into the details of each component. Some of the questions were open-ended to allow for individual perspectives and experiences to emerge, and to minimise the problem of predetermined responses.

Only a few major independent studies about the financial services sector in Estonia have been carried out, but the questions from the studies by Juhkam in 2003 (Financial Innovation in Estonia) and Efma in 2013 and 2014 (Innovation in Retail Banking) were taken into account and modified according to the current Estonian market situation. The main differences involved the specific focus on factors influencing financial services innovation and concentrating only on the Estonian banking sector. The items in the questionnaire were grouped according to the constructs they were intended to measure. The author examined three main topics in the questionnaire: the development of financial services in Estonia, innovation in a financial service organisation and personal details about the respondent (see also Figure 3).

<b>Semi-structured interview</b>		
<b>Part A</b>	<b>Part B</b>	<b>Part C</b>
<p><b><u>Impact of factors on innovation</u></b></p> <ul style="list-style-type: none"> <li>• Positive factors</li> <li>• Negative factors</li> <li>• Future trends</li> <li>• Management challenges</li> </ul>	<p><b><u>Innovation management in a company</u></b></p> <ul style="list-style-type: none"> <li>• Level of innovation</li> <li>• Innovation management model</li> <li>• Methods of open innovation</li> </ul>	<p><b><u>Personal data</u></b></p> <ul style="list-style-type: none"> <li>• Professional experience</li> <li>• Academic background</li> <li>• Self-assessment</li> </ul>

**Figure 3. The structure of the questionnaire about financial services innovation in Estonia** (Source: compiled by the author)

The current survey consisted of three parts, eight pages and 51 questions (see Appendix 2):

1. Section A has general questions about the development of financial services in Estonia as the impact of external factors (see also chapter 3)
2. Section B concentrates on innovation management in a specific financial service company. The study attempted to assess the degree of detail and sophistication and best practices present in innovation management processes in Estonian banking sector to obtain input for the financial services innovation management model (see also chapter 4.6)
3. Section C consisted of questions about the respondents educational background, professional experience and self-assessment.

This questionnaire was tested in a pilot case study that was not included in the sample. The aim was to learn how well the questions are understood, assess how easily and reliably the questionnaire works and receive feedback from an expert who is familiar with the topic. Thereby, the expert provided the author with feedback to indicate whether she understood the meaning of the questions and the meaning of the words in the questionnaire. Changes were made in a number of questions and in the layout of the questionnaire to increase clarity, and two questions were eliminated based on her suggestion after the discussion.

The aim of the survey was to understand the innovation management in banks. But for comparison some surveys were also conducted with the most related representatives of financial services. Generally, the sample was divided into two main categories: banks and other financial services providers (incl. insurance companies, asset management companies, Fund KredEx, stock exchange) (see Table 2).

**Table 2. Overview of survey respondents based on the financial services innovation questionnaire, May-June 2015**

	No of institutions involved (sample)	Sample/ population (%)	No of respondents from financial institutions
<b>Banks</b>	11	73.3	26
<b>Other</b>	9	24.3	14

Source: author

The high response rate from the banks (73% of the companies, including all four large commercial banks, who own 88% of total market share) was achieved, that represented a large proportion of the assets (97% of deposit market share) in the industries concerned and quality data from the other market participants. It should

be emphasized that all banks were contacted. Unfortunately, the banking sector in Estonia is relatively concentrated and tightly knit. Therefore, banks can be reluctant to reveal and share information. In the framework of this survey, three banks did not answer and only one commercial bank refused to participate in the survey on grounds of confidentiality. As the main aim of the survey was to understand innovation challenges in banks then insurance, fund management companies and support institutions were just chosen to get an insight into innovation in the sub-systems of the financial services sector.

The author selected the face-to-face interview method for the collection of the data. Such a method has numerous advantages. For example, the respondents do not have to prepare for the conversation (e.g. complete a questionnaire), and the researcher can ask semi-structured open-ended questions as well as open-ended questions that may arise during the interview. On the other hand, such a method can be expensive to conduct in terms of time and money for the researcher (Andres 2013).

The process of carrying out a face-to-face interview and the conversation setting (the physical environment and location), asking the questions and starting and finishing the questions is highly demanding (King and Horrocks 2010). All interviews (with one exception) were carried out at the workplace of the respondents to give them comfort and privacy. Each company team member was asked to respond to questions individually within a 45–60 minute meeting with the researcher.

Some measures were chosen which contributed essentially to the overall reliability and validity of the sample and to enhance the quality of the data during the data collection process.

First, the survey units were managers and CEOs of financial services companies. So the author ensured that the survey participants actually had professional and trustworthy knowledge of company innovation activities.

Secondly, the author attempted to get three representatives of every company to complete the questionnaires (CEO, head of development and head of sales) with the aim of obtaining the most comprehensive and reliable overview of innovation in each company, to cover the market and to describe the trends.

Thirdly, direct contact helped increase the willingness to respond. In addition, in the invitation email and at the beginning of the survey, total confidentiality (in regard to connections between the firm name and individual views) was guaranteed and the opportunity to be sent the survey results including all the important findings of the study. Furthermore, it is possible to assert that the participants were answering the survey questions in a serious fashion. According to the feedback it can be suggested that there was a high level of interest in this research by those who responded, and that confirms the importance of the subject.

Fourth, the conversation started with a general introduction to make the respondents aware of the purpose of the questionnaire and interview agenda. The definition of innovation based on this study was explained. Subsequently, a number of questions were asked and detailed notes taken. The questionnaire served as a guiding tool for the conversation and was completed by the research author. Finally, the author's long-term experience in financial the services sector supported the achievement of mutual understanding about the research objectives and questions.

### **The originality of the research and its practical merit**

Nowadays, banks need to plan for new developments and innovations in all service areas, although banking is a conservative economic sector with very long traditions. There are many cases of incremental product, channel and process innovation, but there are also examples of how banks are using a combination of product, channel and process innovation together with a new business model to create an improved customer experience. On the one hand, such continuous innovation is important for banks to cope with increased competition, but on the other hand it is customers and state authorities, who are interested in solutions, and that ensure attainable, convenient and inexpensive financial services.

The research focuses on the nature of innovation, particularly financial services innovation, and on its main components. Additionally, the author has scrutinised the financial services innovation in the current practice of banking.

To the knowledge of the author, this is one of the few academic studies that analyses the development of Estonian banking sector from the perspective of the three main influencers – regulations, technology advances and customer behaviour and the topic of financial services innovation in Estonia. As the novel approach, the author highlights the need for treatment of financial services innovation not only as innovation process, but as a comprehensive management model.

The current dissertation is expected to make the following contributions:

1. The doctoral thesis contributes to knowledge in Estonian banking drawing together different historical and current best practices.
2. The thesis is useful and intriguing for researchers of innovation to understand new approaches to innovation in services, financial services and especially banking. The main theoretical contribution lies in defining and developing a model for financial services innovation management to ensure a stable development and sustainability of banking sector. The aim of the model is to support sustainable innovation in a constantly changing environment and meets the requirements of the financial services public law framework.

3. The empirical part of the doctoral thesis aims to present an overview of the current situation of innovation management in financial services in Estonia to form a basis for future research.
4. This thesis also targets professionals in order to understand innovation in financial services. Although there are a wide range of different groups (stakeholders, business consultants) interested in financial services and banking (e.g. decision makers responsible for banking strategy, regulatory authorities, customers), the study is primarily aimed at development directors and managers of different banks and financial institutions, who want to be successful in meeting all the main strategic challenges and find new solutions for banking or financial services business models.



## 1. THEORETICAL ASPECTS OF INNOVATION

This chapter will present a review of the literature on innovation, its definitions, typologies and processes of innovation. It will then focus in on the internal and external components of successful financial services innovation. The aim of the chapter is to analyse the theoretical literature on innovation, which will be basis for the analysis of the financial services innovation management in Estonia and creation of an financial services innovation management model for banking.

Economics literature has recognized innovation as a mark of technological progress and the main driver of long-run growth and business success (Siimon *et al.* 2000, Tidd *et al.* 2006, O’Sullivan and Dooley 2008, Kotsemir *et al.* 2013). Sustained success in any industry is the result of continuous evolutionary or incremental change and requires a continuous stream of such innovations. Customer needs and desires as well as technology and competitive offerings are constantly changing, and therefore, the requirement to develop and introduce new products is essential (Alam and Perry 2002, Frame and White 2002). There seems to be less and less scope for making a living purely out of standardised production, low prices and low costs. Firms pursue strategies to do better than they currently do with attempts to achieve performance improvements through new products and services (Buzzavo 2012). Firms need to perpetually search for strategies to introduce new and improved products, services and service delivery processes and at the same time to learn from competitors’ activities. Success in the future, as in the past, will surely be in the ability to acquire and utilize knowledge and apply this to innovation. The company that loses its ability to innovate quickly cannot compete in a changing environment and shall lose its position. Yet the process can be complex, time consuming, costly and often unsuccessful (Smith *et al.* 2007), and how to do this successfully remains one of the most pressing management problems today (Trott 2012).

### 1.1 Definition of innovation

Although innovation is one of the key growth and profitability drivers in the 21st century economy, it is also becoming an increasingly attractive advertising keyword or slogan, and this has reduced the scientific value of the word (Kotsemir *et al.* 2013). However, for the creation of a successful innovation framework, it is important to define innovation for the company – whether it be product, service, process, marketing method or business model innovation or innovation in general (Lindegaard 2011, Tidd and Bessant 2014).

On the one hand, it is very simple – the word “innovation” comes from the Latin, *innovare*, and it can be interpreted as renewal or change or thinking about new and better ways of doing things (Tidd and Bessant 2014). On the other hand, an

innovation cannot be treated as a homogenous thing nowadays, but rather like a complex phenomenon that consists of different aspects: the allocation of resources to an innovation, or the innovation process itself and its economic effects. Consequently, for many years and even centuries various authors have defined innovation in increasingly different ways (see Table 3).

**Table 3. Some examples of the development of the definition of innovation**

<b>Author</b>	<b>Definition</b>
Gold <i>et al.</i> 2001 (p. 190)	Innovation is the creation of new knowledge from the application of existing knowledge.
Carlson and Wilmot 2006 (pp. 6-11)	Innovation is the successful creation and delivery of a new or improved product or service in the marketplace. Innovation is the process that turns an idea into value for the customer and results in sustainable profit for the enterprise.
Link 2007 (p. 1)	“Invention is the creation of something new. An invention becomes as innovation when it is put in use.”
O’Sullivan and Dooley 2008 (p. 16)	“Innovation is the process of making changes to something established by introducing something new that adds value to customers.”
Hamburg and Köörna 2009 (p. 19)	Innovation always includes new knowledge. New knowledge becomes innovation after the implementation, but not every new knowledge is innovation.
Apilo 2010 (p. 13)	Innovation is any new, useful and successful way of solving either an articulated or a previously unknown internal or external customer need, developed and implemented by a company and/or an innovation network.
Oja 2010 (p.73)	“An innovation should include or bring something additional to something that already exists – and in the business environment that also means something that somebody is willing to pay for.”
Trott 2012 (p. 15)	“Innovation is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of a new (or improved) product or manufacturing process or equipment.”
Tidd <i>et al.</i> 1999 (p. 24)	“Innovation is a process of turning opportunity into new ideas and of putting these into widely used practice.”



Definitions of innovation typically address the idea or new knowledge. Some definitions regard innovation as an idea or new knowledge (Gold *et al.* 2001, Hamburg and Kööri 2009, Tidd *et al.* 1999), others regard it as an invention (Link 2007), and an increasing number regard it as an idea that has already been utilised or adopted in some way (Trott 2012). Another aspect concerns the novelty of the end result (O'Sullivan and Dooley 2008), raising the question of how new an innovation has to be, and new for whom. It can be new for a particular market (Carlson and Wilmot 2006, Oja 2010) or new from the point of view of the company (Apilo 2010). In addition, it could highlight the utility of the innovation. It no longer refers merely to something new or some kind of new gadget, but it should create value for the customer (Tidd and Bessant 2014).

Therefore, the author defines innovation as the process whereby a new or improved idea or invention becomes a new marketable product, service or process that increases customer value. This means that an innovation does not have to be a tremendous change for the world or an industrial sector. It can exist merely in the idea of combining existing techniques in an original way that is just new for a company or a business unit (Gadrey *et al.* 1995, Vermeulen and Dankbaar 2002).

The first discussions of innovations versus inventions started to emerge at the end of the 1920s, and in the early 1930s started to spread over the different fields of science (Kotsemir *et al.* 2013). Different authors (Kööri 2005, Fagerberg 2006, Link 2007, Maxwell 2009, Kuittinen 2011, Kotsemir *et al.* 2013) have pointed out the diffusion of the innovation definition from Joseph Alois Schumpeter, who initially defined technical change as “a historical and irreversible change in the method of the production of things” and “creative destruction” in 1934, and then in 1943 in his work “Capitalism, Socialism and Democracy”, he underlined the role of innovation as an engine of long-run qualitative economic development and social change, and stressed that innovation along with credit and profit maximization is an essential function of the entrepreneur (Ruttan 1959, Tidd *et al.* 2005).

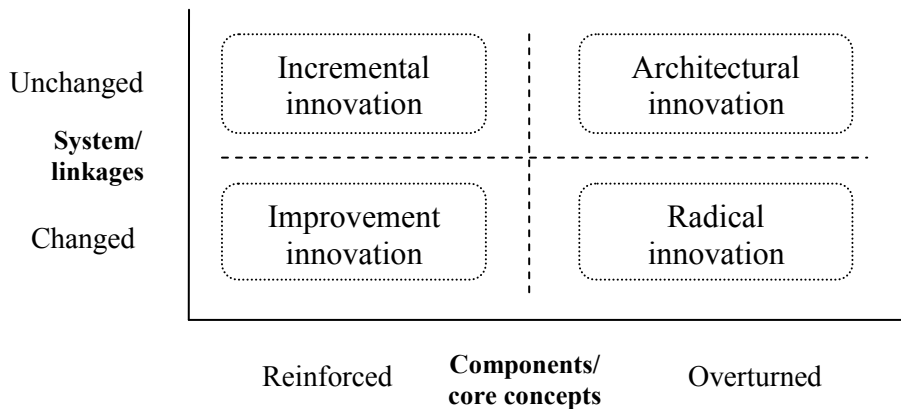
One of the influencing statements from Schumpeter was that innovation is something, which is carried into practice. He defined innovation as a new combination of existing resources (ideas, capabilities, skills etc.) with a commercial purpose. The greater the variety of these factors within a given system, the greater the scope for them to be combined in different ways, producing new innovations, which are both more complex and more sophisticated. This process of creative destruction ensures and explains the cyclical nature of economic growth and the division of prosperity. In the modern knowledge-based economy this notion is still valid and characterizes the role of innovation in search of competitive advantage (Toivonen and Tuominen 2009).

As already said for Schumpeter, the most general form of innovation was the new combination of existing things, but he also stressed the importance of more radical discontinuities in everyday business activities. Schumpeter was among

the first economists to emphasize the importance of new products as stimuli for economic growth. He argued that the competition posed by new products was far more important than marginal changes in the prices of existing products. For example, economies are more likely to experience growth from the development of products such as new computer software or new pharmaceutical drugs than owing to reductions in prices of existing products such as telephones or motorcars. Indeed, early observations suggested that economic development does not occur in a regular manner, but seemed to occur in “bursts” or waves of activity, thereby indicating the important influence of external factors on economic development (Toivonen and Tuominen 2009).

## 1.2. The spectrum of novelty in innovation

Looking at these definitions of innovation, it can be said that authors have used the concept of innovation in a slightly different way but in general it is defined as the development and implementation of something new, although the level of novelty can differ. Innovation has been defined in terms of radical acts, but can also be explained as the steady evolution of products, services and processes (see Figure 4).



**Figure 4. Innovation classification by degree of novelty** (author’s illustration based on Henderson and Clark 1990)

Innovation can be viewed in terms of novelty, ranging from a totally new, discontinuous innovation to a service involving simple line extensions or minor adaptations/adjustments that are of an evolutionary nature (de Jong *et al.* 2003). The concepts of radical (or disruptive) innovation and incremental innovation represent opposite ends of the novelty spectrum, a new service might rely on previous research leading to a radically new solution.

Accordingly, **radical innovation** is applied to achieve significant impact on the resources or technology of the organization. It is the creation of a totally new product – all characteristics replaced or unconnected with those of an older product and a new set of competences are needed (Gadrey *et al.* 1995, Wyszowska-Kuna 2011).

**Radical or disruptive innovation** can be the basis for the successful entry of new firms or even the redefinition of the industry via the creation of a demand previously unrecognized by the customer. Such an innovation depicts solutions, which are new to the world and the set of underlying characteristics is changed (Henderson and Clark 1990, Garcia and Calantone 2002, Gremyr *et al.* 2014).

Many revolutionary new products are paradigm breaking, but very difficult to plan as they require understanding how to strategically plan both the technological and marketplace discontinuities. These innovations are comparatively rare and will likely emerge unexpectedly from research projects that are focused on architectural innovation (Lorange and Rembiszewski 2014). Moreover, the realization of the economic benefits from “disruptive” innovation that is such a marked improvement that it eventually makes the current technology completely redundant, in most cases requires a series of incremental improvements. The more radical an innovation is, the greater the possibility that it may require, new modes of learning and new skills become quickly apparent, extensive infrastructural investments and/or organizational and social change to succeed. Arguably, the majority of economic benefits come from incremental innovations and improvements (Henderson and Clark 1990, Moore and Pessemier 1993, Fagerberg 2006, Maxwell 2009).

**Architectural or recombinative innovation** exploits the possibilities opened by new combinations or bundles of various existing service or technical characteristics. This consists of combining existing characteristics, which have been proven in practice or breaking apart characteristics of a pre-existing service (Gadrey *et al.* 1995, Wyszowska-Kuna 2011, Gremyr *et al.* 2014). The first step in problem solving is to seek solutions using knowledge, methods and techniques already available and assimilated or known to be readily obtainable. This can go further by creating a totally new product through combining existing technical characteristics in different ways.

**Improvement innovation** consists the improvement of certain characteristics without changing the structure of the service system (Wyszowska-Kuna 2011, Gremyr *et al.* 2014). Nevertheless, this type of innovation cannot be ignored as it has great importance on overall productivity.

**Incremental innovation** is characterized as a change that implies minor adaptations to the existing service concept or service delivery process and often described as a step-by-step process. It describes solutions, which are expected to be developed by means of a less formalised approach, with co-workers who work

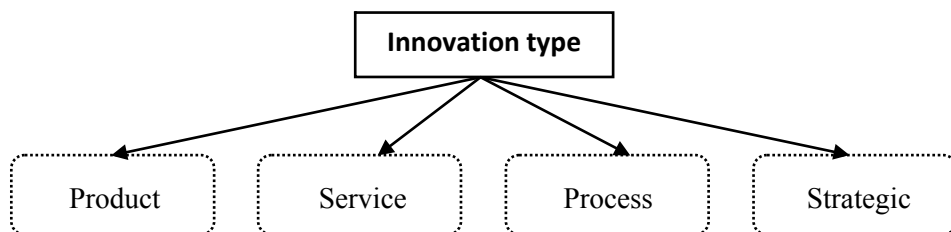
on their usual tasks. These activities can be characterized by adding, eliminating, or substituting a new characteristic, but the general structure of the system remains the same. It is rather change in of the “visibility” and the degree of standardization of the various characteristics (de Jong *et al.* 2003, Gremyr *et al.* 2014). Although, it often requires considerable skills rather than wide researches or new science, the cumulative impact of incremental innovations over the time can be significant and greater than the original, more radical innovation. It is certainly difficult to define clearly the boundary between incremental innovation and improvement innovation, i.e. to distinguish the moment at which a new characteristic is added from the one at which a simple improvement is made (Wyszkowska-Kuna 2011).

### 1.3. Innovation types

Innovations may also be classified according to “type”. Schumpeter distinguished five different types (Toivonen and Tuominen 2009):

- new goods that are new to consumers, or higher in quality,
- new methods of production that are new to the specific industries and economic activities in which they are used,
- new sources of supply and the use of new sources of raw materials,
- the exploitation of new markets, and
- new ways to organize business that lead to structural changes in the industries of their implementation.

However, these types have since changed, and it is possible to differentiate four principal applications for innovation: product, service, process and business model as shown in Figure 5.



**Figure 5. Innovation classification by type** (author’s illustration)

Term “product innovation” has been used to characterize making beneficial changes and the occurrence of new or improved final marketable good and services. Process innovation can be viewed as the introduction of a new or significantly

improved method for the production and delivery of output that adds value to the organization (Francis and Bessant 2005, O’Sullivan and Dooley 2008).

The main argument for focusing on the distinction between product and process innovation in particular is their different economic and social impact. For instance, the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment. On the other hand, it has been argued that process innovation can have a big impact on the economics of production but due to its cost-cutting nature it may have an even more ambiguous and controversial effect. Process innovations can be divided into two categories: technological process innovations that are related to new types of machinery and organizational process innovations describing new ways to organize work within companies or industries (Fagerberg 2006).

In some cases, the combination of all these types may be involved. For instance, the Google internet search engine could be considered a service innovation but also as an innovative business model to generate outstanding revenues, profitability and shareholder value from this technology (Maxwell 2009).

Additionally, there is strategic or strategy innovation, which is also called competitive innovation. It can be defined as the insight-based allocation of resources in a competitively different way to create new value for selected customers. To accommodate changing environmental conditions the companies have to periodically reinvent themselves by adopting new strategies and structures. This type of innovation describes situations in which companies have operated considerable disruptive changes in strategy, structures, skills and culture. The main aim is to find innovative ways of doing business rather than trying to achieve greater performance over competitors within the established way of doing business. Accordingly, strategy innovation can imply a redefinition of the target market and the product provided, leading to a different way of playing the game in an existing business (Buzzavo 2012). As the focus of this study is service innovation, before embarking on a discussion of innovation in services and its components, some definitions and major characteristics of services should be described.

#### **1.4. The theory of service innovation**

Services can be defined and described in different ways. There are some service-specific criteria, commonly referred to as “IHIP criteria” that have to be considered when describing services and service innovation: intangibility, heterogeneity, inseparability and perishability (see Table 4).

**Table 4. Service-specific criteria (IHIP criteria)**

<b>Criteria</b>	<b>Description</b>
Intangibility (or immateriality)	Physical and mental intangibility because the buyer does not know what the result will look like before a transaction
Heterogeneity	The variability of the results of providing services
Inseparability	The indivisibility of providing and consuming services – simultaneity of production and consumption
Perishability	The transitory nature of services – these cannot be kept, stored for later utilization, resold and returned

Sources: Fisk *et al.* 1993, Lovelock and Gummesson 2004, Biege *et al.* 2013

All these service specific criteria should also be considered in the case of financial services and related innovation. The intangibility of services is considered one of the key factors. For example, the tangible criteria of the consumer credit facility may be a plastic card, but its intangible criteria are the payment possibilities, payment grace period and repayment obligation (Davidson 1990). The conceptual nature of services, the impossibility of touching them or examining them before buying may make the development of new services harder because there is no physical object on which all can direct their thoughts (Pearson 1997, Vermeulen and Dankbaar 2002, Shekar 2007, Miles 2008, Farsi and Taghizadeh 2012).

One of the main criteria in case of financial services is heterogeneity. Many services are people-based; accordingly, they tend to be heterogeneous, which describes the variability of the results when providing services. The service will be different each time it is delivered as the provider of the service shapes the service in the presence of the customer, and the customer is actively involved. The nature of the service is individualized – that one customer receives might not be the same as the service another customer gets (Leich *et al.*, Vermeulen and Dankbaar 2002, Dolfsma 2004, Farsi and Taghizadeh 2012, Morrar 2014). Currently customers are very demanding in respect of financial services. They always require a high level and reliable service. Otherwise they tend to change bank.

On the other hand, the service could also be less heterogeneous or standardized, when it is more automated or equipment-based (de Bretani 1989). For example, a point of sale (POS) terminal is an equipment-based service that is able to provide exactly the same service over and over again. But if people go to the branch to get advisory service, the level of service and perception of quality is different because it involves the interaction of two different people (de Jong *et al.* 2003).

The inseparability of the services describes the simultaneous production and consumption process involving such factors as the presence of the customer,

the customer's role as co-producer, and customer-to-employee interaction as an essential part within the process of producing or delivering services (Lovelock and Gummesson 2004).

Services that are perishable are services that are available but cannot be stored in order to sell them at a later date. Accordingly, the production and consumption of services are mostly bound to time and place and take place near the customer. This, in turn, creates barriers to trading and measurement (Shostack 1984, de Jong *et al.* 2003, Leich *et al.*, Miles 2008, Hipp 2009, Trott 2012, Morrar 2014). They can be developed in advance at the conceptual and infrastructural level, but it makes the reliable and timely co-ordination and control of resources highly important (Melvin 1995, Vermeulen and Dankbaar 2002, Nightingale 2003, Miles 2008, Farsi and Taghizadeh 2012).

During the last two decades, there has been growing interest in services innovation as services have grown to constitute the larger part of employment and are a dominant and growing economic activity in major advanced economies. According to Christensen and Drejer (2007), services as the object of innovation started to receive attention in innovation or in economic studies in general in the 1990s. There has been considerable growth in developing service innovation theory in the last decade (Furseth and Cuthbertson 2013). Before this shift, studies have been dominated by a strong manufacturing and technology focus and in some sense still are (Tidd and Hull 2003).

The relatively scarce literature about service innovation compared to product innovation can be explained by the manufacturing roots of innovation theory, the huge diversity within the sector and the fact that although the sector includes highly innovative and knowledge intensive enterprises (e.g. software development, telecommunication and financial intermediation), service sector firms have traditionally been considered less likely to be innovative and more passive users of produced technologies. Service innovations usually do not attract as much attention as product innovations as they are often less spectacular and less eye-catching (Dolfsma 2004, Leiponen 2008, Masso and Vahter 2011), but some researchers have tended to assume that innovation in services consists of little more than adopting innovations developed in industry (Gadrey *et al.* 1995, Gallouj and Weinstein 1997, Toivonen and Tuominen 2009). Table 5 presents a range of definitions of service innovation.

**Table 5. Definitions of service innovation**

<b>Author</b>	<b>Definition</b>
Komaladewi <i>et al.</i> 2012 (p.1)	The goal of service innovation is creating solution to the customers' problems which provide added value for both customers and companies.
Michel <i>et al.</i> 2008 (pp. 1-4)	Service innovation is not just a new offering but rather improved customer value co-creation.
Schwarz <i>et al.</i> 2012 (p. 9)	"Service innovation comprises new, better, or more effective services as well as creative activities necessary to develop them"
de Jong <i>et al.</i> 2003 (p. 17)	"Service innovation involves the creation and introduction of a new offering or delivery process"
Gadrey <i>et al.</i> 1995 (pp. 7-9)	Service innovation are innovations in processes and in organisation for existing service products. Therefore, innovations can be described as new developments in activities undertaken to deliver core service products for various reasons.
Gremyr <i>et al.</i> 2014 (p. 124)	Innovations are often designed to improve product or service performance. Accordingly service innovation can be seen as any change that affects one or more service characteristics, but it should, either directly or indirectly, create value for both the firm and its customers.
Toivonen and Tuominen 2009 (p. 14)	"A service innovation is a new service or such a renewal of an existing service which is put into practice and which provides benefit to the organisation that has developed it; the benefit usually derives from the added value that the renewal provides to the customers. In addition, to be an innovation the renewal must be new not only to its developer, but in a broader context, and it must involve some element that can be repeated in new situations, i.e. it must show some generalisable feature(s). A service innovation process is the proceed through which the renewals described and achieved."

Taking into account these definitions it can be said that a service innovation can be seen as a new service offer or any improvement that affects one or more of the characteristics of a service, which provides added value for both customers and companies.

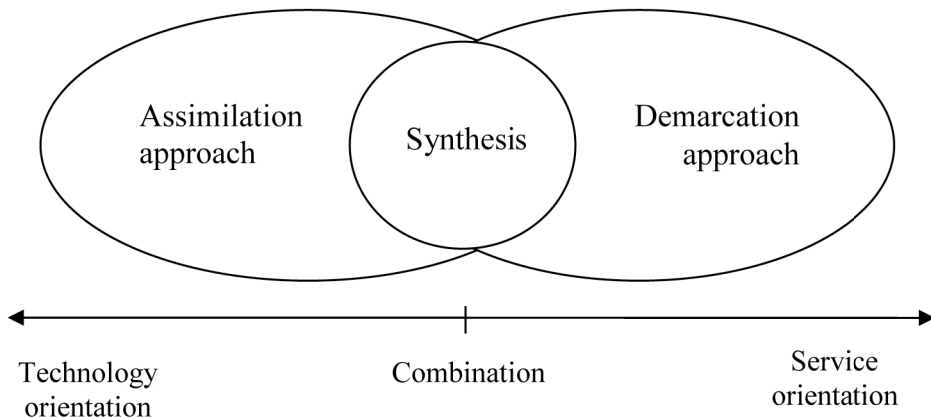
As a consequence of all services (including financial services), IHIP-criteria innovation in services tends to involve small or incremental adjustments in



processes and procedures instead of proper innovations with radically new offerings. Den Hertog and Bilderbeek (1999) have described service innovation through changes in various dimensions of novelty.

1. The service concept includes changes in the characteristics of the service itself. Although a particular service concept may already be familiar in other markets, a service is novel in its application within a particular market or a new value proposition.
2. The design of the interface between the company and its customers that involves customers in service design, production, and consumption.
3. The service delivery system and organisation that refers to the internal organisational arrangements to empower service workers to perform their job properly and deliver services adequately. The service delivery system changes the internal work processes and arrangements by which service workers perform their jobs delivering critical services, and accordingly organisations should be redesigned and employees trained.
4. Service innovations are possible without technological innovation, but this allows for greater efficiency and effectiveness in information processing. Many service innovations involve some combinations of these four dimensions and often these cross-linkages are forged in practice. A service innovation primarily involving one dimension may trigger the need for changes in other dimensions (Miles 2008).

There are three schools of thought for classifying, analyzing and understanding service innovation (see Figure 6) – assimilation, demarcation and synthesis (Droege *et al.* 2009, Carlborg *et al.* 2014).



**Figure 6. Approaches to service innovation** (Hurnonen 2012)

An assimilation perspective sees the innovation of goods and services within the same framework of understanding. It treats innovations in services and manufacturing similarly and undermines many of the unique characteristics of services. Therefore, this approach underestimates innovation in service activities, which are characterized by their intangible and information-based nature (Morrar 2014).

In contrast, research using a demarcation perspective assumes that services differ in nature and character from products. It emphasizes the unique characteristics of services and the need for a specifically developed theoretical framework and innovation models – services and their innovation activities are highly distinctive and fundamentally different from those in manufacturing. Services are dynamic and fluid, constantly changing to meet customer requirements through a mixture of different technologies (Leigh *et al.*).

This study is based on the third perspective – the synthesis perspective. The purpose of the synthesis perspective is to create both a theoretical and an empirical approach to innovation without favouring one over the other. It does not deny the importance of the technological aspects of innovation in services, but innovation does not come solely out of research laboratories. Innovation often comes from things that are not technological; although technology is important, it does not guarantee excellence in performance (Kline and Rosenberg 1986). Accordingly, it aims to integrate both assimilation-oriented and demarcation-oriented research as services and manufacturing do not follow entirely different approaches to innovation, and promotes a unified framework (Christensen and Drejer 2007, Wyszowska-Kuna 2011, Carlborg *et al.* 2014). Not only is there considerable interdependence between product and service sectors, but services are embraced and are equally crucial in other sectors including manufacturing and others. In fact, the economy is becoming more and more service-oriented. For example, nowadays the sales of manufacturing products are also often packaged with services (training, maintenance). It can be said that on the one hand, focus is on selling products rather than solutions, but on the other hand, services are becoming more and more interactive and accordingly distinctions between services and non-services make less and less sense. Additionally, treating service innovation as a separate area of study entails the risk that important lessons for the study of innovation within manufacturing and other sectors may be lost (Miles 2000).

Many service innovations have often already been implemented in or by other service organisations. Only a few developments that service firms themselves consider as innovations are new to the market and extremely radical innovations are very rare (Sundbo 1997, Sundbo and Gallouj 1998, de Jong *et al.* 2003). Therefore, the development of services could generally be considered a process with a series of small changes. Together, these small changes will cause the company and the sector to grow in terms of volume and returns (Johne 1993, Sundbo 1997).

Due to the heterogeneous nature of services, innovation can take a very different shape in different areas. Financial services are primarily characterized by four features: products are information, service and knowledge intensive, the environment is dynamic, choices are complex and organisations have to consider many different sides. Banks perform functions for customers rather than provide goods that perform functions. These functions are typically consumed as they are produced, making their provision time-dependent, as they cannot be stored (Nightingale 2003). Additionally, customer service quality and corporate reputation are critical success factors. The last two factors are major differentiators in the banking sector, where services are quite similar, easy to imitate and customer decision-making depends to a large extent on the corporate image of an institution (Blazevic and Lievens 2004). Innovation in financial services can be defined differently (see Table 6).

**Table 6. Definitions of innovation in financial services**

<b>Author</b>	<b>Definition</b>
Oke 2007 (p. 566)	Financial services innovations are related to new developments in the core offering of financial institutions that tend to create new revenue streams.
Juhkam 2003 (p. 3)	Financial services innovation as positive changes in financial intermediation or financial system: in financial institutions and in financial markets to make different intermediation methods, business processes, services cheaper and more available for clients and to increase their quality, which is an assumption for a long run sustainable growth of economy.
Frame and White 2002 (p.4)	Financial services innovation is something new that reduces costs, reduces, risks, or provides an improved product/service/instrument that better satisfies participants' demands.

Author focuses in this study on incremental financial services innovation in Estonian banking and specifies the area by the companies whose the principal and permanent economic activity is to receive cash deposits and other repayable funds from the public and to grant loans for its own account and in its own name and provide other financing. These companies should also have received an activity license of a credit institution from the Financial Supervision Authority (Finantsinspektsioon). A new service or such an enhancement in a service provides benefits and adds value for the organisation that has developed it and the output encompasses some generalisable features.

It can be said that innovation in financial services concerns the search for, and the discovery, experimentation, development, imitation, and adaptation of new

products (e.g. intraday loan), new services (e.g. internet banking), new “production” processes (e.g. credit scoring) and new organisational set-ups (e.g. Internet-only banks) (Dosi 1988, Frame and White 2002).

Many financial services innovations have often already been implemented in or by other financial services organisations. Only few of developments that the service firms themselves consider as innovations are new to the market and extremely radical innovations are very rare (Sundbo 1997, Sundbo and Gallouj 1998, de Jong *et al.* 2003). Financial services companies have to look for innovations that the customer appreciates and such innovations are typically relatively incremental. Therefore, development of services could generally be considered as a process with a series of small changes. Together, these small changes will cause the company and sector to grow in terms of volume and returns (Johnes 1993, Sundbo 1997). And the sum of several efficiency-enhancing innovations may require a major allocation of resources or technology and accordingly can have the same effect as a disruptive innovation (Lorange and Rembiszewski 2014).

### **1.5. The innovation process**

Firms normally innovate because of environmental changes (customer needs, technological advances, regulatory reform or competition) or they believe there is a commercial need for it. Successful new services rarely emerge by accident. Rather, they tend to grow out of appropriately designed structures and formalised processes (Scheuing and Johnson 1989). For many service firms, the development of new services is something natural. As opposed to product innovation, which usually follows the agreed innovation (also called the stage-gate) process from idea through to launch, service firms tend to treat service innovations as something random, and can be characterized by trial and error, learning-by-doing or learning-by-using. People and organisations can learn how to use/improve/produce things through informal activities of solving production problems and overcoming various types of customer complaints and “bottlenecks”, but usually it results in irreproducible methods, unpredictable success levels, and unsatisfactory development results (Shostack 1984, Dosi 1988, Froehle *et al.* 2000, Chai and Tan 2014).

There are many reasons for such behaviour, arising from the peculiarities of services and their innovation. One reason is that new service development tends to be ad hoc and due to the intangibility of services (de Jong *et al.* 2003), new features in a service offering are difficult to recognize. Furthermore, service innovations are not protected in the same way as product innovations. When a service company innovates, it will soon be simply copied or imitated by its competitors (Shostack 1984, Furseth and Cuthbertson 2013). Therefore, a service company cannot forget innovation as an integral part of the management process, but prefers to keep the innovation process simple and quick and avoid sophisticated and time-consuming formal development requirements (Furseth and Cuthbertson 2013, Chai and Tan 2014).

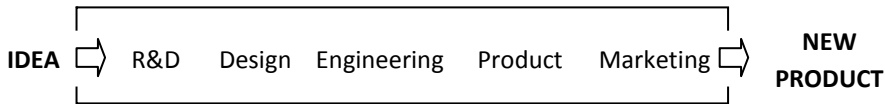
Naturally, the process of new service development can be described in various ways. Innovation within an organisation can be a complex and multi-phased activity, moving from initiation to adoption and implementation (Pierce and Delbecq 1977, Miller and Miller 2012). It consists of the uncertain activity of search and problem-solving based on varying combinations of people-based knowledge and firm-specific experiences, general scientific principles, well-articulated procedures and rather tacit competences (Dosi 1988).

Several authors (Cooper 1994, Egrett 1996, Griffin 1997, Froehle *et al.* 2000, Chai and Tan 2014) have shown that the existence of the stage-gate innovation process is one of the key factors that distinguishes successful and unsuccessful innovation projects. The stage-gate process enhances the predictability of projects, makes a positive contribution to the speed and reduces risk in relation to uncertainty, timing and budgeting (Froehle *et al.* 2000, Dooley *et al.* 2001). Cooper (1994) described the new product or service innovation process as a formal blueprint, roadmap, template or thought process for driving a new product/service project from the idea stage through to market launch and beyond. Process formalization should consist of at least three main areas: systematic behaviour, referring to standardized procedures and rules; documentation, which covers instructions, guidelines and other formal paperwork required during the process; and the assignment of responsibilities. The assignment of responsibilities specifies the roles regarding the decision-making and implementation of the service innovation, inspires the employees and keeps possible ideas for new services within the strategy framework (Chai and Tan 2014).

The stage-gate system breaks innovation into a predetermined set of phases, each stage consisting of a set of prescribed, cross-functional and parallel activities. Such a standardized process improves the effectiveness and efficiency of the product/service development cycle. It provides better communication and cooperation between process participants, increases the speed of the development process, improves the project flows and reduces unnecessary activities. The formal process can be replicated more easily to reduce cycle time.

On the one hand, according to Buganza (2006) and Oke (2007), a highly formalized innovation process is inappropriate for developing flexible services in volatile environments. The solution is a new process set-up for every project and setting less rigid timelines. On the other hand, the author supports Dooley *et al.* (2001), who stress that at the initial level, the development process can be *ad hoc*, and occasionally even chaotic, where success depends on the effort of individuals. But as the company grows and gathers experience, the development process should become repeatable. The necessary process discipline will be created to repeat earlier successes on similar projects. Competencies and activities can be replicated with some consistency across multiple projects. The defined process with documented, standardized activities, necessary decision points and patterns of information flow and communication guarantees an even greater degree of consistency and predictability. This, in turn, makes the process manageable and measureable.

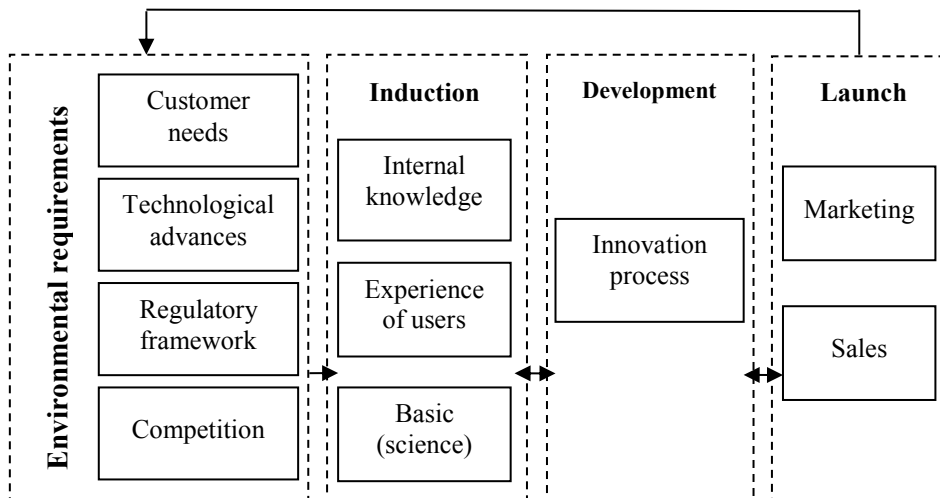
Management and organizational scholars following Schumpeter’s original views can be broadly divided into two distinct approaches – the neoclassical economic approach and the evolutionary view. Earlier, the neoclassical economic approach used a rather linear approach, which assumed that the innovation outcome was a linear process progressing through a series of stages or phases of development. In this case, nothing can become an innovation until it has processed through the manufacturing and marketing stages and been distributed into the marketplace (see Figure 7).



**Figure 7. Linear departmental-stage innovation model** (de Jong *et al.* 2003)

Although, the linear or stage-wise model of innovation had well-defined stages in which invention or basic and applied research leads to development and to a new marketable product, there was little attention paid to the innovation process itself or to the role of the marketplace and later product adaption and upgrading in the process. The departmental-stage model is not very suited for formalizing the new service development process and has been abandoned (de Jong *et al.* 2003).

In the early to late 1970s, it became increasingly necessary to understand the basis of successful innovation to reduce the incidence of wasteful failures (Garcia and Calantone 2002, Fagerberg 2006, Garcia and Calatone *et al.* 2008) and the existing simple linear innovation process was extended in order to obtain the expected answers (see Figure 8).



**Figure 8. Non-linear innovation process** (modified by author from Fagerberg 2006)

The new innovation process also contained feedback loops that occur between the different stages and parties of the process. Early feedback from whatever stage can be vital in changing the solution or adjusting it according to market conditions (Fagerberg 2006, Maxwell 2009).

In subsequent years different authors have proposed many service innovation process models. One of the highly influential processes that has often been mentioned as the first step towards innovation theory which concentrated specifically on services (Toivonen and Tuominen 2009, Wyszowska-Kuna 2011) was created by Barras. Barras (1986) concentrated in his works on the service innovation process and in certain services (banking, insurance, accounting, administration) has observed a product life cycle that is the converse of the traditional industrial cycle – a “reverse product cycle” innovation process. Process innovation precedes product innovation. In the first phase the applications of the new technology and accordingly incremental process improvements are designed to increase the efficiency of the existing service delivery process. In the second stage the technology is directed towards more radical process innovation to improve service quality rather than reduce costs. That leads to the third phase that involves a shift from qualitative improvements to the generation of wholly new types of services – the product becomes the focus, rather than the process.

Additionally, the creation of activity-stage models started as the most widely recognized models to describe new service development. In activity-stage models, an innovation process is divided into a number of activities. These models focus on different types of activities that vary in the amount of time and effort spent on each stage (de Jong *et al.* 2003).

The stages of innovation process can be different and depend on the sector. For example, new service development processes in manufacturing companies can be identified by three stages: identification of market needs, development of new services and market introduction (Gebauer *et al.* 2006, Chai and Tan 2014). But Kindström and Kowalkowski (2009) divided the service innovation process into four stages: market sensing, development, sales and delivery. Both of these authors have agreed with fewer stages than a standard new service innovation process. Scheuing and Johnson (1989) highlighted the complexity and difficulties of a service development framework and proposed a model that featured two sequential rounds of new service definition, analysis, and synthesis, followed by two implementation phases, market introduction, and a post-introduction audit.

Furseth and Cuthbertson (2013) describe innovation as a function of time and divided it in three areas: the pre-launch phase, related to idea generation (e.g. origin of ideas, quality of ideas, filtering of ideas), the launch phase, covering all the development activities, and the post-launch phase. In the post-launch phase, everything is connected to a continuing focus on improving and innovating to offset competition and extend the service lifecycle. While the pre-launch phase may lead

to disruptive or incremental innovations, the post launch phase is a process of incremental innovations. Trott (2012) also described three stages (idea generation, evaluation, realisation) to the service innovation process as a sequential model, but despite the innovation process it is influenced by a large number of various external and internal factors.

Innovation management model cannot focus only on the innovation process without taking into account other factors influencing the innovation process and results. Accordingly, for creation of innovation management model, the author analyzes the most important external and internal components of innovation management process.

### **1.6. External and internal components of the innovation management process**

Components of innovation management model include both internal and external components. Some of internal components are for example, strategy management, process formalisation, knowledge management, customer involvement and business model (de Jong *et al.* 2003, Furseth and Cuthbertson 2013, Chai and Tan 2014, Deloitte 2014).

The external components tend to have a strong and in some cases immediate impact on internal functioning (Pierce and Delbecq 1977). Juhkam (2003) and Frame and White (2002) proposed that the most important environmental components are macroeconomic conditions, technological development, legislation, sociological and cultural factors. For example, unstable macroeconomic conditions increase uncertainties and risks that can spur more innovation (Frame and White 2002), but on the other hand, can also decrease the resources for innovation.

The regulations are a two-edged sword. On the one hand, regulations and financial supervision can inhibit innovation, but on the other hand, some form of regulation (e.g. legislation for digital signing) can support the creation of more comfortable processes. Sundbo and Gallouj (1998) have identified technology as one of the main driving forces for innovation that generally influences service products and production processes and institutional development that describes the general trend of evolution of regulations and political institutions and social force. Peverelli and Feniks (2010) highlight changes in customer behaviour that influence the development of financial services. The demand for financial services (Frame and White 2002) and the customers' knowledge and ability to use innovative products should also not be forgotten (Juhkam 2003).

Looking at competition as one of the major drivers of innovation in more detail, it is important to understand who are the main competitors to fear and monitor. According to The Economist Intelligent Unit (2015), many respondents think



that new entrants and competitors will have a major effect on financial services innovation. Challengers have a number of advantages since they do not have to cope with the legacy that burdens many traditional financial institutions: inflexible IT systems that were implemented over 30 years ago, a physical distribution network and labour-intensive business processes. As a result, their solutions are more cost-efficient and they are quenching the rising demand in consumers for functionality, transparency and ease of use.

Capgemini and Efma (2015) state in their World Retail Banking Report 2015 that a growing number of start-ups and some new banks are taking advantage of technology to offer a range of flexible and attractive financial services that reflect the increasingly digital lifestyles of today's customers. Rather than regard their banks as one-stop shops, customers can turn to retailers for small credit, crowd-funding web sites, peer-to-peer lending and so on, to fulfil their financial needs. Traditional banks, bound to their legacy systems should find new ways to keep up with all the new competition.

But financial services innovation depends not only on external components. If innovation is the continuous activity of finding new value, then strategy is the basis for the configuration of resources in the best way possible to develop and deliver that value. The innovation of new services should be aligned with the overall business strategy to plan the use of financial, human and IT resources and to find the right balance between customer needs, market requirements and the strategic objectives of the company (Menor and Roth 2007, Menor and Roth 2008). Accordingly, the service firm has to create and communicate both business strategy and innovation action plan that will be supported by the management and that is well-communicated, clearly articulated and easily understandable for employees. Management needs to define what innovation means to the firm, decide how to use technology and agree appropriate performance indicators (Oke 2007, Cooper and Edgett 2010). It is like a roadmap that provides a clear direction and objectives for the business and service innovation efforts, and identifies the strategic arenas (markets, industry sectors, service types and technologies) of focus and allocated resources. It cannot be just a list of the year's development projects; it has a much longer-term commitment. Innovation action plan can be agreed separately, but it can be also part of business strategy.

Innovation action plan can also provide inspiration for innovation by explaining to employees what the customers want and what the firm's particular resources are (Sundbo 1997, Toivonen and Tuominen 2009). It indicates a clear understanding of how these innovation goals will perform in helping the business achieve its objectives and allocate the necessary resources to utilize existing development capabilities. One prerequisite for successful innovation is the availability of financial resources. In many cases the development people tend to say that they would be able to develop a lot of more innovative things, if there were the time and money.

The implementation of the action plan will be supported by a systematic and easy to follow innovation process for new service development. A formal development process that consists of systematic new service development practices and routines, indicates the existence of the formalized process for conducting innovation efforts (Shostack 1984, Griffin 1997, Oke 2007, Menor and Roth 2008, Toivonen and Tuominen 2009).

Part of action plan is the firm's attitude to innovation. For example, a strategy may be to be the industry innovation leader, the first to the market with new products, or the fastest follower, rapidly copying and improving upon competitive entries (Cooper and Edgett 2010). Both roles have their advantages and disadvantages. The first movers are looking for access to an untapped market segment, or a service or process improvement in an established market. The innovation leaders can enjoy greater buyer loyalty, but can have higher development costs and greater rates of failure. Innovation involves a fundamental element of uncertainty, which is not simply a lack of all the relevant information, but entails also the existence of techno-economic problems, whose solution procedures are unknown (Dosi 1988).

The strategy of being a fast follower allows competitors to bear the costs and risks of being the first to adopt a new strategy or technology, and entering the marketplace only when the strategy or technology has proven viable (PWC 2014a). Fast followers can achieve market leadership by avoiding expensive R&D investments and focusing on customer retention and brand image, often moving quickly to adopt the new technology. They can achieve their advantage by improving the new service, without making it cheaper than original (Chakravorti and Kobor 2003, Deloitte 2014).

There are many authors (Johnson *et al.* 2008, Teece 2010) who see business models as part of service innovation. The key driver of a business model for service innovation is an attractive value proposition for all stakeholders: the firm, the firm's customers, and the firm's suppliers. For example, the successful service firm provides added value through a relevant customer experience – all of the outcomes necessary for customers to evaluate the desired value of innovation. For one customer it can be the speed of the service, and another customer may value the availability of the service in different channels. Accordingly, this value is only realised if the required services are delivered in an appropriate way over the long-term (Furseth and Cuthbertson 2013).

One of the key aspects is knowledge management, which combines people, organisational structure and culture and technology. The organisational structure must clearly define responsibilities and authority in an appropriate manner. For example, clear responsibility for the various activities in connection with the introduction of a new service. Collaboration between different departments that are not responsible for the development process is difficult to achieve. This can lead to an increase in time-to-market, increased costs and a substantial decrease

in quality. Edvardsson and Olsson (1996) and Lester (1998) have proposed that not all departments have to participate in the development of the service process. There is an obvious risk that each department will optimise its “own” processes and will not cover the whole and the inter-functional dependency relations which exist in all organisations.

The specialists from one department usually speak the same language, share the same understanding of various aspects in the development process and have a “departmental thought world”. Additionally, it is not only about the use of existing knowledge within one department or organisation, but also bringing information about the external environment into the organisation (Blazevic and Lievens 2004). The presence of a product champion is also one of the important success criteria. A product champion is internally responsible for the service in the organisation and pushes a new service innovation through all stages of the innovation process, but externally is the coordinator of the innovation network (de Jong and Vermeulen 2003).

Inversely, Gallouj and Weinstein (1997) have stated that flexible, cross-functional teams with their combination of knowledge and competencies are the most successful in development activities. These teams should be supported by the functional department’s information and knowledge sharing (Vermeulen and Dankbaar 2002, Engen and Holen 2014). But these employees can have a lack of time to spend on the development project (Leich *et al.*). The development projects that are carried out by full-time development people are finished much quicker.

Knowledge management is part of the process as the collection of the competency of creating, storing, transferring, applying and the good coordination of internal knowledge (Nightingale 2003). An organisation’s ability to learn depends on the experience, ability, actions and shared perceptions of individuals. People and their individual autonomy are always a hugely important resource in creating successful innovation because individual personalities can vary enormously (Pierce and Delbecq 1977, Klein and Sorra 1996, Furseth and Cuthbertson 2013). Investments in the employee’s knowledge, expertise in offering and managing new products/services, communication and exchange of information among the innovation team are all critical activities to reduce risk and uncertainty (Drew 1995, Juhkam 2003, Nysveen and Pedersen 2007, Engen and Holen 2014). Edvardsson and Olsson (1996) have set up the reasonable assumption that staff and their training and education should also be an important part of the development of new services. Service personnel are often crucial for customer-perceived quality and should have the ability to understand the customer’s problems and needs as the sources of innovation and service improvements. Additionally, Shekar (2007) has stated that the lack of experienced development staff is one of the key barriers to development in service firms.

However, knowledge and experience alone can be insufficient. Motivation and enjoyment in work are also necessary (Edvardsson and Olsson 1996). These can

be created through work content, interaction with fellow workers, management, attractive jobs and a stimulating work environment. All together these factors can be referred to as organisational culture. Edvardsson and Olsson (1996) have even said that this will probably be the most important quality-creating factor in service development.

Frame and White (2002) and Furseth and Cuthbertson (2013) have stressed the size of the company among other important assumptions for service innovation. They propose that a greater size will offer possibilities for a wider range of activities and accordingly, including large investments, yield a greater return on the investment in the innovation (Bantel and Jackson 1989). On the one hand, smaller firms may also be rapid innovators due to competitive pressure. Juhkam (2003) has stated that small financial institutions are less able to invest in innovation. Due to a smaller number of customers, many new services or improvements simply do not pay off or do not provide additional value. On the other hand, the small, local organisation will often find it easier to innovate than the large multi-national corporation (Furseth and Cuthbertson 2013). Larger and older organisations tend to be bureaucratic and to have more structural and cultural inertia. These companies have different structures and systems to handle the complexity. These systems are difficult, costly and time-consuming to change. Cultural inertia comes from age and success in the form of informal norms, values, social networks and in myths and stories (Tushman and O'Reilly 1996). Pierce and Delbecq (1977) have concluded that size can be used to leverage economies of scale and scope, not to become a controller that slows the organisation down. The development of new services is a priority, which will guarantee competitive advantage. It is not size per se (assets and number of employees) that causes innovation, but size that increases the likelihood of the presence of other more credible predictors (e.g. "critical masses" for adaptation, personnel professionalism) of innovation. As innovation is the creation of new ideas from the application of existing knowledge, it is important to manage knowledge not only internally, but equally effectively manage external knowledge as well. The easier form of innovation is to pick up and to duplicate the competitors innovative achievements (Dosi 1988). But there can be other approaches to innovation. One of the choices for financial service companies is whether to innovate by themselves or to outsource innovation to entrants and start-ups. Some companies rely on the in-house development of innovative solutions (closed innovation approach); others tend to find cooperation and idea changing possibilities with partners, suppliers and customers (open innovation approach) (Terwiesch and Xi 2008). More and more, financial services companies are choosing to cooperate with their partners and to outsource a portion of their technical development work to new technology start-ups or partner companies.

Leich *et al.* indicate that a diversity of idea sources is important – ideas for innovations should come from all parts of the organisation, not only from the development division, and from the external network of the firm. To reach such a goal, the exchange of information and experiences should be supported internally between

employees and externally between the organization and its network of business partners (Sundbo 1997, Gold *et al.* 2001). The involvement of employees increases the likelihood of a successful implementation on innovative services. Employee, and especially front-line employee, knowledge of customers and unsatisfied client needs is the first opportunity for initiating new services (de Jong and Vermeulen 2003). But there can also be many open innovation initiatives that often rely on the desire to compete for status within the community. One such nonfinancial motive is idea content, in which users are invited to submit ideas or plans for new services to an innovating firm (Magnusson *et al.* 2003, Terwiech and Xu 2009).

An increasingly important aspect is customer involvement that relates to the capability of engaging customers in the service innovation process. Many service firms see customers as pure buyers and assume that developers can predict and translate customer needs into the required solution (Shostack 1984). Customers can also be treated as an object of study, and gathering ideas is realized through complaints or sales reports (Chai and Tan 2014). But to understand the customers' real needs and wishes, it is necessary to include them as experts and sources of information in the service development processes (den Hertog and Bilderbeek 1999). Customer orientation should be a central point of departure for all service developments. Meaningful dialogue with customers can be an important source of new innovative ideas with great user value and good promoters of new services and/or brands to other customers. Involving users makes the ideas more original, holding a higher perceived value and helps to learn the real needs and wants of customers (Edvardsson and Olsson 1996, Magnusson *et al.* 2003). When customers feel empowered, with passion and a sense of ownership of the offering, they are willing to contribute extensively to the benefit of the firm and influence other customers' perceptions on their own initiative through word of mouth, blogging or other means of interactions (Jaakkola and Alexander 2014).

On the one hand, customers might not easily offer ideas for innovations because they lack sufficient technical knowledge and rarely know the solution to their own problems. They can only provide ideas on the basis of their own experience and have trouble imaging the use of emerging technologies (Magnusson *et al.* 2003). On the other hand, the company gains knowledge about customers' lives and problems. Understanding customer needs, wishes and expectations constitutes an essential foundation for ideas for new services and accordingly, sustained competitiveness through innovative new products and services (Nightingale 2003, Rubalcaba *et al.* 2012). Customer needs are basic. Wishes refer to the way in which the customer wants to satisfy a specific need. Expectations are linked to a specific service or a certain company and influenced by the company's image or reputation on the market, the customer's previous interaction with the service company (Edvardsson and Olsson 1996).

Innovation management should also have objectives. The whole point of having goals is that everyone involved in the activity has a common purpose. This is

the post-launch review aimed at determining whether the goals and objectives are being achieved (Scheuing and Johnson 1989). On the one hand, Kline and Rosenberg (1986) stated that it is the complexities that make the effect of innovation hard to measure effectively. On the other hand, Rubalcaba *et al.* (2012) suggest that the effect of innovation investments should be measurable. Even though not all innovation attempts lead to success, there should be quantitative measures to demonstrate the benefits of innovations. Different measures (financial or non-financial metrics) have been used to assess the outcomes and success of the innovation performance of service firms. Researchers (Cooper and Edgett 2010) reveal the most popular metric (objective) is the percentage of the business' annual sales generated from new (less than three years on the market) products.

On the one hand, innovation is important for financial institutions in order to survive, create more value and cope with increased competition by providing difference, but on the other hand, this is for the sake of customers and state authorities, who are interested in solutions, that ensure attainable, convenient and inexpensive financial services. Accordingly, understanding the innovation management processes in banking industry will result in a better understanding of how the banking industry can adopt the best practices, stay competitive, provide customers with more value and meet the changes posed by external drivers.

The financial services sector is facing significant strategic challenges while ensuring survival, further growth and profit making – banks and other financial institutions have understood that traditional services, trustworthiness and efficiency alone can no longer create sustained competitive advantage in a constantly changing environment. Therefore, changes in the external environment (e.g. regulatory framework, technology and customer behaviour) and internally (e.g. organisation, branch network and technology platform) require a continuous and integrated approach to innovation and its management as one of the most important sources of competitiveness. In doing so, the important role of banks in society and the resulting responsibilities must not be forgotten. The challenges of financial services companies are not only to adapt to changing legislation, but also to change from technical inventors to business designers. This needs new modern technological solutions and a new focused, adaptive and collaborative culture of innovation to meet increasing customer needs and to establish new services and business models to compete and grow. In the next chapter, the author provides an overview of public law the framework of the financial system and related responsibilities to explain and understand some peculiarities of financial services innovation management.

## **2. PUBLIC LAW FRAMEWORK OF FINANCIAL SERVICES**

In any analysis of financial services innovation, the public law framework of the financial services sector should be taken into account. Banking has a very important role in the economy. It can even be said that banking and the financial system in general is the circulatory system of the economy. But the last financial crisis (2007–2008) showed how vulnerable the entire economy can be in the case of a banking crisis.

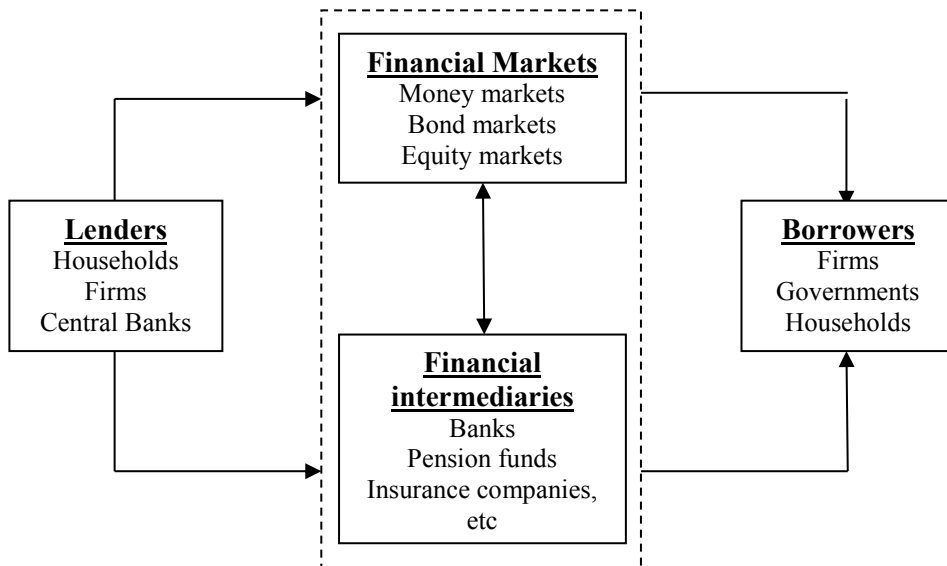
The importance of banks in the financial system and the role of banks in society are two reasons why the banking is one of the most regulated economic areas. On the one hand, regulations guarantee the sector's strengths, but on the other hand, regulations can restrain the innovation of financial services. The aim of this chapter is to describe the public law framework of the banking sector to understand the importance of banks in the financial system, the role of banks in society and the public law framework for financial services innovation.

### **2.1. Importance of the financial system**

A well-organized and efficient financial system is the central nervous system of every market economy. The five essential components for a strong financial base are considered to be (Erma 2001):

- strong public finance – raising revenues, controlling expenditures and servicing public debts;
- stable money;
- a central bank as the regulator and supervisor of a state's financial system, and as executor of monetary and financial policies promoting economic stability and growth;
- a banking system that accepts deposits and lends it to creditworthy borrowers;
- a well functioning financial market to finance governments and enterprises by facilitating the issue of new securities (bonds, equity, shares and other financial instruments) and creating “liquidity” for these securities by providing trading markets for the securities.

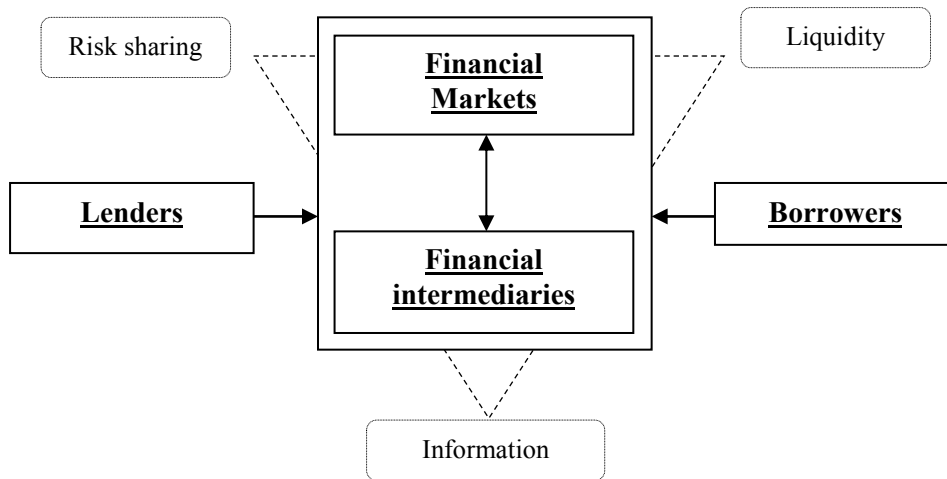
Figure 9 gives an overview of the financial system.



**Figure 9. An overview of the financial system** (Source: author modified from Allen and Carletti 2010)

The financial system helps mobilize and pool savings to match savers and borrowers and allocate real resources from those in surplus (lenders) to those in deficit (borrowers). It is particularly important in reallocating capital for providing the basis for the continuous restructuring of the economy that is needed to support growth. It has two main components: financial markets (money markets, security markets) in which claims are exchanged and financial intermediaries (such as banks) are an indirect linkage between savers and borrowers (Hubbard 1997). They act as principals in assuming liabilities and acquiring claims. The different tasks of financial markets and financial intermediaries in society are depicted in Figure 10.





**Figure 10. Main tasks of the financial system** (Source: author modified from Hubbard 1997)

Generally, it can be said that the financial system directs real resources to their ultimate users, either by direct, market-based financing or by indirect, bank-based finance, and it also provides payment services that facilitate the exchange of goods and services and risk-sharing, liquidity and information services.

The financial system produces and processes information about investors and investment projects to enable the efficient allocation of funds, monitor investments and exert corporate governance after these funds are allocated, that helps diversify, transform and manage risk (Demirgüç-Kunt 2010). Secondly, according to Crockett (2011), by converting illiquid and uncertain claims into liabilities that better match the asset-holding preferences of savers, a financial system can both add to the liquidity of nonfinancial sectors and increase the overall level of saving within an economy. Information services contain the collection and communication of information. On the one hand, this gathers information about prospective borrowers and their intentions, but on the other hand, the financial system deals with the problems of asymmetric information.

The general opinion (Duisenberg 2001, Tadesse 2005, Crockett 2011, Levine 2011) is that the optimal financial system, in combination with a well-developed legal system, incorporates elements of both direct, market-based and indirect, bank-based finance to improve the efficiency of financing decisions, influencing and favouring the better allocation of resources and thereby economic growth.

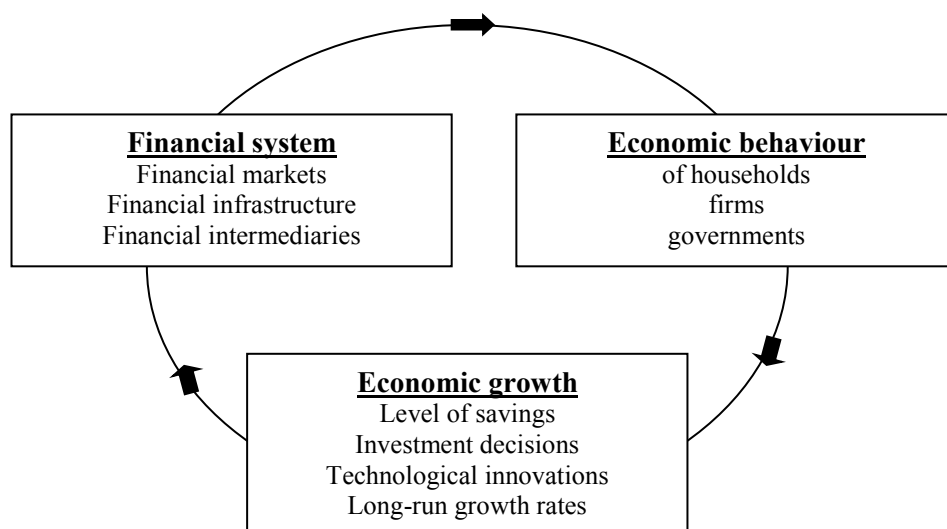
Both market-based and bank-based financial systems have their own advantages. For some industries market-based financing is preferable as the financial markets provide capital for the emergence and growth of innovative firms. It is essential for maintaining the competitiveness of an economy today given the strongly increased

international competition, rapid technological progress and increased role of innovation for growth performance.

Financing through financial intermediaries is advantageous for industries with strong information asymmetries. This could provide an solution to adverse moral hazard problems and distinguish between good and bad borrowers. Banks can bridge this gap thanks to their comparative advantages in the assessment and monitoring of investment projects, which contributes to overcoming information asymmetries and accordingly, banks are by far the most important source of finance for small and medium-sized enterprises and key financiers of households (Liikanen 2014).

In summary, by offering a menu of alternatives to borrowers and lenders and minimizing the risks and costs of conducting transactions, the system facilitates the efficient allocation of financial resources in an economy (Burton and Lombra 2000).

It has been observed that services and the development of financial systems have positively influenced the countries state of development and are vitally linked to economic performance (See Figure 11).



**Figure 11. The influence of the financial system on economic growth** (Source: author)

A number of studies (de la Torre *et al.* 2011, Demirgüç-Kunt and Levine 2001, Sawyer 2013) have proven that financial development exerts a causal impact on economic growth. It tends to accelerate economic growth by generating high levels of savings, promoting quality of investment decisions, facilitating technological

innovation and boosting long-run growth rates. The financial system will support the quality and quantity of investments through the efficient allocation of credit. The access to capital from both the private and the public sector with an increase in capital flows raises capital stock, productivity and investments, along with efficiency, economic growth and employment (Sawyer 2013).

Looking at Estonia's small open economy, the development and growth path is affected not only by local industrial or wider economic policies and monetary policies, but also the European Central Bank, EU fiscal transfers and decisions mainly by foreign owned parent banks. See also 2.3. Legislative framework of the banking sector.

## **2.2. The roles and functions of banks in society**

In the European Union the concept of financial services is defined by the principles that introduce single financial market goals, on the basis of the relevant directives and regulations applicable to the banking sector and the decisions of the European Court of Justice.

As a general term, financial services is used both for specific services, as well as in the meaning of the movement of capital and delivery of information through payment systems. On the one hand, companies operating on the financial market use their services to ensure the capital needed for daily activities, on the other hand, they offer individuals opportunities to change the savings for investment.

Krediiasutuste seadus (Estonian Credit Institutions Act 2011), § 6, subsection 1, defines financial services as, "services to third parties rendered by a person in the course of professional or economic activities which consist of the conclusion of the following transactions and acts" and brings out a separate list of transactions and operations.

Looking closer at financial intermediaries and particularly at the banking sector it can be said that banks play important and critical roles in every financial system and in every economy. Moreover, understanding the roles that banks play in the economy is one of the bases for this study. Different authors (Diamond 1996, Vensel 2001, Andrieş 2008, Allen and Carletti 2010, Cecchetti 2012) have identified the roles of banks as being primarily related to liquidity transformation, information production, delegated monitoring and risk sharing.

1. Banks perform an important role in terms of liquidity transformation. They collect funds in the form of deposits from surplus agents (depositors) and raise funds in the short-term capital markets and transform them into medium and long-term credits. Usually, these credits can be characterized as large with medium or high risk and with a low degree of liquidity. This transformation

can occur because banks can attract small and low risk deposits, they have access to a large mass of depositors and economies of scale. So banks create liquidity that individual surplus agents cannot (Andrieş 2008).

2. The second role of the banks is information production. In the resource allocation process the surplus agents can bear substantial costs to find potential partners on their own. Banks have the necessary know-how and expertise because of the experience gained over time in relationships with deficit agents. As banks collect and process information regarding deficit agents on behalf of depositors, their transaction costs for information gathering are lower than that of the surplus agents if they tried to gather information on a pool of borrowers. The intermediary's profits from lending compensate for the investments in information.
3. Delegated monitoring allows various informational problems to be solved. Because the monitoring of the credit risk determined by the debtors' inability or bad faith is costly and difficult to observe, it is more efficient to delegate this monitoring activity to some specialized entities such as banks. A bank is an entity that matches, analyzes and verifies borrowers in order to develop a long-term relationship with borrowers and limit the effects of information problems. They carry out monitoring and control functions to ensure that firms use the financial funds allocated to them effectively. Banks have the necessary expertise because of the large-scale economy in the processing of information regarding debtor risk and this can be beneficial for them.
4. One of the most important functions of banks is to provide some form of insurance against several sources of risk by diversifying and smoothing fluctuations over time. Banks must select and control the risk inherent to the management activity of deposits, credit portfolios and balance-sheet operations, and invest in different risk management systems to analyze, limit and cover the risks they are exposed to. Sörg (2000) and Allen and Santomero (1998) have even argued that the bank's main role has shifted from providing information and transforming liquidity to the management and control of risks or from credit intermediation to risk intermediation. For example, banks have the possibility to minimize individual credit risk by diversifying the investment portfolio, covering risks, and evaluating and monitoring debtors. The diversification of credits and the monitoring activity helps to deal with information asymmetry in the relationship with debtors and to eliminate the effects of moral hazard.

These are the main, albeit selected roles of the banks. To fulfil these roles banks have different functions that contribute materially to our economic well-being (White 2013).

1. Firstly, receiving deposits and supplying loans; that is, credit intermediation between savers and investors. The main function of the banks is to aid collecting and allocating funds, especially in the shape of deposits, from the surplus agents to those in deficit in the shape of credits. This intermediation

process helps match savings and credit supply, transforms non-liquid assets into liquid assets and provides liquidity to an economy. Generally, this means transforming relatively small, homogeneous, liquid and short-term deposits into larger heterogeneous, long-term and illiquid credits. But also allowing households and firms to fulfil their economic aspirations via smooth consumption and investment spending according to variations in income and revenue (Cecchetti 2012).

2. The other important function is to offer access to a payment system that reduces transaction costs; that is, to offer transfer and payment services between parties across borders and currencies. Andrieş (2008) describes this function as the banks ensuring their customers a payment system that enables the management of the customer accounts and the performing of transfers between the accounts of different customers. The banks ensure the transfer of important amounts of money over large distances under safe conditions, in a short time and at reasonable costs.
3. Thirdly, the provision of investment services; that is, investors can acquire a portfolio of securities at low cost. Services provided by the credit institutions traditionally include the reception and transmission of securities (shares, bonds, derivatives) orders, the execution of orders in accordance with the customer's name and/or expense, safekeeping and administration of securities, as well as a discretionary portfolio management and securities offerings, including the issuance or sale of assurance (Krediiasutuste seadus 2011, Siibak 2011).

The combination of these roles and functions distinguish banks from other enterprises. As fulfilling all these functions will lead to a range of risks, it cannot be done without an appropriate legal, regulatory, enforcement or accounting environment (Barth *et al.* 2009). Society needs financial services and needs the regulation of these financial services. The goal of financial regulations is to retain access to all these services and to encourage the development of these products and services more cheaply and effectively.

### **2.3. The legislative framework for the banking sector**

The rapid development of society and economy have brought to the market a wide range of new inherently critical financial services and products. Therefore, such development has increasingly turned attention to the regulation of the financial services. These changes have led to new regulatory challenges and issues. Over the past decade, the area of financial regulations has been one of the most rapidly developing areas in European Union legislation. It can be said that for the European Union a sound framework for the banking industry is one of the major priorities in addition to the development of a single financial market (Siibak 2011, Mariotto and Verdier 2014).

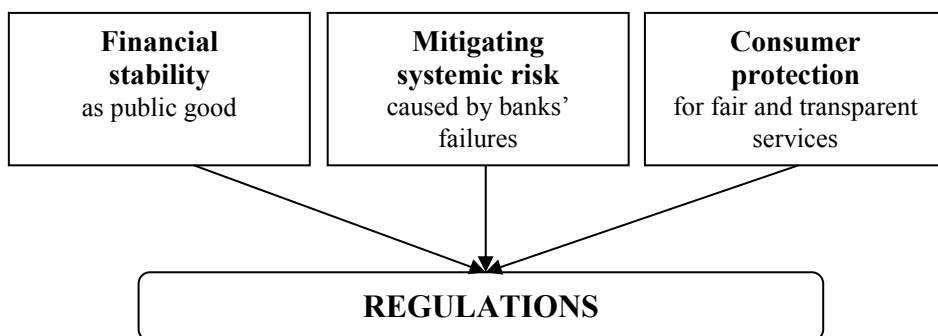
Due to the formulation of European Union law, financial globalization and changes in the domestic and international money and capital markets, banking law has lost its role as part of commercial law (as it was from the beginning of the 19th century until the 1970s) and has become a separate branch of law (Raa 2001).

Theorists and practitioners have had long discussions over whether banking law is private or public law. In the absence of common positions, where can a different point of view be found in the scientific literature. On the one hand, banking law regulates the relationships between credit institutions and their customers and other credit institutions by defining the mutual rights and obligations. This is based on the contractual agreement between parties that regulates financial services provided by credit institutions and used by customers or by other credit institutions, and this is based on civil law (Raa 2001). On the other hand, according to public banking law, banks interact closely with the central government, as the state intervenes actively through its supervision of daily banking business activities. Therefore, banking law in broad terms covers a public set of rules that also regulates the factual relationship between the credit institutions and the executive public authorities (Mark *et al.* 2003). Based on Raa (2001), a number of limits and obligations set by public regulations also extend to credit institutions (e.g. keeping of personal data and bank secrecy, participation in the deposit guarantee system, contributing to the prevention of money laundering).

In addition, according to § 13 of the Eesti Vabariigi Põhiseadus (the Constitution of the Republic of Estonia) (“everyone has the right to the protection of the state and of the law”), if necessary the state is ready to intervene in the bank’s activities to protect the interests of the weaker half, as the depositor and the customer of the bank have a somewhat economically disadvantaged position in communication with the bank. Accordingly, the state creates a relationship of subordination between itself and credit institutions, which are subject to state supervision. This is an administrative and not a banking relationship between the state and credit institutions. From the foregoing, state intervention in the credit institutions’ economic activities must be seen in terms of public economic law or administrative law, similar to consumer or health protection.

There are numerous reasons, some centuries old, why banks are closely regulated and supervised. In the theory of economic regulation, one of the views why regulations are held is for the protection and benefit of the public at large (Stigler 1971, Posner 1974).

The same can also be seen in the regulation of financial services. Firstly, the financial system and banks perform a central role in society and have close links with the economy in general. Secondly, in order to ensure reliability and maintain confidence in the financial markets for their customers, extensive public regulation applies to banks in all developed countries (see Figure 12).



**Figure 12. Main forces for the regulation of banks** (Source: author)

Accordingly, the most important reasons for the legal regulation of the financial markets and banking can be identified as (Siibak 2011):

- ensuring financial stability as a public good,
- avoiding systemic risk caused by bank failure,
- consumer protection to ensure that the financial institutions are fair and transparent.

Legal scholars are of the opinion that financial stability is a public good resulting from the use of financial services as services of general interest. Services of general interest can be categorized by the inevitable need to use them in a modern society. In Estonia financial services (e.g. a bank account as well as payment services) are an important and unavoidable part of everyday life (Siibak 2011).

The other important aspect of maintaining financial stability is that the failure of a single, large institution can spread, and combined with customer uncertainty, can cause depositors and other creditors to lose confidence and run on their banks irrespective of whether they are problematic or healthy banks. According to Siibak (2011) and Claessen (2006), developments in financial services relate in large part to financial stability as new, possibly systemic risks arise. Systemic risk can be talked about in the case of a chain reaction in which liquidity, credit and operational risk occurs and leads to a financial and economic crisis in a country or group of countries. Also, systemic risk can be identified as a serious disorder in the domestic financial system, which could lead to a serious impact on the domestic real economy due to both domestic and external public financial systems (such as borrowing from foreign financial institutions).

The banks are at the centre of systemic risk because the interconnection is much greater than in most other industries. The financial system is working as a network of the markets, interbank deposits, payment and settlement systems, and market participants. The activity of one part may affect the others and the entire economy as

a whole. The entire financial system, including the payment and settlement system loses its sustainable ability to carry out enforceable obligations or bankruptcy if one institution spreads and affects other financial institutions and the financial system as a whole. Materialization of systemic risk in the financial sector can lead to a crisis in the network and impact on the whole economy, putting at risk both financial stability and current monetary stability (Claessen 2006, Santoso and Batunanggar 2007).

Financial crises have always brought major negative implications to the economy by lowering growth and income. These events eventually create negative aspects on social and political life and great fiscal costs, and in the worst case, even severe and prolonged recession if prompt measures fail to address the crisis rapidly and effectively. Systemic risk can be mitigated through the efficient regulation of information and by legal rules to fight contagion when certain parts of the market collapse. It is also important that legal rules are enforced so as to promote and maintain consumer confidence in the financial system (Hoenig 1996, Mwenda 2006, Santoso and Batunanggar 2007).

If through regulation and supervision the institutions are protected from failure, the health of the system is ensured and potential risks to the safety nets are minimized. Accordingly, the third reason for regulations is to prevent the abuse of financial services customers and ensure equal opportunity for the public to access to financial services (including special credit solutions for housing or small business). The European Economic and Social Committee have considered that the financial products and services cannot be compared to other products and services. These like many other products cannot always be visually seen or analyzed before final consumption. Financial services and products are perceived rather than just on the basis of information made known to the customer (information booklet, counselling, provider website, or contractual terms) (Siibak 2011).

Consequently, in the legal literature financial services have been mentioned as “trust products”, the actual features of which will become available only after the conclusion of the contract or abstract legal products, which will only be defined in the agreements. Legal scholars believe that since information introducing the financial services and concerning the consumer, under which it will create legal relations or declarations of intent, is fully under the power of the service provider, then the customer will never be in a position equal to the financial services provider (Siibak 2011). Therefore, the banks’ interaction with their customers should be fair, transparent and professional. This, however, is one of the reasons why the financial services industry are experiencing and are expected to continue to experience extreme regulation.

It is essential to protect the safety of the public’s savings and interests, and to ensure efficient facilitation of speedy payments for goods and services. Banks are the leading deposit holders for private and small corporate savings. They also



create money by transforming these readily spendable deposits into loans and investments. These loans and investments support consumption and investment spending and endorse economic growth. One of the public interests is the adequate supply of credit that can be used for personal and business well-being and for ensuring improvements in the standard of living. On the other hand, strict regulations can be beneficial both to the industry and to the customer. They may increase customer confidence, encourage the purchase of desirable products, and accordingly create higher customer loyalty and make financial services more effective for their customers.

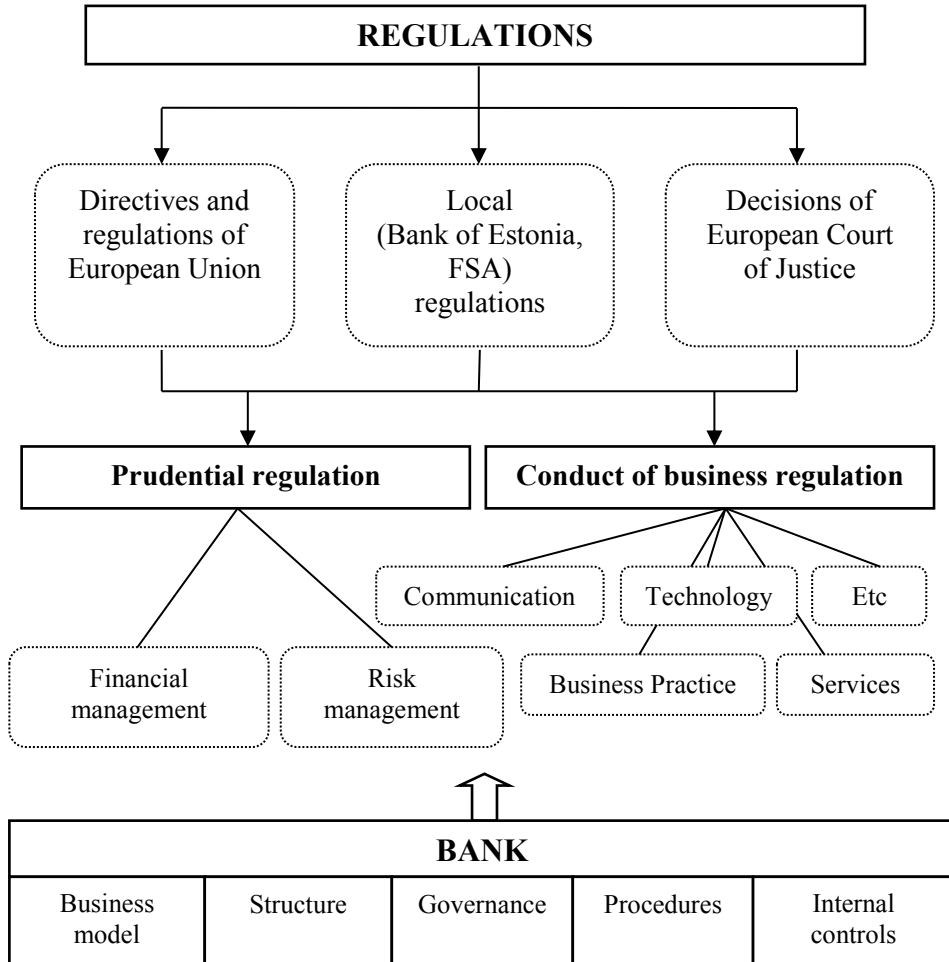
With the increased diversity of financial services and providers, it is harder for consumers to choose on a well-informed basis. Retail customers remain in a weak position in terms of their lack of understanding of many financial products. The driver of regulators is to compensate for this information imbalance that sometimes exists in favour of consumers by imposing upon the financial services minimum standards of business conduct and to protect individual customers by assuring that they can access the best from financial services provision through proper information and education. Financial institutions have had to comply with providing lots of additional information about their services, creating additional legal and administrative tools (e.g. additional questionnaires, confirmation letters, etc.) to help customers make informed choices and to avoid the misuse of their services and in taking responsibility for the truth in advertising. Still, even the implementation of all these measures cannot assure well-informed decisions. Consumers should also be educated enough to make the “right” choices, and governments have to take steps to ensure higher levels of financial literacy regarding financial services and alternatives (Claessen 2006, Mwenda 2006, OECD 2011).

Regulation could be divided into two generic types (Llewellyn 1999):

- prudential regulation, which concentrates on liquidity, solvency and soundness of financial institutions;
- conduct of business regulation, which focuses on the different functions (except financial management) of financial firms (e.g. mandatory information disclosure, competence of banks’ employees and management etc.). These are rules and guidelines about how financial institutions conduct business with their customers.

In this study the term financial regulation refers to a set of official policies, supervisory practices and binding rules issued by a legal body and applied in the financial services area to fulfil the functions and activities of financial institutions. Supervision in the banking sector is not only the monitoring of the behaviour of financial institutions and compliance with regulations, but also evaluation and monitoring financial institutions’ awareness of risk in their business area and of internal control processes (Ojo 2010).

Figure 13 illustrates a simplified typology of regulations in financial services.

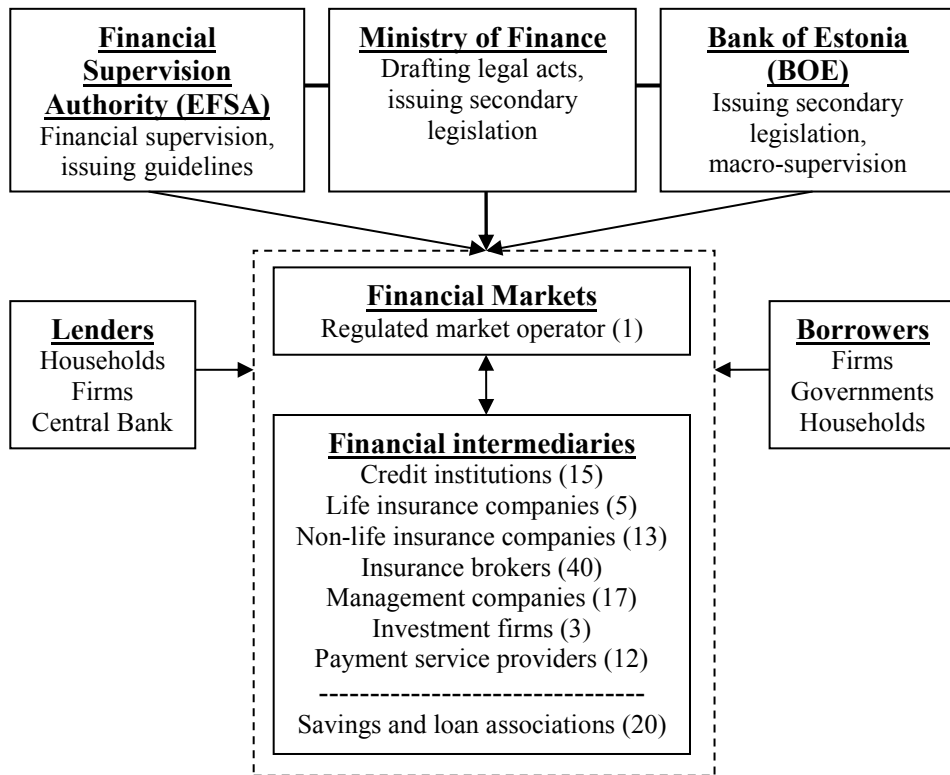


**Figure 13. Structure of financial services sector regulations in Estonia 2015**  
(Source: author)

Regulators and supervision institutions shape the legal framework for banks that must secure fair competition in the market and prevent excessive risk taking. The initiatives must guarantee that the number of participants is sufficient, the financial market is transparent and competition is fair and sufficient.

Respectively, banks should build up reliable organisation and risk management systems and to improve them continuously. It also needs governance (goals and expectations), policy and procedures (operational principles), internal controls, measuring, monitoring and reporting systems to be compliant with the regulatory framework.

The Estonian financial system has developed rapidly since the restoration of independence. The financial markets are highly integrated within the EU, and particularly with the Nordic and Baltic regions. As of December 2014, supervision of the financial system primarily involves three institutions – the Ministry of Finance, Bank of Estonia (BOA) and the Financial Supervision Authority (EFSA) (see Figure 14).



**Figure 14. Estonian financial supervision model as of 31 December 2014**  
(Source: author based on Finantsinspektsioon 2015)

The Financial Supervision Authority (EFSA) is a financial supervision institution with autonomous competence and a separate budget, which conducts financial supervision in the name of the state and is independent in its activities and decisions. The activities of the Financial Supervision Authority cover the principal areas of activity of various financial institutions – deposits, credit, insurance and securities brokerage (Finantsinspektsioon). The primary goals of the EFSA is to support the stability of the Estonian financial and monetary system by increasing the credibility and transparency of the financial sector and helping increase the efficiency of the Estonian financial sector, avoid systemic risks, and prevent the abuse of the financial sector for criminal purposes (Finantsinspektsiooni seadus 2013).

The central bank focuses on three principal activities: the issue of banking-related regulatory acts, support of policies reinforcing the strength of the financial system and consolidation of general financial stability (Eesti Pank 2003, 2004).

The obligations of the Bank of Estonia with respect to safeguarding financial stability is to guarantee the smooth functioning of financial intermediation – analyzing and assessing threats to the operation of the financial intermediation system and taking appropriate policy measures and monitoring and developing the legal framework of the banking sector (Eesti Panga seadus 2011). In its supervisory activities, the central bank follows the internationally recognised understanding that it is impossible to achieve full stability of banking, because banks are primarily liable for the results of their business activities. As a result, the aims of the supervision include above all the support of stability and decrease of costs arising from potential financial crises for society.

The Ministry of Finance is responsible for financial policy making to provide the legal background for the financial market. This includes the preparation and coordination of various financial sector policies including those covering financial markets, transactions in securities, banking, savings, insurance, pensions and money laundering in conjunction with financial supervision (OECD 2011).

As of December 2014, the Estonian financial system is heavily bank-based (Finantsinspektsioon). According to the Review of the Estonian Financial System (2013), the role of domestic capital markets in collecting and allocating funds and resources has been very limited. The overwhelming majority of companies in Estonia are small enterprises, who prefer to use external equity for financing. So bank-based loans remain the most efficient way. At the same time, a substantial share of the medium-sized and large corporates in Estonia are owned by foreign companies and have relied on internal funds, which provide them with other alternatives for obtaining funds beyond the local financial sector; such as, for example, intra-group capital transfers and foreign loans.

The Estonian banking sector is uniquely small, compact and dominated by fully privately owned foreign commercial banks. According to the Krediidiasutuste seadus (2011), § 4, subsection 1, credit institutions (banks) in Estonia have the exclusive right to receive money from the public for the purposes of depositing or to receive repayable funds in any other manner. This right may only be used by companies to whom the competent financial authority (EFSA) has granted such a license.

As of 31 December 2014, there were eight locally licensed credit institutions and seven branches of foreign credit institutions operating in Estonia. All the major banks operate as universal banks, covering a wide range of market segments. They have a very high level of market concentration in terms of control of market share and ownership structure. The aggregate market share of the four major

foreign owned banks (Swedbank, SEB, Nordea branch and Danske branch) is 87%, measured by total assets. The total number of market participants in the life insurance business was five institutions and the number of non-life insurance companies is 13 companies. The main activity of insurers is to compensate for damage created upon and as a result of insured events, or payment of agreed sums of money. There are also 17 fund management companies operating in Estonia (Finantsinspektsiooni aastaraamat 2014).

In Estonia, providing loans and leasing transactions does not require FSA supervision and the corresponding activity as a service may be provided by companies without FSA financial supervision. Therefore, in addition to the financial intermediaries supervised by the EFSA there were 21 savings and loan associations (SLA) active in Estonia. According to the Hoiu-laenuühistu seadus (1999), their scope of activities is limited to taking deposits from their own members and subordinating government loans and foreign aid funds to their members. The aggregated total assets of the SLAs have been very small and they had in total about 4,999 members at the end of May 2014.

The foregoing analysis shows that the whole financial system, and banking as a part thereof, plays a crucial and irreplaceable role in the entire economy. The financial services sector is highly regulated, but despite this banks need to find solutions for value creation for their customers. Accordingly, in the next chapter the author will analyse the influence of regulations and technical advances and changes in customer behaviour as external factors on the development of banking during the years 1988–2015.



### 3. THE IMPACT OF EXTERNAL FACTORS ON FINANCIAL SERVICES INNOVATION MANAGEMENT

The twenty-five years that have passed since the establishment of Estonian banking has been stormy but also list of success stories. The sector has survived monetary reform as well as banking crises, stock exchange and banking booms, a stock market crash, large mergers and the invasion of foreign banks, the financial crisis in the world economy and Estonia’s adoption of the euro. Nevertheless, the commercial banks operating in Estonia in 2015 provide almost all of the products and services of modern banking.

According to Sörg and Ivanova (2008), the successful development of Estonian banking and introducing new financial services were not a single bank activity, but the major banks of Estonia very quickly reached the level of banking in developed countries in relation to trustworthiness and the range of services. Innovation has been one of the main survival measures for continuously improving competitiveness abilities in the rapidly changing business environment and market situation.

According to the theoretical literature (Meidan 1996, Hubbard 1997, Sundbo and Gallouj 1998, Listra 2001, Kerem 2003a, Blommestein 2006), there are three important factors that influence innovation of financial services: regulations, technology and sociological-cultural factors (see Figure 15).

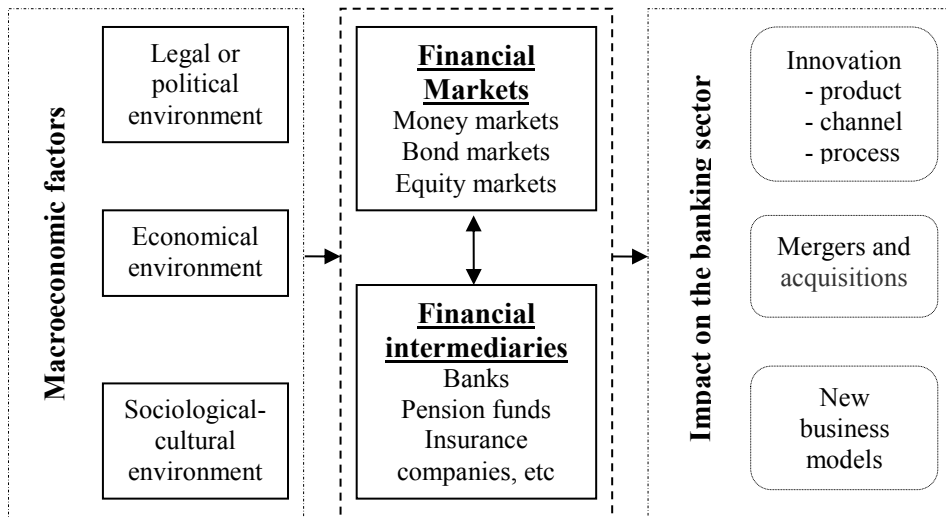


Figure 15. The impact of external forces on banking sector development (Source: author)

In this chapter the author will analyse the innovation of financial services in Estonia during the period 1990–2015 on the basis of the impact of these three criteria as external factors.

### **3.1. Regulations**

After restoring its independence, Estonia chose to transition from the planned economy to a market economy. Consequently, changes in society demanded a new way of thinking in the banking sector and a new type of banking.

This decision required the creation of a legislative basis from the beginning. On one hand, it was no longer impossible to take laws developed during the first period of the Republic of Estonia as an example, due to the evolution within the last fifty years. On the other hand, the effective legislation of the Soviet planned economy did not support the pursuit of the development of a market economy (Sepp 1995). Accordingly, the development of Estonian banking-related regulation during the first years of modern banking can be described as adaptive rather than proactive.

Following the new thinking and the development of regulations in the Estonian banking, the history of Estonian banking can be divided into six eras (see Appendix 1).

#### **1. Start of contemporary banking (1988-1992) – excessive number of banks with their own economic interests**

The years 1990–1992 were a period of the first steps in contemporary Estonian banking. The former Soviet banking regulations were not in force, but the new ones had not yet been developed by the central bank. The most important matter was to create the basis for the entire banking sector and provide the possibility to establish independent commercial banks based on national capital. Following the example of Western banks, the Bank Law of the Estonian SSR (valid from 1 January 1990, later the Bank Law of the Republic of Estonia) became the first law that regulated monetary and credit relations. The main aim of the law was to define the independence and main functions of the Bank of Estonia, and stipulate the procedure for establishing commercial banks and other credit institutions and the fundamentals of their operations. Unfortunately, the first Bank Law relied on international standards but mostly observed experience gained from commercial banking in the USSR. This was too general for commercial banks and left them the freedom to decide how to plan their development (Hagelberg 2001, Zirnask 2002).

According to the law, the minimum capital requirement for a bank was RUB 5 million. This was an intentional choice at that moment to promote the rapid formation and development of the banking sector with a view to reduce loan interest rates through competition and provide the possibility for the rapid advancement of



the private sector through increased credit supply. As a result, by the end of 1991, Estonia had 27 registered commercial banks with 74 branches and 20 departments and 242 branches of the Estonian Savings Bank (*Eesti Hoiupank*). In the first pre-reform period of 1992, another 21 commercial banks were created. So, at the end of 1992, the number of commercial banks operating simultaneously in the small Estonian banking market reached its maximum – 41 (Sörg 2003).

According to various assessments (Sörg 1999, Zirnask 2002), such a low minimum capital requirement enabled an excessive number of banks to be established for such a small country, and these usually followed their own economic interests (and not those of their depositors). At the same time, the management and supervision of risks was only being developed. However, these factors entailed several liquidity and solvency problems in the coming years and the Bank of Estonia had no experience in surveillance and compliance monitoring, financial instruments or adequate regulations to solve those issues (World Bank 1993, Sörg 2003).

Arising from the foregoing, the considerable development needs of the period included low requirements for the establishment of new banks as an intentional choice, the actual value of which was even more reduced by hyperinflation, and the inability to supervise the area of commercial banking. When the State Bank of the USSR was no longer able to control activities in national banking, the Bank of Estonia did not have sufficient skills and experience in the field of managing a market economy banking system. Therefore, internal control within banks was also unable to compensate for the weakness of the external control. Low barriers to entry (e.g. share capital or prudential ratios) and weak supervision may have caused conflicts of interest (owners vs. clients) and damaged the interests of customers.

## **2. Monetary reform and banking crisis (1992-1994) – the first experience of a banking crisis**

The years 1992–1994 were characterised by the regulation of the banking sector and the establishment of a modern legal framework. The period can conditionally be divided into two – preparations for and implementation of monetary reform, and the regulation of the first banking crisis in Estonia.

The development of the legal framework in the first half of the period was related to the preparations for and implementation of the monetary reform, when the legal acts devoted to the monetary reform (of 20 May 1992) were passed as a package (Monetary Law, Foreign Currency Law and Law on Guarantee of the Estonian kroon). In addition, to regulate the banking market and ensure the success of the monetary reform, the mandatory renewal of banking activity licences was required by a decree of June 1992 of the Monetary Reform Committee of the Republic of Estonia, and the minimum amount of the share capital of banks was set at EEK 6 million by a resolution of the Supervisory Board of the Bank of Estonia (*Eesti Pank* 1994, Juuse and Kattel 2013).

Irrespective of the success of the monetary reform, it was necessary to deal with the banking crisis as early as the end of 1992. Three major banks (Tartu Commercial Bank [TCB] [*Tartu Kommertspank*], Union Baltic Bank [UBB] [*Balti Ühispank*] and Northern Estonian Joint-Stock Bank [NEJSB]) [*Põhja-Eesti Aktsiapank*] and eight smaller banks became insolvent. To quickly overcome the crisis and restore the trust of the public in Estonian banking, the central bank set four important objectives upon renewing the banking sector: better assessment of the equity of banks to enhance the solvency of banks, the reduction of the difference between loan and deposit interest rates, the increase in the share of mid-term and long-term loans and the privatisation of banks owned by the government (Hansson 1995, Sörg and Vensel 2002).

The creation of the legal framework for the achievement of the objectives started again with the establishment of additional requirements for the minimum share capital. By a resolution of 11 May 1993 of the Supervisory Board of the Bank of Estonia, a schedule for gradually increasing the minimum rate was fixed (by 1 April 1995 up to EEK 15 million, by 1 April 1996 up to EEK 25 million and by 1 April 1997 up to EEK 35 million).

New prudential ratios were also established (solvency rate, liquidity rate and a limitation on the concentration of exposures of the client and the bank), insolvent banks were liquidated and the issue of new activity licences was suspended until 1 January 1994. The greater minimum capital requirement, relatively heavy starting expenses and restrictions hindering the entry of foreign banks as well as the lead of banks already operating impeded the foundation of new banks and reduced the number of banks operating in Estonia to 22 (Eesti Pank 1994, Juuse and Kattel 2013).

The hitherto trend of drafting regulations concerning financial management continued, specifying the procedure for writing off bad loans. In addition, the accounting for net foreign currency positions and the procedure for accounting for and the use of the legal reserve was changed. The Supervisory Board of the Bank of Estonia adopted several resolutions targeted at strengthening the financial and economic status of banks, the prevention of large exposures and the reduction of the possibility of incurring a conflict of interest.

In addition to the constant supplementation of the legal framework regulating the operations of credit institutions, the focus was also on the creation of a legal basis for the activities of the central bank. The respective wording of the Bank of Estonia (Eesti Pank) Act was passed by the *Riigikogu* (the Parliament) on 18 May 1993, determining the functions and operating principles of the central bank. The central bank gained sovereignty and independence of the executive power of the state, reporting only to the Parliament and being released from the obligation to finance the state or local authorities (Lainela and Sutela 1994, Hagelberg 2001).

The lessons to be learned from the first years after the reform included, on the one hand, the incomplete regulation and weak supervision of the central bank, poor bank management and lack of professional skills. On the other hand, the general economic environment was under-regulated. Until the end of 1994 there was principally no Accounting Act or Commercial Code complying with contemporary requirements. However, this considerably limited the legal possibilities of banking supervision to require from banks that they must operate in a manner that corresponds to the modern risk approach (Eesti Pank 1995, Zirnask 2002).

At the same time, according to Sörg and Vensel (2002), the crisis that is often entailed with the simultaneous reorganisation of monetary, economic and banking systems had a positive effect on Estonian banking. The forceful intervention of the central bank significantly influenced the formation of the market as well as the operations of commercial banks. By implementing fast measures, trust in the Estonian banking system was regained and strengthened, and commercial banks had to pay more attention to analysis, diversification and the management of risks. This resulted in a very cautious domestic credit policy and the growth of foreign assets (see Table 7).

**Table 7. Commercial bank loans and deposits ratio to gross domestic product in Estonia (January 1993, 1995 and 2000)**

	<b>January 1993</b>	<b>January 1995</b>	<b>January 2000</b>
<b>Bank loans (M EUR)</b>	85	300	1705
<b>Deposits of individuals and business associations (M EUR)</b>	138	382	1460
<b>GDP of the preceding year (B EUR)</b>	0.91	1,89	4,82
<b>Bank loan/ GDP (%)</b>	9	16	35
<b>Deposits/ GDP (%)</b>	15	20	30

Source: Zirnask (2002)

The central bank also vigorously changed its strategy – the pace of the natural growth of banks was replaced with a forced movement towards banks with a size corresponding to the norms of the European Union and accepted by the EU. These measures helped to restore confidence in the banking system and taught customers to pay more attention to their choice of bank.

### 3. “Naive-optimistic” banking period (1994–1997) – new quality level and involvement of foreign capital

The period from 1994–1997 or the “naive-optimistic” banking period introduced further regulation of the banking sector, a new level in the legal regulation of banking with a focus on qualitative changes as well as the stock exchange and banking boom.

Regardless of the experience acquired during previous periods, the second banking crisis in the history of independent Estonia could not be avoided in 1994 – the year marked the collapse of the Estonian Social Bank (*Eesti Sotsiaalpank*), the largest bank at that time. It was a great financial loss to many private savers, who were victims of the first banking advertisements (Zirnask 2002).

That crisis highlighted the bottlenecks of Estonian banking supervision and regulations and stimulated their further development. Under the impact of the crisis, on 2 September 1994 the Supervisory Board of the Bank of Estonia tightened the prudential ratios of banks even more, primarily with respect to loan risks and established additional capital requirements (see Table 8).

**Table 8. Minimum share capital requirement according to the decisions of the Supervisory Board of the Bank of Estonia (respectively 11 May 1993 and 2 September 1994)**

Minimum share capital requirements (decision 11 May 1993)		Minimum share capital requirements (decision 2 September 1994)	
Deadline	Amount (M EUR)	Deadline	Amount (M EUR)
1 April 1995	0.96	-	-
1 April 1996	1.60	1 January 1996	3.20
1 April 1997	2.24	1 January 1997	3.83
-	-	1 January 1998	4.79

Source: Sõrg 2000

The minimum share capital had to increase to EEK 50 million (3.2 M EUR) by 1 January 1996, to EEK 60 million (3.83 M EUR) by 1 January 1997 and to EEK 75 million (4.79 M EUR) by 1 January 1998 (Sõrg 2000).

Moreover, following the experience gained, Estonian banking supervision started to include assessment criteria covering several aspects upon evaluating the activities of banks, and strengthened control over the issue of activity licences and

the appointment of executives (Juuse and Kattel 2013). The aim of the changes was to favour the consolidation of banks via the requirements to reinforce the capital base of banks.

From 20 January 1995, the operations of commercial banks were subject to the Credit Institutions Act that had passed through international expert assessment. This was a remarkable step forward in the development of Estonian banking legislation. Upon drafting the new act, banking-related legislation effective in the Member States of the European Union was followed and the level of development of Estonian banking was thereby considered. The act established the fundamentals of universal banking, dealing with the foundation, reorganisation and termination of activities as well as the management of credit institutions and the norms prescribed for the protection of the interests of customers, but the document also served as a legal basis for the internal control function in Estonian banking. On the basis of experience gained within previous years, the act strengthened the legal basis of supervisory activities in almost all significant areas (Zirnask 2002).

The internal consolidation of the financial system also continued from 1995 to 1996 in order to meet the minimum capital requirement of EEK 50 million (3.2 M EUR) effective since 1 January 1996, and as a result of intensifying competition and regulative pressure. Several banks merged and foreign capital was involved that supported the aims of the central bank to achieve a concentrated and strong banking market. Rapid consolidation improved the loan and security portfolios of banks that outpaced the general growth rates of the economy. High growth rates, the involvement of foreign capital and the foundation of subsidiaries of foreign banks in Estonia further emphasised the need for cooperation between various supervisory institutions and caused further regulations (Eesti Pank 1996, Sõrg 2000).

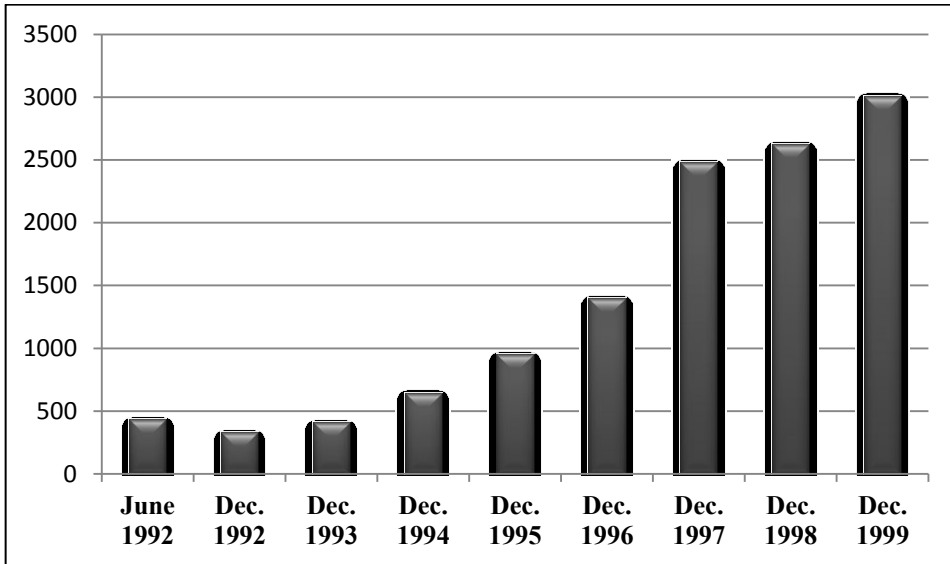
Under the procedure for the establishment of guidelines for the calculation of prudential ratios and the reporting of new credit institutions, Estonian credit institutions were subject to the requirements applicable to banks in the Member States of the European Union. In addition to the management of financial risks, more attention was paid to other risks. Thus, a requirement that banks must have a separate risk management strategy for each risk area approved in writing by a resolution of a managing body was set out for the first time in the regulation concerning prudential norms (Eesti Pank 1997).

Competition in the banking market became ever more intense and banks supplemented their existing services and developed new ones. More and more attention was being paid to the consumer market. Accordingly, the security and data protection of information systems became one of the aims of supervision in connection with the development of new products (e.g. ATMs and payments

terminals, telebanking and internet banking). Fixed requirements for information systems and the obligation to carry out information technology audits were established for credit institutions (Eesti Pank 2009).

The period is also characterised by the rapid growth of non-banking financial mediation – the launch of the Tallinn Stock Exchange, the establishment of minimum capital requirements for insurance companies and the development of open investment funds. Following the development of non-banking financial mediation, a draft Investment Funds Act was adopted to legalise the area in 1996, and a new procedure for the public offering of securities was established by a regulation of the government. The procedure brought the requirements applicable to the public placement of securities and investment funds and asset management companies (e.g. minimum share capital) in accordance with the corresponding directives of the European Union. The stock exchange regulations also governed some of the areas not legally covered (Eesti Pank 1997, Juuse and Kattel 2013). These and some of the following measures show that the transparency of the market and protection of clients (incl. investors) was increasingly taken into account. To maintain and strengthen the trust of clients in banks and the general financial system, the Board of the Estonian Banking Association adopted the Principles of Sound Banking Management in 1996 under which the ethical rules of banking business were agreed on and established. For instance, the Principles of Good Banking Practice set out the principles of mutual relations, not supporting politicians or the obligation to provide training and comprehensive development opportunities for employees. The reasons for stipulating the principles included rapid changes in the operations of banks and their internationalisation, but also systemic banking crises that had occurred in several countries in the 1980s and 1990s. The Principles of Good Banking Practice were only renewed in 2011, when they were brought into accordance with the changed environment (Sörg 2000, Estonian Banking Association).

The Bank of Estonia responded quickly both to the rapid nominal growth in the real and financial sectors (banks' total assets increased by 76.8% compared to the previous year, but the last three years, approximately 50% per year, see Figure 16) and the financial problems of emerging markets that appeared in 1997.



**Figure 16. Balance sheet growth (EUR bn) in Estonian commercial banks**  
(Source: Sörg 2000)

Several economic policy steps were taken to ensure the greater capitalisation and stable development of the financial sector in the future, and those steps followed the European Union's and Basel Committee on Banking Supervision's recommendations and the European Union Member States' experience of banking supervision. The steps that had an immediate effect included the establishment of additional reserve and liquidity requirements. The most important long-term regulatory measures were the increase in the minimum capital adequacy ratio from 8% to 10%, the increase of the risk weight applied to Estonian local government authorities and their secured exposures, and the resolution to establish the capital requirement for market risks in the capital adequacy accounting and create consolidated supervision from Q2 of 1998 (Eesti Pank 1998). All of these measures had to hamper the rampant growth of banks and decrease the possibility of banks to grant loans.

The formation of the legal framework of the period was characterised by the commitment to the guarantee of client and investor protection and an increase in the transparency of the market. On the basis of environmental developments, the focus on the financial management of credit institutions shifted to the management of specific risks, and the financial system was more widely observed (Zirnask 2002).

The intensified competition improved the quality of financial services provided, interest from foreign banks was attracted and the first branches of foreign banks were opened in Estonia (Sörg and Vensel 2002). However, it must be admitted that

regardless of the scope and development of the banking legislation in comparison with other financial areas, there were several omissions (e.g. insufficient transparency of market or weak control over risk hedging and management), and progress in this field was slower than expected. Estonia was hit by a stock market crash followed by the third banking crisis.

#### **4. Period of modern banking (1997–2004) – stock market crash, big mergers and stabilization**

The period from 1997–2004 has also been called (Sörg and Tuusis 2008, Sampo Pank 2012, Juuse and Kattel 2013) the period of modern banking, where the consequences of the crises were tackled and the focus was on the supplementation of regulations of banking operations based on European Union requirements.

The unexpected fall on the equity market at the end of 1997 and the suspension of the fast growth of the total balance sheet for the banks led the commercial banks to great operating losses by the end of 1998. The intensifying competition in the banking and the tightening of the environment along with omissions in the general management of banks and activities of internal control were the reasons for the institution of bankruptcy proceedings in the event of two banks (Estonian Land Bank [*Eesti Maapank*] and EVEA Pank) and a moratorium was declared in the event of ERA Pank. A consolidation took place in the banking market of Estonia in 1998. This took the number of banks to a critical minimum (see Table 9), which is essential to guarantee a stable development and enhanced the risk of monopoly but also made the creation of new banks attractive (Sörg 2003).

**Table 9. Development of banking in Estonia during the period 1992–1998**

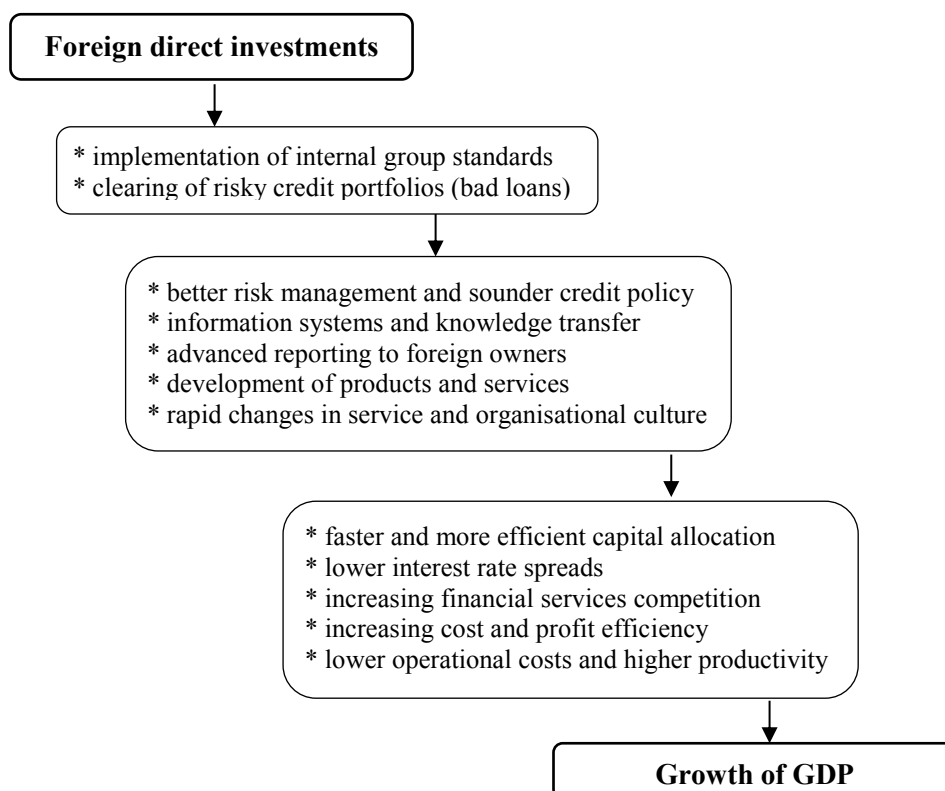
Year	No of operating banks*	Total by the end of the year (B EUR)			Banks assets % of GDP	Loan portfolio per bank (B EUR)
		assets	loan portfolio	profit		
1992	41	0.33	0.13	0.01	36.4	0.003
1993	22	0.41	0.17	0.02	28.0	0.007
1994	24	0.66	0.29	0.003	33.2	0.012
1995	18	0.99	0.45	0.02	36.0	0.025
1996	13	1.46	0.79	0.03	41.0	0.061
1997	11	2.59	1.36	0.06	59.2	0.127
1998	6	2.62	1.53	-0.03	52.6	0.254

\*incl. branches of foreign banks

Source: Bank of Estonia



By the end of the year, five banks and one branch of a foreign bank operated in Estonia. The entry of Swedish banks and other Nordic investors among the owners of banks and insurance companies improved the future prospects of the Estonian financial system and supported economic growth (see Figure 17).



**Figure 17. Impact of foreign direct investments on Estonian banking market starting 1998** (Source: author modified from Eller *et al.* 2006)

Better information systems, liquidity and risk management techniques transferred from foreign banks supported banks so they could have high profitability and low credit loss rates (Eesti Pank 1999, Eller *et al.* 2006, Sõrg and Tuusis 2008).

The Deposit Guarantee Fund Act was adopted and enforced in 1998, which served as the basis for the deposit insurance and compensation system in the case of the insolvency of the banks in Estonia.

The Money Laundering Prevention Act also came into force the same year with the aim of preventing the investment of money or other assets acquired as a result of a criminal activity in the financial system. In addition, the new wording

of the Credit Institutions Act and the Savings and Loan Associations Act were being drafted and adopted in 1999 – the year of the post-crisis adoption (Eesti Pank 1999 and 2009).

The new Credit Institutions Act following the European model arose from significant amendments to the legal system of the Republic of Estonia as well as the stormy development of the banking and financial markets. The act was drafted on the basis of the banking directives of the European Union, the experience of other countries and the materials of the Basel Committee on Banking Supervision. To increase the transparency of banks and market discipline, the new act thoroughly regulated the assessment, management and control of risks. Major changes related to the prudential ratios consisted of the inclusion of market risk in calculating the capital adequacy ratio, the adoption of Tier 3 capital and the enforcement of prudential ratios on a consolidated basis. In addition, the Bank of Estonia adopted several regulations on the basis of the new act that concerned many minor issues (e.g. acquisition of qualifying holdings, declaration of economic interests, new wording of prudential ratios or the obligation of public reporting, under which banks were required to disclose an extensive report once a quarter). The report contained comparable information of major events and developments, risks and principles of managing them and data characterising the financial status of the bank (Eesti Pank 2000).

In 2000–2004 the supplementation of the regulative acts and the improvement of legislation through various regulations of the Bank of Estonia continued. Accordingly, for instance, minimum requirements for loan evaluations and the write-off procedures of uncollectible claims were established for the purpose of improving the management of credit institutions and to obtain a better overview of the quality of loan portfolios and the risks therein (Eesti Pank 2009).

As a result of implementing the Law of Obligations Act (2001), the terms of financial contracts became more favourable for customers, which protected their interests. The main changes were the order of calculating the fines for a delay in payment, loan repayment order and limited the fine for the early termination of contracts (Juhkam 2003).

To ensure financial stability, the procedure for calculating the capital adequacy of credit institutions was being revised starting from 2002, and to improve the security network of the financial sector, a new Guarantee Fund Act (see Table 10) was drafted that, in addition to the guarantee of deposits, also created systems of protection for investors and pensions (Eesti Pank 2001, 2002).

**Table 10. Compensation of deposits and investments according to the terms of the Guarantee Fund in Estonia (for the period 2003–2015)**

<b>Period</b>	<b>Amount of deposits and investments</b>
As of December 31, 2003	90%, but not more than 6391.16 EUR
As of December 31, 2005	90%, but not more than 12782.33 EUR
As of December 31, 2007	90%, but not more than 20000 EUR
As of October 9, 2008	100%, but not more than 50000 EUR
As of January 1, 2011*	100%, but not more than 100000 EUR

Source: Tagatisfond

Significant changes were made in the current supervisory mechanisms that served as a basis for founding the Financial Supervision Authority. By joining the Banking Supervision, Insurance Supervisory Authority and Securities Inspectorate, a united financial supervision body was created. The Financial Supervision Authority is a supervisory body with an independent budget and autonomy, reporting directly to the *Riigikogu*. The budgetary independence of the institution from the government and the central bank was achieved as a result of the implementation of a funding scheme financed by the institutions subject to supervision. Irrespective of independence, close cooperation is made with the Bank of Estonia, Ministry of Finance and foreign supervisory bodies (Juuse and Kattel 2013).

Although by the beginning of the period, Estonia had mostly applied the regulations, record-keeping and work organisation based on the experience of Europe, in comparison with previous years the development was much more impressive with respect to the liquidation of legislative omissions. The primary objective was to increase the transparency and reliability of the market in the banking and financial system and strengthen supervision over the banks, following the Principles of Sound Banking Management (Eesti Pank 1999 and 2009).

According to different quality assessments given to banking regulations and supervision (Neyapti and Dincer 2000, Oxera 2009, Eesti Pank 2009, OECD 2011), Estonia was a relatively well-regulated state at the turn of the century. The legal framework applied to Estonian credit institutions was similar to that of developed countries and corresponded largely to the requirements of the European Union (Cavalcanti and Oks 1998). On one hand, the banking operations developed in accordance with the risk and financial management and supervision models arising from macroeconomic and international trends. On the other hand, large mergers occurred and Swedish banks started to enter the Estonian market, which entailed a significant enlargement of the knowledge base and experience.

## **5. Full takeover of leading Estonian commercial banks (2004–2008) – stabilization and the global financial crisis (2007–2008)**

From 2004 to 2008 Estonia integrated with the banking framework of the European Union and the Estonian financial sector was taken over by Nordic banking groups, which was followed by real estate market and loan booms in Estonia and the financial crisis in the world economy.

Due to accession to the European Union and the development of international financial regulations, additional amendments were introduced to the Credit Institutions Act in 2004. The amendments related to the harmonisation of the winding-up and reorganisation of credit institutions, the renewal of procedures for applying for activity licenses and the specification of relations between market participants and the Financial Supervision Authority (Eesti Pank 2005, Juuse and Kattel 2013).

As early as 2003/04, the Bank of Estonia drew attention in its economic policy comments to potential risks accompanying the rapid growth of the credit portfolios of banks and the loan burden of private individuals as well as the need to perceive and hedge risks, but it did not show any urgency in applying the required measures (Eesti Pank 2009).

It was repeatedly highlighted that conservatism must be preserved upon evaluating the future solvency of borrowers and the market value of security. To increase the share of the banks' own funds as regards the funding of housing loans, the central bank increased the risk weight of housing loans from 50% to 100% in the capital adequacy calculation effective from 1 March 2006. As a result of the increase in the risk weight, the banks had to increase their equity (i.e. capital buffers). However, this did not considerably change the behaviour of the banks, and due to the foregoing the reserve requirement was raised from 13% to 15% with effect from 1 September. To ensure the interests of consumers, credit institutions were required to inform their clients of the risks associated with borrowing (Eesti Pank 2004, 2006, 2007).

In 2006, the transposition of the new EU directive on the capital adequacy calculation developed by the Basel Committee on Banking Supervision to the Estonian legal framework was completed, which involved significant amendments to the existing Credit Institutions Act and the establishment of new prudential ratios (Eesti Pank 2007). According to the situation in the loan market, the norms based on Basel II were tightened even more in Estonia on 1 January 2008, by increasing the risk weight of housing loans to 60% instead of the promised 35% (Eesti Pank 2008).

To manage financial crises better, the Bank of Estonia created a security network in 2007, meaning that multilateral cooperation agreements were signed with

institutions liable for the financial stability of the Member States of the European Union as well as with the central banks of Latvia, Lithuania and Sweden, establishing significant principles on the mutual exchange of information between supervisory organisations (Eesti Pank 2008, Juuse and Kattel 2013).

In 2007, Estonia applied the Markets in Financial Instruments Directive (MiFID) adopted by the European Parliament and the Council of Europe, harmonising the rules for providing investment services and standardising the provision of financial services and products throughout the European Union (Investment Services Directive).

Therefore, it can be said that during this period the focus was on bringing existing regulations into conformity with international norms. In addition to the regulation targeted at regular financial management and the management of direct risks, the provision of financial services was being standardised on the basis of EU directives, and credit institutions had to inform clients more than earlier. It must be recognised that Estonian legal regulation had reached a new level as a result of the skills and knowledge acquired during previous years – reactive conduct was replaced with proactive activities. Although the first measures remained weak, they were additionally tightened based on the changed situation.

## **6. Global post-crisis period (2008-the present) – new area of regulations in banking**

The period from 2008 can be called the post-crisis period accompanied by a conservative credit policy along with the establishment of additional regulations (Eesti Pank 2009). The economic crisis that hit the world in 2008 increased the uncertainty of financial markets and decreased trust in financial mediators. This forced the central bank to improve the requirements for operations of financial mediation institutions and enhance supervision over them. Two major trends can be observed in devising regulations during the period – on one side, risk management and cooperation to improve supervision, while on the other, the transposition of several directives of the European Union with the objective of standardising and harmonising the provision of various financial services (see Figure 18).

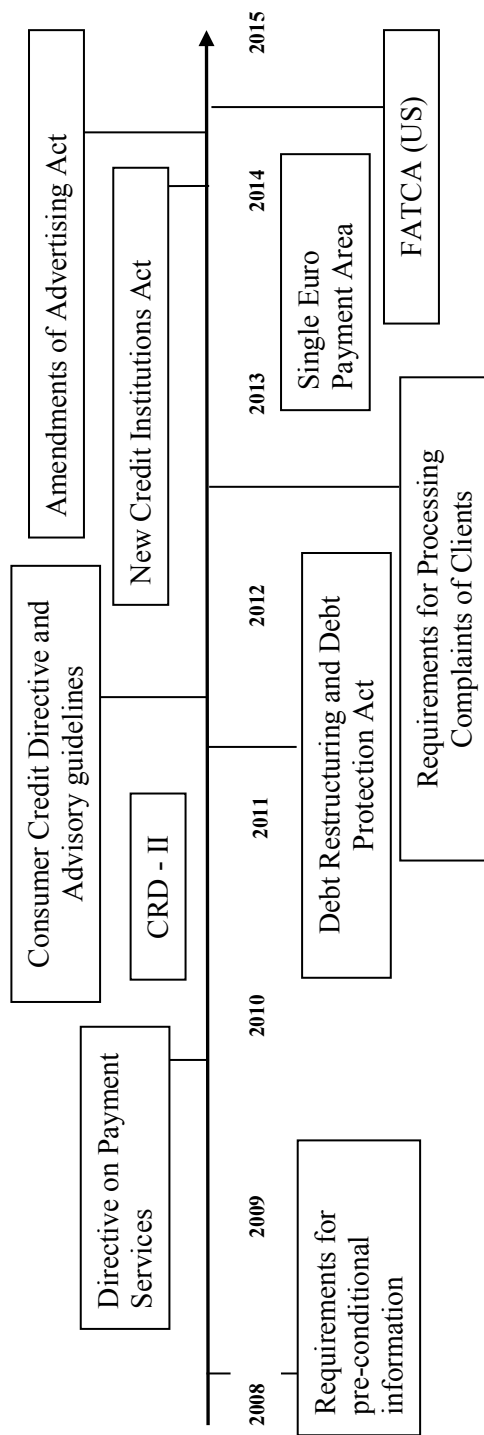


Figure 18. Regulatory changes in banking in Estonia for 2008–2015 (Source: author)

Examples of the first direction include the constant strengthening of the capital adequacy framework for the purpose of ensuring financial stability (Eesti Pank 2010) or amendments to the Capital Requirements Directive of the banking sector established by the European Parliament (known as CRD-II) transposed to the Estonian constitutional law that dealt with the enhancement of the cross-border cooperation of supervisory authorities and stricter requirements for the concentration of exposures (Eesti Pank 2011).

At the beginning of 2011, an act adopted by the *Riigikogu* also entered into force, which raised the limit of the deposit guarantee rate up to EUR 100,000 and the deposits of large companies were also included among deposits to be guaranteed. The increase of the limit also raised the quarterly contribution of the sectoral fund from 0.025% to 0.047%. In addition, to improve the prevention and management of financial crises, the rights of the Financial Supervision Authority were enlarged to intervene in the operations of banks to inspect their activities in risk or crisis situations. As an extreme measure (if no other relevant and planned measures fail to ensure financial stability), the state was granted the possibility to consider the expropriation of shares belonging to the owners of banks operating in Estonia. To protect private clients and as an alternative to the bankruptcy proceedings of private individuals, the *Riigikogu* passed the Debt Restructuring and Debt Protection Act (Eesti Pank 2012), which did not apply successfully in practice.

To assess cross-border factors and risks more efficiently, the Nordic-Baltic Macroprudential Forum of central bank governors and financial supervisors was set up in 2011 where issues related to ensuring financial stability are continuously addressed (Eesti Pank 2013). Due to amendments to the Capital Requirements Directive of the banking sector adopted by the European Parliament (CRD-III), the procedure for the disclosure of instruments in trading portfolios and securitisation and remuneration for executives was specified (Eesti Pank 2012). On 1 January 2014, new amendments to the Credit Institutions Act came into effect. The aim of the amendments is to increase financial stability, the reliability and transparency of the financial sector and resistance in crisis situations. The Act introduced additional requirements for credit institutions, investment firms and hedge fund management companies for high-quality capital, financial buffers and managing bodies (Krediidiasutuste seadus).

The period was also characterised by the protection of the interests of several customers and the application of directives/guidelines targeted at the transparency of products. Therefore, one example of the harmonisation of the provision of financial services includes the advisory guidelines of the Financial Supervision Authority developed to protect the interests of clients and enhance the transparency of products concerning the requirements for the presentation of pre-contractual information on an investment deposit or a housing loan (Finantsinspektsioon 2008). Another example is the new directive adopted by the European Parliament and the Council of Europe on payment services across Europe (*Payment Services Directive*

[PSD]) that was applied on 1. November 2009. The Payment Services Directive specified the requirements for payment services rendered by credit institutions (the timing and channel for giving advance notice of changes in the terms and conditions, pricing of payment services and calculation of service charges, deadlines for the execution of payment instructions) (Directive on Payment Service).

Furthermore, on 1 July 2011 the Consumer Credit Directive (CCD) of the European Parliament and the Council was applied in Estonia. The aim of this directive was to guarantee a single internal market of consumer credit and a high level of consumer protection in the European Union. Upon implementation of the directive, requirements for consumer credit agreements (e.g. pre-contractual and contractual information, requirements for the notification of clients and advertising, calculation of the annual percentage rate, etc.) were specified and leaflets with standard information on European consumer credit were established, which must be used by a credit institution within the negotiation process with a potential borrower (Finantsinspeksioon 2011).

The Consumer Credit Directive was supplemented by the advisory guideline of the Financial Supervision Authority that came into force at the same time and required that credit institutions must notify borrowers of the risks related to raising a loan through pre-contractual information and preserve conservatism upon calculating the reasonable loan burden (Finantsinspeksioon 2012).

But this was not all. On 1 July 2012 the advisory guideline “Requirements for Processing Complaints of Clients” of the Financial Supervision Authority entered into force, which defined the obligations of the financial service providers upon communicating with clients and applying information arising from the complaints of clients in the relevant procedures and documentation (Finantsinspeksioon 2013).

On 1 February 2014 Estonia applied the single payment terms of the European Union (Single Euro Payments Area [SEPA]). After the adoption of the euro as a currency in 2002, the European Central Bank and the European Commission started to prepare for the integration of payments systems serving daily retail payments across Europe. Upon the application of SEPA, the operation of various electronic payment instruments (credit payments, direct debit orders, card payments) was harmonised, previous account numbers were changed to IBANs (international banking account number) and national direct debit orders were substituted for services based on e-invoices (Directive 2008/48/EC, Estonian Banking Association).

On 1 July 2014 amendments were introduced to the Advertising Act, which tightened the requirements for loan advertisements of credit institutions and limited the channels for showing advertisements. The creation and implementation of similar directives will continue in the near future (e.g. renewal of the guideline



for responsible lending and borrowing, directive regulating the granting of housing loans, guidelines regulating insurance mediation, etc.).

To characterise the period, relying on practical experience it can be summarised that banking in Estonia has become one of the most regulated economic areas. The directives to be applied are detailed and meticulously regulate the behaviour of credit institutions in relations with consumers. Although the development of such directives and guidelines is targeted at the protection of consumers who are weaker parties in customer relations, the application thereof is time-consuming and resource-intensive for banks.

Looking back at the history and experience gained, it must be recognised that the basis of the reliability of the financial system consists of the framework of relevant regulatory acts that is in compliance with internationally recognised rules and also takes into account local conditions, and that must leave sufficient freedom of action for companies operating within the framework. However, the surrounding world is constantly changing. Accordingly, the author analyses the present regulatory environment and challenges accompanied with it in following subsection.

### **3.1.1. Current challenges in financial regulation in the European Union and Estonia**

In 2007/08 the global crisis erupted, the worst economic and financial crisis since the 1930s. Some estimations put crisis-related losses of European credit institutions as much as €1 trillion or 8% of EU GDP in the period 2007–2010 (Delimatsis 2012). The modern crisis created considerable “brand damage” for the financial sector, crushed the hard won trust of the public and raised different questions about the trustworthiness of banks and the whole financial sector as well as how banks with such sophisticated risk models and highly paid staff could not manage all possible risks (Lowe 2012).

A number of answers to these questions and solutions for dealing with financial crises can be envisaged. One of them for example, is that risk is part of banking, the risk of financial instability should be accepted and the cost of crises periodically covered. But the representatives of public and political power have chosen another way. They are convinced that the financial services regulatory framework should be re-evaluated and toughened to enhance the ability of the financial sector to provide loans and other financial services efficiently without compromising financial stability and such extensive consequences of the financial crisis in the future (Liikanen 2014).

Their opinion is acknowledged also by various authors (New Paradigms 2013, The Future 2010), who have highlighted that the out-dated, inadequate and overly liberal regulatory system particularly in respect to risk-taking was one of the possible causes of the financial crisis. Low capital requirements, the

lack of transparency and spread of unregulated “shadow banking” have been emphasized as the main weaknesses of financial institutions. This has led the banking sector to the new and most significant, far-reaching and complex wave of regulatory changes and supervision in more than seventy years. The opening decade of the 21st century ended with the announcement of a range of new laws and regulations.

In April 2009 the leaders of the twenty largest economies – the G20 – met to discuss and find solutions for the financial crisis. The leaders of the G20 stated (G20 Leaders’ Statement):

“Major failures in the financial sector and in financial regulation and supervision were the fundamental causes of the crisis. Confidence will not be restored until we rebuild trust in our financial system. We will take action to build a stronger, more globally consistent, supervisory and regulatory framework for the future financial sector, which will support sustainable global growth and serve the needs of business and citizens.”

The leaders of the G20 agreed on an action programme that covered the following main themes (Cunliffe, 2014):

1. Prudential regulation and standards (e.g. significantly increased and consistently implemented international standards for reserves of capital and liquidity, more extensive resolution regimes). Financial institutions have very strong market-based pressure to change the way they manage their risks. This includes liquidity, operational and market risks. The first measure for better risk management and governance is to increase capital requirements. The aim of strengthening capital and liquidity regulations is to improve the banking sector’s ability to react to shocks arising from financial and economic stress as well as improve bank transparency and disclosures (The Future of Banking Regulation 2010).
2. Interconnections in the system (e.g. trading derivative instruments between institutions). The financial system has become more complex, more globalised and more intertwined with many interdependencies between different agents and the real economy. Accordingly, the system as a whole could be dependent not only its parts but also on the linkages and may be vulnerable even if the individual parts appear strong (White 2013). The overall essence of regulations are to ensure that the financial sector supports the real economy. Key principles should be properly supervised to achieve a more stable, more responsible, more consumer-friendly and growth-enhancing financial sector.
3. Regulating the “shadow banking” system to avoid the potential to generate financial instability. Definitions vary, but “shadow banking” can be defined as bank-like leverage and maturity transformation – converting short-term

maturity deposits into longer maturing investments – outside or partially outside the traditional, regulated banking system (Financial Stability Board 2011). However, the shadow banking system can also become a source of systemic risk, both directly and through its interconnections and interdependencies with the regular banking system. A growing number of retail financial or commercial lending products in the small-medium enterprise are being funded outside the traditional banking system. This is an area where innovation happens especially quickly and should be monitored actively to avoid possible sources of systemic risk.

The main aim of the agreed-upon action programme was to restore public confidence, to avoid panic and to prevent or at least reduce expected public costs (e.g. the size of the losses incurred) arising from instability (White 2013).

The action programme became one of the biggest-ever reforms in the regulatory regime. As of 17 December 2013 the European Commission had suggested nearly 30 proposals to create the soundest, most appropriately regulated and efficiently supervised financial sector since 2008 (European Commission 2013). On the one hand, regulators are convinced that financial stability is a pre-condition for sustainable recovery. New regulations will improve transparency within the industry, mitigate risk in the overall global financial economy, and lessen the degree of financial and accounting fraud. On the other hand, still recovering from the crisis, many European banks are trying to find optimal solutions to cost-cutting and becoming more efficient. In particular, attention is paid to increasing profitability and restoring returns on equity. If, during the period 2000-2007, the average return on equity (ROE) for the leading banks in developed countries ranged from 20 to 25 per cent, now these numbers are in single digits (Accenture 2012a, Deloitte 2013). Despite low revenues from daily economic activities, banks are facing high costs related to the implementation of fundamental regulatory changes and various legislative acts. But it is not only financial costs. As banks do not have unlimited resources, they need to be able to plan time, resources and capital. Additionally, regulations are not free: some of the rules imposed on banks are seen as burdensome; however, they impose real costs in the form of prices on money, inefficiencies, reduced competition and innovation.

But the supervisory authorities are convinced about increasing the readiness of banks for possible unexpected events in the future. On the one hand, this means increased requirements for capital and reserves. On the other hand, there will be limits in offering cost-effective, but perhaps riskier services.

It can be said that a major wave of regulatory demands will affect every aspect of the business model, operations and infrastructure for the banks. For example new capital requirements will put enormous pressure on bank profitability. The volume of work should be completed to tight timelines and in an inconsistent environment. Some regulatory requirements overlap, addressing the same underlying risk

concept and the same problems from different angles. All this creates additional costs of implementation and compliance (Vlerick Business School, The Future of Banking Regulation 2010, Cunliffe 2014). In order to understand the extent of the changes, some examples of the implementation activities are given. In particular, it is necessary to set up an effective governance model to ensure compliance with the regulations, align and harmonize financial and risk management, establish more stringent operational risk management principles and examine the existing crisis management plans. Additional attention is needed to upgrade customer data collection and Know Your Customer (KYC) and anti-money laundering processes. These measures also require extended reporting structures and the renewal of strategic plans and operations.

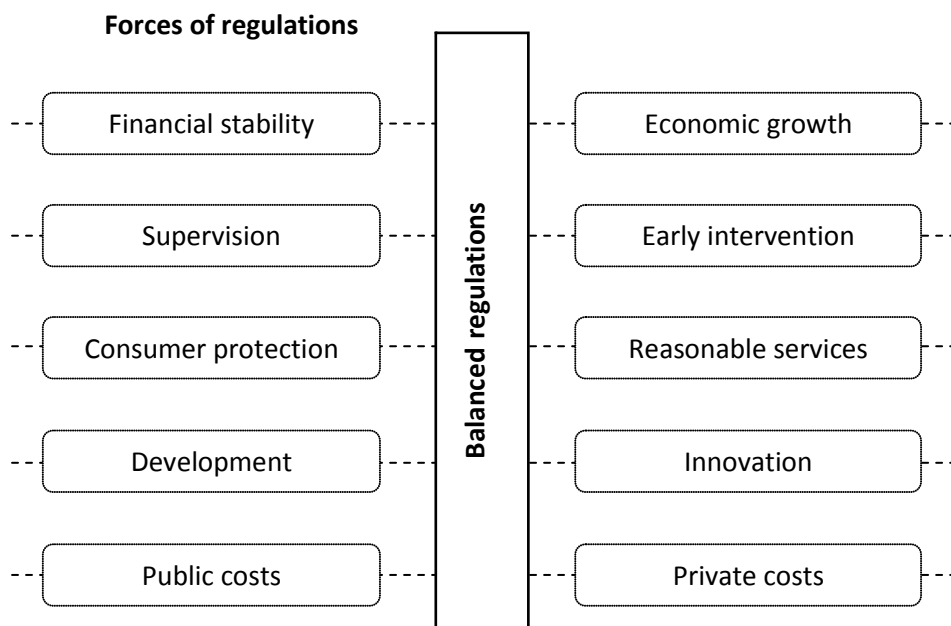
All these regulations not only create a tightening effect, but become quite complicated and require the management's close attention, not to mention lots of time, resources and capital. This is the "new normal" for the banking industry as size, growth and future business models of financial institutions are to be dominated by regulatory and supervisory changes (Ayadi *et al.* 2012). A new survival model is about creating the right culture and behaviours, appropriate governance, and oversight of all regulations/limitations and taking steps to ensure compliance and improvements. It could also require the adjustment of certain product lines and/or business activities.

The implementation of separate individual regulations in the short term it is not enough. On the contrary, simply reacting to every regulation could be very costly. Management of such challenges requires the banks to take a highly strategic approach. All actions should be aligned with the bank's strategic and tactical plans. The regulatory environment has become the primary driver in determining long-term business strategy for the banks. Some individual steps according to the implementation of regulatory changes may be inefficient and wasted investments over the medium and long term. A comprehensive understanding of the interrelationship between regulatory reforms and business strategy will help that these two disciplines be treated in an integrated manner. The world's high-performing banks are already looking at possibilities, not just to be compliant with the new regulations, but to use these investments to make changes to existing products, services, processes and business models to achieve a new level in a new environment. All this calls for a review of existing innovation processes.

### **3.1.2 The impact of regulatory reform on the banking sector in Estonia**

As already mentioned, the banking sector is changing rapidly. Market forces, due to regulatory changes and supported by technological advances, have led to large changes in financial systems and will affect almost every aspect of banks' activities. These changes have in large part been triggered by financial re-regulation (i.e. new prudential regulations and overwhelming supervision) (Claessens 2006).

The creation or design of regulations is a difficult process. The task of choosing an effective bank regulatory and supervisory system is aided by an understanding of different choices that should be made, and different aspects should be taken into account, for example, the role of the bank in society, competition policy, effective and efficient consumer protection or the costs of regulations (Claessens 2006). Regulations should be based on clear economic and policy principles addressed to real-world vulnerabilities. Accordingly, the implementation of broad-ranging regulatory reform should be balanced and limited (see Figure 19).



**Figure 19. Balanced development of financial regulations** (Source: author)

Regulations are not just about preventing the next financial crisis. Before any final decisions are made it is vital to keep in mind that additional regulation is not a “free good” and in the case of over-regulation some elements of banking will inevitably re-emerge elsewhere. So it is important to formulate a clear framework, objectives and general principles for the regulation of banks. They should be prioritised and weighted, reflecting the scope and scale of the underlying problems. Inappropriate objectives can reduce the availability of financial services and can cause unnecessary costs, that can be imposed upon society and might exceed the economic costs that regulation is designed to avoid.

The ultimate objectives of banking regulation should be to provide a safe-and-sound banking industry that will protect depositors, reduce the likelihood of bank failures and lower the very large macroeconomic and social costs of any failures

that do occur (Ayadi *et al.* 2012). Regulations must cover the whole range of banking risks, but should also retain its flexibility and innovative character and should not penalize the supply of useful banking services.

Regulations should be simple and understandable without too many detailed and overlapping regulatory prescriptions. Every new or changed regulation needs a true cost-benefit analysis because, as we see, the implementation of regulatory changes is costly in terms of new competent people, technology and processes. All these costs could be transferred to the customers in the form of higher prices or reduced availability of banking products and services.

Some essential aspects of balanced regulations and a safe-and-sound banking:

- 1. Financial development and financial stability will be used in order to ensure economic growth.** The aim of risk management in the financial system is to ensure strong, stable and sustainable growth, by reducing the probability and severity of bad events (Cecchetti 2012). A sound banking system is one of the key ingredients for sustainable growth, but regulation is not just about preventing crises. It is also about cultivating financial systems that provide growth-promoting services. Regulations that impede sound financial services innovation could slow technological innovations and sustained improvements in living standards.

Another important aspect of the development of the banking sector is the flexibility of regulations; in other words, how quickly the legal system is able to adapt to changing conditions in order to meet the needs of the financial sector. But it is sometimes vital to focus more on the possible sources of the next crisis rather than correcting all mistakes of the last crisis. The banking sector must be efficient with providing critical services at low costs and to be resilient to real economic shocks.

- 2. More timely and intensive supervision by testing and monitoring risk analysis and management systems in banks** leads to earlier intervention and clearly-defined resolution arrangements (Ayadi *et al.* 2012). The authorities should have the knowledge, experience and power to take action to forestall threats to financial stability.
- 3. Competition in financial services stays strong compared to different business limitations to ensure high-quality services with reasonable prices and adequate scope.** Financial regulations attempt to improve stability but may also shape the quality of financial services available to an economy and influence competitive outcomes. New stringent regulations tend to favour the non-banking financial institutions or the less-regulated financial service providers entering the market that can win customers with more innovative business models and financial solutions.

Different authors (Benink and Benston 2005) have argued whether such strict and overwhelming regulations in the banking sector are necessary solely because they provide loans to businesses and individuals. Maybe banks are

simple businesses with only a few special features that should be regulated. In the European Union or Estonia similar small loans are provided by many other non-bank organisations; for example, businesses generally (such as telecommunication companies, which finance the purchase of goods), peer-to-peer (P2P) loan companies (such as Bondora (by IsePankur)) or SMS-loan providers. None of these companies are regulated as strictly as banks. However, the regulation is based on the fact that banks finance their loans with deposits.

4. **Banks can deal with financial services innovation to ensure new services to meet public demand.** Financial services innovation is necessary to foster technological innovations and sustain economic growth, but regulation often lags behind technological innovation. It can even be said that the banks are constantly innovating around existing rules. They take advantages of gaps, ambiguities or inefficiencies in the regulatory framework and try to find new innovations that help them go around the new rules. The solution is not to prohibit the innovation, but to find principle-based rules that help to prevent utilizing new financial services innovations to achieve an undesired outcome. Appropriately employed innovations can improve the allocation of resources and boost economic prosperity.
5. **The right balance between the private (and public) costs and the public (and private) benefits is found.** On the one hand, reforming the regulations should provide large benefits to society. On the other hand, the need is for better, not more regulation, as every new regulation or regulatory change can raise the costs of banks. These could be new costs in the form of direct expenditures on compliance, development of internal technical and reporting systems, increased reporting or inefficient procedures that can influence profit earnings (e.g. banks cannot choose the least costly options for distributing financial services). All this can have undesirable side-effects – rises in the prices of financial services which are ultimately paid by the customers.

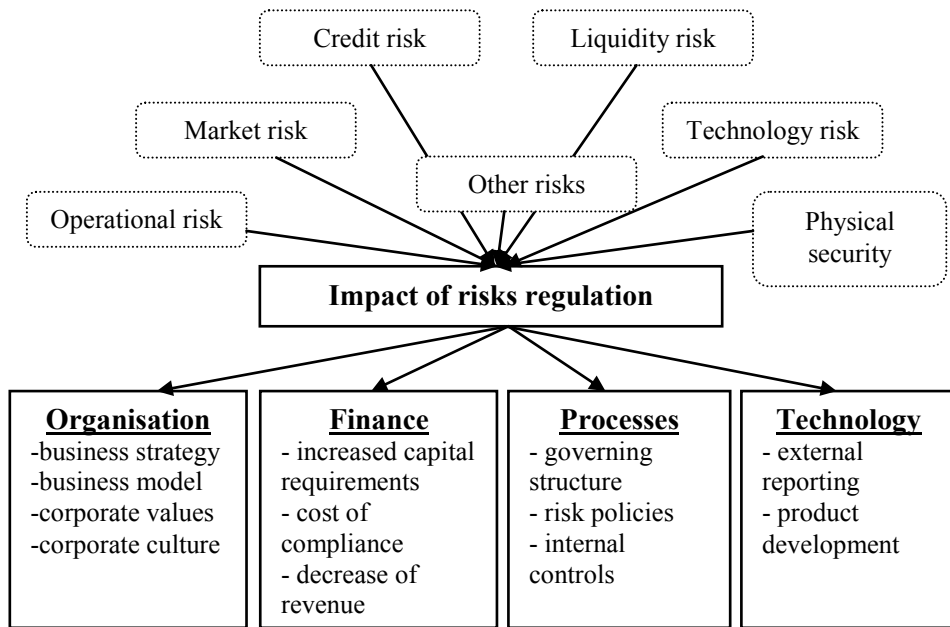
For example, Santos and Elliott (2012) have shown in their study that reforming the regulation of financial institutions should provide large benefits for society, but financial reforms will likely result in a modest increase in banking lending rates. On some occasions these regulation implementation costs can be absorbed by lowering returns to shareholders, reducing expenses or restructuring the business, but usually it will lead to an increase in operating costs, that in turn, directly affects customers, employees and investors.

The banking sector must be efficient in providing critical services at low costs and be resilient to real economic shocks. The cost of a less efficient financial system have to be less than the expected costs of financial instability. So every new or modified policy requires a true cost-benefit analysis (Claessens 2006). If the costs are too high the regulations should be reassessed to improve the cost-benefit ratio

because usually additional costs and inefficiencies will be passed on to the final consumers.

The impact of regulatory reform on banking has never been greater and ranges across organisational structure and culture, risk governance, product development, investment strategies and even customer service and marketing. Subsequently, some examples of the main impacts of regulation are given.

The dominant task of the regulator is prudential regulation or the regulation of the management of risks (see Figure 20).



**Figure 20. The impact of regulatory reform on banks in Estonia**  
(Source: author)

Prior to the financial crisis, financial institutions were highly profitable, but risk was being under priced and there was too much leverage (Lowe 2012). The implementation of new regulations requires the upgrade of governing structures, business strategy, risk appetite, internal controls, and risk policies and procedures. Higher regulatory requirements for capital are raising lending spreads and reducing the appetite for debt, that in turn threatens economic recovery (Lowe 2012, White 2013). The financial institutions should be ready to absorb the costs of regulation, including the costs of new competent people, technology and processes. The other problems are that regulations substantially increase compliance costs, slow innovation and limit the ability to adapt to changing market conditions (Hoenig 1996).



Some studies (Barth *et al.* 2008, Barth *et al.* 2012) have shown that tightening capital requirements and empowered supervisory agencies will not always improve banking-system stability or enhance the efficiency of intermediation. Moreover, in some cases restricting bank activities increases bank fragility, lowers bank development and reduces the efficiency of financial intermediation.

Supervisors are looking for **radical changes in banking behaviour**. So the new regulations increase demands on the organisational culture to make sure that financial institutions treat customers fairly and minimise risk of moral hazard and conflicts of interest. All these regulatory demands are so extensive that changes in “conduct of business” are not enough. It demands a significant change in organisational culture and behaviour to achieve the awareness and personal commitment of every employee. This is a dramatic shift in culture that needs additional time and resources to strengthen the role of risk management and compliance functions and change the existing values, thoughts and behaviour of all stakeholders – employees, senior executives, customers, partners and shareholders. Customers should benefit from a customer-centric attitude, understandable products and user-friendly distribution channels (KPMG 2014).

Regulatory requirements **will force radical changes in the business strategies, organisational structures, business models and core operations of banks**. Margins will remain under pressure. To boost revenues, banks will need to efficiently manage in a more demanding regulatory landscape while substantially reducing costs. Stricter regulations and increased costs of funding, compliance, core operations, risk management and governance will reduce flexibility towards customers, products and markets and will lead banks to reassess pricing and the range of products and services offered. Financial institutions will need a new successful business (including operational and financial) model and infrastructure to support the new regulatory and business environment and to survive and compete with an increasing number of new non-banking and less-regulated service providers (KPMG 2014).

Banks face **two major challenges around product development**. Firstly, modern banking regulations regulate the quality of the products and services sold. The aim of “conduct of business” is to ensure that the terms and conditions meet the needs and expectations of the retail customer. Those qualities are inseparable from the selling process. For example, they involve a bank’s obligation to ensure that a borrower’s realistically expected net income is sufficient to follow the agreed payment schedule or that the customer receives accurate and transparent information about financial products.

Secondly, stricter regulations and increased costs of compliance, core operations and risk management will force banks to find ways to reduce costs in other areas. One way is to minimise the development of new and innovative solutions and the

termination of less profitable products and services. So the impact of prudential requirements is a restricted choice of more expensive products.

Banking is the business of numbers. Good, right and useful data form the basis of business decisions, risk management, product development and reporting. To ensure the trustworthiness and transparency of banks, the requirements for **external reporting are increasing exponentially**. Higher transparency requirements and accurate reporting of financial performance and material events also differentiate banks from non-financial corporations (Claessens 2006).

Every new regulation brings with it additional reporting requirements. On the one hand, financial institutions have almost all demanded data, but on the other hand the IT legacy and out-dated data systems limit the possibilities to meet these strict requirements. According to a survey by KPMG (2014), many banks have admitted that the improvements to data and risk systems restrain investments on more strategic projects. Budgets are just too limited to deal with commercial and regulatory projects and compete with new innovative non-banking business models at the same time.

Accordingly, one of the major forces influencing the development of banking is technical advantage, which will be examined more closely in the next subsection.

### **3.2. Technology advances**

Financial services by nature is a technology intensive sector. During the last two decades there has been enormous evolution in the banking industry driven by technology advances that have resulted in improved quality and variety of financial services (e.g. ATMs, internet or mobile banking).

If the initial reason for using technology in the banking sector was handling existing processes more efficiently and increasing volumes, now it has also changed the banking industry's core. Nowadays, technology affects nearly every aspect of the bank. It does not only support existing business processes but gradually constitutes the driver of change within the banking business. Information, communication and technological progress does not only provide for the creation of high-level finance (e.g. derivatives) and the emergence of new financial markets and trading systems, but also makes cheaper and better financial services accessible for households and companies without a close presence (on-line) (Claessens 2006).

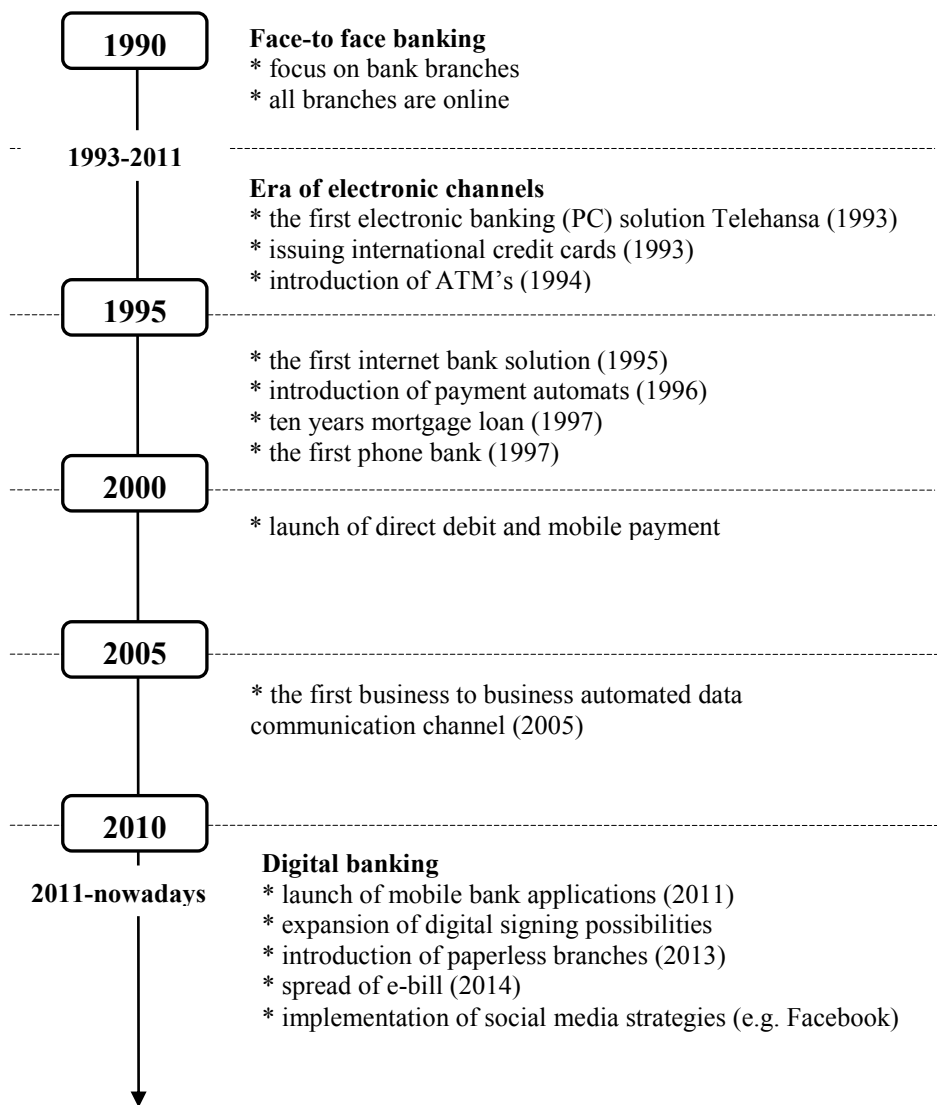
Although, the banks have eagerly taken advantage and have been excellent users of new technology, new information technology is continuously turning into an important factor in the future development of the financial services industry, influencing the business strategies and marketing of banks (Capgemini 2012).

It can even be said that technological advantages will cause radical changes in traditional banking, on the one hand, through the creation of successful customer facing products and services, and on the other hand, through competition from new entrants (non-banks, e.g. telecommunications companies, supermarkets, e-brokers etc.) enabled by improvements in technology, who are ready to rapidly create, adjust to user preferences and deliver new innovative solutions.

At the same time, the consistent process of meeting regulatory risk and compliance requirements after the financial crisis 2007–2009 continue to dictate the main IT initiatives of financial institutions. As a result, banks have limited budgets and resources to focus on developing new capabilities for operational excellence and innovation. All these changes and burdens require rethinking existing processes, business models and strategies to re-establish the basis for market differentiation, business growth and profitability.

This subsection is structured according to the stages of development: from the beginning of information technology usage in Estonian banking via the single steps of financial services evolution to the technological challenges in 2015 and further.

Banks in Estonia have always been very fond of introducing new products and new service models. Accordingly, looking at the history of banking in Estonia (e.g. 1988–2007), the development of banking technology and accordingly financial services in Estonia has been rapid and impressive and can be roughly divided into three major periods (see Figure 21).



**Figure 21. Stages of bank channels according to IT developments in Estonia for 1988–2015 (Source: author)**

## 1. Face-to-face commercial banking (1988–1992)

The years 1988–1992 are referred to as face-to-face banking in Estonia – a large number of branches with the first computers, matrix printers and paper based transfer orders. Customer-bank communication was possible only through branches. By the end of 1991, Estonia had 27 registered commercial banks with 74 branches and 20 departments and 242 branches of the Estonian Savings Bank (*Eesti Hoiupank*). At the end of 1992, the number of commercial banks operating simultaneously in the small Estonian banking market reached its maximum – 41 (Sörg 2003).

As competition in different market segments increased and most Estonian banks had quite ambitious growth strategies, survival required an innovative mind-set. The fundamental principle that already become obvious and is still valid is that growth can be achieved by introducing new ideas and finding cheaper service channels. Technology has to excel for the customers. One of the immediate results of innovations was that customers were able to bank at any point in the retail branch network (Eesti Pank 1993, Sörg 2003).

## 2. Era of electronic channels (1993–2011)

The years 1993–2011 – era of electronic channels – were characterised by the rapid proliferation of electronic services and channels. The launch of credit cards began. The Bank Card Centre (Pankade Kaardikeskus) was founded in 1993 for technical support concerning card payments (Nets Estonia) and the first automated teller machine (ATM) was introduced by Keila Pank in 1994. Leading banks went along with the innovations in 1995 when Hansapank (predecessor of Swedbank) and Eesti Ühispank (predecessor of SEB) set up their first ATMs. Additionally, in 1996 Tallinna Pank set up the first payment machine (Sörg 2003). That marked the beginning of self-service banking as services previously provided by the bank teller could be performed on an around-the-clock schedule and at the customer's convenience rather than during banking hours. Banks rapidly expanded their ATM networks with little or no charge to customers (see Table 11).

**Table 11. Number of bank cards, automated teller machines (ATMs) and points of sale (POS) accepting bank cards in Estonia, between 1994 and 1998**

	1994	1995	1996	1997	1998
<b>Debit cards (ths)</b>	5.0	117.2	424.0	592.4	678.5
<b>Credit cards (ths)</b>	-	2.3	9.6	15.0	19.2
<b>All cards (ths)</b>	5.0	119.5	433.6	607.4	697.6
<b>Automated teller machines</b>	5	140	230	427	490
<b>Points of sale (POS)</b>	20	250	1,200	2,153	2,586

Sources: Eesti Pank 1996, Eesti Pank 2000

While the number of ATMs by the end of 1994 was five, by the end of 1995 it had already reached 140. Accordingly, as possibilities to use cards become wider and customers became accustomed to them, the rise in the number of plastic cards in 1995 was 24 times, from 5,000 to 120,000. The turnover of payments carried out with plastic cards reached 11.5 m euro (2.2 m in 1994) (Eesti Pank 1996).

This development had a positive impact in the financial services sector on the one hand because it relieved the branch employees from routine tasks and contributed to cost reduction in the long run. On the other hand, the growing use of technology can decrease customer loyalty in the long run because services become increasingly anonymous. This, along with the widespread use of debit and credit cards (by May 1996 number of issued cards reached 200,000), provided an opportunity to skip the widespread cheque systems.

During 2001–2002, the larger commercial banks launched their internationally accepted, easier to obtain and flexible credit cards. For example, Hansapank launched its EGO credit card and Trump card (free payment). Later, Eesti Ühispank created the MAGNET card and Sampo Pank its Sampo credit card. A lot of payment facilities were related to these cards to increase the use of bankcards and reduce cash payments, which were more costly for banks (Juhkam 2003).

A large amount of new innovations related to the development of the internet environment (Juhkam 2003). The relative cheapness of services provided via electronic channels has always been an opportunity to optimize the processes, and therefore, also cut costs. Therefore, Estonian banks have always had an interest and the ability to develop electronic channels. So the first electronic banking solution Telehansa.net (by Hansapank, now Swedbank) started already in 1993 – just a few years later all banking in Estonia followed this lead (Kerem 2003a). Telehansa was an internet environment, PC solution, for business customers which was compatible with different accounting programmes and software solutions (Juhkam 2003).

Two years later (1995), the first internet banking solutions for private customers were introduced by Eesti Foreksbank (now Danske Bank) and Eesti Hoiupank (now Swedbank). Hansapank's internet bank Hanza.net started at the end of June 1997 and Ühispank (now SEB) introduced their U-Net on 10 June 1998. In order to meet the competition, smaller banks also established internet banking (e.g. Eesti Krediidipank in 2001) (Juhkam 2003). The new distribution channel allowed banks to move customers from more to less expensive distribution channels. In three years (the usual period for the acceptance of innovations) the internet banks became the most widespread channel for everyday transactions (see also Table 12) (Sörg 2003).

**Table 12. Amount of internet bank agreements in Estonia during the period 1999–2003**

	Amount of internet bank agreements					
	Swed-bank	SEB	Danske Bank	Nordea	Krediidi-pank	Total
<b>Dec.1999</b>	100.000	33.201	-	-	-	133.201
<b>Dec.2000</b>	187.105	72.847	-	2.039	-	261.991
<b>Dec.2001</b>	318.540	118.441	18.817	4.526	1.937	462.261
<b>Dec.2002</b>	405.719	184.902	46.974	8.303	4.323	650.221
<b>Dec.2003</b>	484.387	264.546	65.643	13.539	7.515	835.630

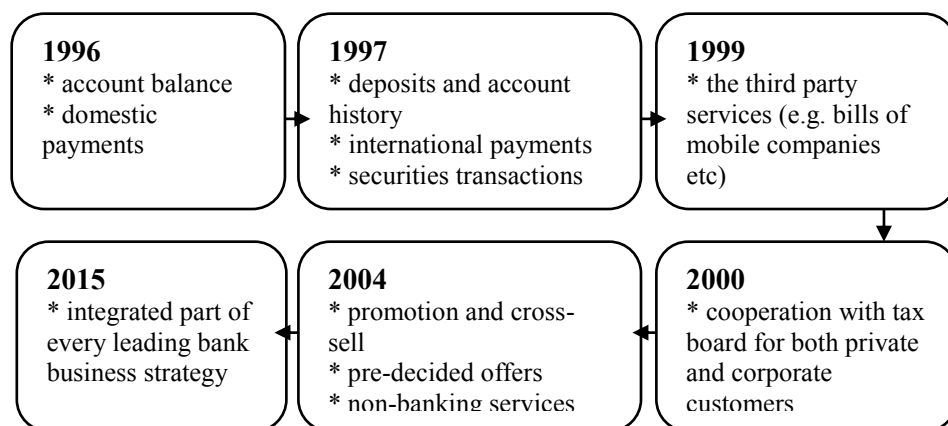
Source: Toomla (2004)

One lesson to learn from this period is that guiding customers to electronic channels should be an active process, as clients demand a minimum relative advantage in order to switch channels. As in similar cases, technologically educated and eager to try early adopters will try new applications as soon as possible, but the majority of clients do not show any such initiative.

In Estonia according to Kerem (2003b), the main reason for such rapid and successful adoption was freedom of time and place combined with speed and price incentives. At the end of the 1990s just some years after the beginning of Estonia's own independent banking, the number of branches in several locations was unsatisfactory, causing long queues and wasting time. In addition, in the early years of banking, service levels in branches were low and customers did not get the expected special attention and did not feel valued. A further and no less important factor was pricing – the services delivered via electronic channels were priced lower or free of charge compared to quite high transaction fees in the branches.

According to Luštšik (2003) and Kerem (2003a), there were two main aspects of the development of e-banking in Estonia. The greatest advantage for Estonian banks as newcomers was the existence of relatively modern (compared for instance to the French and German) and efficient IT hardware and the lack of old technologies, rooted principles and processes before starting e-banking facilities. Building up electronic channels requires substantial investments, and in some cases, as we can see also in modern banking, old technologies and platforms can be very expensive and complicated to develop further. Secondly, the international owners (Scandinavian parent banks) of the local branches, who omitted the know-how of domestic banks, also did not demand the adoption of the e-banking infrastructure from the Scandinavian parent banks.

The development of the functionality of internet banking and e-channels has been step-wise (see Figure 22) – from more general and simple services towards more sophisticated ones.



**Figure 22. Innovations in internet bank functionalities in Estonia, 1996–2015**  
 (Source: author)

In 1996, internet banks mainly started by making it possible to view account balances and statements and execute domestic payments; a year later the range of services were improved to include securities transactions, international payments, credit card statements, deposits and account history etc. In 1999, the first third party services were added and since 2000 banks have been cooperating with the tax board for both private and corporate customers (Kerem 2003a, Toomla 2004). Currently, banks use internet banking and home pages to promote and cross-sell through pre-arranged offers their own services and products and generate extra traffic by providing non-banking services. Currently, electronic banking is an integrated part of every leading bank strategy in Estonia. This needs continuous effort and investment to upgrade and re-design in response to the changing demands of the market.

The range of electronic solutions was expanded when bank link services and mobile payments were launched. The bank link services were promoted intensively as risk free options for e-commerce providers. The link is placed on the vendor's home page. Clients can enter the bank through the service provider's home page and pay for goods prior to receiving the goods. Mobile payment is a simple and cheap payment method. The service was and is specifically suitable for small payments and available only to the customers of Hansapank (now Swedbank) and Eesti Ühispank (now SEB) (Eesti Pangaliit 2007).

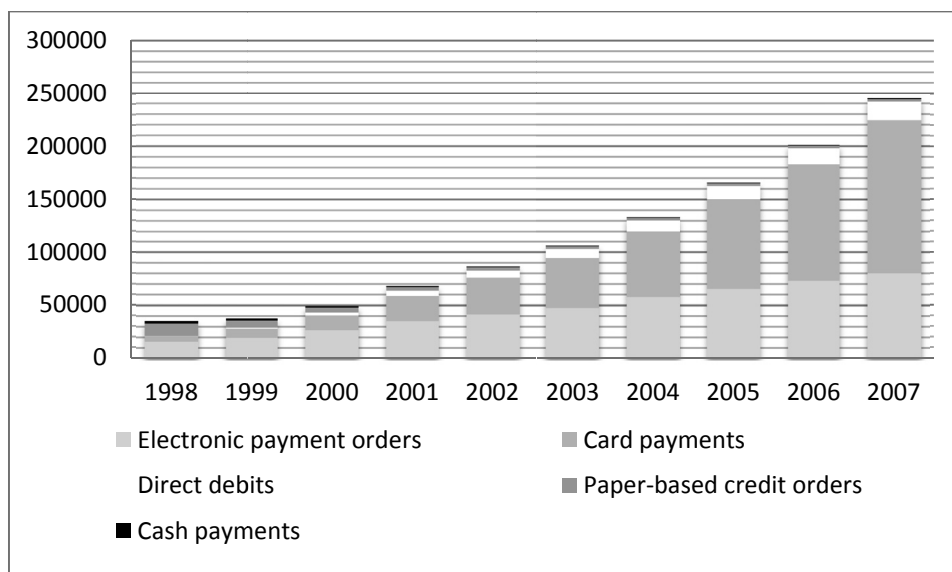
Additionally, the mobile payment service was developed in collaboration with Eesti Mobiiltelefon (now EMT) by Hansapank, Sampo Pank and Eesti Ühispank



in 2002 with the aim of making payments more comfortable and to decrease the need for cash payments (Juhkam 2003).

The years 1996–1997 were a time to find new sources of income. Several new depositing and loan instruments were introduced to the market and the launch of the Tallinn Stock Exchange increased the role of brokerage services and the banks’ own financial investments in the total range of banking services. Although it did not last long, Estonian banks continued to introduce innovative banking services (e.g. ten-year mortgage loans, phone banking, direct debit) in order to be successful in the financial services sector (Eesti Pank 1997, Raidla 2007).

Soon, companies started to transfer salaries and other income to bank accounts and banks started to introduce client loyalty programs to build real loyalty and modify purchase behaviour. The advantages were twofold. First, many companies could decrease the number of deals in cash and therefore increase efficiency. Second, the bank account was a very convenient and inexpensive (or even free) way to make various payments for rent, phone, electricity, water or insurance. A bank account became a necessary prerequisite for investing money and getting loans. Plastic money became a method of payment accepted equally with paper-based transactions, and internet banks became the most used service on the internet (see Figure 23).



**Figure 23. Number (thousands) of payments by payment instrument in Estonia from 1998 to 2007** (Source: author based on Eesti Pank)

The total number of payments in 2007 exceeded that of 1998, the initial year of collecting payment statistics, seven-fold and the total turnover of payments was five times greater. Within nine years, the volume of payments made via direct debits has grown most drastically (160 times). The number of card payments has increased nearly 27 times. Cash payments and paper-based credit orders had not been very popular among residents who prefer effective electronic payment methods, and traditional cash and paper payments decreased year after year (Eesti Pank 2007, Eesti Pank 2008).

In 2005, Swedbank launched the first Gateway solution – an electronic channel for data communication between the information systems of a company and a bank. This was the next step in Estonian banking history. The channel did not contain a banking program for the end user, as was the case in the internet bank, but was meant to be used directly in business software (ERP). Medium- and large-scale businesses with large amounts of payments are eager to use technologies that could help them speed up the cash cycle of the company, increase overall performance and so make their everyday work more efficient and fast (Swedbank).

By the end of 2007, Estonian credit institutions had issued a total of 1.8 million payment cards, exceeding the result of 2006 by 10%. Of all cards issued 76% were debit cards (1.4 million) and 24% were credit cards (over 421,000). By the end of December 2007, Estonia had 1000 ATMs and 85% of them enabled for cross-usage. Within the year, 82 new ATM's were installed, i.e. approximately as much as in 2006. The number of points of sale (POS) that accept card payments increased 8% in 2007 compared to the previous year and at year-end, 15,885 POS provided the opportunity to use payment cards (Eesti Pank 2007, Eesti Pank 2008).

At conclusion of this period, it can be said that Estonian banks have been very effective in implementing technological innovations that have lowered transaction costs for processing financial transactions. The development of e-channels has been a success story for Estonian banking. The World Bank in its report on e-finance in emerging markets pointed out that one of the three countries with impressive progress in information technology is Estonia (Claessens *et al.* 2001). On the one hand, the Estonian electronic banking systems have been created at remarkably low cost compared to other world class solutions and have been prosperous according to both the supply of services and the number of active customers. The focus has been on the customer relationship to deliver integrated products and services. On the other hand, according to Sörg and Ivanova (2008), it has been one of the reasons for the continuously high efficiency in the Estonian banking sector.

Technology allowed the banks to improve their cost structures, provided the customers changed their behaviour according to banks' expectations, but not only. Banks have also had an important role in creating the Estonian information society. In addition to continuous investments in information technology to develop and introduce advanced and customer friendly IT solutions, the IT departments of

Estonian banks have also been like software companies in Estonia. The lack of ready-made software applications forced the banks to develop their own solutions (Bátiz-Lazo and Wood 2002). Although they have developed innovative solutions, this also created the demand for services like cryptography, e-commerce solutions and other additional services, which therefore promoted the expansion of ICT sector (Kerem 2003a).

### **3. Era of digital banking (2011-present)**

The period from 2011 can be referred to as the era of digital banking – innovations in online and mobile platforms, digital signing and social integration are taking precedence in order to connect with customers on the virtual level.

To accommodate changes in customer behaviour and needs, the banks had to continue the steady improvement of the service and functionality of electronic channels, primarily in terms of sales. In addition, Swedbank and SEB successfully launched mobile bank applications for both Android and iPhone in 2011. Already in 2012, the number of customers using mobile banking services surpassed the number of people who visited branches. In 2013, customer contact via mobile phone exceeded the number of contacts in the branch network. For example, in Swedbank the number of mobile app users doubled, with 65,000 customers using it every month and mobile app payments were used three times more than at the branches (SEB 2012, Swedbank 2013). In 2014, the progress of mobile banking exhibited stable growth. For an ever-increasing number of clients, smart phones or tablet computers are becoming the primary means for organizing their finances. Consumer habits have never changed this fast before in Estonian banking (SEB 2013, SEB 2012).

In 2013, SEB launched digital and paper-free services at six branch offices across Estonia, where documents are signed digitally and saved in the client's digital portal located in the internet bank. This resulted in significant savings in the everyday use of paper and increased the awareness of responsible business behaviour.

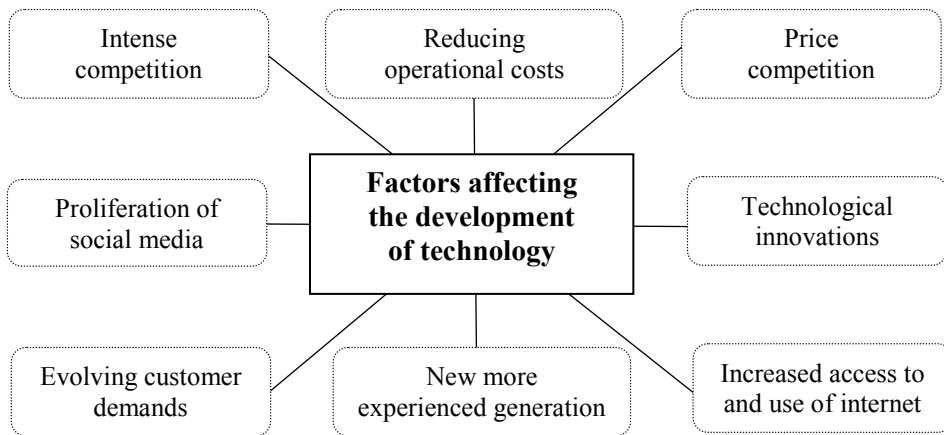
With the implementation of the SEPA (Single European Payment Area) directive in February 2014 spread of the e-bill began. Until this date the e-bill had quite a small share of financial services, but as a substitute for direct debit it is irreplaceable for many service providers.

In the previous subsection the author has provided the necessary background for understanding the current situation in the financial services industry. According to Kerem (2003a), Estonian banking technology development has been quite unique. Firstly, the late start has made it possible to learn from the mistakes made by other countries. Secondly, the development of the banking sector has been very quick compared to countries with historically strong banking traditions, where the same processes have taken longer periods. Although banks are trusted institutions, a

source of loans and facilitators of transactions, they must not only deal with today's challenges, but also radically innovate and transform themselves for the future. The industry that has historically changed slowly, will have great challenges in the future.

### 3.2.1 Technology advances in the banking sector

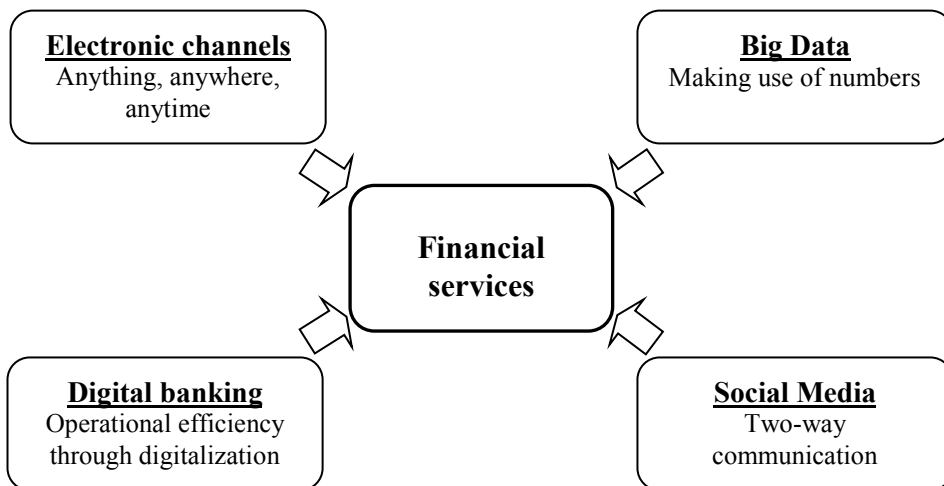
Although Estonian banks have always invested in expanding and improving their IT systems, technological innovation in the banking sector reflects the internal structure of banks as being determined by a combination of changes in the external environments and advances in information technology (see Figure 24).



**Figure 24. Factors affecting the development of banking technology in Estonia 2015** (Source: author)

Looking at the previous subsection and at the development of society, it is possible to identify a number of factors affecting the development of technology. First of all, efficiency expectations (low operational costs, price competition) as the result of tight competition. Traditionally, retail banks have used branches, ATMs, call centres, and internet banking to interact with customers, now the changing needs, skills and preferences of customers, leveraged by growing technological innovations and unprecedented development of electronic devices has led to increased popularity and adoption of recently emerged direct channels such as mobile banking, tablet banking and social media.

Innovations around the better and faster delivery of the right products to the customer will help banks provide a differentiated customer experience, and therefore, to lower customer retention costs in a situation where markets are highly saturated, volatile and uncertain, and product and price no longer provide a clear competitive edge. But looking at the development of technology, we can describe four main technology factors (see Figure 25).



**Figure 25. Four main technology factors in banking 2015** (Source: author based on Efma 2011, Capgemini 2013, RBS 2014, Zink 2015)

These factors have already affected banks and their customers, but their advancement shows no sign of slowing down. Subsequently, the author will analyze these factors in more detail.

### **1. Electronic channels – anything, anywhere, anytime**

One of the most overwhelming factors in banking technology is the development of electronic channels. In this study the term electronic channels refers not only to internet banking, but includes several other services like ATMs, telephone banking (also called call centres), mobile and tablet banking.

It must be noted that in 2015 customers of all ages are active internet customers and almost every activity (communication, music-listening, organizing trips) can be accomplish within seconds at any time from any location. Electronic devices are designed to bring instant gratification to any task. The same prompt service delivery is also expected of providers of financial services as the historical leaders in technology implementation. Therefore, electronic channel management is being transformed from being an operational function to a tactical tool as part of a larger business and customer management strategy.

In the second half of 2014, a total of 75% of the value of payments came from internet banking payments (Eestis kasutatakse 2014) and the importance of self-service banking by mobile device or tablet is rising. Accordingly, all major banks in Estonia have declared electronic channels and digital banking as one of the core strategies for future development.

Customers are looking for online possibilities to be connected with their bank. They require useful (reducing time spent and improving efficiency), easy to use and convenient (little physical or mental effort is needed to learn to use the system) financial services available around-the-clock when and where customers want to use them (Salciuviene *et al.* 2014).

Additionally, products and services should be engaging, by creating a seamless (anything, anywhere, anytime) integration of all channels for an omni-channel experience across in-branch, assisted and digital interactions, differentiated customer experience and digital interactions as “wow” experiences that exceed their expectations. Respectively, products must to be redesigned specifically for the direct channels. These should be developed keeping in mind an end-to-end process, with alignment between sales and the organisation on the various objectives. It should be focused on simplicity and the possibility of having “one click” sales. There is also the opportunity to offer a variety of wizards and calculators (loans, pension, corporate financial report), which enables customers to do a “what-if” analysis before making important financial decisions.

An activity plan should provide an overview of customer needs, bring out how to achieve channel excellence across key customer touch points and what possibilities exist for moving customers from high-cost contact centres and branch operations to lower-cost channels to optimize satisfaction and profits. The main benefit from the bank customers’ point of view is comfort, time saved, quick and continuous access to information, as transactions can be made around-the-clock, without requiring physical interaction with the bank. The other important reason is the feeling of control, because if customers do not like something, they can just log out.

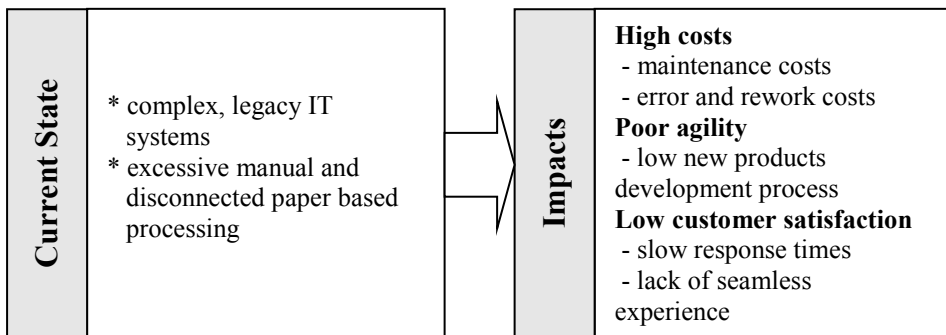
For banks, leading customers from higher-cost traditional bank branches to lower-cost online channels can help first of all to reduce the overall cost-to-serve while improving return on investments. The main goal of any company is to maximize the profits for its owners, and banks are no exception. Electronic channels provide the perfect opportunity to minimize costs for banks and their customers. For example, it helps customers to use less cash and if the amount of cash in circulation decreases, the efficiency of the banking sector will increase as both customer’s and bank’s costs will decrease (for instance cash storage, cash fees or processing costs). But secondly, quantitative evidence (Baxter and Vater 2014, Accenture 2012a) suggests that high digital usage correlates closely with customer profitability and loyalty, and therefore, the banks would enjoy a better brand image. Customers who use more channels become more loyal, buy more products and are more satisfied.

However, financial institutions in Scandinavia are already looking for tools to bring people back into branches because they cannot cross-sell so successfully through online channels. According to Efma (2010), research in Finland indicates that the average bank customer visits the branch only once in every seven years.

## 2. Digital banking – operational efficiency through digitalization

One of the main technological factors is also digital banking – that is an essential competitive edge in today’s banking landscape. It can even be said that it is a critical factor for the more agile and innovative operating model.

The aim of digital banking is twofold. Firstly, digital banking supports fast and convenient services and experience has shown that customers will adopt digital-banking propositions breathtakingly fast. Secondly, digital banking can be a cost-saving opportunity for financial institutions and create new sources of value and revenue (see Figure 26).



**Figure 26. Current state of everyday banking processes** (Source: author modified from Capgemini Consulting 2013)

The digitalization of processes can be a major lever to increase operational efficiency in branches by providing enabling tools (such as interactive touch screens) to create a paperless environment and facilitate straight-through processing (STP), reduce costs and create a new source of fees that can be called convenience fees. According to Olanrewaju (2014), a full digital transformation can realize 40 to 90 per cent of the bank cost base via the automation of internal servicing and fulfilment processes. But this does not mean mimicking current operations and capabilities digitally; it should become the core of operations and the heart of operational management, leadership and culture. Innovations in online and mobile platforms, video banking and customer relationship management (CRM) are taking precedence to connect with the customers on a virtual level.

This can be achieved by transforming existing IT platforms or rigid legacy technology. But banks’ legacy systems are complex and the upgrade is a challenging and expensive task. Therefore, all this requires a combination of IT systems and human skills and proficiency that is substantially different from systems designed for traditional banking.

### 3. “Big Data” – making use of numbers

One of the most important and it can even be said strategically most important technological tools for performance management and for development winning long-term strategies is data analysis. Although banks have an unprecedented amount of data about their customers available, most of that is not even captured to better understand client buying and channel-use patterns. Therefore, analytics technologies can be used to capture and analyze vast, continuous data streams to better understand customers and get closer to them to develop an intimate experience that will keep existing customers coming back and attract new ones (see Figure 27).



**Figure 27. “Big Data” – making use of numbers** (Source: author modified from Accenture 2012b)

For example, a variety of advanced technologies can be used to develop marketing capabilities for competitive advantage – next-best-product-marketing and data mining. This includes the use of sentiment and predictive analytic tools to examine and determine current and future customer behaviours and preferences. In an era of demand for personalisation, effective use of the right data can help to better understand customer attitudes, needs and lifestyles and create a more relevant and compelling customer experience.

But banks also face some major challenges around data management. First of all in-house data must be linked to external information, but the difficulty is not finding enough data, but in finding the right data – the “right” data can change according to environmental changes. The rate of change is not always apparent, but it is real and tomorrow’s customer will likely have different needs and expectations (PWC 2013).

Secondly, the use of advanced analytics technologies should move bank behaviour from a reactive state to a proactive or from the descriptive stage – simply analyzing what happened in the past – to predictive and prescriptive insights helping customers to decide their future actions. Combining customer data with business



intelligence and predictive analytics can help increase cross-sell opportunities, enhance customer value and profitability, learn from customer behaviour for product development and marketing purposes and make better informed decisions. Business intelligence systems should have a familiar and easy to use interface for front-line staff – CRM. The CRM solution should be fully integrated with the everyday work to make it easy to translate customer insights and centralised marketing campaigns into successful customer interactions.

The third challenge in the data management field is meeting the wide-ranging and exponential increases in demands from regulators and others for reporting and disclosures. Financial institutions have to prove to supervisory institutions that the right data, risk management models and IT architecture enable them to manage all the risks and control systems (including compliance and internal audit) effectively.

The fourth challenge is regulations. In an attempt to protect customer privacy, regulation will continue to evolve and that poses significant compliance risks for banks. Banks must carefully consider the benefits of big data against the cost and risks of collecting large amounts of customer information (RBS 2014).

One example of customer information that can be leveraged to find its true potential are Know Your Customer (KYC) regulatory requirements, which are often seen only as a cost of doing business and not used for additional business and payment transactions, which are extensive, but often only used as historical record.

#### **4. Social media – two-way communication**

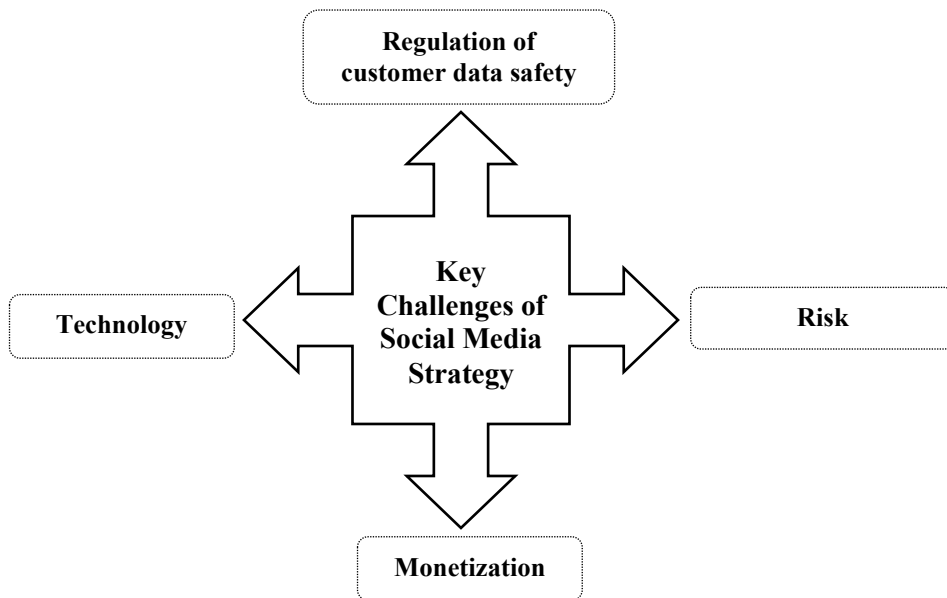
Changes in customer behaviour require adjusting from a “bank-based push method” to the “customer pull model”. This means that a bank has to focus on satisfying customer needs, bank should be easily accessible and having relevant dialogue with clients. The marketing communication of the past, which was a monologue, has to become a dialogue, a sequence of interactions communicating simple and clear offerings that are beneficial for both parties – direct two-way communication (interactive/iteractive) with customers (Lorange and Rembiszewski 2014). New options in the “customer pull model” and modern marketing communication can be created through the ability to answer customer messages immediately and using social media actively (social networks, blogs, web sites, viral marketing etc.) (Balaceanu 2011).

Nowadays, social media will simply become part of the operational and marketing strategy of banks the same way as the telephone, the internet and email did before them. The question about social media is not whether or not to participate, but rather how it can best be applied and implemented to achieve the greatest benefits for the bank, its shareholders and its customers (KPMG 2013, Klimašaukas and Fikrle 2014).

On the one hand, the data provided by social media can help better understand customer motivations, behaviour, sentiments and needs. For example, banks can start blogs or forums to discuss new products and services with their clients, or participate in social networks to increase transparency and foster customer loyalty. LinkedIn provides information about job changes, and information on Facebook about new homes and new babies can influence cross-sale opportunities, credit decisions, relationship pricing or loan-collection (KPMG 2013).

On the other hand, customers are already expecting their banks to replace one-way communication methods and open the dialogue by offering high-level personal interaction and financial advice through social media and allow them to suggest innovations and provide feedback about bank services and products. Using social media as one of the communication channels can create active experiences that create emotions, which in turn encourage the buying of financial services.

But there are also some challenges associated with the implementation of social media (see Figure 28).



**Figure 28. Key challenges of a social media strategy for banking** (Source: author)

While there is lack of specific regulation related to social media in banking, regulators are keenly watching how the banks approach this field and what activities they engage in (KPMG 2013, Capgemini and Efma 2014). For example, plugging into third-party social media platforms involve challenges in terms of data security.

Handing customer data to third parties should be prevented. The second hurdle is related to technology. On the one hand, banks are struggling to offer an omni-channel experience for their customers, on the other hand, social media should be integrated into banking operations to guarantee success (KPMG 2013).

Finally, the on-going challenge of monetizing social media usage cannot be forgotten. Leading banks have shown positive results at using this to reduce operational costs and increase efficiencies within the enterprise, but nobody has achieved a sustainable revenue stream (KPMG 2013).

However, social media can be a tool that helps sure up relationships between banks and customers and re-motivate their customers. Therefore, it should be integrated into the marketing strategy – social networks can enhance the recognition and perception of the brand and further build the bank's credibility and reputation (Accenture 2014a).

The author has explored two factors (regulations and technology) that have and will continue to influence the development of the banking industry, but that is not all. The customers' changing expectations towards banking and financial services cannot also be forgotten. On the other hand, according to Radovanović (2009), experience has shown that new technologies cannot be implemented without the acceptance of social institutions and structures. It must be closely interconnected with the fundamental social and cultural changes influencing customer awareness and behaviour.

### **3.3. Customer expectations towards banking**

It must be noted that to remain competitive, in addition to continuous development, customers' needs, expectations and demands must also be taken into account. This can be a way to achieve competitive differentiation and sustainable profitability levels (Accenture 2010).

Today's customers have access to more information than ever before and become more and more experienced and savvy using technology-based devices. For instance, more than ten years ago customers primarily interacted with the bank through branch offices, while now the main communication tools are the various electronic channels. Shifts in demographics, attitudes and behaviour, in addition to technology (e.g. tablets and smart phones) and greater transparency regarding pricing and services are empowering customers like never before (Peverelli and de Feniks 2010). Therefore, demographic, social and behavioural changes are among the main driving forces in the banking market. Changes in society and the increase in client knowledge and skills have significantly influenced customer behaviour and attitudes towards banks (see Table 13).

**Table 13. Changes in banking customer behaviour and expectations for the period 1990–2015**

	<b>Customer</b>	
	<b>The 20<sup>th</sup> century (~ 1990-2000)</b>	<b>The 21<sup>st</sup> century (~2001-2015)</b>
<b>Description</b>	<ul style="list-style-type: none"> <li>* little knowledge about financial services</li> <li>* inexperienced in communication with banks (bottom-up)</li> <li>* loyal to the bank - mainly customer of one bank</li> </ul>	<ul style="list-style-type: none"> <li>* more experienced in choosing products and service providers</li> <li>* better informed and demanding towards banks (win-win)</li> <li>* increased number of banking relationships</li> <li>* savvy users of electronic channels</li> <li>* reduced trust in banks</li> </ul>
<b>Expectations and demands</b>	<ul style="list-style-type: none"> <li>* credibility of the bank</li> </ul>	<ul style="list-style-type: none"> <li>* credibility of the bank</li> <li>* personalised services and enhanced customer experience</li> <li>* seamless omni-channel experience</li> </ul>

Sources: Aarma (2001), Accenture (2010, 2011, 2014b), RBS (2014), The Economist Intelligent Unit (2014), Zink (2015)

Looking at Table 13, two factors can be outlined that have influenced the behaviour of customers the most. These are the increase in knowledge, experience and self-confidence, and the development of technology in the surrounding environment.

Respectively, in today’s knowledge society clients have access to more information than ever before, which gives them a lot of power. Customers become more volatile in their relationships and more sophisticated in their buying behaviour. Confident and informed customers with limited patience, empowered by digital technologies, are driving banks to respond. They want to feel like their bank is anticipating their needs, not bombarding them with product offerings (Accenture 2010). The bar is getting higher every day. On the one hand, services need to be transparent, simple, intuitive, user-friendly and no surprises in terms of fees. On the other hand, customers expect attention, good advice and solutions to their financial needs. They want to buy more than just a product. They want to engage, be served, recognised and rewarded and understood (Vlerick Business School). If clients get it, bank volumes and revenues will increase. Customer-centricity should be the mantra, as

some alternative providers can already offer good online services, low fees and personalized service.

Failure to meet customer expectations can have a significant impact by damaging the reputation of the bank. As soon as the home bank becomes too passive or too conservative, it can be punished by customers who just distribute their assets to another bank. Loyalty is decreasing, especially among the younger customers, but not only. For example, every third client is willing to change to a bank that offers better technology-based services, and as a result of that and shopping around, customer profitability in the leading European banks has decreased even to 10% (Accenture 2011a).

One important factor is the emergence of the next generation of consumers (GenY and Millennials, born between 1980 and 2000) (Vlerick Business School, Zink 2015). They have never experienced an adult world without the aid of digital connections. They do not see their world without the aid of the internet, or their social and working life without smart devices, and therefore, are less and less engaged with the physical distribution of financial services. Accustomed to instant access and seamless transactions in most aspects of their social and professional lives, they view technology as a way of life, an extension of themselves (Capgemini and Efma 2015). Consequently, younger generation expects services providers not only to provide the service, but banks to be “self-directed” and highly adapted to the online world. They also like to do their own research before making buying decisions (Lorange and Rembiszewski 2014), but they look to family and friends to support their conclusions, a tendency reinforced by their participation in social media.

Peverelli and de Feniks (2010) have even described the six key consumer trends that set new requirements for how financial institutions should meet client expectations (see Table 14).

**Table 14. Main consumer trends influencing the development of the financial services sector**

<b>Key consumer trend</b>	<b>Main expectations</b>
1. Customers' relationships with financials has changed	*variety of basic and simple products *added value through graphics and interactive approaches, wizards and calculators *transparent access to information across all channels

<b>Key consumer trend</b>	<b>Main expectations</b>
2. Customers are calling for transparency and simplicity	<ul style="list-style-type: none"> <li>*simplicity, self-control and mobility</li> <li>*enhanced and better informed customer involvement</li> <li>*customized, personalized and consistent customer experience across various channels</li> <li>*reasonable and transparent pricing system</li> <li>*ability to build an intimate understanding of clients</li> </ul>
3. Customers become more and more self-directed	<ul style="list-style-type: none"> <li>*increased customer education and provision of financial literacy trainings</li> <li>*large number of data and tools to monitor and control spending and saving</li> <li>*customer-centric services based on changing client behaviour and preferences</li> <li>*options to suggest innovations and provide feedback about bank services and products</li> </ul>
4. Customers rely on the wisdom of crowds	<ul style="list-style-type: none"> <li>*two-way communication</li> <li>*immediate response to clients requests or feedback</li> <li>*possibilities to communicate with other clients (e.g. social networks)</li> <li>*gamification and digital interactions as “wow” experience</li> <li>* interaction via different social media channels</li> </ul>
5. Customers are revaluing values	<ul style="list-style-type: none"> <li>*win-win customer-bank partnership</li> <li>*protection of client interests</li> <li>*simple and honest solutions</li> <li>*corporate social responsibility</li> </ul>
6. Customers prefer to be close	<ul style="list-style-type: none"> <li>*technology-led integration of data, analytics and business intelligence to engage clients and tailor propositions around their needs and expectations</li> <li>*respect and interest towards local needs and culture</li> </ul>

Sources: Peverelli and de Feniks (2010) and the author

These six trends have an impact on the business models of banks, on the offerings of products and services, and the sustainability of banks in a changing environment. The leading principle should be consumer centricity and the core elements are stakeholder alignment, simple experiences, empowerment, new paths of purchase, common decency and the human dimension (Accenture 2011a). Generally, customers identify service and experience as the dominant factor in their relationship with the bank. They are more volatile, confident in their ability to make financial decisions for themselves, lack trust in the authority of banking

brands and are price conscious. Customers prefer simple unbundled products that are transparent, have value for money and are easy to compare. All these require changes across organizations. For instance, how is it possible to reduce information asymmetry, achieve excellent service and in the broader perspective a remarkable customer journey or more openness and find ways to show responsibility in society.

There are some powerful forces reshaping the banking sector. Banks have to adapt to a different and rapidly-changing economic, regulatory and business environment. The combination of customer expectations and demographics, technological advances, heightened and costly regulatory requirements, searches for operational efficiency through technological innovation, and competition from low-cost digital-only entrants, who respond to customers' needs and banking behaviours, are all creating the imperative to change. Financial institutions should use their analytical and research resources to decide how best to serve customers who are seeking an "Amazon-like" or similar experience from other industries (e.g. booking flights and holidays). Therefore, financial institutions urgently need a new and lower-cost business model that can generate sustainable and also predictable revenues. A customer-centric service and organisation offers a new approach to recover decreasing customer confidence and loyalty towards the banking sector.

#### **3.4. The cornerstones for the banking sector**

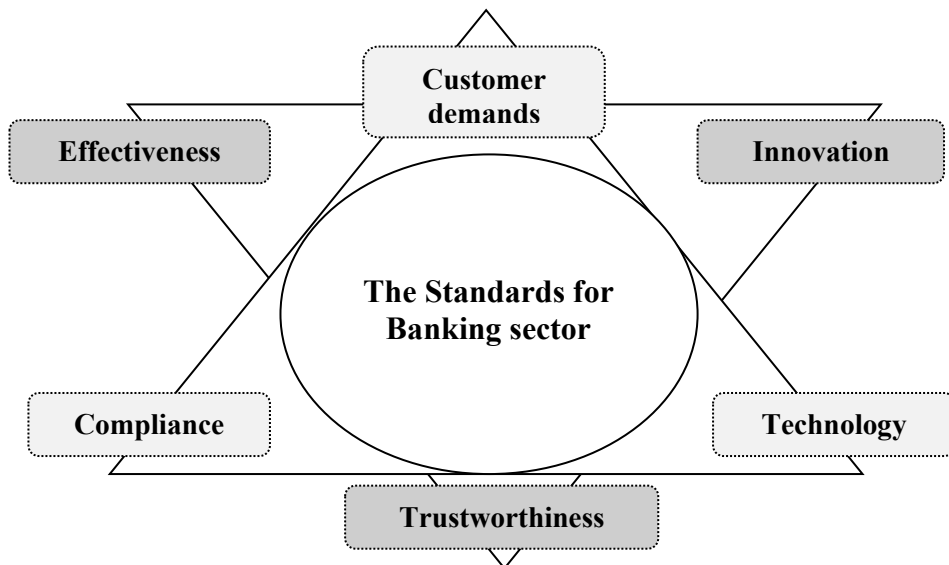
As already mentioned, the banking sector is changing rapidly. Market forces, due to changes in regulations and customer behaviour supported by technological advances have led to substantial changes in financial systems that will affect almost every aspect of the activities of financial institutions as well as revenues and costs.

In addition, the competition in the banking sector is tougher than ever. Technological advances, especially in digital technology, have made it easier for newcomers to enter the financial services market, while a wave of new regulations is making it harder for financial institutions to even react to these changes. From alternative financial services providers to non-bank entrants such as technology vendors like Apple, Google, and Facebook or telecoms and retailers, many new players are nimbler in developing new financial services. Freed from the burden of legacy infrastructure, a less stringent regulatory regime and the better position to exploit the opportunities offered by changes in technology, they are innovating around the traditional bank business model (Efma 2014). They are ready to take advantage of digital technology and improve traditional ways of delivering banking services. Relatively small start-ups can take on large incumbents by taking revenues and market share in profitable niches and cherry-picking pieces of the value chain and shape the customer experience. They charm the most attractive customers by offering price transparency and clarity on fees. The challenge is becoming ever more complex due to different applications that offer payment or foreign currency exchange services. One of the most famous examples in Estonia and in the world is TransferWise.

There are different winning models. It could be in the form a redefined interface between service providers and customers, new innovative sales and approaches to customer relationship management (e.g. marketing through mobile and social media, especially Facebook) or offering a better experience for targeted segments by providing alternative products and services.

The only solution for banks is to re-invent themselves, with a vision of how they can best serve the financial needs of customers, innovate and offer game-changing technology to retain existing customers and gain a competitive advantage in attracting new ones. The changing environment will force radical changes in banking business strategies, organisational structures, business models and core operations. Therefore, traditional operating models should be replaced by new strategies to rethink the usual levers around enabling new or increased revenue streams and cost reductions, but also a wider economic and social role. The effects range across organisational structure and culture, risk governance, product development, investment strategies and even customer service and marketing (The Economist Intelligence Unit 2013).

Based on the previous chapters, the cornerstones of banking or the standards of the banking sector will be compliance, technology and customer demands (see Figure 29).



**Figure 29. Cornerstones and standards in banking** (Source: author based on The Economist Intelligence Unit 2013)



But the bank of the future will also be built on three pillars: effectiveness, trustworthiness and innovation. The first pillar is innovation – necessary for survival in a rapidly changing environment (PWC 2014c). Innovations, especially when they are transparent and consistent with the interests of customers, can reduce costs and mitigate risks. Some innovations will be solutions like advanced multichannel integration, pervasive analytics based on effective customer data collection and advanced advisory services leveraging digital channels and personal analytics.

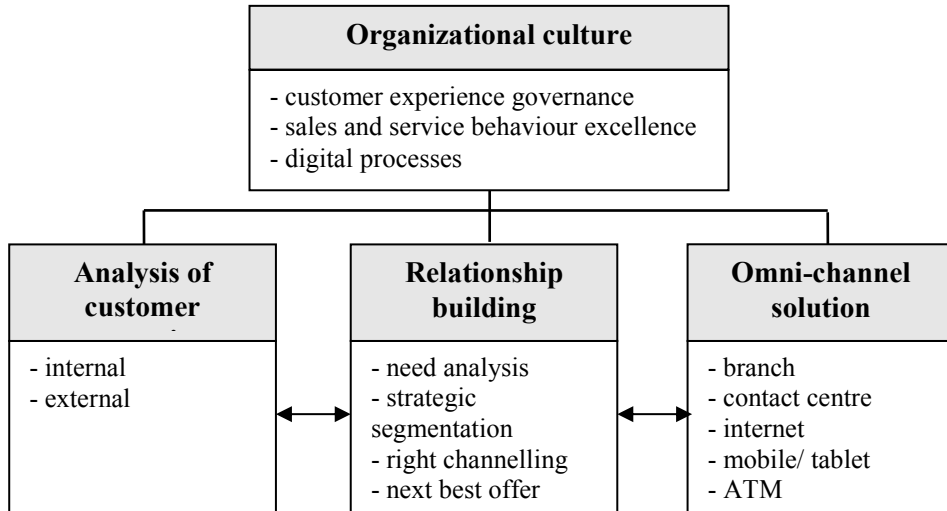
The second pillar is trust. The loss of trust can directly impact the prosperity and sustainability of an individual bank (The Economist Intelligence Unit 2013). Customers are increasingly connected to each other. The recommendations of friends and family are a primary source of information. The banks need to act in the best interests of their customers, and provide the best possible solutions that are transparent and secure. The intention is to focus on two-way communication (KPMG 2013). Banks have tailored relationships with clients on the basis of personal interests and led customers to feel that they are part of the co-creation of the future of banks. The bank can subsequently become a daily partner able to answer client needs and offer suitable customer-centric solutions.

The third pillar is effectiveness. An effective bank is run efficiently, takes informed risks needed to steadily increase earnings over time and delivers value to its customers, employees and shareholders (The Economist Intelligence Unit 2013). The key elements are optimization, standardization, digitalization, back-office automation and integrated CRM systems (Accenture 2011a, PWC 2014c). It needs to become the lowest cost producer as their processes and systems are redesigned for the digital age that is structurally changing their cost base.

To create a bank according to the cornerstones and pillars, the project should be broken down into manageable pieces. The organizational culture, technological platform and communication principles are the most challenging.

## **1. Organizational culture**

First, financial supervisors are looking for radical changes in banking behaviour (KPMG 2009, Ernst & Young 2012, KPMG 2014). New regulations increase demands towards organisational culture to make sure that financial institutions treat customers fairly, minimise the risk of moral hazard and conflicts of interest. All these regulatory demands are so extensive that changes in the “conduct of business” are not enough. Customers should benefit from a customer-centric attitude, understandable products and user-friendly distribution channels (see Figure 30).



**Figure 30. A new approach to customer engagement in banking** (Source: author based on Accenture 2013)

Historically, banks have created and provided products and services they felt their customers needed. But customer needs are now more complex, so the future bank should provide customer-centric, convenient and personalized products and services that match individual needs. The experience should be tailored to the customer, clearly designed to suit their circumstances, information and preferences. Accordingly, a simplistic understanding of customer expectations and a vastly complex product set should be replaced with complete understanding and dramatically simplified product range. Demonstrating this is critical to earning customer loyalty (Peverelli and de Feniks 2010).

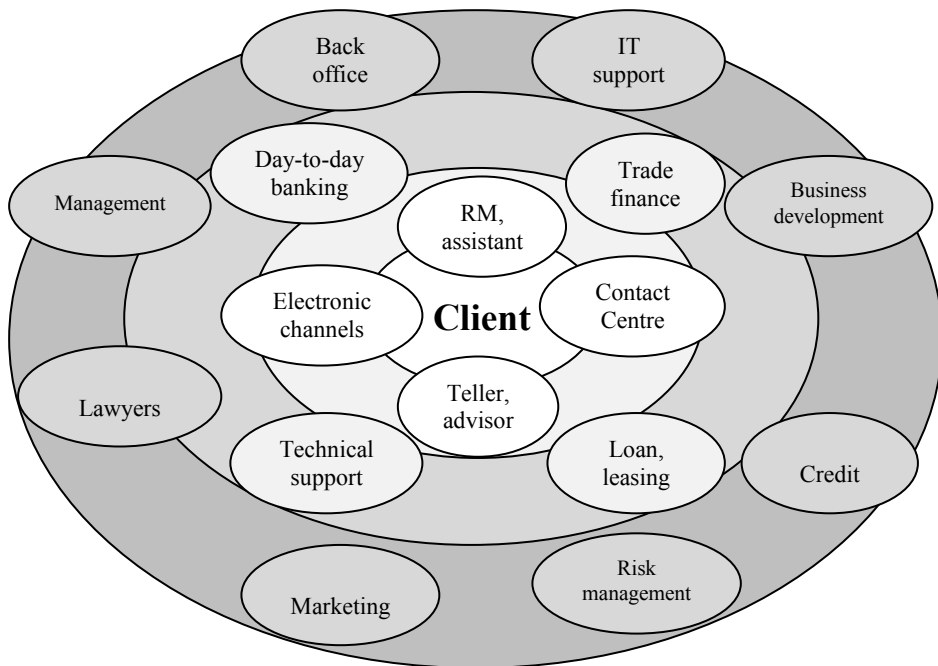
A clear view of customer needs and concentration on the customer-centric cross-sell can generate a higher share of customer wallet and sustain both customer loyalty and strong interest and fee income. This can be amplified by a segment-based service model, effective relationship management strategies and a strong customer-focused culture. These activities can be supported by products and services designed around customer needs, analytical tools and marketing tools that incorporate social media elements (blogs, wikis, RSS feeds) into the bank’s customer interactions (Accenture 2012a). The ultimate goal through a clear business strategy is to attract new customers and generate increased loyalty across existing customer segments, which will help banks increase their revenues and profitability.

Convenience and speed can be achieved by offering a multi-channel or omni-channel concept – all the right or necessary banking transactions can be performed at the right time from the comfort of the home or office or from any place the customer wants (e.g. mobile or tablet). But it cannot be concentrated only on distribution.

It should be the right mix of products, prices, distribution and communication – customer-centric products at the best possible price communicated in the best way and distributed through the right channels (Efma 2010).

This will require the establishment of more customer-focused business and operating models, both internally and externally, that drive business from customer expectations and realise greater value from deeper relationships. Improving business performance under heightened regulatory and competitive pressure will require changing many other aspects of the organisation and its mind-set (PWC 2014c). It will impact virtually every part of the organisation with profound implications across strategy, leadership, organisational culture, the commercial value proposition, as well as employee skills from front-end commercial activities to back-end technology and operations, which must be focused on continuous innovation and incremental development. It requires a dramatic shift in culture that needs additional time and resources to strengthen the role of risk management and compliance functions and change the existing values, thoughts and behaviour of all stakeholders – employees, senior executives, customers, partners and shareholders (KPMG 2014).

All the employees (e.g. tellers, sales staff, product specialists, management) have roles to play in the customer relationship (see Figure 31).



**Figure 31. Customer service teamwork in banking** (Source: author)

People in frontline positions should develop more general and interpersonal skills to create and retain long-term customer relationships, provide high-quality product advice, generate sales and earn revenues (Accenture 2012). At the back end, activities should be rationalized and streamlined to deliver value and achieve business results. Development positions will demand less administrative skills and stronger ability for innovation – incentives to offer and test new ideas and vision, readiness to experiment and fail (KPMG 2014, PWC 2014c). It will require a mindset of agility to manage change quickly, laser focus and the commitment to rebuilding internal and external business models around consumer priorities to proactively meet customer needs.

All together it should be teamwork focused on customer-centricity. The branch teller or sales advisor may identify a new customer need and can bring in a product specialist, who needs legal advice within the bank to create a new product or service. The success and profitability of the bank depends to a large extent on enabling these people to work together efficiently and productively. The banks that best respond to new customer behaviours are those that will succeed in the future. They will understand customer expectations towards financial services and bringing together multiple partners, to deliver the ultimate outcome that the customer wants.

## **2. Branch networks**

Over the next few years, digital usage through electronic channels (internet, mobile and tablet banking) will increase, but branches will not disappear. Although it could be argued that gone are the days when branches represent a slow and inflexible one-size-fits-all solution for all demographics and services, branches will remain a major channel for customer acquisition and the customers preferred channel for face-to-face advice about complex products. Branches will stay as a cornerstone of the social interchange, a place to build valuable customer relationships and a unique opportunity to achieve success in cross-selling. But they must be competitive, game-changing and ultimately profitable (Accenture 2011a).

The role of the branch and the associated branch processes need a rethink and change in areas such as format and design, roles, sales and services. The key challenge is to justify the high operating costs by better and more cost-effective client service (Deloitte 2008, PWC 2014c). For example, banks will increasingly focus on matching the level of service provided with the profitability of the individual customer – only the most profitable customers will have their own relationship manager. Secondly, although the branch remains the bedrock for many customer relationships and a major barrier to entry for many potential new competitors, the number of branches will decrease and specialization will increase.

Branch formats will be adapted to focus on the provision of advisory services rather than traditional cash and transaction products according to the range of services

provided, the complexity of advice provided and customer intimacy achieved (Accenture 2011a). For example, branches will be the salesrooms for complex products and venues for providing expert advice, and will be supported by modern design and different technology zones – a self-service banking zone (ATM, Internet Bank), a product zone for different demonstrations on devices, remote personal advisors' zone for providing face-to-face advice via video-conferencing, and so on.

Some leading banks have begun to combine digital and physical assets. This is a radically new approach to distribution – a combination of simpler branch offerings with the continuous innovation of seamless digital services (Efma 2014). They have started to move current functionalities online to reinvent the customer experience and add value for customers. This also means the development of more profitable advisory services that meet customer expectations, and to ensure the branch network is optimally designed to guarantee effective delivery. As a result, banks are automating in-branch processes; for example, automating cash transactions and address changes, and increasingly looking to technologies that give customers access to remote advisors. Branches will also be physical extensions of online or mobile banking and part of a digital bank by employing advanced digital tools and technologies, such as video-conferencing, complementing the essential face-to-face contact, online document sharing, digital signatures and card readers. All this is supported through an analytics-driven front office equipped with a deep understanding of customer needs, and therefore, significantly increasing the cross-selling higher-value products and all via a modern technological platform (Accenture 2011a).

### **3. Technological platform**

Banks have spent a great deal of time focused on growth – getting bigger, doing and offering more, becoming more risk averse, but now it is also time to become automated, leaner and more efficient. It is time to move from a product factory and a sales channel to a financial choice ecosystem for customers.

In the growth years with high margins and strong returns, banks rarely had to worry about operational efficiency. New activities could be started quickly with limited supporting infrastructure and root causes were put off to some point in the future. Banks just added organizational complexity (e.g. people, operational procedures, systems and data flows) to cope with growing, new and constantly changing businesses. Accordingly, the incorporation of the new services compliant with customer expectations into the existing banking systems can be the main bottleneck in the innovation process (Vermeulen and Dankbaar 2002).

In 2015, this has all become too complicated. The current economic challenges are forcing financial institutions to resize and restructure their infrastructure for leaner operations. This is working as efficiently and effectively as possible in the existing structure. It all begins with optimization and simplification – banks should increase

the number of automated processes and standardise operations in order to drive efficiency across the organization, and thereby, reduce complexity, reduce costs and enhance customer service. The changed processes have to match or surpass previous performance as the customer willingly accepts positive innovation (for instance faster or cheaper processing) but is very rarely willing to accept restrictions of known functionality at the same time (Lamberti and Büger 2009).

The spread of electronic devices available to customers means that it is becoming too expensive to design services based on a specific device interface. Banks will have to embrace technologies, which are intelligent and adaptive enough to automatically account for the interface that the customer happens to be using at given time and place (PWC 2014b). One of the possible solutions to the changing environment is a service oriented architecture to integrate disparate channels and create an agile infrastructure where back end systems can be exposed to new services and channels as they emerge or evolve and front offices will be analytically powered (Efma 2010).

The current economic challenges force banks to take a longer view of technology investments to ensure the strategic value of investments. But for many banks the transformation from traditional banking to omnichannel and digital banking means overcoming some key challenges and a multi-year roadmap of changes to systems and infrastructure. Additionally, this must be accompanied by a reduction in operational costs and synergies resulting from a more flexible infrastructure. First of all, banks face challenges around their existing legacy applications, systems and processes. These are complex and the upgrade is a challenging and expensive task. Therefore, these investments should not just fulfil today's functional needs but should also support the achievement of the organization's broader strategic goals around cost reduction and right-channelling (using insights about customers through various touch points). As the risks and costs of core system replacement are significant and it is hard to deliver, a few banks have chosen to replace their core systems at once (KPMG 2014). Others are mitigating risks, staging the transition and exploring opportunities to achieve their IT goals at a lower cost level. On the one hand, funding these changes in terms of decreasing revenues is a major challenge to the management of banks. But on the other hand, cost reduction resulting from using new technology, automation and increasing efficiency can usually be realized in the medium or long-term perspective, especially in the case of larger investments (Lamberti and Büger 2009).

Looking back on 26 years (1989–2015) of banking in Estonia, it should be noted that the most important external factors of the development have been the regulatory framework and technology advances. During the first years of modern banking in Estonia, the development of financial services regulations can be described as reactive rather than proactive due to poor knowledge and lack of experience. Along with the development of the banking sector, the experience gained and skilful regulation managed to ensure the rapid and successful growth

of the banking market. In 2015, the Estonian banking regulations are in accordance with the relevant EU directives, and banking has become one of the most regulated areas of activity. On the one hand, this ensures the reliability of the banking sector; on the other hand, it limits the banks' freedom of action compared to several less regulated non-bank competitors (e.g. Apple, retailers etc.).

The development of banking technology and financial services in Estonia has been rapid and impressive. Continuous development and a readiness for innovation has meant that Estonian banking has joined advanced European banking countries. In 2015, the commercial banks in Estonia offer a large variety of modern banking products and services. The current economic challenges are forcing financial institutions to resize and restructure their technical infrastructure to find the most effective and efficient solutions and to ensure the strategic value of investments.

Both factors (regulatory framework and technology advances) will also influence the development of the banking sector in the future (2015–2020). An additional important driver of development will be changing customer behaviour – needs, attitudes and demands. Clients have become more volatile in their relationships and more sophisticated in their buying behaviour. They are confident, informed and empowered by digital technologies. Failure to meet their expectations could have a significant impact and damage the reputation of banks. This and tight competition from new non-bank entrants will require the rethinking of business models. Banks should re-invent themselves, with a new vision of how they can best serve the financial need of customers, innovate and offer game changing technology to retain existing customers and gain a competitive advantage in attracting new ones. The only possibility is continuous and strategic innovation of financial services.





#### **4. CREATION OF FINANCIAL SERVICES INNOVATION MANAGEMENT MODEL FOR BANKING**

Innovation is the main driver for long-run growth and development in the banking. Nevertheless, the volume of literature on innovation is growing, there is relatively little about financial services innovation management and especially financial services innovation management in Estonia. Accordingly, on the basis of a review of existing academic literature and existing surveys (especially Innovation in Retail Banking (Efma 2013, Efma 2014) and Financial Innovation in Estonia (Juhkam 2003)), a empirical study of financial services innovation management was conducted by the author to clarify the concepts identified in innovation management literature and to understand the current situation and best practices in financial services innovation management in Estonia. The main differences involved the specific focus on factors influencing financial services innovation and concentrating on the Estonian banking sector.

##### **4.1. Survey results**

Methodology was presented in the Introduction. The empirical data for the research was collected using semi-structured interviews with CEOs, and development and sales executives from various commercial banks in Estonia to uncover and understand current innovation best practices and activities in financial services organisations, their attitudes to the same, and to obtain input for the creation of the innovation management model. Financial services innovation in Estonia was studied in terms of the following:

1. How is the innovation management in different organisations organized (existence of innovation action plan and development process, organisational structure and financial resources for innovation)?
2. What kinds of external and internal factors have been estimated to have the most positive and negative impact in financial services innovation management in different areas of financial activities?
3. What are the main factors that will most influence financial services innovation in Estonia during the next three to five years?

All respondents of the study were selected according to their area of knowledge including the development of new products and services in their respective organisations. The sample consisted of professional, very experienced and loyal executives who are responsible for innovation. More than half (22 respondents) of them have master's degrees in economics and 22 of respondents had at least 15 years of work experience in the financial sector (see also Appendix 3)

In addition, 33 respondents are convinced that they will also work in the financial services sector after three years. Based on the survey and according to the self-assessment questions (C7 and C8, see Appendix 3) they define themselves as disruptive persons who are (quoted from the survey)

1. initiators:

*“problem solver”*

*“person who finds the solutions”,*

*“creation of risk management system of the bank”*

*“creation of the high-quality customer service system”*

*“always ready for changes with will to implement these successfully”*

2. innovators,

*“person with new ideas”;*

*“originator of simplified and optimized processes”*

*“author of innovative electronic and mobile solutions”*

*“founder of the new financial service company or bank”*

*“creator of new and successful segment strategies”*

*“founder and expert of pension II pillar solutions”*

3. people and visionary leaders:

*“fiery small banker”*

*“creator of new vision in the retail banking”*

*“leader who can give to employees mission to create value for customers”*

*“developer of organisational and innovation culture”*

*“the best leader in the world”*

One can say that thanks to them we have a strong banking system with major and smaller financial service companies, various high-quality products and services for customers and satisfied customers. They have made the history of Estonian financial services sector and survived stormy periods of Estonian banking (see also chapter 3).

On a self-assessment basis, the respondents were asked to estimate the overall innovation level of their company. Both CEOs and development managers assessed the innovation in their company predominantly as good (accordingly 33% and 60%) – 13% of CEOs even assessed it as excellent. As expected, sales executives were significantly more critical – 25% of sales managers said that innovation in their institution was good, but 38% were even more critical and said that was only satisfactory. Usually, while CEOs and development managers see the organisational strategy and development resources big picture, sales employees have to meet customer expectations and offer the best possible solution on a daily basis.

Based on this survey, it can be said that the least innovative organisations are in the insurance sector. For example, while 25 respondents in the banking sector

assessed innovation as good (good (54%) and very good (8%)), only 30% of executives assessed innovation as good in the insurance sector. As there were only two representatives from fund management and other companies, and the aim of this study was to concentrate on the banking sector, there is a need to further investigate financial services innovation by sub-sector (insurance companies, asset management companies etc.).

**Based on the survey, it can be said that overall innovation level of companies is good.** Additionally, at least one bank in Estonia is focusing strongly on its innovation culture. For example, they have hired innovation managers both at the local and Baltic level, they have strong support from the CEOs and owners of the entire banking group, they have agreed a roadmap for popularizing innovation thinking inside the institution. Some other companies also have the right mind-set for innovation, but were not so focused.

The respondents were also asked to give their opinion in more detail, as financial service companies have to cope with different types of innovation. Although four respondents assessed the process of innovation in their organisation as excellent, more than 28 respondents also assessed customer service and customer experience from good to excellent. Not surprisingly, the focus on customer service and customer experience innovation reflects the changing customer behaviour and customer expectations of value from their financial partners.

**On a self-assessment basis, the differences between innovation types were small, which shows that all different areas of innovation are important to the institutions.** Customer service and customer experience innovation was followed by product and channel innovation as the most traditional and understandable innovation types. Examples of strategy and business model innovations can be brought especially from the Estonian banking sector, where during the first half of 2015, two banks announced they will focus on corporate services, and therefore, will significantly reduce their share on the private customer market. In addition, there are examples of banks that have focused on a specific product segment (e.g. credit or investments).

**One of the most influential innovation direction is the expansion of electronic channels.** As expected the highest assessment was given to electronic channels, which has been one of the innovation priorities during recent years. The lowest assessment was given to mobile banking. One reason for this low assessment was that mobile banking and its solutions is one of the newest areas of innovation, and not many institutions have it yet. But it will probably be one of the most developed areas in the future. As banks have been the market leaders in terms of channels, it is important to look separately at their assessments.

Non-surprisingly, if we look at the evaluations on a scale from good to excellent, innovation in the field of electronic channels attracted the highest results from 23

respondents, followed closely by branches (18 respondents) and mobile banking (17 respondents), but generally, the assessments are higher among commercial banks than the sector as a whole.

According to the literature review, the starting point and the most important component for successful innovation is innovation action plan.

#### **4.1.1. Innovation action plan**

A large majority of the respondents (35) confirmed that their company has concentrated on innovation during the last three years. Some of the reasons are changes in business strategy and organisational set-up, focusing on the achievement of efficiency and looking for new technical solutions in different electronic and mobile channels. They also believe that they will also focus on innovation for the next three years.

In addition, 75% of the executives who gave a negative answer about the last three years had the perception that they will focus on innovation for the next three years anyway. Quite many respondents think that it is the only chance to be sustainable and to survive in a rapidly changing environment with growing competition from new entrants, technology advances, stringent regulations and consumer requirements. It is vital to find smart solutions to meet customers' expectations in different channels. The respondents of only one company marked that their enterprise is not going to concentrate on innovation. The reasons given are strategic changes in business model of the company and lack of resources.

**Accordingly, it can be said that based on their self-assessment financial service companies have been and will be focusing on innovation.**

In accordance with the theoretical literature (see chapter 1.6) and as banks should cope with different types of innovation, it is vital to have an innovation action plan that establishes a mind-set for innovation, defines clear objectives about which areas the bank wants to innovate, describes the processes, agrees metrics and specifies the prioritization principles for essential resources. Surprisingly, opinions from the representatives of the companies on this issue differed widely. **Ultimately, only five companies (three banks, one insurance company and 1 other) have an innovation action plan.** The existence of an innovation action plan is one way to set clear objectives and declare a mind-set.

This survey found that only five companies (25%) have the objective of being an innovation leader. These are the major companies (market leaders) in the field, or the smaller new arrivals (two organisations), who are very flexible and try to reach as many customers as possible by offering innovative solutions. In most cases this choice (innovation leader) has already been the organisation's long-term strategy and will be the same for the coming three years. Interestingly, only one company, who assessed itself as an innovation leader, actually had an innovation action plan.

In the author’s opinion **innovation leaders could be even more successful if they had an innovation action plan.**

The status of innovation leader is also seen in self-assessments about the innovation level of the organisation. The representatives of organisations that saw themselves as innovation leaders on average gave higher assessments of the level of innovation in their organisation (see Table 15).

**Table 15. Self-assessment about innovation on the basis of organisational position and the financial services innovation questionnaire May-June 2015**

	Mode	Standard deviation	Good + very good + excellent (%)	Non-existent + weak + satisfying
<b>Innovation leader</b>	5	0.79	100	0
<b>Fast follower</b>	10	1.14	58	25
<b>Follower</b>	8	1.11	14	86

Source: author’s calculations

The assessments were only from good to excellent compared to fast followers who also gave as low assessments as weak. Such a high self-assessment confirms that the organisation really concentrates on innovation and innovation is part of the employees’ mind-set.

The others (10 companies) said that the lack of resources, ideas and people knowledge are why they have chosen the status of fast follower. Unfortunately, representatives of five companies admitted that they are even more followers than fast followers. Their self-assessments about innovation in their organisation were mainly (with one exception) weak and satisfying.

Radical innovations require innovation ability – risk-taking activities, lots of time and experimenting, and considerable resources. Accordingly, being the innovation leader carries more risk and can be more expensive. The fast follower status is therefore reasonable. The author believes that financial service companies need to compare themselves with each other and also look at international trends.

**Based on respondents answers it can be said that quite often companies do not concentrate on local innovation as it expensive and risky, but rather look to what is happening in other countries and try to implement the best international ideas in the Estonian financial market environment.** This does not carry too much risk taking, but requires a good system for monitoring the market and being ready to react quickly.

Interestingly, the only innovation leader who was mentioned by name by the other respondents was Swedbank. The author sees two reasons for this. First, Swedbank is the market leader in the Estonian banking market and the market leader is often seen as the innovation leader. The other reason could be the mobile payment solution that was launched at the same time as the research took place. The new mobile solution was supported by a comprehensive marketing campaign that also reminded the public of the status of Swedbank.

Looking at the financial resources for innovation, it can be said that almost one third of the companies (6 companies) do not have a separate budget for development and innovation. The main explanation for this was that project-based budgeting is used, and therefore, every new project has to obtain approval for its budget. The number of companies who have used this principle is decreasing, and most of the companies believe that they will have a separate budget for innovation during the next three years. Interestingly, if the separate budget principle is approved, usually the resources are used by different units, despite of existence a separate development unit. This makes it possible to believe that development and innovation will also be addressed outside the development unit – primarily by IT units.

Only two respondents said that their company also has a budget for disruptive innovations. All others (38 respondents) agreed that they do not and the situation will likely remain the same for the next three years. According to these results, it can be said that **financial services institutions in Estonia are focusing on incremental innovation rather than radical innovation**. There could be many reasons for this:

1. According to their role in society and the overall framework, they are more risk averse, but radical innovations are always related to risks.
2. One of the goals is cost-saving and efficiency, and radical or disruptive innovation is related to higher costs.
3. Financial services firms cannot simply approve investments in something too radical; the solution also has to be useful for their customers.

For example, ten years ago all the major banks had mobile payment solutions, but they were not popular for customers at that time. Some banks even stopped providing the service. Only now, in 2015, can it be said that mobile payments is one of the increasing channels for transferring funds.

#### **4.1.2. Organisational structure**

Making a success of innovation requires a certain amount of organisation and focus – this is not an activity, which relies entirely upon inspiration and creativity (Efma 2013). 18 organisations (90%) have dedicated human resources to development and innovation, either in a centralised department or distributed within business units.

One of the biggest management challenges is to hire staff in the first place, and even more difficult to hire and keep employees that have the necessary competencies

and motivation to participate in innovation activities. However, it is important to have some dedicated staff otherwise it is difficult to make progress. If you are setting up an innovation team it is important to carefully manage expectations upfront and agree how success will be measured.

Based on the survey two organisational structures can mainly be identified for innovation and new service development.

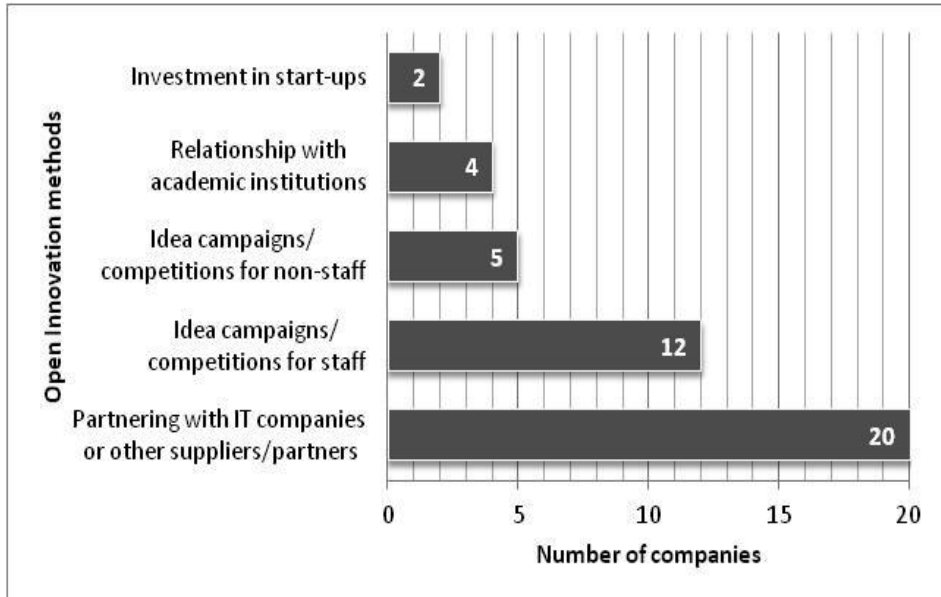
- 1. Separate development unit.** While the largest number of respondents (21 respondents) said that their company engages in formalised innovation activity in the form of a permanent development department as a means to develop/innovate new services. The development department or unit, acting like an intermediary between the core business and IT, has the task of evaluating and developing ideas. This unit is also responsible for analysing market conditions, collecting ideas throughout the organisation, planning new developments and directing the innovation process through all stages of development. In addition, these people are also project champions, who are responsible for developing, documenting and improving the products and processes across the firm and should have sufficient time to spend on the development project. The process will then be controlled and kept within the strategy by the new product/service committee, who will make go/no go and budget decisions.
- 2. Multi-functional teams.** The other form of organisation is multi-functional teams across the organisation (6 organisations). A structure, where each division is responsible for new service development can understand customer needs more adequately, but may not have the time and skills to implement the resulting insights quickly. Where innovation activity is spread across the organisation, a strong organisational culture and internal communication is relevant. Communication has to be at the centre of any innovation action plan if a bank is to be successful with its innovation efforts. The development department or the innovation manager as the concentration of knowledge can be the main factor or creator of such an organisational culture and innovation communication. Only one of the respondent company's (0,05%) has an exceptional type of structure with an innovation unit and development unit. The first unit concentrates on fostering the development of radical innovations. The development unit is responsible for implementing ideas and projects.

**Based on this study it can be said that the optimal allocation of these resources will depend on factors like the size of the company, and the innovation action plan.** As 34 respondents (85%) were satisfied with their organisational structure, it is difficult to give exact prescriptions. Proponents of the development unit say that such a solution helps concentrate knowledge and experience, provides the opportunity to focus on one subject (development and innovation) and guarantees better communication between different stakeholders. People who prefer multi-functional teams across the company say that this ensures a better understanding of customer needs and is very suitable for small companies with a flat structure.

### 4.1.3. Innovation process

Together with action plan, the second important subject is the innovation process. Based on academic literature formal processes are essential for innovation. The majority of the companies distinguished all the typical stages in the innovation process starting from idea generation and ending with the measurement of success. Slightly less common were the ideas of screening, prototyping and development project approval. Although more than half of the organisations (11 companies) use a stage-gate innovation process for innovation, only the small percentage of the companies (40%) do not consistently use a formal innovation process. Looking at this sample, 75% are small enterprises or companies, which are quite new in the market and have not reached their critical mass. **While formalised innovation process is usually a requirement from the owners or parent companies in major organisations, it could be said that some companies are too small to have in some cases quite bureaucratic and resource consuming processes.**

It can be said that financial services providers are adopting formal innovation practices and developing an approach to open innovation. The survey found that financial service companies are already quite open to finding new solutions – for example working with partners, crowdsourcing ideas and investing in start-ups (see Figure 32).



**Figure 32. Open innovation approaches (number of companies) based on the financial services innovation questionnaire May-June 2015 conducted by author (author's illustration)**



Despite the fact that companies do not have an innovation action plan, they are looking for options to open themselves up to the outside. The lack of resources can be compensated for by relying on the resources of suppliers and partners, which is a key feature of open innovation. For example, working closely with IT companies and suppliers and looking towards start-ups is becoming more common and even inevitable.

The survey revealed that all financial service companies (20 companies) are cooperating with IT companies or other suppliers. The respondents were also asked about idea campaigns for employees and non-staff. In most companies internal brainstorming was the most frequently reported approach to idea generation – 12 (60%) is organising the idea campaigns and competitions for staff and five (25%) is organising the idea campaigns and competitions also for non-staff. The reason why these numbers are rather low, is that most of the companies see idea generation as part of the everyday work of their employees. They expect employees to flag up something they see that needs to be done to improve existing solutions. On the other hand, idea collection through campaigns is unreasonable if you do not have sufficient resources to implement the ideas. People who offer their ideas look forward to seeing their excellent ideas in practice and will be disappointed if ideas keep being rejected on the ground of a lack of resources.

The incidence of cooperative relationships with academic institutions was surprisingly low. As people who have tried such cooperation were very positive, than this could provide additional options for successful innovation. **The author believes that there are different solutions for cooperation. For example, conducting market surveys, special programmes or training courses.**

The author also sees that cooperation or investments in start-ups will increase in the near future. It is possible to outsource resources for quick, flexible and in some cases very innovative solutions.

#### **4.1.4. Measuring results**

One important part of the innovation process is measuring the success of an innovation project. The author asked respondents whether each development/innovation project must have a financial business case that shows a positive return on investment.

**The prevailing attitude was that an innovation project must have a positive outcome.** More than half of respondents (24 respondents) answered positively (yes, must have (23%) or rather yes (38%)). But as the financial services sector is faced with numerous legislative changes, then 31% were not so optimistic. Three respondents (7%) even said that every project does not have to be profitable, because it should be seen as part of the bigger picture; for example, in cases where you have to create basic products and services and you have to reach some critical number of customers to build up your business.

Different key performance indicators can be used to measure project success. Goal-setting for development and innovation activities more frequently depend on the exact project. Productivity, profitability and increase of income calculations were stated as frequently used financial criteria, although almost all the measures proposed in the survey were quite popular. In addition, ROI, customer reach and public attention were also mentioned.

#### 4.1.5. Positive and negative influencers

To understand and predict future trends, it is vital to know what the most important factors are (both positive and negative) that have had and will continue to have an influence on the development of the sector. Accordingly, the respondents were asked to assess the impact of different factors. **Looking at the factors that have had and will continue to have a positive impact on innovation, the highest rates were given to technological development** (100% of respondents evaluated the impact from relevant to highly significant), **tight competition both inside the sector and with non-financial sector companies** (36 respondents) and **demand for financial services** (33 respondents).

All these factors can be divided into external and internal factors. Interestingly, the highest positive impact is from factors outside the company, which is not possible to control. Looking at the internal factors (employee competence, size of the organisation and organisational culture), the highest assessment was given to employee competence (80%).

Looking at the customer perspective (demand for financial services and customer interest in innovative solutions), these factors have quite a high positive impact, but are not so important compared to other factors. The main reason, which was stressed by the respondents, is that customers do not actually know what they exactly want, and what the future of the financial services sector might be. However, the market is mainly shaped by providers, not by customers.

To understand the main barriers to innovation, the author asked the respondents to assess the influence of various external and internal factors on innovation. **The highest barrier for all types of organisations was legislation and financial supervision** (78% of respondents evaluated the impact from relevant to highly significant), **organisational culture** (67%), **which does not focus on innovation, and macroeconomic factors** (65%). Surprisingly, these factors were followed by other internal factors like size of the organisation and employee competence. The fact that three of the top five factors were internal factors is positive, as the organisation can work with these.

As all these factors are rather broadly defined barriers, the author asked the respondents to name other factors which had had an impact on the overall innovation capability of the Estonian financial services sector, but the results were the same.

#### **4.1.6. Main trends and management challenges**

The highest impact on the innovation of financial services in Estonia during the next three years will come from large commercial banks (Swedbank, SEB), technology companies and telecommunication companies.

Looking at the financial services sector in May-June 2015, the author agrees that large commercial banks have a strong impact on the development of new products and services. For example, if the major banks bring a new solution to market, this influences the others. It creates pressure on the other market participants to create something similar or to copy it. Such behaviour tends to leave less time for competitors to think about their own innovative solutions – they are always at least one step behind.

According to the survey, financial services representatives find the most threatening of these competitors by far are technology companies. As the number of new entrants is increasing and customer loyalty is decreasing, financial services companies should focus on dramatically improving their customer experience. The newcomers often offer simple and intuitive solutions, greater flexibility and price transparency than the banks can offer. As such, these companies are continually able to meet rising customer expectations, while also pushing those expectations ever higher (Capgemini and Efma 2015).

Technology companies have considerable knowledge of technology and have shown the ability to create radical solutions. They have already developed devices and services so useful and intuitive that users have come to see them as indispensable to their daily lives. When such companies start to move into the financial services, this presents a huge challenge for existing companies. However, based on the survey, it can be said that the impact of technology and telecommunications companies is more an expectation or increasing threat.

Furthermore, start-up companies should not be forgotten (e.g. Transfer Wise or Bondora). On the one hand, despite thinking that regulations make the entrance of newcomers difficult, existing companies cannot ignore the threat to their market share from such new types of competitors. Firstly, their processes are fast and agile. Secondly, they do not have an IT legacy or the burden of legislation; therefore, they can focus on the innovation and the creation of a new and fresh customer experience. In May-June 2015, the market share of new entrants was still tiny relative to established competitors with large customer bases, and radical innovations remain quite rare, but this can only be the starting point.

On the other hand, financial services companies are anticipating digital disruption by making investments in or collaboration with start-ups and financial technology companies. This could help financial services companies create better, faster and

cheaper services attuned to the digital age. The fact remains that innovative start-ups have ample ideas for high levels of innovation, but need capital, while the established financial services firms have that capital, and need to increase their ability to innovate.

In addition to knowing about the main competitors, it is important to have a good understanding of other significant trends. The respondents were asked to name up to three trends, that will influence the financial services development the most in Estonia in the next three to five years and their impact on the financial services sector. Some examples:

1. regulations

*“tsunami of regulation – significantly hampers innovation”*

*“overregulation of credit institutions – loss of market share to the non-banking companies”*

2. technology

*“the rapid development of technological solutions – requiring the ability to make right choices for the future”*

*“changes in payment solutions – pressure on bank revenues and market shares”*

*“financial service is moving to mobile – the growth of non-personal contacts and self-service solutions (automatic solutions against the customer)”*

3. customer behaviour

*“customer behaviour is changing due to the new channels of communication – the decrease of face-to face communication to the minimum”*

*“everything should be as easy and convenient as possible with a small number of clicks – calls for continued investments in innovation”*

*“the growth of knowledge and income – increasing expectations towards speed and quality of services”*

Based on this study it can be said that the current state of financial services innovation management is good. The evidence from this survey based on respondents self-assessment is that financial service companies have been focusing on innovation. But unfortunately, in many cases innovation management is limited by the innovation process and budgeting principles. There is missing comprehensive view that takes into account various external and internal factors. Accordingly, in the following chapter the author proposes a financial services innovation management model for banks.

## **4.2. Innovation management model for banking**

Although banking is a conservative economic sector with very long traditions, nowadays banks need to plan for new developments and innovations in all areas to achieve sustainable growth and profitability. There are many cases of managing incremental product, channel and process innovations separately, but there are also examples of how banks are using a combination of product, channel and process innovation with a new business model to create improved customer experience.

The purpose of this part of the study based on certain assumptions is to propose a financial services innovation management model for banks that:

- supports sustainable innovation in a constantly changing environment;
- meets the requirements of the financial services public law framework;
- makes it possible to consistently evaluate potential opportunities arising from the external environment (e.g. macro-economical factors, development of technology, changes in customer expectations and behaviour);
- takes into account the internal components of the innovation process;
- makes it possible to measure the achievement of the innovation objectives and to give feedback about the process;
- keeps potential ideas within the innovation action plan framework.

These requirements were identified during the study described in the previous chapters. The previous chapters featured a preliminary financial services innovation framework that is the starting point for building the service innovation model for banking, because closer theoretical examination proved that it should contain both antecedents for innovation as well as components according to the financial services public law framework. In addition, the dialogues from the empirical research provided some examples of best practices in innovation in the current financial services market.

Based on the academic literature, applied research and empirical research of financial services innovation in Estonia conducted by the author in May–June 2015 and the above assumptions, the author proposes the following service innovation model for banks (see Figure 33).

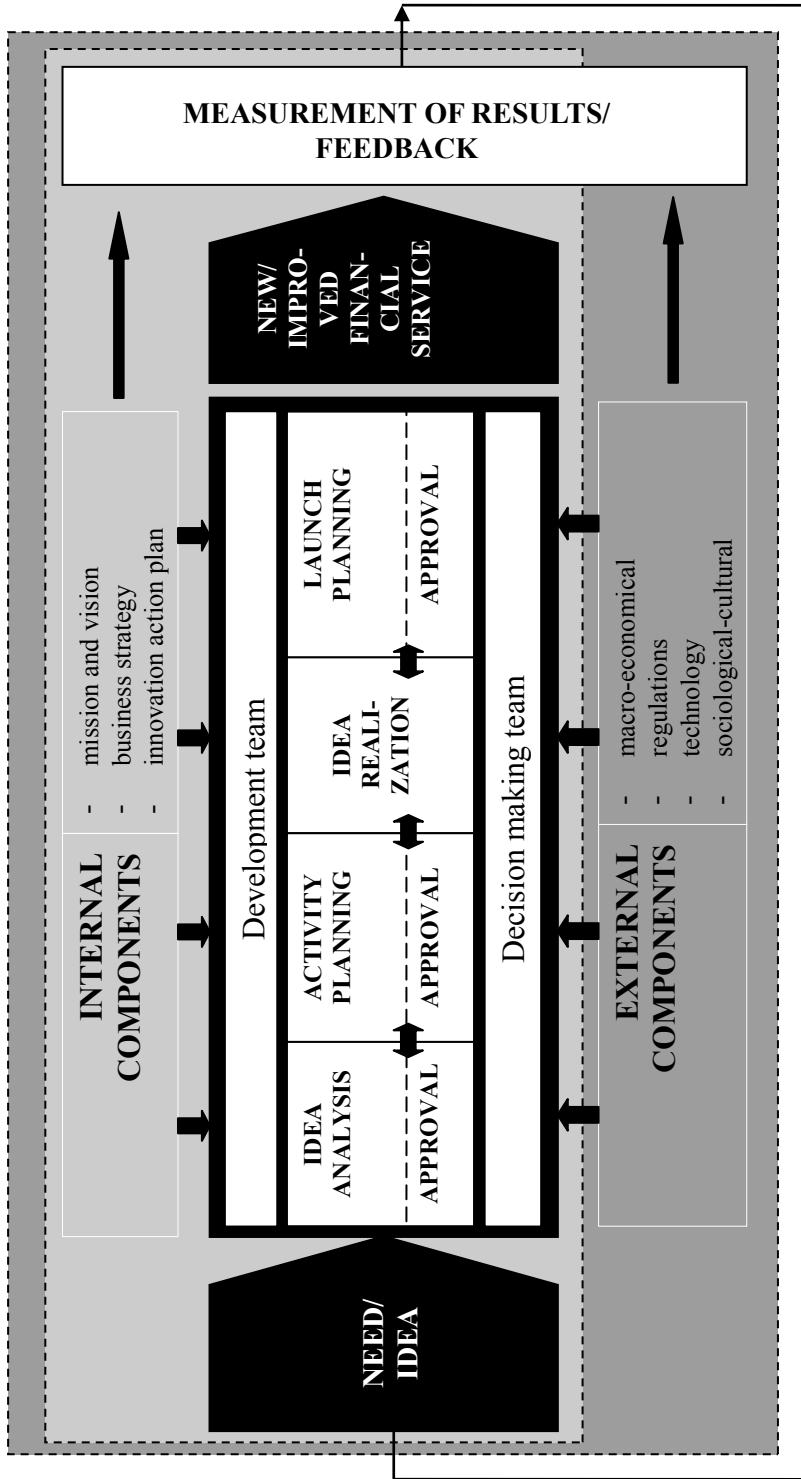


Figure 33. Financial services innovation management model for banking (Source: author)

Innovation is a process that can be managed and improved. Improving innovation is not going to happen by simply investing more money in research and development. Innovation requires not only fixed amounts of the normal resources (people, time, money), but also a strategic commitment to adopt the mind-set, attitudes and values of the organisation toward innovation. Therefore, financial institutions should develop an optimal innovation management model to succeed in a highly competitive arena. A robust innovation management model supports the organization and facilitates the frequency, speed and consistency of innovation results. To make tangible improvements, organisations need to develop an innovation action plan and recognize that improving innovation requires the transformation of the organisation, its culture and innovation processes that can lead to higher innovation success rates. Formalized innovation management processes and governance are among the innovation success factors. A stage-gated innovation process divides innovation into predetermined phases, with each phase containing previously agreed sub-activities. Formalizing the innovation process ensures repeatable results, the predictability of projects, makes a positive contribution to the speed and reduces risk in relation to uncertainty, timing and budgeting. Although this is highly dependent on organisational culture and the people involved, structured innovation management approaches help get the most out of the innovation potential of people, customers and partners.

A thoughtful innovation process is crucial for the endurance of the banks and value creation. On the one hand, such an innovation process is important for banks to cope with increased competition, but on the other hand, it is customers and state authorities, who are interested in solutions, and that ensure attainable, convenient and inexpensive financial services.

The inputs for the innovation process are needs and ideas. The innovation process starts with the creation of many ideas or innovation opportunities that are then evaluated in a screening step that will help select the most promising opportunities. In many cases organisations do not suffer from too few ideas, but rather from the problem of implementing and converting those ideas into successful new services. This requires careful management of the project to drive innovation to bring value added ideas to market and to keep costs within limits.

But a diversity of idea sources is important, and therefore, there are different options for idea generation inside and outside the organisation. Commonly, idea generation starts by reviewing and combining existing knowledge. In fact, the experience of users, not science, is deemed to be the most important source of innovation. There can be many different sources. For example, proposals and complaints from customers and co-workers, employee suggestions, brainstorming competitions, operational risk incidents, changes in regulations and competitors' activities. But idea generation should not only concern one department. It is a good idea to arrange special meetings across the organisation with various employees in order to gather ideas or ask for advice. The employees of different departments interact with customers and may come up with ideas.

The other source of ideas is the external environment. The external components tend to have a strong and in some cases immediate impact on the company's functioning. Based on the survey conducted by the author, it can be proposed that the most important environmental components are macroeconomic conditions, technological development, legislation, and sociological and cultural factors. For example, unstable macroeconomic conditions increase uncertainties and risks that can spur more innovation, but on the other hand, can also decrease the resources for innovation. Regulations are a two-edged sword. On the one hand, regulations and financial supervision can inhibit innovation, but on the other hand, some form of regulation (e.g. legislation for digital signing) can support the creation of more comfortable processes.

One of the choices for banks is whether to innovate by themselves or to outsource innovation to entrants and start-ups. Some companies rely on the in-house development of innovative solutions (closed innovation approach); others tend to find cooperation and idea changing possibilities with partners, suppliers and customers (open innovation approach). More and more, banks are choosing to cooperate with their partners and to outsource a portion of their technical development work to new technology start-ups or partner companies.

However, new trends in innovation, specifically open innovation, rely on the outside world to create opportunities for finding the best solution from among alternatives for further development. From outside the organisation one of the solutions is to ask customers what they want. Unfortunately, on the one hand, it can be that customers do not know and cannot predict the future of financial services, but on the other hand, they are good testers from the point of view of customer experience and innovation that will increase overall satisfaction with customer services.

Other sources of ideas and information from outside the organisation include suppliers, partners and academic institutions. The financial services innovation survey (May-June 2015) conducted by the author revealed that financial service companies are looking for options to open themselves up to the outside. Partners can contribute particular expertise, applicable ideas from a different industry, sector or market, resources that are scarce in the host or other types of value. This allows an organisation to develop services for which there is no in-house knowledge.

The central component of the financial services innovation management model is the innovation process. The innovation process is a stage-gate process led by a development team, where every step means a decision-making body makes a decision (go/ no go decision) about moving to the next stage. Such a stage gating process with the go/no-go decisions will help prioritize activities and funding, allocate time from development team members and mitigate the risks.



Based on the survey conducted by the author, it can be said that financial services providers are adopting formal innovation processes, but this can be further formalized and more widely communicated inside the organization. Accordingly, the financial services innovation management model created by the author is divided into the following stages:

- **Analysis and approval of ideas.** The development team is responsible for gathering together ideas and needs and making an initial analysis. During the analysis, both the company's internal factors (e.g. business strategy and innovation action plan) and external factors (e.g. regulations, competition etc.) must be taken into account, without forgetting the potential risks involved. After identifying the exact needs, potential solutions should be formalized in the form of a memo. The memo contains both a description of the initial solution and a business plan (including the objectives set out in the project). The memo will be presented to the decision-making body by the head of the development team and should be confirmed by the management or decision-making body. This is the first go/no go decision, after which a project team is formed and the main activities are agreed. Such a decision stage makes it possible to avoid ideas that are interesting for the idea generators, but not important or less prioritized for other stakeholders in the financial services company.
- **Planning and approval of activities.** After the acceptance of the idea, the preparation for the next "go/no go" decision starts. This consists of a preliminary market assessment, technical assessment, detailed market study/market research, business/financial analysis, agreeing on product development activities and the formation of the team. These activities will be followed by the second go/no go decision – acceptance of the development activities and resource allocation. After this decision the actual development process can start.
- **Idea realization.** Based on the activities and timetable agreed in the previous stage, the development team members will carry out development activities. Every appointed member of the team knows his/her responsibilities and can devote themselves to the project. Head of the development team is responsible for coordinating activities and communication between the different parties. Additionally, before the actual readiness of the project, the launch stage will be prepared during the development activities (e.g. prototyping, programming, system design, testing).
- **Planning and approval of launch.** The final stage will concentrate on marketing and communication activities (test market/trial sell, pre-commercialization business analysis, full-scale launch). The final timeline for activities will obtain approval via a "go/no go" decision. As in the earlier stages of the decision-making, the possible risks associated with new or improved financial services will be assessed and a launch schedule with responsible parties will be approved. In most cases the corresponding marketing and communication people will join the development team.

The output of such a stage-gate innovation process is a new or improved financial service, the main value of which is the creation of new value for the customer.

- **Feedback and measurement of results.** Based on the financial services innovation questionnaire May–June 2015 conducted by the author it can be said that the prevailing attitude was that an innovation project must have a positive outcome. Accordingly, innovation should be treated as any other business discipline by aligning resources, tools and processes with a clear set of performance goals. Therefore, after the launch, the post-launch review and analysis are always important. This will provide an overview of the achievement of the project goals and proposes ideas for service and innovation process amendments.

As, based on the empirical research, the goal-setting for innovation activities more frequently depend on the exact project, and different key performance indicators can be used to measure project success, the innovation management model requires that at the stage of analysis and approval of the idea, the project objectives will also be confirmed. After an agreed period (e.g. six months or a year), the business plan and set objectives, the activities and timetable of the project will be reviewed by the head of development team and a summary will be presented with commentaries to the decision-making body.

It is not sufficient for organizations to create an innovation action plan; building innovation capability requires a framework for execution and the right organizational structure. The lack of organizational clarity, a formal organizational structure for innovation, or the lack of clear roles and responsibilities (including decision-making process) for innovation may keep some companies from achieving the results they expect from the innovation. Innovation can be organized in multiple ways; it can be centralized or decentralized, enterprise-wide or within a department or development team. Based on the financial services innovation survey (May–June 2015) conducted by the author, it can be said that the optimal organizational structure for innovation will depend on factors like the size of the company, and the innovation action plan.

Usually, innovation is wider than a single department. Innovation can be organized in various departments across the organization, such as customer administration divisions, marketing or IT departments. Such a cross-departmental structure for innovation ensures that innovation is a company-wide concern. On the other hand, it can be delivered within a separate development or strategy planning department, which might facilitate greater focus, exchanges of expertise, standardised ways of working, synergy and streamlining innovation efforts across the organization.

Innovation decisions should be based on consistent and objective metrics and should be made by the decision-making body who will have a clear understanding of its potential value, including the impact of uncertainty and risks. Minimizing

uncertainty, mitigating risks and compliance with regulations can help to prevent costly problems down the line.

Uncertainty, includes legal, technical and market uncertainty. According to the financial services public law framework, one of the main objectives of credit institutions is managing risks and compliance with regulations. Managing risks is at the heart of any business, but in banking it is one of the biggest pre-conditions set by different regulations. Every strategic or innovation decision, should be assessed in terms of risk and potential returns. Only by taking a risk-adjusted view of opportunities can an organisation effectively select and prioritize objectives. Technical uncertainty is about whether a service can actually be developed by existing resources and optimal cost. Innovations should be evaluated against resource constraints to avoid overloading the execution pipeline. Market uncertainty is caused by the unpredictable behaviour of users.

Therefore, all innovations should be prioritized according to the value to be created. Opportunities should be based on alignment with company strategy, ensuring an aligned balance of initiatives to objectives. Such a decision-stage model supports carrying out prioritized activities according to the agreed innovation action plan. At all stages, all possible risks are brought out and options for mitigation discussed. Compliance with regulations is also checked and confirmed.

Clearly defined objectives will serve as the basis for developing an innovation action plan and determining the role that innovation will play in achieving business goals. Surprisingly, based on the survey conducted by the author, only a small number of financial services companies in Estonia have an innovation action plan. The innovation action plan can include a broad variety of elements, starting from alignment with the business strategy, taking innovation objectives, priorities and processes from the business strategy to drive IT and product strategies, and ending with the role of partners in the strategy.

In addition, the innovation action plan includes clear high-level objectives, high-level areas to be funded for innovation, innovation approaches and processes. The innovation action plan can be developed via a combination of top management, business unit heads, and internal innovation experts, but it should be widely communicated inside the organization, focused on people as the key source of competitive advantage. With agreed objectives and priorities, the bank converts its business strategy into tangible commitments toward execution. It acts as the ongoing guidepost to ensure actions and initiatives align with the business strategy.

Crafting an innovation management model requires executives to think about the following internal components that have a significant bearing on the power of innovation and should ideally be aligned with organization vision and mission statements, business strategy and the innovation action plan.

Looking at the environment that is changing with unprecedented speed, banks should re-invent themselves with a vision of why the bank is in the business and how it can best serve the financial needs of customers. The mission and vision are the basis for decisions for how and where the majority of the resources will be invested. The vision statement focuses on the future and describes the future of the organisation and the financial services sector. It provides long-term goals to the employees. The mission statement concentrates on the present, defines critical processes and communicates the desired level of performance.

Based on the company vision and mission statements, the overall business strategy is created and agreed upon. The main aim of a good business strategy is to define what the bank does that is valued by its customers in order to differentiate itself from its competitors, to inspire innovation by providing answers about where the bank wants to be and how to get there. Accordingly, the business strategy provides an overview of the main objectives for the next 3–5 years and defines possible customer segments, markets and activities by which to achieve the desired goals. These objectives are the foundation for the bank's key areas of strategic focus and should be based on a well-articulated vision of its future state. The business strategy will be the basis for budgeting, activity planning and the innovation action plan. By setting priorities, the bank will strongly articulate its strategic intent and ensure that the structure and processes needed to execute the strategy are understood.

It can be said that innovation can be fostered, structured and controlled if an appropriate innovation management model is put in place to stage-gate internal and external ideas and capabilities. This means that organisations can derive new services and revenue streams, create new markets via a pipeline of innovations or other objectives of innovation in a controlled, predictable manner. Ultimately, given our rapidly-changing environment, organisations that are able to evolve in line with the changes and strategic challenges are most likely to survive and thrive.

## CONCLUSIONS

The research problem of this doctoral thesis has been: How to manage financial services innovation? The aim of this study was to fill the gap in the research of financial services innovation management in Estonia, analyse the factors influencing new services outcomes and create a financial services innovation management model for the banking sector.

The author's contribution to the knowledge base of management includes:

1. A financial services innovation management model for banking, taking into account the most important external and internal factors.
2. Analysis of the development of the Estonian banking sector from the perspective of three main external factors – regulations, technology development and customer behaviour.

The contributions to practice are as follows:

1. The thesis provides deeper understanding of financial services innovation in banking for different interest groups, e.g. decision-makers responsible for the banking strategy, regulatory authorities, bank managers and development directors, customers etc.
2. Understanding the development and possible future trends of the banking sector will help the authorities shape the legal framework for the financial services sector fostering technological innovations and sustaining economic growth.
3. The survey conducted indicates that the financial services sector needs strong competition to ensure high-quality services with reasonable price and adequate scope. New stringent regulations tend to favour the less-regulated financial service providers entering the market, and these win customers with more innovative business models and financial solutions.

The study was primarily aimed at development directors and managers of banks and other financial institutions, who want to be successful in meeting all the main strategic challenges and to find new practical solutions for banking or financial services through an innovation model. The main recommendations for them based on the study would be the following:

1. Every organisation must conceptualise what innovation means in their particular context. Incremental innovation can be encouraging for all employees to be part of something important and constructive.
2. A well-communicated innovation action plan provides a clear direction and objectives for the business, identifies strategic arenas and resources allocated, mobilizing the employees to contribute to the innovation process.
3. Innovation process supported by continuous ideas analysis, measurement of results, risk mitigation and compliance controls is fundamental for achieving sustainable growth and profitability.

4. Open innovation and outsourcing technological development are the methods for increasing the efficiency and cutting the costs of financial services innovation.
5. Mutually beneficial cooperation between financial services organisations and academic institutions in finding innovative solutions should be encouraged.
6. The author recommends wider involvement of customers in the financial services innovation process.

This study, like any other, has methodological and conceptual limitations that also indicate opportunities for further research. One of the methodological issues is using non-random sample of financial institutions studied going beyond banking sector.

This survey will hopefully provide valuable directions for future research projects.

**First**, there is a need to investigate financial services innovation in the sub-sectors (insurance companies, asset management companies etc.) and outside of the financial services sector among newcomer companies (e.g. peer-to-peer lending companies, start-up companies, financial technology companies and crowdfunding institutions).

**Second**, relatively little attention has been paid to the impact of strategic planning practices and control mechanisms on financial services innovation strategies and success.

**Third**, the effect of innovation on the economic performance of financial service companies is relatively unexplored in terms of productivity, employment and other variables.

**Fourth**, more in-depth understanding of the actual needs of Estonian customers for financial services is needed to improve the planning of innovation in financial services.

**Fifth**, as the new generations (GenY and GenZ) are among the main challenges in financial services management, their expectations towards financial services as customers and potential employees of financial services companies should also be explored.

**Sixth**, one of the current topics in the banking market is restructuring the bank's commercial activities and focusing for example only on corporate customers. From a theoretical and practical point of view, it is vital to understand how such changes would influence customer expectations and financial services innovation.

## REFERENCES

Aarma, A. 2001. *Segmented Analysis of Bank Customers and Banking Information: the Estonian Case*. Thesis on Economics H1. Tallinn: TTU Press

Aarma, A., Vensel, V. 1996. *Statistika teooria põhikursus*. Tallinn: Külim, pp. 75-90

Accenture. 2008. *Overcoming Barriers to Innovation*. - [http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture\\_PDF\\_3\\_CIE\\_brochure.pdf](http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_PDF_3_CIE_brochure.pdf) (24.06.2015)

Accenture. 2010. *Customer 2012*. - [http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture\\_C2012Time\\_for\\_a\\_new\\_contract.pdf](http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_C2012Time_for_a_new_contract.pdf) (20.06.2015)

Accenture. 2011a. *Enhancing the banking customer value proposition through technology-led innovation*. - [http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture\\_Study\\_Bankingtech\\_E\\_DE.pdf](http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_Study_Bankingtech_E_DE.pdf) (12.08.2014)

Accenture. 2011b. *The Innovation Death Spiral*. - [http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture\\_The\\_Innovation\\_Death\\_Spiral.pdf](http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_The_Innovation_Death_Spiral.pdf) (24.06.2015)

Accenture. 2012a. *Banking 2012: Revenue Growth and Innovation*. - <http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-Banking-2012-Revenue-Growth-Innovation.pdf> (14.08.2014)

Accenture. 2012b. *Banking 2016: Accelerating growth and optimizing costs in distribution and marketing* - <http://www.accenture.com/SiteCollectionDocuments/PDF/FinancialServices/Accenture-Banking-2016.pdf> (20.06.2015)

Accenture. 2014a. *Digital Operations for the Digital Business*. - <http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-Digital-Operations-for-the-Digital-Business.pdf> (18.08.2014)

Accenture. 2014b. *The Digital Disruption in Banking*. – <http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-2014-NA-Consumer-Digital-Banking-Survey.pdf> (20.06.2015)

Alam, I., Perry, C. 2002. *A customer-oriented new service development process*. Journal of Services Marketing, Vol. 16, No. 6, pp. 515-534

Allen, F., Carletti E. 2010. The Roles of Banks in Financial Systems. *The Oxford Handbook of Banking*. Edited by Allen N. Berger, Philip Molyneux, John O.S. Wilson, New York: Oxford University Press, pp. 37-58

Allen, F., Santomero, A.M. 1998. *The Theory of Financial Intermediation*. Financial Institutions Center. The Wharton School, University of Pennsylvania, pp. 96 – 32 – <http://fic.wharton.upenn.edu/fic/papers/96/9632.pdf> (02.06.2014)

Andres, L. 2013. *Designing and Doing Survey Research*. Los Angeles: SAGE Publications Ltd.

Andrieş, A.M. 2008. *Theories Regarding the Banking Activity*. Alexandru Ioan Cuza University, Faculty of Economics And Business Administration, Vol. 55, November, pp. 19-29 – [http://anale.feaa.uaic.ro/anale/resurse/03\\_F12\\_Andries.pdf](http://anale.feaa.uaic.ro/anale/resurse/03_F12_Andries.pdf) (15.06.2014)

*A network of innovation*. 2006. Strategic Direction, Vol. 22, Issue 10, pp. 39-41

Apilo, T. 2010. *A model for corporate renewal. Requirements for innovation management*. Doctoral thesis. Espoo: VTT Publications 750.

Ayadi, R. Arbak, E., de Groen, W.P. 2012. *Regulation of European Banks and Business Models: Towards a New Paradigm?* Brussels: Centre for European Policy Studies, 2012 - <http://www.ceps.eu/book/regulation-european-banks-and-business-models-towards-new-paradigm> (08.06.2014)

*AS SEB Pank aastaaruanne 2012* - [http://www.seb.ee/sites/default/files/web/files/aruanded/seb\\_pank\\_aa\\_2012.pdf](http://www.seb.ee/sites/default/files/web/files/aruanded/seb_pank_aa_2012.pdf) (02.09.2014)

*AS SEB Pank aastaaruanne 2013* - [http://www.seb.ee/sites/default/files/web/files/aruanded/seb\\_pank\\_aa\\_2013.pdf](http://www.seb.ee/sites/default/files/web/files/aruanded/seb_pank_aa_2013.pdf) (02.09.2014)

Balaceanu, V.A. 2011. *Promotional Strategies Direct Marketing and Technological Innovations in Banking*. Journal of Knowledge Management, Economics and Information Technology, Issue 7, pp. 1-13

Bantel, K.A., Jackson, S.E. 1989. *Top Management and Innovations in Banking: Does the Composition of the Top Team Make a Difference?* Strategic management Journal, Vol. 10, pp. 107-124

Barras, R. 1986. *Towards a theory of innovation in services*. Research Policy 15, pp. 161-173

Barth, J.R., Caprio, G., Levine R. 2008. *Bank Regulations are Changing: For Better or Worse?* World Bank Policy Research Working Paper Series, Vol. WPS4646 [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1149579](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1149579) (08.06.2014)

Barth, J.R., Caprio, G., Levine R. 2012. *The Evolution and Impact of Bank Regulation*. Policy World Bank Research Working Paper Series, Vol. WPS6288 - <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-6288> (08.06.2014)



- Barth, J.R., Gan, J., Nolle, D.E. 2009. ***Global Banking Regulation & Supervision: What Are the Issues and What Are the Practices?*** Nova Science Publishers, Inc.
- Baxter, M., Vater, D. 2014. ***Building the retail bank of the future.*** Bain & Company - <http://www.bain.com/publications/articles/building-the-retail-bank-of-the-future.aspx>
- Bátiz-Lado, B., Wood, D. 2002. ***A Historical Appraisal of Information Technology in Commercial Banking.*** Electronic Markets, Volume 12 (3), pp. 1-12
- Benink, H.A., Benston, G.J. 2005. ***The Future of Banking Regulation in Developed Countries: Lessons from and for Europe.*** Financial Markets, Institutions & Instruments, Vol. 14, No. 5, pp. 289-328
- Biege, S., Lay, G., Zanker, C., Schmall, T. 2013. ***Challenges of measuring service productivity in innovative, knowledge-intensive business services.*** The Service Industries Journal, Vol. 33, No. 3-4, pp. 378-391
- Blazevic, V., Lievens, A. 2004. ***Learning during the new financial service innovation process. Antecedents and performance effects.*** Journal of Business research. Vol. 57, pp. 374-391
- Blommestein, H.J. 2006. ***Visions about the Future of Banking.*** SUERF studies 2/2006, SUERF - The European Money and Finance Forum, Vienna 2006 – <http://www.suerf.org/download/studies/study20062.pdf> (28.08.2014)
- Buganza, T., Verganti, R. 2006. ***Life-cycle flexibility: How to measure and improve the innovative capability in turbulent environments.*** Journal of Product Innovation Management. Vol. 8, No. 23, pp. 393-407
- Burton, M., Lombra, R. 2000. ***The Financial System and the Economy.*** South-Western College Publishing
- Buzzavo, L. 2012. ***Strategy innovation as business model reconfiguration.*** Università Ca' Foscari Venezia. Working Paper no. 2/2012
- Capgemini. 2012. ***Trends in Retail Banking Channels: Improving Client Service and Operating Costs*** – [http://www.capgemini.com/resource-file-access/resource/pdf/Trends\\_in\\_Retail\\_Banking\\_Channels\\_\\_Improving\\_Client\\_Service\\_and\\_Operating\\_Costs.pdf](http://www.capgemini.com/resource-file-access/resource/pdf/Trends_in_Retail_Banking_Channels__Improving_Client_Service_and_Operating_Costs.pdf) (17.08.2014)
- Capgemini. 2013. ***Trends in Retail Banking Channels: Meeting Changing Client Preferences*** – [https://www.capgemini.com/resource-file-access/resource/pdf/trends\\_in\\_retail\\_banking\\_channels\\_meeting\\_changing\\_client\\_preferences.pdf](https://www.capgemini.com/resource-file-access/resource/pdf/trends_in_retail_banking_channels_meeting_changing_client_preferences.pdf) (20.06.2015)

Capgemini and Efma 2014. **World Retail Banking Report 2014**. - <https://www.capgemini.com/thought-leadership/world-retail-banking-report-2014> (20.06.2015)

Capgemini and Efma. 2015. **World Retail Banking Report 2015**. - <https://www.worldretailbankingreport.com/> (20.06.2015)

Capgemini Consulting. 2012. **Innovation leadership study. Managing innovation: an insider perspective**. – [https://www.capgemini.com/resource-file-access/resource/pdf/Innovation\\_Leadership\\_Study\\_\\_\\_\\_\\_Managing\\_innovation\\_\\_An\\_insider\\_perspective.pdf](https://www.capgemini.com/resource-file-access/resource/pdf/Innovation_Leadership_Study_____Managing_innovation__An_insider_perspective.pdf) (25.06.2015)

Capgemini Consulting. 2013. **Backing up the Digital Front: Digitizing the Banking Back Office** - [http://www.capgemini.com/resource-file-access/resource/pdf/backing\\_up\\_the\\_digital\\_front25\\_11\\_0.pdf](http://www.capgemini.com/resource-file-access/resource/pdf/backing_up_the_digital_front25_11_0.pdf) (09.09.2014)

Carlborg, P., Kindström, D., Kowalkowski, C. 2014. **The evolution of service innovation research: A critical review and synthesis**. Service Industries Journal. Vol. 34, No. 5, pp. 373-398

Carlson, C.R., Wilmot, W.W. 2006. **Innovation. The Five Disciplines for Creating What Customers Want**. New York: Crown Business

Cavalcanti, C., Oks, D. 1998. **Estonia: The Challenge of Financial Integration**, ECSPE Technical Paper No. 1946, The World Bank

Cecchetti, S. **The Future of Financial Intermediation and Regulation**. Second Conference of the European System of Central Banks Macro-Prudential Research Network, Frankfurt, Germany, 30 October 2012 - [https://www.ecb.europa.eu/events/pdf/conferences/mar\\_net/Cecchetti\\_2012-10-30.pdf?9fc5c0e21fdad8fa77a1f89c63141bd3](https://www.ecb.europa.eu/events/pdf/conferences/mar_net/Cecchetti_2012-10-30.pdf?9fc5c0e21fdad8fa77a1f89c63141bd3) (08.06.2014)

Chai, K.H., Tan, K.C. 2014. **New service development maturity model**. Managing Service Quality, Vol. 24, Issue 1, pp. 86-116

Chakravorti, S., Kobor, E. 2003. **Why invest in payment innovations?** Emerging Payments Occasional Papers Series, Federal Reserve Bank of Chicago

Champagne, J. 2014. **Levers of Innovation in the Financial Industry**. Organization Development Journal. July 1, 2014 - <http://www.highbeam.com/doc/1P3-3332325521.html> (23.08.2014)

Christensen, J.L., Drejer, I. 2007. **Blurring boundaries between manufacturing and services**. Denmark: Aalborg University

Claessens, S. 2006. *Current Challenges in Financial Regulation*. World Bank Policy research Working Paper 4103 - <http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-4103> (01.01.2014)

Claessens, S., Glaessner, T, Kliengebiel, D. 2001. *E-finance in Emerging Markets: Is Leapfrogging Possible?* World Bank Financial Sector Discussion Paper No. 7, - [http://www1.worldbank.org/finance/assets/images/e-finance\\_ii.pdf](http://www1.worldbank.org/finance/assets/images/e-finance_ii.pdf)

Cooper, R.G. 1994. *Third-generation New Product Processes*. Journal of Product innovation management, Vol. 11, pp. 3-14

Cooper, R.G., Edgett, S.J. 2010. *Developing a product innovation and technology strategy for your business*. Research Technology Management, Vol. 53, No.3, pp. 33-40

Crockett, A. 2011. *What Financial System for the Twenty-First Century?* Per Jacobsson Foundation – <http://www.perjacobsson.org/lectures/062611.pdf> (26.12.2013)

Cunliffe, J. 2014. *Is the World Financial System Safer Now?* Conference on Global Financial Markets: new rules on market structure, trading and funding. London, 17 March 2014 - <http://www.bis.org/review/r140507f.pdf> (02.06.2014)

Davidson, H. 1990. *The Development of New Products in the Personal Financial Services Sector*. Doctoral Thesis. Dorset Institute.

Davila, T., Epstein, M.J., Shelton, R.D. 2013. *Making Innovation Work. How to Manage It, Measure It, and Profit from It*. USA: Pearson Education, pp. xlv-xlvi

de Bretani, U. 1989. *Success and failure in new industrial services*. Journal of Product Innovation Management. Vol. 6, Issue 4, pp. 239-258

de Jong, J.P.J., Bruins, A., Dolfsma, W., Meijaard, J. 2003a. *Innovation in Service Firms Explored: What, How and Why?*, EIM Business & Policy Research, Zoetermeer.

de Jong, J.P.J., Vermeulen, P.A.M. 2003b. *Organizing successful new service development: a literature review*. Management Decision, Vol. 41, Issue 9, pp. 844-858

de la Torre, A., Feyen, E, Ize, Alain. 2011. *Financial Development. Structure and Dynamics*. Policy research Working Paper, The World Bank- [http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2011/10/24/000158349\\_20111024134059/Rendered/PDF/WPS5854.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2011/10/24/000158349_20111024134059/Rendered/PDF/WPS5854.pdf) (15.06.2014)

Delimatsis, P. 2012. *Financial Innovation and Prudential Regulation – The Impact of the New Basel III Rules*. Swiss National Science Foundation, Working Paper No 2012/25 – [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2044694](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2044694) (27.07.2014)

Deloitte. 2008. *Evolving Models of Retail Banking Distribution*. – <http://www.pdfdrive.net/evolving-models-of-retail-banking-distribution-e235567.html> (21.06.2015)

Deloitte. 2013. *Global risk management survey, eighth edition: Setting a higher bar*. - [http://www.deloitte.com/assets/dcom-unitedstates/local%20assets/documents/us\\_fsi\\_aers\\_global\\_risk\\_management\\_survey\\_8thed\\_072913.pdf](http://www.deloitte.com/assets/dcom-unitedstates/local%20assets/documents/us_fsi_aers_global_risk_management_survey_8thed_072913.pdf) (27.07.2014)

Deloitte 2014. *From follower to leader. Innovation strategies in retail financial services*. Deloitte University Press

Demirgüç-Kunt, A. 2010. Finance and Economic Development. The Role of Government. *The Oxford Handbook of Banking*. Edited by Allen N. Berger, Philip Molyneux and John O.S. Wilson. New York: Oxford University Press, pp. 729-755

Demirgüç-Kunt, A., Levine, R. 2001. Financial Structure and Economic Growth: Perspectives and Lessons. *Financial Structure and Economic Growth. A Cross-Country Comparison of Banks, Markets, and Development*. Edited by Demirgüç-Kunt, A.; Levine, R. Massachusetts Institute of Technology, pp. 3-14

den Hertog, P., Bilderbeek, R. 1999. *Conceptualising Service Innovation and Service Innovation Patterns*. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.102.9390&rep=rep1&type=pdf> (02.05.2015)

Diamond, D.W. 1996. *Financial Intermediation as Delegated Monitoring: A Simple Example*. Economic Quarterly, Federal Reserve Bank of Richmond, Vol. 82, No. 3, pp. 51-66 - [http://www.richmondfed.org/publications/research/economic\\_quarterly/1996/summer/pdf/diamond.pdf](http://www.richmondfed.org/publications/research/economic_quarterly/1996/summer/pdf/diamond.pdf) (16.06.2014)

*Directive 2008/48/EC* – <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:133:0066:0092:EN:PDF> (25.06.2014)

*Directive on Payment Service* - [http://ec.europa.eu/internal\\_market/payments/framework/index\\_en.htm](http://ec.europa.eu/internal_market/payments/framework/index_en.htm) (24.06.2014)

Dolfsma, W. 2004. *The Process of New Service Development – Issues of Formalization and Appropriability*. International Journal of Innovation Management, Vol. 08, Issue 03, pp. 319-337

Dooley, K., Subra, A., Andreson, J. 2001. ***Maturity and its impact on new product development project performance***. Research in Engineering Design, Vol. 13 No. 1, pp. 23-29

Dosi, G. 1988. The Nature of the Innovative Process. ***Technical Change and Economic Theory***. Edited by Dosi, G., Freeman, C., Nelson, R., Silverberg, G., Soete, L. Pinter Publisher, London and New York, pp. 221-237

Drew, S.A.W. 1995. ***Strategic benchmarking***. International Journal of Bank Marketing, Vol. 13, Issue 1, pp. 4-16

Droege, H., Hildebrand, D., Forcada, M.A.H. 2009. ***Innovation in services: present findings, and future pathways***. Journal of Service Management. Vol. 20., No. 2, pp. 131-156

Duisenberg, W.F. 2001. ***Finantsturgude roll majanduskasvus***. Eesti Panga Bülletään nr. 8, pp. 14-18

Edvardsson, B., Olsson, J. 1996. ***Key Concepts for New Service Development***. The Services Industries Journal, Vol. 16., No. 2, pp. 140-164

Eerma, D. 2001. The Role of Modern Financial System Development in Economy. ***Harmonisation and Freedom in the Economic Policy of Estonia Integrating with the European Union. Reports-papers of the IX scientific and educational conference (Tartu – Vürska, 28.-30. June 2001)***. Tallinn: Mattimar OÜ, pp. 38-44

***Eesti Panga 1993. aasta aruanne***. 1994 - <http://www.eestipank.ee/publikatsioon/aastaaruanne/1993/eesti-panga-1993-aasta-aruanne> (23.06.2014)

***Eesti Panga 1994. aasta aruanne***. 1995 - <http://www.eestipank.ee/publikatsioon/aastaaruanne/1994/eesti-panga-1994-aasta-aruanne> (23.06.2014)

***Eesti Panga 1995. aasta aruanne***. 1996 - <http://www.eestipank.ee/publikatsioon/aastaaruanne/1995/eesti-panga-1995-aasta-aruanne> (24.06.2014)

***Eesti Panga 1996. aasta aruanne***. 1997 - <http://www.eestipank.ee/publikatsioon/aastaaruanne/1996/eesti-panga-1996-aasta-aruanne> (24.06.2014)

***Eesti Panga 1997. aasta aruanne***. 1998 - <http://www.eestipank.ee/publikatsioon/aastaaruanne/1997/eesti-panga-1997-aasta-aruanne> (24.06.2014)

***Eesti Panga 1998. aasta aruanne***. 1999 - <http://www.eestipank.ee/publikatsioon/aastaaruanne/1998/eesti-panga-1998-aasta-aruanne> (24.06.2014)

***Eesti Panga 1999. aasta aruanne***. 2000 - <http://www.eestipank.ee/publikatsioon/aastaaruanne/1999/eesti-panga-1999-aasta-aruanne> (24.06.2014)

***Eesti Panga 2000. aasta aruanne.*** 2001 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2000/eesti-panga-2000-aasta-aruanne> (24.06.2014)

***Eesti Panga 2001. aasta aruanne.*** 2002 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2001/eesti-panga-2001-aasta-aruanne> (24.06.2014)

***Eesti Panga 2002. aasta aruanne.*** 2003 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2002/eesti-panga-2002-aasta-aruanne> (24.06.2014)

***Eesti Panga 2003. aasta aruanne.*** 2004 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2003/eesti-panga-2003-aasta-aruanne> (24.06.2014)

***Eesti Panga 2004. aasta aruanne.*** 2005 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2004/eesti-panga-2004-aasta-aruanne> (24.06.2014)

***Eesti Panga 2005. aasta aruanne.*** 2006 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2005/eesti-panga-2005-aasta-aruanne> (24.06.2014)

***Eesti Panga 2006. aasta aruanne.*** 2007 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2006/eesti-panga-2006-aasta-aruanne> (24.06.2014)

***Eesti Panga 2007. aasta aruanne.*** 2008 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2007/eesti-panga-2007-aasta-aruanne> (24.06.2014)

***Eesti Panga 2008. aasta aruanne.*** 2009 - <http://www.eestipank.ee/publikatsioon/aastaruanne/2008/eesti-panga-2008-aasta-aruanne> (24.06.2014)

***Eesti Panga 2009. aasta aruanne.*** 2010 – <http://www.eestipank.ee/publikatsioon/aastaruanne/2009/eesti-panga-2009-aasta-aruanne> (24.06.2014)

***Eesti Panga 2010. aasta aruanne.*** 2011 – <http://www.eestipank.ee/publikatsioon/aastaruanne/2010/eesti-panga-2010-aasta-aruanne> (24.06.2014)

***Eesti Panga 2011. aasta aruanne.*** 2012 – <http://www.eestipank.ee/publikatsioon/aastaruanne/2011/eesti-panga-2011-aasta-aruanne> (24.06.2014)

***Eesti Panga 2012. aasta aruanne.*** 2013 – <http://www.eestipank.ee/publikatsioon/aastaruanne/2012/eesti-panga-2012-aasta-aruanne> (24.06.2014)

Eesti Pangaliit. 2007. ***15 aastat Eesti Pangaliitu 1992-2007***

***Eesti Statistika aastaraamat. 2014.*** Tallinn: Eesti Statistikaamet, pp. 355-360 - <http://www.stat.ee/72571>

*Eestis kasutatakse senisest rohkem internetipanka ja sularahaautomaate* - <http://www.eestipank.ee/press/eestis-kasutatakse-senisest-rohkem-internetipanka-ja-sularahaautomaate-24072014> (03.08.2014)

*Eesti Panga seadus*. RT I 23.12.2011, 13 - <https://www.riigiteataja.ee/akt/123122011013> (03.07.2014)

*Eesti Vabariigi Põhiseadus*. RT 1992, 26, 349 - <https://www.riigiteataja.ee/akt/633949> (18.06.2014)

Efma. 2010. *Transforming Retail Banking to Reflect the New Economic Environment*. A report by the EFMA Banking Advisory Council in partnership with Microsoft - <http://download.microsoft.com/download/B/8/C/B8C335B3-9316-4604-BA57-B59C88478221/Microsoft%20EFMA%20Report%20-%20Transforming%20Retail%20Banking%20to%20Reflect%20the%20New%20Economic%20Environment.pdf> (19.08.2014)

Efma. 2011. *A New Landscape for Retail Banking*. Developing channels to enhance the customer experience - <http://www.efma.com/index.php/resources/studies/detail/EN/1/507/1-HQ4CP> (26.08.2015)

Efma. 2013. *Innovation in Retail Banking*. Simplify Technology to Innovate. 5<sup>th</sup> Annual Edition

Efma. 2014. *Innovation in Retail Banking*. Delivering Superior Customer Value. 6<sup>th</sup> Annual Edition

Egrett, S.J. 1996. *The new product development process for commercial financial services*. Industrial Marketing Management, Vol. 25, No. 6, pp. 507-515

Eller, M., Haiss, P., Steiner, K. 2006. *Foreign direct investment in the financial sector and economic growth in Central and Eastern Europe: The crucial role of the efficiency channel*. Emerging Markets Review No. 7, pp. 300-319

Engen, M., Holen, E. 2014. *Radical Versus Incremental Innovation: The Importance of Key Competences in Service Firms*. Technology Innovation Management Review, 4 (4), pp. 15-25

Ernst & Young 2012. *Financial regulatory reform. What it means for bank business models*. - [http://www.amcham.ro/UserFiles/articleFiles/Financial-reg-reform-what-it-means-for-banks\\_01151649.pdf](http://www.amcham.ro/UserFiles/articleFiles/Financial-reg-reform-what-it-means-for-banks_01151649.pdf) (20.06.2015)

*Estonia Review of the Financial System*, October 2011. OECD - [www.oecd.org/finance/financial-markets/49497930.pdf](http://www.oecd.org/finance/financial-markets/49497930.pdf) (05.07.2014)

**Estonian Banking Association** - home page – <http://pangaliit.ee/et/oigusaktid/hea-pangandustava> (24.06.2014)

European Commission. 2013. **A comprehensive EU response to the financial crisis: substantial progress towards a strong financial framework for Europe and a banking union for the eurozone**. Brussels, 17 December 2013 - [http://europa.eu/rapid/press-release\\_MEMO-13-1168\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-1168_en.htm) (08.06.2014)

Fagerberg, J. 2006. **Innovation: A Guide to the Literature**. The Oxford Handbook of Innovation. Edited by Fagerberg, J., Mowery, D.C., Nelson R.R. New York: Oxford University Press Inc. pp.1-26

Farsi, J.Y., Taghizadeh, S. 2012. **Success factors in new banking services development in Iran**. Global Journal of International Business Research. Vol. 5, No. 5, pp. 35-51

**Financial services sector in Estonia. Growth opportunities and policy implications**. Report prepared for the Ministry of Economic Affairs of Estonia and the Development Fund of Estonia, Oxera 2009 – <http://www.arengufond.ee/upload/Editor/teenused/EDF-Oxera-final-report-November-2009.pdf> (24.06.2014)

Financial Stability Board 2011. **Shadow Banking: Strengthening Oversight and regulation**. Recommendations of the Financial Stability Board.

**Finantsinspeksioon**. Home page - <https://www.fi.ee/index.php?id=580> (03.07.2014)

**Finantsinspeksiooni aastaraamat 2008**. 2009 - [http://www.fi.ee/aastaraamat2008/aastaraamat\\_2008\\_ee.pdf](http://www.fi.ee/aastaraamat2008/aastaraamat_2008_ee.pdf) (24.06.2014)

**Finantsinspeksiooni aastaraamat 2010**. 2011 - [http://www.fi.ee/aastaraamat2010/aastaraamat\\_2010\\_eesti.pdf](http://www.fi.ee/aastaraamat2010/aastaraamat_2010_eesti.pdf) (24.06.2014)

**Finantsinspeksiooni aastaraamat 2011**. 2012 - [http://www.fi.ee/aastaraamat2011/pdf/aastaraamat\\_2011\\_eesti.pdf](http://www.fi.ee/aastaraamat2011/pdf/aastaraamat_2011_eesti.pdf) (24.06.2014)

**Finantsinspeksiooni aastaraamat 2012**. 2013 - [http://www.fi.ee/aastaraamat2012/pdf/aastaraamat\\_2012\\_eesti.pdf](http://www.fi.ee/aastaraamat2012/pdf/aastaraamat_2012_eesti.pdf) (24.06.2014)

**Finantsinspeksiooni aastaraamat 2014**. 2015 – <http://www.fi.ee/aastaraamat2014/>

**Finantsinspeksiooni seadus**. RT I, 12.07.2013, 4 - <https://www.riigiteataja.ee/akt/112072013004> (03.07.2014)

Fisk, R.P., Brown, S.W., Bitner, M.J. 1993. **Tracking the evolution of the services marketing literature**. Journal of Retailing, Vol. 69, No.1, pp. 61-103



Frame, W.S., White, L.J. 2002. ***Empirical Studies of Financial Innovations: Lots of Talk, Little Action***. Conference on Innovations in Financial Services and Payments, Federal Reserve Bank of Philadelphia, May 16-17, 2002

Francis, D., Bessant, J. 2005. ***Targeting innovation and implications for capability development***. Technovation, Vol. 25, Issue 3, pp.171-183

Froehle, C.M., Roth, A.V., Chase, R.B. and Voss, C.A. 2000. ***Antecedents of new service development effectiveness: an exploratory examination of strategic operations choices***. Journal of Service Research, Vol. 3, No.1, pp. 3-17

Furseth, P.I., Cuthbertson, R. 2013. ***The service innovation triangle: a tool for exploring value creation through service innovation***. International Journal of Technology Marketing, Vol. 8, No. 2, pp. 159-176

***G20 Leaders' Statement at the 2009 London Summit*** - [http://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/WCMS\\_178769/lang-en/index.htm](http://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/WCMS_178769/lang-en/index.htm) (08.06.2014)

Gadrey, J., Gallouj, F., Weinstein, O. 1995. ***New modes of innovation. How services benefit industry***. International Journal of Service Industry, Vol. 6, No. 3, pp. 4-16

Gallouj, F., Weinstein, O. 1997. ***Innovation in services***. Research Policy, Vol. 26, pp. 537-556

Garcia, R., Calantone, R. 2002. ***A critical look at technological innovation typology and innovativeness terminology: a literature overview***. The Journal of Product Innovation Management Vol.19, Issue 2, pp. 110-132.

Gebauer, H., Friedli, T. and Fleisch, E. 2006. ***Success factors for achieving high services revenues in manufacturing firms***. Benchmarking, Vol. 13, No. 3, pp. 374-386

Gillham, B. 2008. ***Developing a Questionnaire***. London: Continuum International Publishing Group

Gold, A.H., Malhotra, A., Segars, A.H. 2001. ***Knowledge management: an organizational capabilities perspective***. Journal of Management Information Systems, Vol. 18, No. 1, pp.185-214.

Gray, D.E. 2013. ***Doing Research in the Real World***. Los Angeles: SAGE Publications Ltd.

Gremyr, I., Witell, L., Löfberg, N., Edvardsson, B., Fundin, A. 2014. ***Understanding new service development and service innovation through innovation modes***. Journal of Business & Industrial Marketing 29/2, pp. 123-131

Griffin, A. 1997. *PDMA research on new product development practices: updating trends and benchmarking best practices*. Journal of Product Innovation Management, Vol. 14 No. 6, pp. 429-458

*Guarantee Fund* – homepage - <http://www.tf.ee/>

Hagelberg, R. 2001. *Pangandust reguleerivate seaduste kujunemisest taasiseseisvunud Eestis, Mõningaid tähelepanekuid*. Juridica, nr. 3, 153-159

Hamburg, A., Kõörna, A. 2009. *Innovatsioon: teooria ja praktika*. Tallinn: Euroülikool

Hansson, A. 1995. Reforming the Banking System in Estonia. *Banking Reform in Central Europe and the Former Soviet Union*. Edited by J. Rostowski. Budapest: Central European University Press, pp. 142-165

Henderson, R.M., Clark, K.B. 1990. *Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms*. Administrative Science Quarterly, March 35, 1, pp. 9 -30

Hipp, C. 2009. *Collaboration for Innovation in Services*. Working Paper nr. 7. Brandenburg University of Technology Cottbus

Hoening, T.M. *Rethinking Financial Regulation*. Economic Review, Federal Reserve Bank of Kansas City, Second quarter 1996, pp. 5-13 - <http://www.kc.frb.org/publicat/ECONREV/pdf/2q96hoen.pdf> (08.06.2014)

Hoiu-laenuühistu seadus. RT I 1999, 24, 357 - <https://www.riigiteataja.ee/akt/13331199> (03.07.2014)

Hubbard, R. G. 1997. *Money, the Financial System, and the Economy*. Addison Wesley Longman, pp. 35-49

Hurmonen, S. 2012. *Service innovation development and knowledge integration practices. Comparative case study on KIBS sector*. Master's thesis, Lappeenranta University of Technology

Ideon, A. 2001. *Kapitali süünd*. Tallinn: Hansapank

*Investment Services Directive* – Markets in Financial Instruments Directive (MiFID) – [http://ec.europa.eu/internal\\_market/securities/isd/mifid/index\\_en.htm](http://ec.europa.eu/internal_market/securities/isd/mifid/index_en.htm) (24.06.2014)

Jaakkola, E., Alexander, M. *The Role of Customer Behavior in Value Co-Creation: A Service System Perspective*. Journal of Service Research. Vol. 17, No. 3, pp. 247-261

- Johne, A. 1993. ***Insurance Product Development: Managing the Changes***. International Journal of Bank Marketing. Vol. 11, Issue 3, pp. 5-14
- Johnson, M.W., Christensen, C., Kagermann, H. 2008. ***Reinventing your business model***. Harvard Business Review, Vol. 86, No. 12, pp. 50-59
- Juhkam, A. 2003. ***Financial Innovation in Estonia***. PRAXIS Working Paper No. 6
- Juuse, E., Kattel, R. 2013. ***The Estonia Financial System***. FESSUD Studies in Financial Systems, No. 1 – [http://fessud.eu/?page\\_id=665](http://fessud.eu/?page_id=665) (23.06.2014)
- Kasanen, E., Lukka, K., Siitonen, A. 1993. ***The constructive approach in management accounting***. Journal of Management Accounting Research, Vol. 5, pp. 243-264
- Kerem, K. 2003a. ***From Adaption to Relationships: Internet Banking in Estonia***. Doctoral thesis. Tallinn: TTU Press
- Kerem, K. 2003b. ***Internet Banking in Estonia***. PRAXIS Working Paper No. 7 – [http://praxis.ee/fileadmin/tarmo/Toimetised/toimetised\\_07\\_2003.pdf](http://praxis.ee/fileadmin/tarmo/Toimetised/toimetised_07_2003.pdf) (13.08.2014)
- Kindström, D., Kowalkowski, C. 2009. ***Development of industrial service offerings: a process framework***. Journal of Service Management, Vol. 20, No.2, p 156-172
- King, N., Horrocks, C. 2010. ***Interviews in Qualitative Research***. Los Angeles: SAGE Publications Ltd.
- Klein, K.J., Sorra, J.S. 1996. ***The Challenge of Innovation Implementation***. The Academy of Management Review. Vol. 21, No. 4, pp. 1055-1080
- Klimašaukas, D., Fikrle, O. 2014. ***Pank Facebookis? Miks ka mitte!*** KPMG Foorum 1/2014, pp. 36-37.
- Kline, S.J., Rosenberg, N. 1986. ***An Overview of Innovation***. The Positive Sum Strategies: Harnessing Technology for Economic Growth, National Academic Press pp. 275 – 305 – [http://www.nap.edu/openbook.php?record\\_id=612&page=275](http://www.nap.edu/openbook.php?record_id=612&page=275) (10.05.2015)
- Komaladewi, R., Nanere, M., Suryana, Y., Rufaidah, P. 2012. ***Service innovation in Banking Industry: a Literature Survey***. World Journal of Social Sciences, Vol. 2, No. 7, pp. 1-8
- Kotsemir, M., Abroskin, A., Meissner, D. 2013. ***Innovation Concepts and Typology – An Evolutionary Discussion***, National Research University Higher

School of Economics. MPRA Paper No. 46667 - [http://mpra.ub.uni-muenchen.de/46667/1/MPRA\\_paper\\_46667.pdf](http://mpra.ub.uni-muenchen.de/46667/1/MPRA_paper_46667.pdf) (24.05.2015)

KPMG. 2009. *Never again? Risk management in banking beyond the credit crisis* – <https://www.kpmg.com/LU/en/IssuesAndInsights/Articlespublications/Documents/Riskmanagementinbankingbeyondthecreditcrisis.pdf> (20.06.2015)

KPMG. 2013. *The Social Banker v2.0. Social media lessons from banking insiders*. – <http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/social-banker/Documents/the-social-banker-v2.0.pdf> (28.08.2014)

KPMG. 2014. *Evolving Banking Regulation. EMA Edition. Is the end in sight?* – <http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/evolving-banking-regulation/Documents/evolving-banking-regulation-ema-2014-v3-fs.pdf> (20.06.2015)

*Krediidiastutuste seadus*. RT I, 02.11.2011, 8 – <https://www.riigiteataja.ee/akt/102112011008> (01.01.2014)

Kuittinen, H. 2011. *Analysis on Firm Innovation Boundaries*. Doctoral thesis. Lappeenranta University of Technology

Köörna, A. 2005. *Innovatsioon ja teadus*. Tallinn: Euroülikool

Lainela, S., Sutela P. 1994. *The Baltic Economies in Transition*. Bank of Finland, A:91, pp. 90-111 – [http://www.suomenpankki.fi/bofit\\_en/tutkimus/muu\\_tutkimus/Documents/baleco.pdf](http://www.suomenpankki.fi/bofit_en/tutkimus/muu_tutkimus/Documents/baleco.pdf) (23.06.2014)

Lamberti, H.-J., Büger, M. 2009. *Lessons Learned: 50 Years of Information Technology in the Banking Industry – The Example of Deutsche Bank AG*. Business & Information Systems Engineering, Vol.1, Issue.1, pp. 26-36

Land, S. 2010. *New Product Development – a Contingency Perspective on the Creation, Management and Application of Knowledge in Corporate R&D Activities*. Doctoral thesis. RWTH Aachen University

*Leading for innovation and organizing for results*. 2002. Edited by Hesselbein, F., Goldsmith, M, Somerville, I. San Francisco: A Wiley Company, pp. xi –xii

Lehtiranta, L., Junnonen, J-M., Kärnä, S., Pekuri, L. 2015. The Constructive Research Approach: Problem Solving for Complex Projects. **Designs, Methods and Practices for Research of Project Management**. Edited by Beverly Pasion, Gower Publishing Limited, pp. 95-107

Leich, D.M., Gökduman, D.-B.S., Baaken, T. *Service innovation. An Evaluation of New Service Development Practice*. Project Report. Fachhochschule Münster

Leiponen, A. 2008. *Is service innovation different?* Discussion Papers, no. 1151. Helsinki: Elinkeinoelämän Tutkimuslaitos, The Research Institute of the Finnish Economy

Lester, D. 1998. *Critical success factors for new product development*. Research Technology Management, Vol. 41, No.1, pp. 36-43

Levine, R. 2011. *Regulating Finance and Regulators to Promote Growth*. Federal Reserve Bank of Kansas City Jackson Hole Symposium, „Achieving Maximum Long-Run Growth“ August 25-27, 2011 - <http://www.kc.frb.org/publicat/sympos/2011/2011.Levine.Paper.pdf> (26.07.2014)

Liikanen, E. 2014. *Europe without banks? The future of financial sector*. The Alpbach Financial Market Symposium, Alpbach, Austria 28. August 2014 - <http://www.bis.org/review/r140905a.htm> (23.09.2014)

Lindgaard, S. 2011. *Making Open Innovation Work*. - <http://www.15inno.com/2011/10/28/free-book-making-open-innovation-work/> (24.05.2015)

Link, A.N. 2011. *Entrepreneurship, Innovation, and Technological Change*. The University of Kansas School of Business The Center for Applied Economics. Technical Report 07-0716

Listra, E. 2001. *The Development and Structure of Banking Sector: Retail Banking in Estonia*. Doctoral thesis. Tallinn: TTU Press

Llewellyn, D. 1999. *The Economic Rationale for Financial Regulation*. FSA Occasional Paper Series 1, London - <http://www.fsa.gov.uk/pubs/occpapers/op01.pdf> (25.07.2014)

Lorange, P., Rembiszewski, J. 2014. *From Great to Gone*. Farnham: Gower, pp. 2-19

Lovelock, C.H., Gummesson, E. 2004. *Whither services marketing? In search of a new paradigm and fresh perspectives*. Journal of Service Research, Vol. 7., No. 1, pp. 20-41

Lowe, P. 2012. *Bank Regulation and the Future of Banking*. Australian Conference of Economists, Melbourne, 11.July 2012 - <http://www.rba.gov.au/speeches/2012/sp-dg-110712.html> (28.07.2014)

Luštšik, O. 2003. *E-banking in Estonia: reasons and benefits of the rapid growth*. University of Tartu. – <http://www.mtk.ut.ee/sites/default/files/mtk/toimetised/febawb21.pdf> (06.08.2014)

Mack, N., Woodson, C., MacQueen, K.M., Guest, G., Namey, E. 2005. ***Qualitative Research Methods: A Data Collector's Field Guide***. Family Health International. USA: North Carolina

Magnusson, P.R., Matthing, J., Kristensson, P. 2003. ***Managing User Involvement in Service Innovation. Experiments With Innovating End Users***. Journal of Service Research, Vol. 6, No.2, November 2003, pp. 111-124

Mariotto, C., Verdier, M. 2014. ***Innovation and competition in the retail banking industry: an industrial organizational perspective***. - [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2505682](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2505682)

Mark, M., Raa, R., Siibak, K., Tupits, A. 2003. ***Eesti pangandusõiguse alused***. Tallinn: Kirjastus Juura

Masso, J., Vahter, P. 2011. ***The Link between Innovation and Productivity in Estonian Service Sector***. Tartu: University of Tartu

Maxwell, I.E. 2009. ***Managing Sustainable Innovation***. New York: Springer

Melvin, J.R. 1995. ***History and Measurement in the Service Sector: A Review***. Review of Income and Wealth, Vol. 41, No. 4, pp. 481-494 - <http://www.roiwi.org/1995/481.pdf> (09.05.2015)

Meidan, A. 1996. ***Marketing Financial Services***. London: Macmillan Press Ltd

Menor, L.J., Roth, A.V. 2007. ***New service development competence in retail banking: construct development and measurement validation***. Journal of Operations Management, Vol. 25, No.4, pp. 825-846

Menor, L.J., Roth, A.V. 2008. ***New service development competence and performance: an empirical investigation in retail banking***. Production and Operations Management, Vol. 17, No.3, pp. 267-284

Michel, S., Brown, S., Gallan, A. 2008. ***Service-logic innovations: how to innovate customers, not products***. California Management Review. Vol. 50, No. 3, pp. 49-55

Miles, I. 2000. ***Services innovation: coming of age in the knowledge-based economy***. International Journal of Management, Volume 4, pp. 371-389

Miles, I. 2008. ***Patterns of innovation in services industries***. IBM Systems Journal, Vol. 47, No. 1, pp. 115-128

Miller, L., Miller, R. 2012. ***Classifying innovation***. International Journal of Innovation and Technology Management. Vol. 9, No. 1, pp. 1-18

Moore, W.L., Pessemier, E.A. 1993. *Product Planning and Management. Designing and Delivering Value*. USA: McGraw-Hill, pp. 1-2, 11-15

Morrar, R. 2014. *Innovation in Services: a Literature Review*. Technology Innovation Management Review. 4 (4): pp. 6-14 - <http://timreview.ca/article/780> (10.09.2015)

Myers, M.D. 2009. *Qualitative Research in Business and Management*. Los Angeles: SAGE Publications Limited

Mwenda, K.K. 2006. *Legal Aspects of Financial Services Regulation and the Concept of a Unified Regulator*. Washington: The World Bank, pp. 1-16

Nets Estonia homepage – <http://www.nets.eu/etee/english/summary/Pages/default.aspx#>

*New Paradigms for Financial Regulation*. Emerging Market Perspectives. Edited by Kawai, M. and Prasad, E.S. Brookings Institution Press and Asian Development Bank Institute, 2012

Neyapti, B., Dincer, N. 2000. *Measuring The Quality Of Bank Regulation And Supervision and Its Macroeconomic Effects*. An Application to Transition Economies - <http://neyapti.bilkent.edu.tr/rs2001circ.pdf> (24.06.2014)

Nightingale, P. 2003. *Innovation in Financial Services Infrastructure*. The International Handbook on Innovation. Elsevier Science Ltd, pp. 529 – 547

Nysveen, H., Pedersen, P.E. *Service innovation Methodologies I*. Report no 1 from the TIPVIS-project. Universitetet I Agder - <http://brage.bibsys.no/xmlui/handle/11250/135045> (23.05.2015)

OECD, 2011. *Bank Competition and Financial Stability*. OECD Publishing, pp. 13-33

OECD, 2011a. *Estonia: Review of the Financial System* - <http://www.oecd.org/finance/financial-markets/49497930.pdf> (24.06.2014)

Oja, H. 2010. *Incremental Innovation Method for Technical Concept Development with Multi-disciplinary Products*. Doctoral thesis. Tampere University of Technology

Ojo, M. 2010. *The growing importance of risk in financial regulation*. Journal of Risk Finance, Vol. 11, Issue 3, pp. 249-267

Oke, A. 2007. ***Innovation types and innovation management practices in service companies***. International Journal of Operations & Production Management. Vol. 27, No. 6, pp. 564-587

Olanrewaju, T. ***The rise of the digital bank***. McKinsey on Business Technology, Number 33, Spring 2014 - [http://www.mckinsey.com/~media/mckinsey/dotcom/client\\_service/BTO/PDF/5-MOBT33\\_36-39\\_DigitalBank\\_R4.ashx](http://www.mckinsey.com/~media/mckinsey/dotcom/client_service/BTO/PDF/5-MOBT33_36-39_DigitalBank_R4.ashx) (04.08.2014)

O'Sullivan, D., Dooley, L. 2008. ***Applying innovation***. Los Angeles: SAGE Publications, pp. 1-20

Pearson, R. 1997. ***Towards an Historical Model of Services Innovation: The Case of the Insurance Industry, 1700-1814***. The economic History Review, New Series, Vol. 50, No. 2, pp. 235-256

Peverelli, R., Feniks, R. 2010. ***Reinventing Financial Services***. What consumers expect from future banks and insurers. Amsterdam: FT Prentice Hall. Pearson Education Benelux

Pierce, J.L., Delbecq, A.L. 1977. ***Organization Structure, Individual Attitudes and Innovation***. The Academy of Management Review, Vol. 2, No. 1, pp. 27-37

Posner, R.A. 1974. ***Theories of Economic Regulation***. NBER Working Paper No. 41 - <http://www.nber.org/papers/w0041> (20.07.2014)

PWC. 2014a. ***Breaking the rules: Achieving breakthrough innovation in financial services*** - <http://www.pwc.com/us/en/financial-services/publications/viewpoints/fs-viewpoint-achieving-breakthrough-innovation-in-financial-services.jhtml> (25.06.2015)

PWC. 2014b. ***Retail Banking 2020. Evolution or revolution?*** – [http://www.pwc.com/et\\_EE/EE/publications/assets/pub/pwc-retail-banking-2020-evolution-or-revolution.pdf](http://www.pwc.com/et_EE/EE/publications/assets/pub/pwc-retail-banking-2020-evolution-or-revolution.pdf) (21.06.2015)

PWC. 2014c. ***Where have you been all my life? How the financial services industry can unlock the value in Big Data*** - [http://www.pwc.com/en\\_US/us/financial-services/publications/viewpoints/assets/pwc-unlocking-big-data-value.pdf](http://www.pwc.com/en_US/us/financial-services/publications/viewpoints/assets/pwc-unlocking-big-data-value.pdf) (20.06.2015)

Raa, R. 2001. ***Sissejuhatus pangandusõigusesse***. Juridica, nr. 3, pp. 147-152

Radovanović, P. 2009. ***Digital Economy, Digital Money and Digital Banking***. Facta Universitatis. Economics and Organization Vol. 6, No. 2, pp. 153-160 – <http://facta.junis.ni.ac.rs/eao/eao200902/eao200902-08.pdf> (03.08.2014)



Raidla, P. 2007. *Eesti kapitali ausammast. Hansapanga asutajate lugu*. Tallinn: Kirjastus Äripäev

RBS. 2014. *Disruptive Technology and Changing Customer Behaviours* – [http://www.finextra.com/finextra-downloads/featuredocs/Disruptive\\_trends\\_2014.pdf](http://www.finextra.com/finextra-downloads/featuredocs/Disruptive_trends_2014.pdf) (20.06.2015)

*Review of the Estonian Financial System*, January 2013. Tallinn: Eesti Pank

Rubalcaba, L., Michel, S., Sundbo, J., Brown, S.W., Reynoso, J. 2012. *Shaping, organizing, and rethinking service innovation: a multidimensional framework*. Journal of Service Management. Vol. 23., No. 5, pp. 696-715

Ruttan, V.W. 1959. *Usher and Schumpeter on Invention, Innovation, and Technological Change*. The Quarterly Journal of Economics. Vol. 73, No. 4, pp. 596-606

Salciuviene, L., Auruskeviciene, V., Ivanauskiene, N. 2014 *Key drivers Affecting Customer Intention to Purchase Financial Services Online*. Inzinerine Ekonomika – Engineering Economics, 25 (2), pp. 194-202 - <http://www.inzeko.ktu.lt/index.php/EE/article/view/6427>

*Sampo Pank – 20 aastat õigel teel*. 2012. Tallinn: AS Eesti Ajalehed

Santos, A.O., Elliott, D. 2012. *Estimating the Costs of Financial Regulation*. International Monetary Fund - <http://www.imf.org/external/pubs/ft/sdn/2012/sdn1211.pdf> (07.01.2013)

Santoso, W., Batunanggar, S. 2007. *Effective Financial System Stability Framework*. Occasional Papers No. 45. Kuala Lumpur: The South East Asian Central Banks research and Training Center

Sawyer, M. 2013. *Financial development, financialisation and economic growth*. FESSUD Working Paper Series No. 21- <http://fessud.eu/wp-content/uploads/2013/04/Financialisation-and-growth-Sawyer-working-paper-21.pdf> (15.06.2014)

Scheuing, E.E., Johnson, E.M. 1989. *A Proposed Model for New Service Development. The Journal of Services Marketing*, Vol. 3, No. 2, pp. 25-34

*Science, technology and innovation in Europe*. 2013. Eurostat Pocketbooks, pp. 132-133 - <http://ec.europa.eu/eurostat/documents/3930297/5969406/KS-GN-13-001-EN.PDF>

Schwarz, S., Durst, C., Bodendorf, F. 2012. *Service Innovation. A Road Map for Practitioners*. Service Science and Management Research, Vol. 1, Issue 1, pp. 8-16

Sepp, U. 1995. Estonia's Transition to a Market Economy 1995. Review of Economies in Transition. Bank of Finland, No 5 [http://www.suomenpankki.fi/bofit/tutkimus/tutkimusjulkaisut/idantalouksien\\_katsauksia/Documents/0595us.pdf](http://www.suomenpankki.fi/bofit/tutkimus/tutkimusjulkaisut/idantalouksien_katsauksia/Documents/0595us.pdf) (23.06.2014)

Shekar, A. 2007. *An Innovative Model of Service Development. A process guide for service managers*. The Innovation Journal: The Public Sector Innovation Journal, Vol. 12 (1), article 4

Shostack, G.L. 1984. *Designing services that deliver*. Harvard Business Review, Vol. 62, No 1, pp. 133-139

Siibak, K. 2011. *Pangandussüsteemi usaldusvääruse tagamine ja teabekohustuse määratlemine finantsteenuste lepingutes*. Doctoral Thesis. Tartu: Tartu Ülikooli Kirjastus

Siimon, I.-J., Lumiste, R., Lumiste, R. 2000. *Tooteinnovatsioon ja innovatsioonisüsteemid*. Tartu: Tartu Ülikooli kirjastus

Smith, A.M., Fischbacher, M., Wilson, F.A. 2007. *New Service Development: From Panoramas to Precision*. European Management Journal. Vol. 25, No. 5, pp. 370-383

Stigler, G. J. 1971. *The theory of economic regulation*. The Bell Journal of Economics and Management Science Vol. 2, No.1, pp. 3-21

Sundbo, J. 1997. *Management of innovation in services*. Service Industries Journal, Vol. 17, No. 3, pp. 432-455

Sundbo, J., Gallouj, F. 1998. Innovation in Services. SI4S Project synthesis. Work package 3/4. IFRESI-University of Lille - <http://survey.nifu.no/step/old/Projectarea/si4s/start.htm> (23.05.2015)

Sõrg, M. 1999. *Riskid panganduse rekonstrueerimise perioodil: Eesti kogemused*, Eesti Panga bulletin, nr. 3 (49) - [http://www.eestipank.ee/sites/default/files/publication/et/Arhiiv/bylletaan/1999/index\\_14.html](http://www.eestipank.ee/sites/default/files/publication/et/Arhiiv/bylletaan/1999/index_14.html) (23.06.2014)

Sõrg, M. 2000. Pangandusriskide analüüs ja juhtimine. *Riskid Eesti majanduses*, Koostanud Tiiu Paas. Tartu: Tartu Ülikooli Kirjastus, pp. 151- 207

Sõrg, M. 2003. *Reformation of the Estonian banking system*. Wirtschaftswissenschaftliche Diskussionspapiere, Ernst-Moritz-Arndt-Universität Greifswald, Rechts- und Staatswissenschaftliche Fakultät, No. 02/2003 - <http://www.econstor.eu/handle/10419/48942> (26.07.2014)

Sõrg, M., Ivanova, N. 2008. ***Estonian banks are highly innovative***. In: Globalization and Institutional Development: The Economics Of Education And Innovation For Sustainability And Growth. Congress of Political Economists International (COPE) 19th Annual Meeting; New Delhi, India; 12.–19.07.2008. (Toim.) Sepp, J., Frear, D., Congress of Political Economists International, 2008, pp. 481 - 494.

Sõrg, M., Tuusis, D. 2008 ***Foreign banks increase the social orientation of Estonian financial sector***. Wirtschaftswissenschaftliche Diskussionspapiere, Ernst-Moritz-Arndt-Universität Greifswald, Rechts- und Staatswissenschaftliche Fakultät, No. 01/2008 - <https://www.econstor.eu/dspace/bitstream/10419/32329/1/590409387.pdf> (24.06.2014)

Sõrg, M., Uiboupin, J. 2004. The Competitiveness of Estonian Banks in EU. ***Intregation of Financial Sectors of Baltic States into the European Union: Challenge and Experience***. Edited by Mart Sõrg and Vello Vensel. FEBA at Tallinn University of Technology, FEBA at University of Tartu, pp. 77-117

Sõrg, M., Vensel, V. 2002. ***Development of the Banking System under the Estonian Currency Board***, IAER Vol. 8, No. 1, pp. 35-48 – [http://216-230-72-154.client.cypresscom.net/journal2/iaer/feb\\_02/sorg.pdf](http://216-230-72-154.client.cypresscom.net/journal2/iaer/feb_02/sorg.pdf) (23.06.2014)

***Swedbank AS aastaaruanne 2013*** - [https://www.swedbank.ee/static/pdf/about/finance/reports/info\\_annual-report-2012\\_est.pdf](https://www.swedbank.ee/static/pdf/about/finance/reports/info_annual-report-2012_est.pdf) (02.09.2014)

***Swedbank***. Homepage – [www.swedbank.ee](http://www.swedbank.ee) (02.09.2014)

Tadesse, S.A. 2005. ***Financial Development and Technology***. William Davidson Institute Working Paper No. 749 - [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=681562](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=681562) (29.08.2014)

***Tagatisfond***. Homepage – [www.tf.ee](http://www.tf.ee) (02.09.2014)

Teece, D. 2010. ***Business models, business strategy and innovation***. Long Range Planning, Vol. 43, No. 2-3, pp. 172-194

Terwiesch, C., Xu, Y. 2008. ***Innovation Contests, Open Innovation, and Multiagent Problem Solving***. Management Science, Vol. 54, No. 9, pp. 1529-1543

The Economist Intelligence Unit. 2013. ***The Good Bank. A concept for improving the global financial industry*** - <http://event.wavecastpro.com/thegoodbanklive/> (20.06.2015)

The Economist Intelligence Unit. 2014. ***Future Factors. How regulation, client expectations and technology are transforming retail banking***. – [http://www.economistinsights.com/sites/default/files/Future%20Factors\\_0.pdf](http://www.economistinsights.com/sites/default/files/Future%20Factors_0.pdf) (20.06.2015)

The Economist Intelligence Unit. 2015. **Future Factors. The 3Rs of retail banking.** - <https://www.temenos.com/en/market-insight/retail-insight/3rs-of-retail-banking/> (19.05.2015)

**The Future of Banking Regulation.** Europe Economics. City of London Economic Development, 2010 - <http://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/research-2010/The%20future%20of%20banking%20regulation.pdf> (03.06.2014)

Tidd, J., Bessant, J. 2014. **Strategic Innovation Management.** A Wiley Company

Tidd, J., Bessant, J., Pavitt, K. 2006. **Innovatsiooni juhimine.** Tallinn: Kirjastus Pegasus

Tidd, J., Bessant, J., Pavitt, K. 1999. **Managing Innovation. Integrating Technological, Market and organizational Change.** A Wiley Company, pp. 2 – 25

Tidd, J., Hull, F. 2003. **Service innovation: Organizational responses to technological opportunities and market imperatives.** London: Imperial College Press

Toivonen, M., Tuominen, T. 2009. **Emergence of innovations in services.** The Service Industries Journal, Vol. 29, No. 7, pp. 887-902

Toomla, R. 2004. **Eesti e-panganduse arengust.** A/A nr.4/5 2004

Trott, P. 2012. **Innovation Management and New Product Development,** 5<sup>th</sup> Edition, Essex: Pearson Education Limited

Tushman, M., O'Reilly, C.A. 1996. **The ambidextrous organisation: managing evolutionary and revolutionary change.** California Management Review, Vol. 38, No. 4, pp. 8-30

Van de Ven, A.H., Polley, D.E., Garud, R., Venkataraman, S. 2008. **The Innovation Journey.** Oxford: Oxford University Press

Vensel, V. 2001. **Panga analüüs ja finantsjuhtimine I,** Tallinn: TTÜ Kirjastus, pp. 9-15

Vermeulen, P., Dankbaar, B. 2002. **The Organization of Product Innovation in the Financial Sector. An Exploration in the Netherlands.** The services Industries Journal, Vol. 22, No. 3, pp. 77-98

Verweire, K., Van den Berghe, L. 2008. **Strategic innovation in the financial services industry: opportunity or threat?** Journal of Financial Transformation, No. 23, pp. 69-76

Vlerick Business School. *There's no such thing as "small change" in the financial services sector*. White paper.

Walsham, G. 1995. *Interpretive case studies in IS research: nature and method*. European Journal of Information Systems, Vol. 4, pp. 74-81

White, W.R. 2013. *The Prudential Regulation of Financial Institutions: Why Regulatory responses to the Crisis Might Not Prove Sufficient*. SPP Research Papers. Vol. 6, Issue 33, University of Calgary - The School of Public Policy - [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2348222](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2348222) (06.06.2014)

World Bank. 1993. *Estonia. The Transition to a Market Economy*. 1993, pp. 48-61 – [http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/1993/03/01/000009265\\_3970128103057/Rendered/PDF/multi0page.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/1993/03/01/000009265_3970128103057/Rendered/PDF/multi0page.pdf) (23.06.2014)

Wyszkowska-Kuna, J. 2011. *Innovation in Services – Theoretical Approach*. Comparative Economic Research. Vol. 14, Issue 4, pp. 25-46

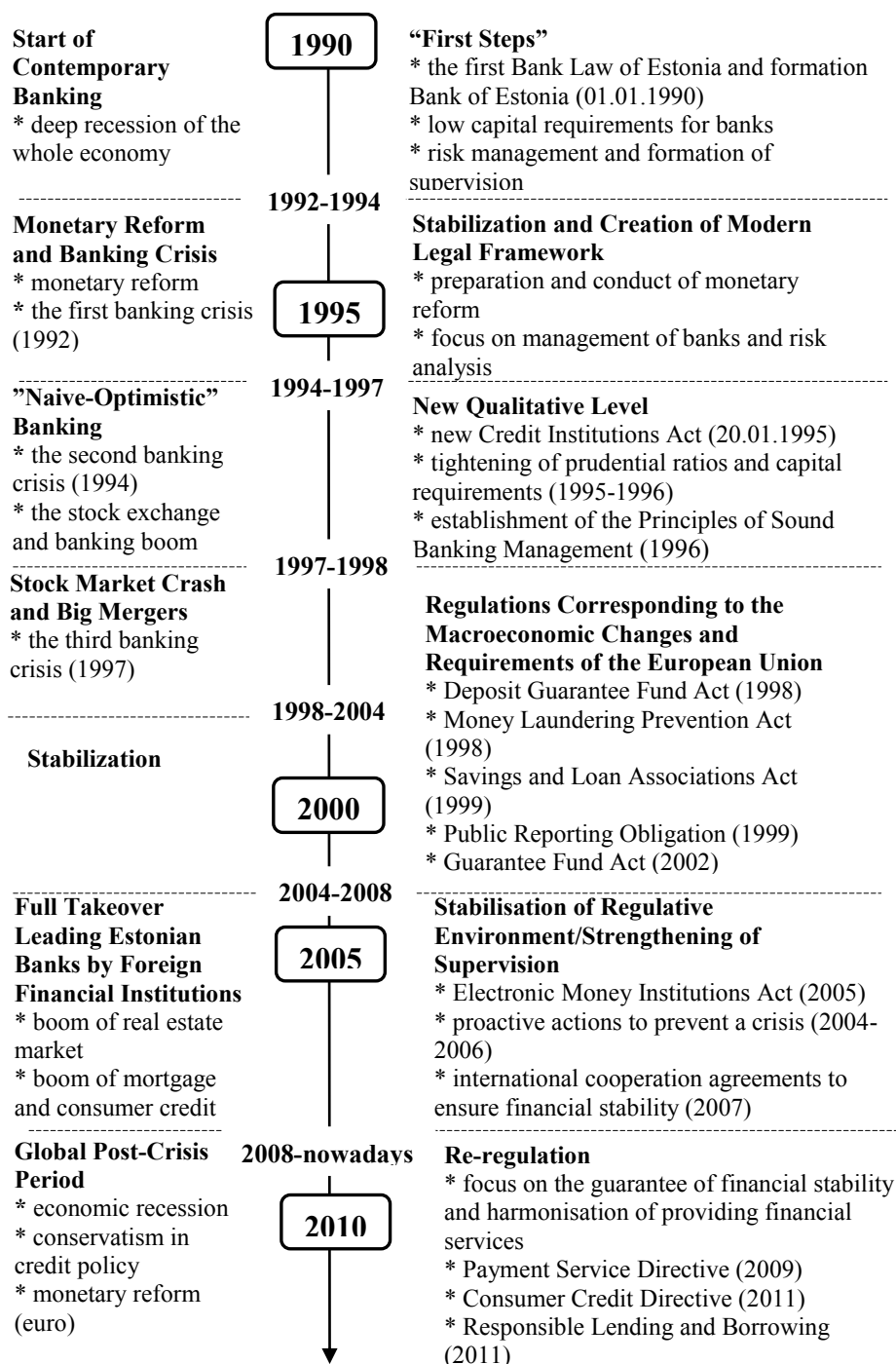
Zink, T. 2015. The Rise of the Digital Customer. White Paper. IDC Financial Insights – <https://www.temenos.com/documents/mi/wp/idc%20ap772410x%20-%20the%20rise%20of%20the%20digital%20customer.pdf> (20.06.2015)

Zirnask, V. 2002. *15 Years of New Estonian Banking*. Tallinn: Estfond



## **APPENDIXES**

## Appendix 1. Stages in the formation of the banking and legal framework in Estonia for 1990–2015





## Appendix 2. Questionnaire

### PART A.

#### THE DEVELOPMENT OF FINANCIAL SERVICES IN ESTONIA

A1. Please name up to three factors, that have the most supported (**the positive impact**) the development (innovation) of financial services in Estonia during the last 20 years?

**A2.** Please estimate the positive impact of following factors on financial services development (innovation) in Estonia. (1- no impact, 7- very important)

	Extent of the impact									
	No impact	Trivial	Small	Neutral	Relevant	Important	Highly significant	Don't know		
<b>A2.1</b> Macroeconomic factors (e.g. economic growth, wage growth, labour emigration etc)	1	2	3	4	5	6	7	0		
<b>A2.2</b> Legislation and financial supervision	1	2	3	4	5	6	7	0		
<b>A2.3</b> Technological advances	1	2	3	4	5	6	7	0		
<b>A2.4</b> Demand for financial services	1	2	3	4	5	6	7	0		
<b>A2.5</b> Customers interest towards innovative solutions	1	2	3	4	5	6	7	0		
<b>A2.6</b> Heavy competition in the financial services (e.g. financial services companies versus financial services companies, financial services companies versus non-financial services institutions)	1	2	3	4	5	6	7	0		
<b>A2.7</b> Employees' competence in offering and managing new products/services	1	2	3	4	5	6	7	0		
<b>A2.8</b> New entrants (e.g. SMS loan companies, car sellers with leasing offers, Transfer Wise)	1	2	3	4	5	6	7	0		
<b>A2.9</b> Size of the financial service provider	1	2	3	4	5	6	7	0		
<b>A2.10</b> Organisational culture of the financial service provider	1	2	3	4	5	6	7	0		

**A3.** Please name up to three factors, that have the most prevented (**negative impact**) the development (innovation) of financial services in Estonia during the last 20 years?

	Extent of the impact									
	No impact	Trivial	Small	Neutral	Relevant	Important	Highly significant	Don't know		
<b>A4.1</b> Macroeconomic factors (e.g. economic growth, wage growth, labour emigration etc)	1	2	3	4	5	6	7	0		
<b>A4.2</b> Legislation and financial supervision	1	2	3	4	5	6	7	0		
<b>A4.3</b> Technological advances	1	2	3	4	5	6	7	0		
<b>A4.4</b> Demand for financial services	1	2	3	4	5	6	7	0		
<b>A4.5</b> Customers interest towards innovative solutions	1	2	3	4	5	6	7	0		
<b>A4.6</b> Heavy competition in the financial services (e.g. financial services companies versus financial services companies, financial services companies versus non-financial services institutions)	1	2	3	4	5	6	7	0		
<b>A4.7</b> Employees' competence in offering and managing new products/services	1	2	3	4	5	6	7	0		
<b>A4.8</b> New entrants (e.g. SMS loan companies, car sellers with leasing offers, Transfer Wise)	1	2	3	4	5	6	7	0		
<b>A4.9</b> Size of the financial service provider	1	2	3	4	5	6	7	0		
<b>A4.10</b> Organisational culture of the financial service provider	1	2	3	4	5	6	7	0		

**A5.** What kind of companies (financial sector and beyond) will have the most influence on the development (innovation) of financial services in Estonia in perspective of three years?

**A6.** What will be the impact of following type of companies on the development (innovation) of financial services in Estonia during the next three years? (1- no impact, 7- very important)

	Extent of the impact								
	No impact	Trivial	Small	Neutral	Relevant	Important	Highly significant	Don't know	
<b>A6.1</b> Major commercial banks	1	2	3	4	5	6	7	0	
<b>A6.2</b> Small commercial banks	1	2	3	4	5	6	7	0	
<b>A6.3</b> Insurance companies	1	2	3	4	5	6	7	0	
<b>A6.4</b> Savings and loan associations	1	2	3	4	5	6	7	0	
<b>A6.5</b> Retail companies	1	2	3	4	5	6	7	0	
<b>A6.6</b> Telecommunication companies	1	2	3	4	5	6	7	0	
<b>A6.7</b> Technology companies (e.g. Google, Paypal etc)	1	2	3	4	5	6	7	0	
<b>A6.8</b> Start-ups	1	2	3	4	5	6	7	0	
<b>A6.9</b> Other (please specify)	1	2	3	4	5	6	7	0	

**A7.** What trends will influence the financial services development in Estonia the most in perspective of the next three to five years. Please name three

**A8.** What will be the impact of these trends on the financial services development in Estonia?

**A9.** According to your opinion how important the financial services innovation in following areas? Please rank three (1.,2.,3.) the most important innovation areas.

<b>A9.1</b> „Big data“ (analysis of large data amounts)	
<b>A9.2</b> Branches	
<b>A9.3</b> Electronic channels	
<b>A9.4</b> Mobile solutions	
<b>A9.5</b> Social media	
<b>A9.6</b> Technical (IT) platform	
<b>A9.7</b> Other (please specify)	

**A10.** What are the biggest challenges of financial services company management on the basis of financial services development (innovation) in perspective of three to five years?

## **PART B.**

### **INNOVATION IN FINANCIAL SERVICES SECTOR**

**B1.** How do you assess the overall level of innovation in your organisation? (1-non-existent, 7-excellent)

<b>Non-existent</b>	<b>Weak</b>	<b>Satisfying</b>	<b>Neutral</b>	<b>Good</b>	<b>Very Good</b>	<b>Excellent</b>
1	2	3	4	5	6	7

**B2.** Is your organisation is focused on innovation in the last three years?

**B3.** Please explain your opinions.

**B4.** Please estimate whether your organisation will focus on innovation also in the next three years.

**B5.** Please explain your opinions

**B6.** Please estimate the level of following innovation types in your organisation. (1-non-existent, 7-excellent)

	<b>Non-existent</b>	<b>Weak</b>	<b>Satisfying</b>	<b>Neutral</b>	<b>Good</b>	<b>Very good</b>	<b>Excellent</b>	<b>Don't know</b>
<b>B6.1</b> Product innovation	1	2	3	4	5	6	7	0
<b>B6.2</b> Channels (electronic channels, branches, etc) innovation	1	2	3	4	5	6	7	0
<b>B6.3</b> Customer service and customer experience innovation	1	2	3	4	5	6	7	0
<b>B6.4</b> Sales and marketing innovation	1	2	3	4	5	6	7	0
<b>B6.5</b> Process innovation	1	2	3	4	5	6	7	0
<b>B6.6</b> Segment strategy innovation	1	2	3	4	5	6	7	0
<b>B6.7</b> Business model innovation	1	2	3	4	5	6	7	0

**B7.** Please rank three (1.,2.,3.) the most important innovation areas in your organisation in the previous three years.

<b>B7.1</b> Product innovation	
<b>B7.2</b> Channels (electronic channels, branches, etc) innovation	
<b>B7.3</b> Customer service and customer experience innovation	
<b>B7.4</b> Sales and marketing innovation	
<b>B7.5</b> Process innovation	
<b>B7.6</b> Segment strategy innovation	
<b>B7.7</b> Business model innovation	
<b>B7.8</b> Other (please specify)	

**B8.** Please rank three (1.,2.,3.) the most important innovation areas in your organisation in the next three years.

<b>B8.1</b> Product innovation	
<b>B8.2</b> Channels (electronic channels, branches, etc) innovation	
<b>B8.3</b> Customer service and customer experience innovation	
<b>B8.4</b> Sales and marketing innovation	
<b>B8.5</b> Process innovation	
<b>B8.6</b> Segment strategy innovation	
<b>B8.7</b> Business model innovation	
<b>B8.8</b> Other (please specify)	

**B9.** Please estimate the level of innovation in your organisation in following channels? (1 – non-existent, 7 - excellent)

	<b>Non-existent</b>	<b>Weak</b>	<b>Satisfying</b>	<b>Neutral</b>	<b>Good</b>	<b>Very good</b>	<b>Excellent</b>	<b>Don't know</b>
<b>B9.1</b> Branches	1	2	3	4	5	6	7	0
<b>B9.2</b> Electronic channels	1	2	3	4	5	6	7	0
<b>B9.3</b> Mobile solution	1	2	3	4	5	6	7	0

**B10.** What kind of innovation methods are used in your organisation?

<b>B10.1</b> Relationship with academic institutions	Yes	No
<b>B10.2</b> Investment in start-ups	Yes	No
<b>B10.3</b> Partnering with IT companies or other suppliers/partners	Yes	No
<b>B10.4</b> Idea campaigns/competitions for staff	Yes	No
<b>B10.5</b> Idea campaigns/competitions for non-staff	Yes	No
<b>B10.6</b> Other (please specify)	Yes	No

**B11.** Is your organisation aiming to be an innovation leader or fast follower?

Innovation leader	Fast follower	Don't know
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**B12.** Please explain your opinion.

**B13.** Whether your organisation have changed it's choice about innovation leader/fast follower in the three previous year.

**B14.** Please estimate, whether your organisation will change its choice about innovation leader/fast follower in perspective of three years.

**B15.** Please give reasons for your opinion.

**B16.** Does the management have approved the organisation's innovation action plan?

**B17.** Does the management have approved the organisation's development (innovation) process?

**B18.** If your organisation has approved development (innovation) process, what are the stages of the innovation process?

<b>B18.1</b> Idea generation	Yes	No
<b>B18.2</b> Idea screening (market research, customer survey etc)	Yes	No
<b>B18.3</b> Prototyping (e.g. bank card, internet bank etc)	Yes	No
<b>B18.4</b> Development project (incl budget) approval	Yes	No
<b>B18.5</b> Development project implementation	Yes	No
<b>B18.6</b> Measurement of success	Yes	No
<b>B18.7</b> Other (please specify)	Yes	No

**B19.** Do you develop any innovations as stand-alone projects, outside of the existing business lines?

**B20.** Does your organisation have employees dedicated to development/innovation?



**B21.** Where do employees dedicated to development/innovation work in your organisation?

Dedicated unit	Separate departments	Dedicated unit and separate departments	Don't know
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**B22.** Does such structure have been justified?

**B23.** Please explain for your opinion.

**B24.** Does your organisation have a dedicated budget for development activities/innovation?

**B25.** Does the organisation have followed the principle of a dedicated budget for the last three years?

**B26.** Will the organisation follow the principle of a dedicated budget for the next three years?

**B27.** If your organisation has a separate budget for development activities/innovation, then who uses it?

Dedicated unit	Separate departments	Both variants	Don't know
----------------	----------------------	---------------	------------

**B28.** Does your organisation allocate any resources/ have separate budget for more advanced development or disruptive innovation activities?

**B29.** Does the organisation have followed the principle of allocation of resources/ separate budget for more advanced development or disruptive innovation activities in the last three years?

**B30.** Will the organisation follow the principle of allocation of resources/ separate budget for more advanced development or disruptive innovation activities in the next three years?

**B31.** Do you require your development/innovation investment to have a financial business case that shows a positive return on investment?

**B32.** Which criteria are used to measure the success of the development (innovation) project?

**B33.** Do the following criteria are used to measure the success of development (innovation) project in your organisation?

<b>B33.1</b> Increase in market share	Yes	No
<b>B33.2</b> Increase of customer satisfaction	Yes	No
<b>B33.3</b> Increase of productivity	Yes	No
<b>B33.4</b> Increase of profitability	Yes	No
<b>B33.5</b> Revenue growth	Yes	No
<b>B33.6</b> Other (please specify)	Yes	No

### **PART C.**

#### **DETAILS OF THE RESPONDENT**

**C1.** How long have you been employed in the current organisation?

1 - 4	5 - 9	10 - 14	15 - 19	20 - 24
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**C2.** How many employers have you had during your working experience in financial services sector?

1	2	3	4	5
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**C3.** What is your current position?

specialist	manager	C-level manager	Other
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**C4.** What is your academic background?

5-years degree	
4-years degree	
bachelor's	
master's	
doctoral	
other	

**C5.** What is your profession?

**C6.** Will you work in the financial services sector also after the three years?

**C7.** What is your greatest achievement in the financial services sector?

**C8.** In case you will leave how will you be remembered the financial services sector?

### Appendix 3. Respondent characteristics by the positions

<b>Characteristic</b>	<b>CEO</b>	<b>R&amp;D</b>	<b>Sales</b>
<b>Employer category</b>			
- bank	10	12	4
- other	7	3	4
<b>Working experience in financial services sector (years)?</b>			
- 1-4	-	2	-
- 5-9	3	7	1
- 10-14	3	-	-
- 15-19	6	1	4
- 20-24	5	5	3
<b>Number of employers in financial services sector (companies)?</b>			
- 1	8	8	2
- 2	4	7	3
- 3	3	-	1
- 4	1	-	2
- 5	1	-	-
<b>Educational background</b>			
- 5-years degree	2	2	-
- 4-years degree	2	2	-
- bachelor's	-	6	3
- master's	13	4	5
- doctoral	-	1	-
<b>Degree</b>			
- economics	15	9	8
- other	2	6	

Source: author's calculations

## KOKKUVÕTE

21. sajandil on innovatsioon üheks olulisemaks kasvu ja kasumlikkuse võtmeteguriks, mis määrab ettevõtete konkurentsivõime. Selleks, et jääda kestma, olla konkurentsivõimeline ja alandada kulusid tiheda konkurentsi ja rangete regulatsioonide tingimustes, tuleb innovatsiooniga tegeleda järjepidevalt (Siimon *et al.* 2000, Tidd *et al.* 2006, O'Sullivan and Dooley 2008, Kotsemir *et al.* 2013).

Arendustegevus ja innovatsioon on omavahel tihedalt seotud, kuid autor defineerib innovatsiooni kitsamana kui protsessi, mille käigus uus või uuendatud teadmine muutub uueks turustatavaks ja kliendile väärtust loovaks tooteks, teenuseks või protsessiks. See tähendab, et innovatsioon ei pea tingimata olema oluline muutus maailmale, ühiskonnale või tööstusharule, vaid võib olla olemasolevate omaduste või tehniliste lahenduste kombineerimine uuel moel, mis on uudne ja väärtust loov ettevõttele või äriüksusele (Gadrey *et al.* 1995, Vermeulen and Dankbaar 2002). Arendustegevus on laiem ning võib endas sisaldada mitmeid parandavaid tegevusi (nt. käitumisjuhiste (protseduuride) muutus tegevuste optimeerimiseks või hinnakirja ülevaatus tulude/kulude tasakaalustamiseks), millega ei kaasne uut turustatavat ja kliendile väärtust loovat lahendust.

Hoolimata veidi rahulikumast perioodist pärast rahvusvahelist finantskriisi aastatel 2007-2008, seisab pangandus (sh Eesti pangandus) taas silmitsi mitmete strateegiliste väljakutsetega:

- finantsteenuste loomist ja pakkumist reguleerivate regulatsioonide arvu kasv;
- uute riskide tekkimine panganduses;
- järjest suurenev konkurents uute finantsteenuste pakkujate ja ärimudelite vahel;
- klientide muutumine nõudlikumaks ning usalduse vähenemine panganduse suhtes.

Seistes silmitsi kõigi nende väljakutsetega, peavad pangad leidma lahenduse edasise kasvu ja kasumi teenimise tagamiseks. Üheks selliseks lahenduseks on innovatsioon. Autor uurib oma töös finantsteenuste samm-sammulist ehk inkrementaalset innovatsiooni Eesti panganduses ning piiritleb valdkonna äriühingutega, kes omavad Finantsinspeksiooni krediidiastutuse tegevusluba ning kellele peamiseks ja püsivaks tegevuseks on rahaliste hoiuste ja muude tagasimakstavate vahendite kaasamine ning oma arvel laenude andmine või muu finantseerimine (Finantsinspeksiooni koduleht).

Teema valiku kriteeriumite aluseks on autori 19 aastane töökogemus panganduses ning otsene vajadus leida lahendused panga stabiilse arengu tagamiseks. Lisaks on autoril pangandusalane õpetamiskogemus alates aastast 2001. Eduka panganduse ja finantsteenuste õpetamise eelduseks on õpetavate teemade tundmine,

raamistamine ning analüüsitud kogemuse jagamine veel kogemust mitteomavate, kuid panganduses karjääri teha soovivate tudengitega. Teiseks, innovatsiooniga küll tegeletakse, kuid tihti jääb pisut puudu selle tegelikust järjepidevast rakendamisest. Lisaks fikseeritud hulgale ressurssidele (inimesed, aeg ja raha) on vaja strateegilist pühendumist, et kujundada ettevõttes vastav mõttemaailm, hoiakud ja väärtused. Juhtkond peab olema teadlik juhtimisprotsessidest ja -süsteemidest, mis aitavad kaasa uue äri ja uute ärimudelite loomisele ning nendega kaasnevatest ohtudest ja võimalustest (Tidd *et al.* 2005, Verweire and Van den Berghe 2008).

Kolmandaks, väga oluliseks teguriks võib kujuneda organisatsiooni suurus. Suurtel pankadel on keeruline radikaalselt muuta oma senist ärimudelit. Väikesed pangad on võimelised keskenduma kindlatele kliendisegmentidele ning olema paindlikud uute kliendi ootustele vastavate lahenduste loomisel (Capgemini Consulting 2012), kuid suuremahuliste regulatsioonide rakendamine võivad hõivata kogu ressursi, loomata seejuures olulist ärilist väärtust.

Neljandaks eeldab autor, et ettevõtte juhid ning töötajad soovivad parandada oma tööd, pakkuda välja ideid uuteks toodeteks ja teenusteks ning optimeerida olemasolevaid protsesse juhul, kui neil on selleks võimalusi ja aega. Lisaks on ettevõtted, kes omavad praktilisi arenduskogemusi, innovatsioonis kiiremad ja edukamad kui ettevõtted, mille tavaprotsessid ei sisalda innovatsiooni juhtimist.

Eelnevast tulenevalt on **doktoritöö uurimisprobleemiks kuidas juhtida finantsteenuste innovatsiooni. Doktoritöö eesmärgiks on luua finantsteenuste innovatsiooni juhtimise mudel**, mis aitaks tagada Eesti panganduse stabiilse arengu ja jätkusuutlikkuse. Selleks ühendab autor laiaulatusliku teoreetilise kirjanduse, rakendusuuringud ning autori poolt läbi viidud Eesti finantsteenuste innovatsiooni juhtimise uuringu tulemused.

Uurimisprobleemist tulenesid uurimisküsimused. Selleks, et midagi lähemalt uurida või analüüsida, on vaja see enda jaoks defineerida ja sõnastada. Sellest esimene uurimisküsimus.

- **R<sub>1</sub>** – millistest komponentidest koosneb innovatsiooni juhtimise mudel?

Mõistes innovatsiooni olemust ja olulisemaid komponente analüüsib autor Eesti pangandusturu kui finantsteenuste innovatsiooni juhtimise mudeli väliskeskkonna senist arengut ning mõju finantsteenuste innovatsioonile.

- **R<sub>2</sub>** – kuidas on olulisemad välised tegurid – regulatsioonid, tehnoloogia areng, klientide käitumine – mõjutanud panganduse arengut Eestis aastatel 1988 – 2015 ehk Eesti senise pangandusajaloo jooksul?

Hoolimata mineviku kogemusest on uurimisprobleemi lahendamisel oluline mõista tänast olukorda, et sellest lähtuvalt pakkuda välja uusi lahendusi.

- $R_3$  – kuidas toimub finantsteenuste innovatsiooni juhtimine Eestis juunis 2015?

Lähtuvalt hetkeolukorra mõistmisest on oluline vaadata tulevikku ning sellest tulenevalt neljas uurimisküsimus:

- $R_4$  – millised on olulisemad trendid finantsteenuste innovatsiooni juhtimises kolme aastases perspektiivis?

Lähtuvalt uurimisprobleemist ja –küsimustest, koosneb töö neljast osast. Töö esimene osa on teoreetiline, mis annab ülevaate innovatsiooni olemusest, teenuste (sealhulgas finantsteenuste) innovatsioonist ning finantsteenuste innovatsiooni juhtimise mudeli olulisematest komponentidest ( $R_1$ ). Töö teine osa annab ülevaate pangandussektori avalik-õiguslik raamistikust, keskendudes pankade funktsioonidele ühiskonnas ning range reguleerimise eesmärkidele ja põhjustele. Töö kolmandas osas analüüsib autor innovatsiooni olulisemate väliste tegurite (regulatsioonid, tehnoloogiline areng, klientide käitumine) mõju pankade arendustegevusele Eestis ( $R_2$ ) ning määratleb olulisemad trendid lähitulevikuks ( $R_4$ ). Töö neljas osa on empiiriline ning keskendub innovatsioonile ja innovatsiooni juhtimisele tänases Eesti panganduses ( $R_3$ ). Tuginedes akadeemilisele kirjandusele, rakendusuuringutele ning autori poolt läbi viidud finantsteenuste innovatsiooni juhtimise empiirilisele uuringule, pakub autor välja finantsteenuste innovatsiooni juhtimise mudeli panganduses.

## Uurimistöö metodoloogia

Tulenevalt doktoritöö eesmärgist luua finantsteenuste innovatsiooni juhtimise mudel kasutab autor nii teoreetilisi kui ka empiirilisi uurimismeetodeid. Töö teoreetilise osa eesmärk on määratleda ja kirjeldada innovatsiooni kontseptsioon, innovatsiooni juhtimise mudeli komponendid ning nende praktiline rakendatavus lähtuvalt akadeemilisest kirjandusest. Töö empiirilise osa eesmärk on uurida innovatsiooni tuginedes Eesti finantsteenuste sektori reaalsele kogemusele ja parimatele äritavadele. Seejuures kasutab autor nii kvalitatiivseid kui kvantitatiivseid meetodeid. Kvalitatiivne uuring võimaldab suurendada innovatsiooni taustsüsteemide, eesmärkide ja tähenduse üldist mõistetavust ning vähendada uurija ja uuringus osaleja omavahelise suhtluse formaalsust. Lisaks võimaldab kvalitatiivne uuring käsitleda teemat üksikasjalikumalt kui ainult etteantud vastustega küsimused ning esitada täiendavaid küsimusi antud vastuste täpsustamiseks (Mack *et al.* 2005). Kvantitatiivne uuring toetab uurimistulemusi arvuliste ja statistiliste väärtustega, mis võimaldab saadud andmeid võrrelda ning leida andmete omavahelisi seoseid.

## **Konstruktiivne uuring**

Lähtuvalt epistemoloogiast on interpreteeriv lähenemine tihedalt seotud konstruktiivse uuringuga, mille eesmärk on kombineerida probleemi lahendamine teoreetilise teadmise (Gary 2013). Konstruktiivse uurimise eesmärk on leida probleemile tänast olukorda parandav lahendus. Käesolevas doktoritöös rakendas autor konstruktiivset meetodit peale olemasoleva teoreetilise kirjanduse analüüsimist ja empiirilise materjali kogumist läbi poolstruktureeritud intervjuude läbiviimise.

Konstruktiivne meetod võimaldab kombineerida praktilise reaalelulise probleemi lahendamise ja akadeemiliselt aktsepteeritud kirjanduses väljendatud teadmised, et luua uued funktsionaalsed lahendused või konstruktsioonid ning seostada neid olemasoleva teadmise (Apilo 2010, Lehtiranta *et al.* 2015). Kasaanen *et al.* (1993) on määratlenud konstruktiivse uuringu kui juhtimisalaste probleemide lahendamise läbi uute protsesside, praktikate, mudelite, organisatsioonide jne. loomise. Kuna konstruktiivse meetodi kui rakendusliku uurimismeetodi eesmärgiks on selgelt piiritletud probleemile lahenduse leidmine ja uue teadmise loomine, siis olulist rolli mängib tänase olukorra muutmine soovitud olukorraks. Samas juhul, kui ka konstruktiivse meetodi abil saavutatud tulemuste praktiline rakendamine ebaõnnestub, võib see siiski anda väärtusliku panuse teooriasse (Apilo 2010, Lehtiranta *et al.* 2015).

## **Poolstruktureeritud intervjuudele põhinev uuring**

Eesti pangandusturu finantsteenuste innovatsiooni juhtimise hetkeolukorra ning parimate tavade mõistmiseks viis autor läbi empiirilise uuringu, mille raames kasutas nii kvalitatiivseid kui ka kvantitatiivseid uurimismeetodeid.

Uuringu raames viidi läbi poolstruktureeritud intervjuud 44 juhiga 23-st erinevast organisatsioonist eesmärgiga uurida ning analüüsida innovatsiooni komponente, kaasnevaid juhtimistegevusi ja parimaid tavasid erinevates Eestis tegutsevates pankades ning saada sisendit finantsteenuste innovatsiooni juhtimise mudeli loomiseks. Finantsteenuste innovatsiooni uuriti järgmistest aspektidest: kuidas on innovatsioon erinevates ettevõtetes organiseeritud (kinnitatud innovatsiooni tegevuskava ja protsessi olemasolu, organisatsiooni struktuur ja innovatsiooni eelarvestamine), milline on innovatsiooni üldine ja detailne (innovatsiooni alajaotuste põhine) tase, millised tegurid omavad olulisemat positiivset ja negatiivset mõju innovatsioonile, millistele innovatsiooni liikidele keskendutakse enim lähima kolme kuni viie aasta jooksul? Intervjuude detailne analüüs on toodud töö empiirilises osas.

Uuringu läbiviimiseks koostas autor küsimustiku, mille koostamisel sai arvesse võetud varasemaid Juhkam (2003) ja Efma (2014) läbi viidud uuringuid ning



kohandatud neid vastavalt Eesti pangandusturule. Küsimustik koosneb kokku kolmest osast, 51 küsimusest kaheksal leheküljel.

- Küsimustiku esimene osa (osa A) keskendub Eesti pangandusturгу positiivselt ja negatiivselt mõjutavatele teguritele, olulisematele trendidele lähiaastatel ning juhtimisalastele väljakutsetele üldisemalt;
- Küsimustiku teine osa (osa B) on suunatud detailsemalt innovatsioonile ja selle komponentide (äristrateegia ja innovatsiooni tegevuskava, arendusprotsess, organisatsiooni struktuur, eelarvestamise põhimõtted jne) uurimisele konkreetsetes finantsasutuses;
- Küsimustiku kolmas osa (osa C) koosneb küsimustest, mis annavad ülevaate vastajast (näiteks haridus, töökogemus ja hinnangud senistele saavutustele jne).

Uuringu küsimusi testiti pilootvestluse raames, mille tulemusi lõplikku analüüsi ei lisatud. Testimise eesmärgiks oli mõista küsimuste arusaadavust, lihtsust ja usaldusväärsust ning saada tagasisidet oma ala eksperdilt. Testimisse kaasatud eksperdi tagasiside tulemusena muudeti mõningate küsimuste sõnastust nende üheselt mõistetavuse suurendamiseks, struktureeriti küsimustikku ning loobuti kahest küsimusest.

Kuigi uuringu esmaseks eesmärgiks oli keskenduda pangandussektorile, siis võrdlusbaasi saamiseks kaasati valimisse ka teisi finantssektori ettevõtteid (kindlustusseltsid, varahalduse ettevõtted ja nn. tugiüksused ehk börs ja Kredex). Sellest tulenevalt jagati valim kaheks: krediidiuasutused ja muud finantsasutused (vt. tabel).

**Tabel. Ülevaade finantsteenuste innovatsiooni uuringu mai-juuni 2015 valimist**

	Kaasatud ettevõtteid (valim)	Valim/Kogum (%)	Ettevõtete esindajate arv (vastajad)
<b>Pangad</b>	11	73.3	26
<b>Muud finantsasutused</b>	9	24.3	14

Allikas: autor

Valimi koostamise eesmärgiks oli kaasata vastajatena inimesed, kes töötavad ettevõtte tippjuhtide, arendusjuhtide ja müügijuhtidena. Lähtuvalt praktilisest kogemusest võib öelda, et arendusjuhtidel on hea ülevaade ettevõttele seatud eesmärkidest, müügijuhid on enamasti väga kriitilised innovatsiooni ja arenduse osas ning tippjuhid saavad anda oma tasakaalustava hinnangu. Lõplik valim koosneb väga kogenud, professionaalsetest ja lojaalsetest juhtidest. Nii näiteks

enam kui pooled vastajad (55%) omavad magistr kraadi majanduses ja 60% neist on töötanud finantssektoris rohkem kui 15 aastat. Lisaks oli 83% vastanutest veendunud, et töötavad finantssektori ka kolme aasta pärast.

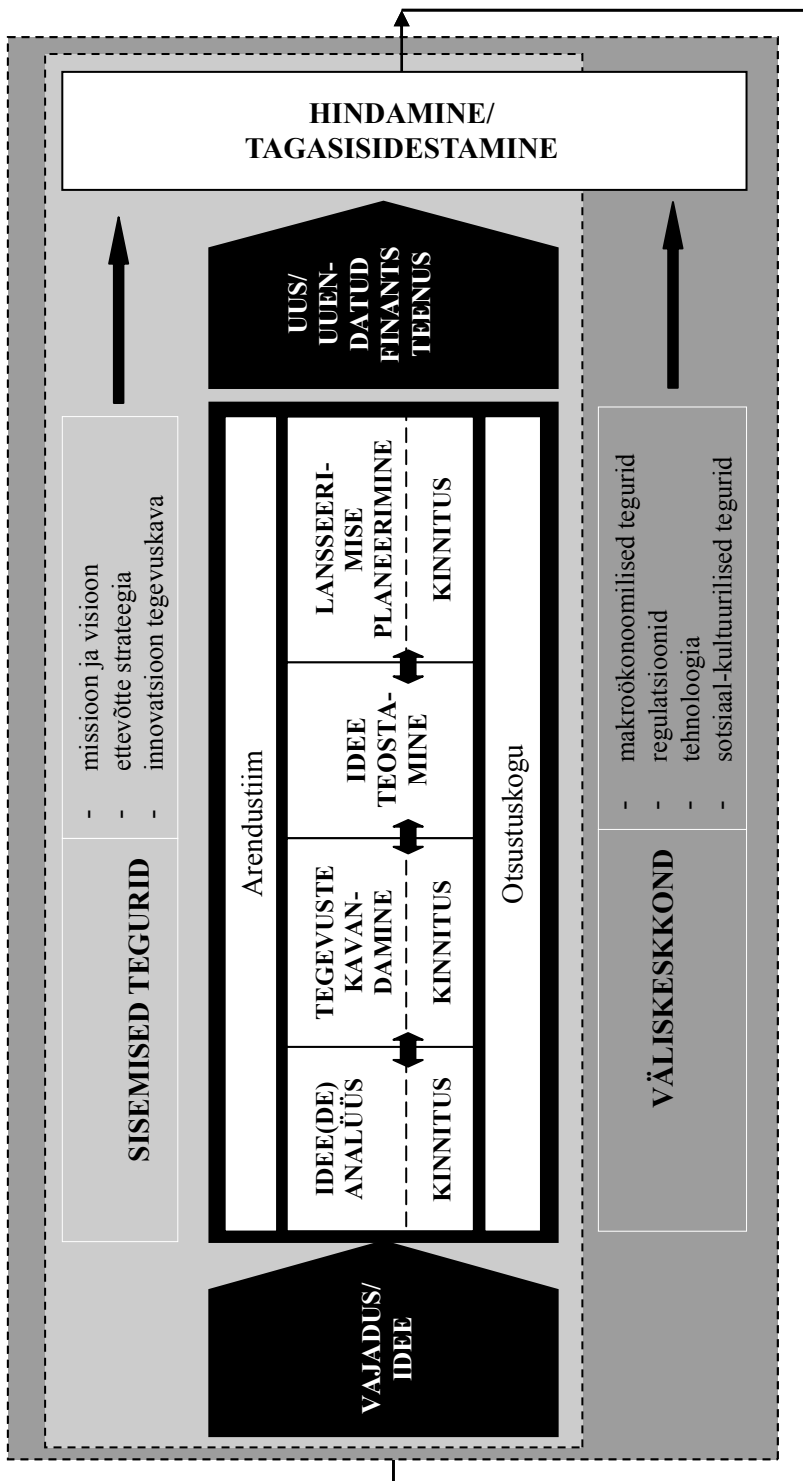
Vastanute arvu suurendamiseks võeti kõigi valimisse kuuluvate inimestega isiklikult ühendust ning tutvustati uuringu eesmärke. Lisaks saadeti kõigile osalejatele eelnevalt välja email, millega kinnitati intervjuu soovi, võimaldati eelnevalt küsimustega tutvuda ning lubati garanteerida täielik anonüümsus vastuste osas. Autor valis uuringu läbiviimiseks silmast silma personaalse intervjuu meetodi ning kohtus kõigi vastajatega isiklikult, mis võimaldab esitada mitmeid avatud küsimusi, viia läbi arutelu ning paremini mõista vastaja seisukohti.

### **Finantsteenuste innovatsiooni juhtimise mudel pankadele**

Lähtuvalt käesoleva töö uurimisprobleemist on uurimiseesmärgiks luua finantsteenuste innovatsiooni juhtimise mudel, mis:

- toetab järjepidevat innovatsiooni pidevalt muutuv keskkonnas;
- vastab finantsteenuste esitavatele nõuetele ning on vastavuses avalik-õigusliku raamistikuga;
- võimaldab järjepidevalt hinnata potentsiaalseid väliskeskkonnast tulenevaid võimalusi nagu näiteks makroökonomilised tegurid, muutused klientide käitumises ja ootustes ning arenevad tehnoloogiad;
- võtab arvesse ettevõtte sisesed tegurid innovatsiooniks;
- võimaldab hinnata innovatsioonitegevustele seatud eesmärkide saavutamist ning anda tagasisidet innovatsiooni protsessile;
- tagab innovatsioonitegevuste vastavuse ettevõtte strateegiale.

Tuginedes teoreetilisele allikmaterjalile, rakendusuringutele, autori poolt Eestis finantsteenuseid pakkuvate ettevõtete seas läbi viidud uuringule ning finantsteenuste innovatsiooni juhtimise mudelile seatud eeldustele, pakub autor välja innovatsiooni juhtimise mudeli (vt. joonis).



Joonis. Finantsteenuste innovatsiooni juhtimise mudel (Allikas: autori joonis)

Innovatsioon on juhitav protsess, kuid innovatsiooni ei ole võimalik saavutada lisades lihtsalt täiendavat raha arendustegevusse. Innovatsioon ei ole ainult etteantud (tihti piiratud) ressursside (aeg, inimesed ja raha) kasutamine, vaid eeldab inimeste väärtuste, hoiakute ja mõttemaailma ning vastava organisatsiooni kultuuri kujundamist. Nähtavate tulemuste saavutamiseks on ettevõtte jaoks oluline luua innovatsiooni tegevuskava ning mõelda läbi innovatsiooni olulised eeldused nagu ettevõtte struktuur ja innovatsiooniprotsess.

Kokkulepitud etappidega innovatsiooniprotsessi olemasolu on innovatsiooni juhtimise üheks eelduseks ning olulisemaks teguriks eristamiseks edukaid ja ebaedukaid innovatsiooniprojekte. Etapiline innovatsiooniprotsess jagab innovatsiooni ettemääratud faasideks, mille iga faas sisaldab varem kokkulepitud alamtegevusi. Autori hinnangul parandab selline standardiseeritud protsess teenuse innovatsiooni efektiivsust ja tulemuslikkust, protsessi osapoolte omavahelist suhtlust, kiirendab ning vähendab mittevajalikke tegevusi. Lisaks toetab kindlaksmääratud ja kooskõlastatud innovatsiooniprotsess jätkusuutlikku innovatsiooni kiiresti muutuv keskkonnas, suurendab arendusprojektide kiirust ja prognoositavust, vähendab määratlematuse, aja ning eelarvestamisega kaasnevaid riske.

Läbi mõeldud innovatsiooniprotsess on pankadele oluline kestmajäämiseks, väärtuse loomiseks ja toimetulekuks konkurentsiga. Sellest on huvitatud nii kliendid kui ka regulaatorid, kes on huvitatud efektiivsetest lahendustest, mis tagaksid kättesaadavad, mugavad ja odavad finantsteenused. Sellest tulenevalt aitab finantsteenuste innovatsiooni mõistmine kaasa turu parimate kogemuste rakendamisele, konkurentsivõime säilitamisele, loob kliendile väärtust ning suudab silmitsi seista väliste teguritega.

Autori poolt loodud finantsteenuse innovatsiooni juhtimise mudeli sisendiks on vajadused ja ideed. Üldjuhul on ideede allikaks juba olemasoleva informatsiooni ning teadmiste läbivaatamine ja kombineerimine, kuid oluline on arvesse võtta ning kaasata ka väliseid allikaid (nt. koostööpartnerid, kliendid). Sisemiselt võib olla mitmeid erinevaid ideede allikaid. Näiteks klientide kaebused või töötajate ettepanekud, ajurünnakud, operatsiooniriski juhtumid, muudatused regulatsioonides või konkurentide käitumises. Samas ei tohi organisatsioonis olla ideede eest vastutajaks ainult üks osakond, vaid tasuks korraldada üle-organisatsioonilisi kohtumisi, kus erineva teadmiste ja kogemustega inimesed saaksid teha oma ettepanekuid. Erinevate osakondade töötajad suhtlevad klientidega erinevalt, mis omakorda võib pakkuda juba olemasolevatele lahendustele eriilmelisi vaateid.

Teiseks ideede allikaks on väliskeskkond. Väliskeskkonnal on tihti otsene ja tugev mõju ettevõtte funktsioneerimisele. Olulisemate väliste teguritena võib välja tuua makroökonomilised tingimused, tehnoloogia arengu, seadusandluse, sotsiaal-kultuurilisi tegureid ja konkurentsi. Näiteks võivad ebastabiilsed makroökonomilised tingimused suurendada ebakindlust ja riske, mis omakorda

võivad soodustada innovatsiooni, kuid teiselt poolt vähendada oluliselt innovatsiooniks vajalikke ressursse. Regulatsioonide mõju võib olla ka erinev. Mõningad regulatsioonid (nt. digiallkirjastamine) aitavad kaasa mugavamate protsesside loomisele, kuid esineb juhtumeid, kus regulatsioonid võivad oluliselt pidurdada innovatsiooni.

Ettevõtte peab otsustama, kas ta soovib keskenduda innovatsioonile iseseisvalt või kaasata sellesse ka partnereid (nt. start-up'ed). Kui mõned organisatsioonid toetuvad ainult asutusesisesele arendustegevusele (suletud innovatsiooni paradigma), siis teised püüavad leida nii mõttekaaslasi, kui ka koostööpartnereid innovatsiooniks nii partnerite, varustajate kui ka klientide seast. Üha enam finantsasutusi valib koostöö oma partneritega ning ostab infotehnoloogilisi arendustöid vastavatelt spetsialiseerunud ettevõtelt.

Innovatsiooni uus paradigma – avatud innovatsioon – toetubki tuleviku arendusteks parimate võimalike lahenduste leidmisel ettevõttevälisele keskkonnale. Oluliseks väliseks ideede allikaks on koostööpartnerid ja akadeemilised institutsioonid. Partnerite kaasamine võimaldab leida uusi ideid, mis iseloomustavad konkreetset tööstusharu, sektorit või turgu, puuduvaid või täiendavaid ressursse ning uut väärtust. See võimaldab finantsasutustel arendada tooteid ja teenuseid, mille jaoks neil endal puudub sisemine kompetents.

Finantsteenuse innovatsiooni juhtimise mudeli keskseks komponendiks on innovatsiooniprotsess. **Innovatsiooniprotsess** on arendustiimi poolt juhitud etapiviisiline protsess, kus igas etapis teeb otsustuskogu otsuse järgmisesse etappi liikumine kohta. Selline protsess aitab prioriteerida tegevusi, rahalisi vahendeid, võimalike arendustiimi liikmete ajalisi ressursse ning maandada tegevustega kaasnevaid riske. Autori poolt loodud innovatsiooni juhtimise mudelis jaguneb innovatsiooniprotsess alljärgnevateks etappideks:

- **Idee(de) analüüs ja kinnitamine.** Arendustiimi ülesandeks on koguda kokku ning teha esmane analüüs organisatsiooni jaoks olulistele ideedele ja vajadustele. Analüüsi käigus tuleb arvestada nii ettevõtte sisemiste teguritega (nt. äristrateegia ja innovatsiooni tegevuskava) kui ka väliste teguritega (nt. regulatsioonid, konkurents) unustamata seejuures võimalikke kaasnevaid riske. Peale konkreetse vajaduse analüüsi ning võimaliku lahenduse määratlemist vormistatakse idee kokkulepitud vormis kokkuvõttena, mis sisaldab nii idee kirjeldust kui ka esmast äriplaani (sh projektile seatud eesmärgid), ning arendustiimi juht esitab selle kinnitamiseks otsustuskogule. Otsustuskogu annab oma hinnangu ning sobivuse korral kinnitab idee. Innovatsiooniprotsessi idee kinnitamise faas võimaldab välistada ideed, mis on huvitavad küll idee loojatele, kuid ettevõtte äristrateegia või innovatsiooni tegevuskava välised või vähesed tähtsusega ettevõttele seatud eesmärkide saavutamise vaates. Selline kinnitamine on esimene järgmisesse etappi liikumise (nn go/no go) otsustest. Pärast idee heakskiitu

lepitakse arendustiimi eestvedamisel kokku projektimeeskond ja olulisemad tegevused.

- **Tegevuste kavandamine ja kinnitamine.** Idee kinnitamise otsusega algab järgmise etapi ettevalmistamine. See koosneb esmasest turgude ja tehnilistest hinnangutest, millele järgnevad üksikasjalikud turu-uuringud, äri-, finants- ja riskianalüüs, arendusmeeskonna ning tegevuste ja nende ajakava kokku leppimine. Neile tegevustele järgneb teine järgmisesse etappi liikumise (go/no go) otsus – väljapakutud tegevuskava ja projektiks vajalike ressursside kinnitamine otsustuskogu poolt. Pärast heakskiitvat otsust võib tegelik arendustegevus alata.
- **Idee teostamine.** Arendusmeeskonna liikmed lähtuvad ideede teostamisel eelmises etapis kokkulepitud tegevustest ning nende teostamise ajakavast. Iga kokkulepitud meeskonna liige teab oma õigusi ja kohustusi ning saab pühenduda projekti edukale elluviimisele. Arendustiimi juhi ülesandeks on tegevuste koordineerimine ja kommunikatsioon erinevate osapoolte vahel. Veel enne tegeliku projekti valmimist ja paralleelselt arendustegevustega (nt. prototüüpimine, programmeerimine, süsteemi disain, testimine) alustatakse arendustiimi juhi poolt ettevalmistustöödega uue toote või teenuse lansseerimise kava välja töötamiseks.
- **Lansseerimise planeerimine ja kinnitamine.** See innovatsiooniprotsessi etapp keskendub turundus- ja kommunikatsioonitegevuste (nt. turu testimine, infomaterjalide ettevalmistamine, sise- ja väliskommunikatsiooni ajakava jne) planeerimisele ning kinnitamisele otsustuskogu poolt. Samaselt eelmistele otsustusetappidele hinnatakse uue või uuendatud finantsteenusega kaasnevaid võimalikke riske ning fikseeritakse lansseerimise ajakava koos vastutajatega. Enamikel juhtudel liituvad senise arendusmeeskonnaga vastava valdkonna turunduse inimesed ja kommunikatsiooni spetsialistid.

**Innovatsiooni protsessi väljundiks** on uus või uuendatud finantsteenuse, mis peamiseks väärtuseks on uue väärtuse loomine kliendile.

- **Hindamine ja tagasisidestamine.** Lansseerimisele peab järgnema ka seniste tegevuste analüüs, mis annab ülevaate projektile seatud eesmärkide saavutamisest ning võimaldab anda tagasisidet protsessis osalejatele. Innovatsiooni juhtimise mudel eeldab, et idee kinnitamise etapis lepitakse koos äriplaani esitamise kokku ka projekti eesmärgid. Kokkulepitud perioodi möödumisel (nt. kuus kuud ja aasta) vaadatakse arendustiimi juhi poolt üle idee koos äriplaani ja seatud eesmärkidega, selle teostamiseks esitatud tegevuste ajakava, nende vastavus reaalsele tulemustele ning esitatakse kokkuvõtte koos kommentaaridega eesmärkide täitmise/ mittetäitmise kohta otsustuskogule. Selline kokkuvõtte võimaldab analüüsida protsessis puudujääke ning teha ettepanekuid seniste tegevuste tõhustamiseks.

Innovatsiooni protsessi edukale rakendamisele aitab kaasa organisatsiooni struktuur, mis ettevõttele sobival viisil määratleb selgelt nii vastutused kui ka

volitused. Organisatsiooni struktuuriga lepitakse kokku ja määratletakse vastutus arendustegevuse eest organisatsioonis. See võib olla organiseeritud väga mitmel moel, nt. tsentraliseeritud ühe osakonna/divisjoni sees või jaotatuna erinevate osakondade ja inimeste vahel. Kuid väga tihti on innovatsioon rohkem kui ühe ettevõtte üksuse vastutusvaldkond. See võib olla jagatud väga mitmete (nt. kliendihaldus, turundus või IT) osakondade vahel. Selliste mitme osakonna töötajatest koosnevate meeskondade eeliseks võib olla parem äritunnetus, kuid oluliseks puuduseks vähene ajaline ressurss tegeleda arendusega oma põhitegevuse kõrvalt. Samas tagab selline vastutuse jagamine, et innovatsiooni on kaasatud väga mitmed inimesed erinevatest osakondadest ning innovatsioon on ettevõtteülene teema.

Innovatsiooni eest võib olla vastutavaks ka ainult üks sellele teemale keskendunudarendustiim. Juhul, kui arendus toimub ühes osakonnas (nt. arendusdivisjon või strateegilise planeerimise osakond), võimaldab see koondada kogu organisatsioonilise tervikvaate ning väldib olukorda, kus iga osakond tegeleb ainult talle oluliste arendustega. Selline organisatsiooni struktuur aitab tavapärasest enam keskenduda just ühele valdkonnale ehk arendustegevusele, suurendab selles osalevate inimeste kompetentsi ning võimaldab suurendada sünergia konkreetsete projektide eestvedamisel.

Innovatsiooni otsused ehk ideede, tegevuste ning lansseerimise kinnitamine peab toetuma järjepidevusele ja objektiivsetele, üheselt mõistetavatele mõõdikutele, mis eeldab täiendavat ettevõtte struktuuri läbimõtlemit ehk otsustuskogu määramist. Otsustuskogu liikmeteks peavad olema inimesed, kes suudavad hinnata konkreetsete projektide väärtust nii organisatsioonile kui ka klientidele ning projektidega paratamatult kaasnevat määramatust (juriidiline, tehniline ja turu) ja riske. Õigeaegne määramatuse vähendamine, võimalike riskide maandamine ja seadusandlusega vastavuses olemise tagamine võimaldab ära hoida võimalikke olulisi probleeme ning rahalisi kulutusi tulevikus. Riskide maandamine on iga äritegevuse oluline osa, kuid panganduses on see üks enim reguleeritud valdkondi tulenevalt finantsteenuste olulisusest ühiskonnale. Iga innovatsiooniprotsessi puudutav otsus peab olema läbi analüüsitud nii erinevate riskide, kui ka võimaliku tulu ja nende omavahelise suhte vaates.

Selline otsustuste põhine protsess võimaldab arendustegevusi prioritseerida vastavalt kokkulepitud innovatsiooni tegevuskavale. Kõigis etappides tuuakse välja tegevustega seotud riskid ning arutatakse võimalikke maandamisvõimalusi. Otsustusprotsessis vaadatakse üle ja kinnitatakse ka vastavus seadusandlusega.

Kuid finantsteenuste innovatsioon ei sõltu ainult välistest teguritest. Kui innovatsiooni eesmärgiks on uute väärtuste loomine, siis strateegia on aluseks nende väärtuste arendamisele ja rakendamisele. Innovatsioon peab olema kooskõlas üldise äristrateegiaga, et planeerida rahalisi, tehnilisi ja inimressursse ning leida tasakaal kliendi vajaduste, turu vajaduste ja ettevõtte strateegiliste vajaduste vahel. Ettevõtte

peab looma juhtkonna toetusega nii strateegia kui ka innovatsiooni tegevuskava, mis on kergesti arusaadav ja mida on ettevõtte töötajatele põhjalikult tutvustatud. Innovatsiooni tegevuskava võib olla ka osa ettevõtte strateegiast. Juhtkond peab defineerima innovatsiooni olemuse ettevõtte jaoks, otsustama tehnoloogia kasutuse ning kokku leppima vastavad mõõdikud. Innovatsiooni tegevuskava annab kindlad juhtnöörid, teenuste innovatsiooni suunad ning määratleb strateegilised valdkonnad pikemaks kui üheks aastaks. Innovatsiooni tegevuskava näitab, kuidas arendustegevus aitab kaasa äriliste eesmärkide saavutamisele ning aitab tagada vajalikud ressursid olemasolevate võimaluste kasutamiseks.

Kindlaks määratud ärilised eesmärgid on aluseks innovatsiooni tegevuskava väljatöötamisel ning määratlevad arendustegevuse rolli äriliste eesmärkide saavutamisel. Innovatsiooni tegevuskava võib sisaldada väga mitmeid erinevaid komponente, kuid kindlasti peaks see olema kooskõlas ettevõtte strateegiaga, seadma innovatsioonile eesmärgid, prioriteedid ning kirjeldama innovatsiooniprotsessi määratledes nii IT kui ka tootestrategiad ja kirjeldama võimalike koostööpartnerite rolli kogu protsessis.

Innovatsiooni tegevuskava peab määratlema innovatsiooni üldise vaate ehk selged, kuid mitte veel liigselt detailsed eesmärgid, tegevusvaldkonnad, suundumused ja protsessid. Innovatsiooni tegevuskava tuleks luua koostöös tippjuhtkonna, äriüksuste juhtide ja arendusspetsialistidega, kuid selle teadvustamine ettevõtte sees peab olema laiaulatuslik ning tagama igale töötajale ülevaate edasistest plaanidest.

Innovatsiooni tegevuskava toetub ettevõtte äristrateegiale ning ettevõtte missioonile ja visioonile. Arvestades ülikiirelt muutuvat keskkonda, peavad pangad leidma endale uue visiooni, mõtestades oma rolli ühiskonnas ja väärtuse loomise võimalusi kliendile. Missioon ja visioon saavad lähtekohaks edasiste ressursside paigutamise otsuste tegemisel. Visioon keskendub tulevikule ning annab pikaajalise nägemuse finantsteenuste sektoris. Missioon keskendub olevikule ning defineerib kriitilised protsessid ja teenuste osutamise taseme.

Tuginedes ettevõtte missioonile ja visioonile luuakse ettevõtte strateegia. Ettevõtte strateegia olulisemateks komponentideks on defineerida konkurentidest eristumise alused klientidele väärtuse loomisel ning anda töötajale inspiratsiooni innovatsiooniks, määratledes ettevõtte olulisemad eesmärgid ning tegevused nende eesmärkide saavutamiseks. Nendest komponentidest tulenevalt määratletakse ettevõtte strateegia kolme kuni viie aasta olulisemad eesmärgid ning konkreetsed kliendi segmendid, turud ja tegevused soovitud eesmärkide saavutamiseks. Läbi selle määratletakse ettevõtte strateegiline fookus, mis peab olema kooskõlas ettevõtte põhjalikult tutvustatud visiooniga. Ettevõtte strateegia on aluseks innovatsiooni eelarvestamise, tegevuste kirjeldamise ja tegevuskava loomisel. Seades selged prioriteedid, väljendab pank oma strateegilisi kavatsusi ning tagab nende elluviimiseks vajalike protsesside mõistmise.



## Järeldused ja ettepanekud

Antud uurimuse põhjal teeb autor alljärgnevad järeldused ja ettepanekud:

- Iga organisatsioon pean enda jaoks defineerima innovatsiooni mõiste, mis võimaldab ettevõttesiseselt tagada ühese arusaamise nii olulise teema osas ning sellest tulenevalt kujundada nii ettevõtte väärtusi, kui ka töötajate mõttemaailma. Näiteks võib radikaalne innovatsioon tunduda riskantse ning keerulisena, siis finantsteenuste innovatsiooni defineerimine inkrementaalse ehk samm-sammulise innovatsioonina võib lihtsustada ettevõtte töötajate arusaamist innovatsioonist ning julgustada sellesse panustamist. Autori poolt läbi viidud finantsteenuste innovatsiooni juhtimise empiirilise uuringu põhjal võib öelda, et juhid nii samas organisatsioonis kui ka erinevates organisatsioonides tajuvad ning määratlevad innovatsiooni väga erinevalt.
- Põhjalikult tutvustatud innovatsiooni tegevuskava on aluseks innovatsioonile defineerides strateegiliselt tähtsate ärisuundade vahendusel innovatsioonile seatud eesmärgid. See innustab inimesi innovatsiooniga tegelema, selgitades, mis on innovatsioon, millised on klientide ootused ja kuidas ning milliste ressurssidega arendustegevus toetab äriliste eesmärkide saavutamist.
- Uuringule tuginedes võib öelda, et hoolimata erinevatest ärielistest ja regulatiivsetest piirangutest, peab konkurents pangandussektoris säilima, et tagada kõrgevaliteetsed tooted põhjendatud valikus ning õiglase hinnaga. Sellest tulenevalt on oluline tagada tasakaal regulatsioonide ning ärilise tegevusvabaduse vahel. Hetkel tunnetavad pangandusturul osalejad, et läbi rangete regulatsioonide kehtestamise pankadele, eelistatakse uute pangandussektori välise ettevõtete finantsteenuste pakkujate turule sisenemist läbi oluliselt vähem reguleeritud innovaatiliste ärimudelite ning finantslahenduste.
- Tulenevalt finantsteenuste välisest keskkonnast ning avalik-õiguslikust raamistikust võimaldab etapiline innovatsiooniprotsess, tagada riskide igakülgse hindamise ja maandamise, vastavuse seadusandlusele ning saavutada stabiilse arengu ja jätkusuutlikkuse.
- Efektiivsusele ja kulude kokkuhoiule suunatud äristrateegia tingimustes on üheks parimaks innovatsiooni meetodiks avatud innovatsioon. Üha enam finantsasutusi maailmas on otsustanud teha innovatsiooni vaates koostööd oma partneritega ning suunab järjest enam tehnilisi arendusi kas start-up'idele või teistele IT ettevõtetele (Capgemini and Efma 2014).
- Autor julgustab nii finantsasutusi kui ka akadeemilisi asutusi leidma senisest enam edukaid koostöövõimalusi. See on pankadele võimalus populariseerida oma valdkonda ning leida noori talente oma ettevõttesse. See annab ka võimaluse teadusasutustele kontrollida ja rakendada oma akadeemilisi teadmisi praktikas ning tagada oma tudengite haridustaseme vastavus ärikeskkonna ootustele. Senisest suurem koostöö on kasulik mõlemale osapoolle.

Kokkuvõtteks võib öelda, et autor täitis seatud eesmärgid. Käesolevas doktoritöös läbi viidud finantsteenuste innovatsiooni hetkeolukorra analüüs püüab anda oma panuse praktikasse. Uuring võib olla huvipakkuv erinevatele huvigruppidele (ärikonsultandid, äristrateegia loojad, regulaatorid, kliendid), kes huvituvad nii finantsteenuste innovatsiooni juhtimisest kui ka panganduse arengust ning luua väärtust finantsvaldkonna professionaalidele, kelle jaoks on oluline mõista finantsteenuste innovatsiooni juhtimist.

Pangandusturu arengusuundade ja võimalike tulevikutrendide mõistmine võimaldab regulaatoritel planeerida oma järgmisi samme ning kujundada pangandusturgu ühiskonna poolt oodatud suunas. See võimaldab finantsasutustel tegeleda innovatsiooniga ning pakkuda oma klientidele just nende ootustele vastavaid lahendusi kooskõlas professionaalse seadusandliku raamistikuga.

Finantsteenuste innovatsiooni mudel võiks olla täiendus teoriasse. Antud uuring võiks olla huvipakkuv innovatsiooni uurijatele, et mõista võimalikke uusi lähenemisi konkreetse turu baasil teenuste innovatsiooni juhtimisele, aga eriti just finantsteenuste innovatsiooni juhtimisele panganduses.

Lisaks on mitmeid väiksemaid kasutusvõimalusi erinevatel tasanditel nii igapäeva majanduselus kui ka akadeemilises arendustegevuses. Eesti, kui väikese, avatud majandusega, riigi pangandussektori ülesehitamise kogemust ja püsima jäämist väljakutseid pakkuv keskkonnas oleks võimalik kasutada teiste sarnaste riikide arengus. Näiteks võib täna päeval öelda, et lähimad naabrid Lätis ja Leedus on veel pangandusarengus Eestist maas ning saaksid õppida senistest kogemustest.

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June 2005	Distance Learning Project at University of Tartu
November 2003	Marketing of Financial Services Distance Learning Project at University of Tartu
September 2002	“Contemporary banking II” Estonian Banking Association
June 2001	Portfolio Management Skandinaviska Enskilda Banken
October 1999 – May 2000	Fund management TEA Language Center Ltd. English
April 2000	Estonian Banking Association “Private Banking and Wealth Management”
August 1999	Mart Nurk Schooling Ltd Sales training
January 1999	Union Bank of Estonia Life insurance schooling
May 1998 – November 1998	Estonian Banking Association “Bases of the contemporary banking”
May 1996	Tallinn Bank Base training of teller

**Professional employment:**

October 2014 –	Danske Bank A/S Estonia branch Development Division Head of Strategic Planning and Customer Management
November 2002 –	Distance Learning Project at Tartu Ülikool Lecturer
March 2011 – October 2014	Danske Bank A/S Estonia branch Development Division Head of Business Banking
October 2008 – December 2011	Tallinna Ülikool Financial Expert of DOLCETA project
September 2007 – March 2011	AS Sampo Pank (Danske Bank A/S Estonia branch) Development Division Head of Credit
September 2006 – September 2007	AS Sampo Pank Development Department Business Banking Division Product Manager of Corporate Credit Products

July 2005 – September 2006	AS SEB Eesti Ühispank Private banking Portfolio Manager
September 2003 – December 2011	Tallinna Tehnikaülikool Lecturer
November 2001 – July 2005	Eesti Ühispank Private Investments & Finance Client Manager
September 2000 – November 2001	Eesti Ühispank Personal Banking Department Facilitator
August 1999 – September 2000	Eesti Ühispank Tornimäe branch Teller
April 1997 – August 1999	Eesti Ühispank Rävala branch Teller

## Scientific work

### Academic publications:

- Elenurm, T., Hõbe, L., Liikane, K. 2002/2003. *Opportunities and Challenges in Managing the Process of Knowledge Sharing in Different Learning Environments*, EBS Review, No.15, pp. 44-56
- Hõbe, L., Võrk, T., Nilsson, S. 2004. *Finantsteenused*. Tartu: Tartu Ülikool.
- Meos, K., Hõbe, L. 2007. *Finantsteenuste marketing I, II*. Tartu Ülikool 2.täiendtrükk. 266 lk
- Hõbe, L. 2014. *Impact of Regulations to Financial Services*. SGEM Conference on Political Sciences, Law, Finance, Economics & Tourism. Conference Proceeding. Volume II. Finance, Bulgaria: SGEM, pp. 319-326
- Hõbe, L. 2015. *Financial Services Innovation Management Model for Banking*. Journal of Management and Change (will be accepted)
- Hõbe, L. 2015. *Technology Challenges in the Financial Services Sector*. International Journal of Business and Management Study. Volume 2, Issue 1.
- Hõbe, L., Alas, R. 2015. *Management Challenges for the Financial Services Sector*. Abstracts and Conference Materials for the 3<sup>rd</sup> Conference on Management, Leadership and Governance. Edited by Ingley, C. and Lockhart, J. UK: Academic Conferences and Publishing International Limited.

### Supervision:

Number of bachelor's and master's thesis in different universities





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