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Financial Technology's effect on the Swedish banking Industry

A study on competition and competitive strategies

Douglas Wilsby and Knut Winström

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MIOM05 Degree Project in Production Management

Division for Production Management at Faculty of engineering LTH
Lund University
Supervisor: Ingela Elofsson

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Sammanfattning

Titel: Effekterna av finansiell teknologi på den svenska banksektorn - En studie om konkurrens och konkurrensstrategier.

Författare: Douglas Wilsby, Industriell Ekonomi 2018, LTH; Knut Winström, Maskinteknik 2018, LTH

Handledare: Ingela Elofsson, Institutionen för produktionsekonomi vid Lunds Tekniska Högskola

Bakgrund: Den snabba teknologiska utvecklingen har potential att omvälva etablerade branscher, inklusive banksektorn. Företag som inte lyckas anpassa sig till teknikskiften riskerar att förlora sina konkurrensfördelar och ställas inför stora utmaningar. När bankbranschen genomgår en digital omvandling står bankerna inför utmaningen att anpassa teknik och affärsmodeller för att effektivt engagera digitala kunder. Bankerna måste hantera det föränderliga landskapet för att förbli konkurrenskraftiga.

Syfte: Beskriva, förklara och analysera hur svenska banker har blivit påverkade av finansiella teknologiers framkomst.

Metod: Denna studie har en abduktiv och blandad metodik samt inkluderar arkiv- och dokumentforskning, fallstudier samt jämförande studier av en utvald grupp FinTech-företag och banker.

Avgränsningar: Detta arbete kommer att begränsas till främst svenska banker eller banker som har en stor del av sin organisation på den svenska bankmarknaden. De finansiella teknologier som beskrivs i arbetet kommer att vara baserade på svenska finansiella teknologiföretag. Detta arbete kommer också att fokusera på bankmarknaden ur ett konsumentperspektiv och inte ur ett företagsperspektiv.

Slutsats:
Svenska banker påverkas av FinTech, med ett ökat inträdeshot, starkare förhandlingsstyrka hos köpare och leverantörer samt ökad rivalitet. Bankerna är i allmänhet proaktiva och har börjat samarbeta med FinTechs för att integrera innovativa tjänster och behålla sin differentiering. Bankerna står däremot inför utmaningar i det föränderliga digitala landskapet.

Nyckelord: FinTech, svenska banker, konkurrens, konkurrensstrategi, digitalisering, teknologi, öppen bankverksamhet, strategi, affärsmodell, digital.

Abstract

Titel: Financial Technology's effect on the Swedish banking Industry - A study on competition and competitive strategies

Authors: Douglas Wilsby, Industrial Engineering 2018, LTH; Knut Winström, Mechanical Engineering 2018, LTH

Supervisor: Ingela Elofsson, Division of Production Management at Faculty of Engineering LTH

Background: The rapid advancement of technology has the potential to disrupt established industries, including the banking sector. Companies that fail to adapt to technological shifts risk losing their competitive advantage and face challenges. As the banking industry undergoes digital transformation, banks face the challenge of aligning technology and business models to engage digital customers effectively. Banks must navigate the changing landscape to remain competitive.

Objective: Describe, explain and analyse how Swedish banks are affected by the emergence of financial technologies

Method: This thesis has an abductive and mixed methods approach and includes archival and documentary research, a case study and a comparative study of a selected group of FinTechs and banks.

Limitations: This work will limit to primarily Swedish banks or banks that have large part of their organisation in the Swedish bank market. The financial technologies described in the work will be based on Swedish financial technology companies. This work will also be focused on the bank market from a retail perspective and not from a commercial perspective.

Conclusion: Swedish banks are impacted by FinTech, with increased threats of entry, stronger buyer and supplier bargaining power, and heightened rivalry. Banks are generally proactive and have started to collaborate with FinTechs to integrate innovative services and maintain differentiated, but face challenges in the evolving digital landscape.

Keywords: FinTech, competition, competitive strategy, digitalisation, technology, Open Banking, Strategy, Business model, Digital.

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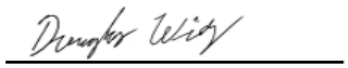
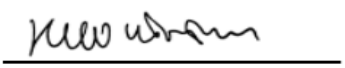
Preface

This master's thesis was conducted during the spring semester of 2023 at Lund University, Faculty of Engineering, by the two authors Douglas Wilsby and Knut Winström. It concludes their Master of Science in Industrial Engineering and Mechanical Engineering programs.

First and foremost, a big thank you is directed to Ingela Elofsson at the Division of Production Management at Lund University, who guided us throughout this work, consisting of highs and lows. With her academic expertise, challenging questions, energetic personality and accessibility, Ingela has been an invaluable sounding board in the execution of this master's thesis.



Douglas Wilsby
Stockholm, 25 May 2023



Knut Winström
Stockholm, 25 May 2023

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Wordlist

- **FinTech:** Financial technology company
- **FinTechs:** Group of financial technology companies
- **Niche bank**: A niche bank is a bank that specialises itself in one or more segment, that can be either customers or products. (Nationalencyklopedin, 2023)
- **Open Banking:** Third-party developers can access customer data from banks and thus build various financial services and functions.

1 Introduction

1.1 The Technology Shift

Technology shifts pose a severe risk to any thriving business. Historical records reveal that companies' technology once a source of competitive advantage often becomes a major drawback. While some companies have managed to overcome these challenges, mature companies struggling with a potential technology shift find it challenging to anticipate the reasons for failure and the keys to success beforehand. (Tongur & Engvall, 2014)

Despite investing in the necessary technologies to retain their current customers, these companies neglect other technological advancements that future customers will demand. This paradox can be attributed to various factors such as bureaucracy, arrogance, outdated leadership, poor planning and short-term investments. However, the root cause is the adherence to a popular management belief - staying close to their customers. By doing this, these companies overlook the technological advancements that future customers will require. (Bower & Christensen, 1995)

The shift towards new technology is affected by a combination of economical, technological and social factors. These factors constantly influence the development and adoption of new technologies. Businesses are motivated to pursue increased efficiency, cost savings and new revenue streams from an economic standpoint. (Anderson & Lanzolla, 2008; Zaki, 2019)

Technological advancements and the creation of new technology have the potential to revolutionise entire industries and are therefore important drivers. Social drivers are influenced by changes in consumer behaviour and demographics. For instance, younger generations' increasing use of digital technologies has led to the creation of business models and services that cater to them. The demand for convenience and personalisation is another significant social driver that is shaping the technology shift. (Zaki, 2019; Bolton et al, 2018)

Ultimately, these drivers are interconnected and mutually reinforcing. Social drivers such as changing consumer behaviour and demographics drive the demand for new and innovative products and services, which in turn drives technological innovation. Meanwhile, economic drivers such as the need for increased efficiency and cost savings also play a crucial role in shaping the technology shift by driving the adoption of new technologies in businesses.

1.2 Digital transformation in the banking industry

Digital transformation presents a significant challenge across all industries, requiring a comprehensive realignment of technology and the adoption of new business models to effectively engage digital customers at every touchpoint in the customer experience lifecycle. The success of digital transformation hinges upon a thorough understanding of digital consumer behaviour, preferences and choices. This understanding serves as the foundation for implementing substantial consumer-centric changes within the organisation that directly address these evolving needs. Such a consumer-centric and self-directed client structure carries profound implications for banking institutions. To navigate this landscape, banks must not only continue to provide their existing services but also develop strategic approaches to manage the shifting landscape. (Schuchmann & Seufert, 2015)

Consequently, banking organisations are compelled to explore new business fields, moving beyond mere exploitation and striking a successful balance between both aspects. This necessitates establishing a clear development orientation and simultaneously implementing innovations while maintaining a strong focus on efficiency by optimising existing resources. The pressure to achieve this balance is driven by the current dynamic changes in the finance market, the emergence of new competitors in the sector and the limited differentiation among the banking services offered. Therefore, banks need to enhance their continuous learning ability, as it serves as an essential prerequisite for effectively coping with innovations. (Schuchmann & Seufert, 2015)

banks are actively pursuing customer satisfaction enhancement in digital banking services by implementing digitalisation strategies. In the face of global competition, banks prioritise the development of systems that facilitate fast, convenient and comprehensible delivery of banking services, allowing immediate resolution of customer issues. Consequently, factors such as employee count, transaction consistency and branch network play a pivotal role in the digitalisation efforts within the banking sector. Digital transformation encompasses a wide range of initiatives in banking, including digitisation of documents, adoption of electronic signatures for transactions, e-learning platforms, teleconferencing, online trading portals, digital storefronts, electronic statements and mobile payments. (Turhan, 2023)

1.3 The emergence of FinTech

Financial technology or FinTech, uses technology to enhance and automate financial services. This industry has emerged as a disruptive force in the traditional financial sector, providing individuals and businesses with innovative ways to access and manage their financial assets. The roots of FinTech can be traced back to the late 1990s and early 2000s, when the rise of the internet and mobile technology expanded access to financial services. Online banking and mobile payments were among the first FinTech services to gain widespread adoption, paving the way for more advanced offerings in the future. (Freixas & Rochet, 2008; Greenbaum, Thakor & Boot, 2019; Arcano Economic Research, 2018)

Following the 2008 global financial crisis, the FinTech industry saw an extraordinary upswing in investment. This was primarily due to a lack of trust in traditional financial institutions and an increasing demand for financial services that are easier to comprehend and use. In addition, FinTech start-ups have thrived thanks to a surge in venture capital and private equity funding. (Macklem, T. 2020)

The FinTech industry has undergone significant changes and growth in recent years. This is mainly due to the advancements in technology. These developments have given rise to new business models such as peer-to-peer lending and digital asset trading. These business models have disrupted the traditional financial sector. Compelling it to adapt and innovate. FinTech has emerged as a major force in the financial industry and it is likely to continue shaping the way people access and manage our financial assets in the future. Therefore, it is essential for businesses and individuals to understand the trends and developments in the FinTech sector to stay competitive and take advantage of the opportunities it presents. (Thakor, 2019; Zachariadis, 2020)

1.4 FinTechs interaction with banks

The emergence of FinTech has had a significant impact on the global banking industry. Various studies indicate that traditional banks are facing increased competition and pressure to adapt to the changing landscape. FinTech companies that often leverage technology to provide financial services have disrupted traditional banking models. This often by offering faster, more convenient and often cheaper services to customers. This has led to a re-evaluation of traditional business models and a shift towards digitalisation in order to remain competitive. (Freixas & Rochet, 2008; Greenbaum, Thakor & Boot, 2019)

One way in which FinTech is impacting global banks is through the use of new technologies such as artificial intelligence and blockchain. FinTech companies are using these technologies to develop new products and services. Examples of this is for example robo-advisors and smart contracts which are more efficient and cost-effective than traditional banking options. This puts pressure on traditional banks to invest in these technologies in order to stay competitive. Additionally, FinTech companies are also able to scale their operations quickly and reach a global market which puts pressure on traditional banks to do the same. A report from the World Economic Forum suggests that traditional banks need to adopt FinTech strategies and technologies to remain competitive in the digital age. (Thakor, 2020; World Economic Forum, 2015)

In conclusion, the emergence of FinTech is having a significant impact on global banks. FinTech companies are disrupting traditional banking models by offering faster, more convenient and often cheaper services to customers. This is leading to increased competition for traditional banks and forcing them to re-evaluate their business models, invest in new technologies and try to scale their operations quickly to remain competitive. Although FinTech companies may be disruptive in some bank segments. They can also be seen as potential value adding supplements in the industry. Since FinTech firms simply cannot replace banks, mutual coexistence and partnership can be prosperous for all parties involved. (Navaretti et al, 2017)

1.5 Objective

Describe, explain and analyse how Swedish banks are affected by the emergence of financial technologies.

1.6 Limitations

This work will be limited to primarily the Swedish banking industry. Thus, focusing on Swedish banks and FinTechs, or banks and Fintechs that have large part of their organisation in Sweden. This thesis will focus on the banking industry from a retail perspective and not from a commercial perspective.

2 Methodology

Methodology is the fundamental approach chosen for one's thesis work. It sets the framework or principles for how to proceed. The methodology does not prescribe in detail what and how to do or not do. It rather serves as a help to move from an overarching goal in suitable steps towards increased knowledge of the question. The choice of methodology depends on the goal and nature of the work. (Höst et al, 2006)

2.1 Research strategy

The work may have different overarching purposes; *descriptive studies* have as their main purpose to find out and describe how something works or is performed. *Exploratory studies* aim to deeply understand how something works or is performed. *Explanatory studies* seek causal relationships and explanations for how something works or is performed. *Problem-solving studies* aim to find a solution to a problem that has been identified. (Höst et al, 2006)

The thesis is not limited to a single predetermined methodology; rather, it may comprise numerous partial studies. For example, a problem may be recognised in a descriptive and exploratory partial study and subsequently addressed in a problem-solving partial study. The purpose of this thesis is as previously mentioned: *Describe, explain and analyse how Swedish banks are affected by the emergence of financial technologies*, which requires a mix of descriptive and explanatory studies. The study be of both longitudinal and cross-sectional character to both comprehend the dynamics of the objective, but also grasp the contemporary

2.2 Research approach

2.2.1 Logical reasoning

According to (Saunders et al, 2019) there are three types of logical reasoning approaches. The first one, inductive reasoning, involves deriving general conclusions from specific observations. It begins with a set of specific facts that undergo systematic analysis and comparison, leading to the formulation of a broader conclusion. On the other hand, the deductive method involves deriving specific conclusions from a general premise or hypothesis. Deductive reasoning moves from the general to the specific, whereas the inductive method operates in the opposite direction, starting with specific facts and arriving at a general conclusion. Deduction and induction can be

said to be opposites of each other. The third one, abductive reasoning, differs from both deduction and induction by involving a reciprocal movement between theory and data. Instead of solely moving from theory to data (as in deduction) or from data to theory (as in induction), abduction combines elements of both approaches, allowing for a back-and-forth exploration between theory and data. (Saunders et al, 2019)

Table 1, Deduction, induction and abduction: from reason to research. (Saunders et al, 2019)

	Deduction	**Induction**	**Abduction**
Logic	In a deductive inference, when the premises are true, the conclusion must also be true	In an inductive inference, known premises are used to generate untested conclusions	In an abductive inference, known premises are used to generate testable conclusions
Generalisability	Generalising from the general to the specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
Use of data	Data collection is used to evaluate propositions or hypotheses related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth
Theory	Theory falsification or verification	Theory generation and building	Theory generation or modification; incorporating existing theory where appropriate, to build new theory or modify existing theory

The logical reasoning is important to consider when determining research approach. Since our objective is to "Describe, explain and analyse how Swedish banks are affected by the emergence of financial technologies.", solely using a deductive or inductive is not the best fit as existing theory will be used, but also generate new insight. Using abductive reasoning, thus moving back and forth between inductive and deductive reasoning is necessary to grasp the dynamics between FinTechs and banks.

2.2.2 Methodological choice

There are three primary research approaches: qualitative, quantitative and mixed methods according to (Creswell, 2016). While these approaches may appear distinct, they exist on a continuum. Qualitative and quantitative methods represent opposite ends of this spectrum, with mixed methods research incorporating elements of both. The differences between qualitative and quantitative research are not solely based on the use of words versus numbers or closed- versus open-ended questions. Rather, they are determined by the philosophical assumptions, research strategies and specific methods employed. (Creswell, 2016)

Qualitative research involves exploring and understanding the meaning that individuals or groups assign to a problem. The research process includes developing questions and procedures, collecting data, analysing data to build general themes and interpreting the meaning of the data. This type of research value an inductive style, an emphasis on individual meaning and a focus on conveying the complexity of the situation. (Creswell, 2016)

Quantitative research, on the other hand, involves testing objective theories by examining the relationship among variables. Researchers measure these variables typically on instruments, so that numerical data can be analysed using statistical procedures. This type of research share assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations and being able to generalise and replicate the findings. (Creswell, 2016)

Mixed methods research involves collecting both quantitative and qualitative data, integrating the two forms of data and using distinct designs that may involve philosophical assumptions and theoretical frameworks. This approach assumes that the combination of qualitative and quantitative methods provides a more complete understanding of a research problem than either approach alone. (Creswell, 2016)

This thesis will utilise a mixed methods research approach as it is best suited to answer the objective. Although the thesis will be focused on the qualitative aspects, parts of the data have to be quantitative in order to draw reliable conclusions.

2.2.3 Archival and documentary research

Archival and documentary research have been significantly influenced by the digitalisation of data and the availability of online archives and open data initiatives. This expansion provides researchers with a broader range of secondary data sources accessible from various locations worldwide. Many archival and documentary materials are now accessible online. Online data archives, gateways to governmental websites, organisational websites and media websites offer access to a variety of documentary sources. (Saunders et al, 2019)

It's important to recognise that documents used for research are considered secondary sources originally created for different purposes. Researchers using archival or documentary research strategies must be mindful of this and understand the advantages and disadvantages of using secondary source material. While caution is necessary when using documents for research, they offer valuable data for analysis, both quantitatively and qualitatively. Quantitative analysis of qualitative documents can provide a rich understanding of events, contexts, actors, external influences and outcomes. Additionally, quantitative data in documents like annual or financial reports allow for comparisons between organisations or across reporting periods. (Saunders et al, 2019)

Documents can be analysed not only for their content but also for what is omitted, which facts are emphasised or not used and how they are circulated within an organisation. Archival or documentary research can be an effective and efficient strategy, but its appropriateness depends on the research question and access to suitable documents. Challenges such as restricted access, varying quality of documents, missing data and inconsistencies may arise when using an archival research strategy. Therefore, researchers need to determine document availability and design their research accordingly, potentially combining this strategy with others, such as qualitative interviews in a Grounded Theory approach or within a case study strategy. (Saunders et al, 2019)

Archival and documentary research will play a significant part in answering the objective since the objective require understanding different dimensions,

both industry related and company specific. Thus, the objective is quite broad and relying on in-person sources of information might be too subjective, thus not reaching the sufficient objectivity aimed for.

2.2.4 Case study

A case study is a comprehensive approach used to describe a phenomenon in detail. This method is appropriate when a thorough examination of situations is necessary to obtain comprehensive information. It is a flexible method where data is gathering often is through interviews, observations or archival analysis. (Höst et al, 2006) Since this study is both descriptive and explanatory a case study approach is suitable. The case itself is the phenomenon of the emergence of FinTechs

2.2.5 Comparative study

A comparative study involves the analysis and comparison of multiple objects or ideas. It aims to demonstrate the ability to examine, compare and contrast subjects or ideas. By conducting a comparative study, one can identify similarities or differences between two subjects by comparing and contrasting multiple things. A comparative study is used to establish and quantify relationships between two or more variables by observing different groups that are exposed to different treatments, either by choice or due to circumstances. This type of study examines two or more similar groups, individuals, or conditions through comparison. The comparison typically highlights specific characteristics. Comparative study's plays a crucial role in the formation of concepts by emphasising suggestive similarities and contrasts among cases or subjects. (Bukhari, 2011)

A comparative study is well suited to answer the objective of the study since the aim is to explore how the incumbents (banks) are affected by the new entrants (FinTechs). Thus, comparing them are vital to understand the dynamics of the industry and their different strategies.

2.3 Selection

2.3.1. Selection method

There are different methods for conducting sampling. To obtain a representative sample, a random sampling method must be used. Random sampling selects a subset of the sampling frame using random number generation. Systematic sampling selects every Nth individual or unit. Stratified sampling defines a number of categories and then selects a sample

from each category. When the sample includes all individuals or units, it is referred to as a complete or census sampling. (Höst et al, 2006) This selection method for this thesis is stratified sampling as mapping and categorising companies will be required, thus using a random or systematic sampling method might not capture the broad picture needed to answer the objective.

2.3.2 Selection criteria for companies

Since this thesis will use stratified sampling as selection method, the basis of selection must be clarified. The following criteria's have been established for the companies included in the thesis:

I. Sector: The companies must be banks or FinTechs
II. Geography: The companies must be present on the Swedish Market, but being international or regional is not a problem
III. Categories: The number and types of categories should be based on existing literature defining them and represent different parts of the industry, but the overall selection should cover the main parts or preferably the whole industry
IV. Service offering and company strategy: The companies should represent a diverse set of offerings and strategy
V. Established actors: The companies must be established actors with several employees, publicly shared annual reports (or at least freely available) containing information about specific company strategy

2.3.3 Motivation of the selected companies

The overall selection of companies was based in the selection criteria in section *2.3.2*, four major categories were identified, acting as the foundation to select companies. The four universal banks were selected as they all play a major part of the Swedish bank industry and fulfil the selection criteria. The Nishe banks selected all fulfil the selection criteria and the specific banks chosen was so because of the diverse geographical presence, service offering and company strategy. The savings banks chosen all fulfil the selection criteria, although the savings banks are quite similar three of them was included for validity purposes. The selected FinTechs fullfill the selection criteria. The FinTechs selected was mainly because of their diverse service offering, but also because of their size and the publicly available information about them. The selected companies are included in the *Table 2*.

Table 2, The selected companies.

Established Categories	Name	Geographical presence	Service offering	Established
Universal bank	SEB	International	Full service	Yes
	Nordea	International	Full service	Yes
	Handelsbanken	International	Full service	Yes
	Swedbank	International	Full service	Yes
Niche bank	SBAB	Sweden	Few products	Yes
	Avanza	Nordic	Several products	Yes
	Nordnet	Nordic	Several products	Yes
	Marginalen Bank	Nordic	Several products	Yes
	Nordax Bank	Nordic	Several products	Yes
	Collector Bank	International	Several products	Yes
	Svea	Nordic	Several products	Yes
	Ålandsbanken	Nordic	Several products	Yes
	Resurs	Nordic	Several products	Yes
Savings bank	Sparbanken Skåne	Parts of Sweden	Several products	Yes
	Sparbanken Syd	Parts of Sweden	Several products	Yes
	Sparbanken Sjuhärad	Parts of Sweden	Several products	Yes
FinTech	Klarna	International	Few products	Yes
	Trustly	International	Very few products	Yes
	Zimpler	International	Very few products	Yes
	Stabelo	Sweden	Very few products	Yes

2.4 Methods of data collection

Primary sources are those where information is collected directly from respondents for the specific purpose of a study. These methods include interviewing, observation and the use of questionnaires. All other sources where the required information is already available such as government publications, reports and previous research are referred to as secondary sources. (Kumar, 2011)

2.4.1 Primary sources

Observation
Observation is a way to collect primary data that involves purposeful, systematic and selective watching and listening to a phenomenon or interaction as it takes place. It can be an appropriate method of data collection in situations where full and accurate information cannot be obtained by questioning or when the primary interest is in observing behaviour rather than individual perceptions. Two types of observation can be used: participant observation and non-participant observation. In participant observation. The researcher participates in the activities of the group being observed in the same manner as its members with or without their knowledge. On the other hand, non-participant observation often involves the researcher being a passive observer who watches and listens to the group's activities and draws conclusions from this. (Kumar, 2011)

Surveys/Questionnaires
Questionnaires are a popular method of data collection that involves a set of questions presented to the participant to complete independently. Questionnaires can be administered in different formats including paper-based, electronic or online. The suitability of questionnaires as a data collection method will depend on the research objectives and the research question. Questionnaires can be useful when the research aims to collect data on attitudes, opinions and behaviours of large populations. Additionally questionnaires can be an appropriate method when the research question requires standardised responses. (Kumar, 2011)

Interviews
Interviews are another way to collect primary data. They involve face-to-face conversation between the researcher and the participant(s) where the researcher asks questions to gather information. Interviews can be structured or unstructured. In a structured interview the researcher asks a predetermined set of questions in a specific order. In contrast to a structured invterview, an

unstructured interview allows for more flexibility in combination with the interviewer can follow up on the participant's responses with additional questions. (Kumar, 2011)

The suitability of an interview as a data collection method will depend on the research objectives and the nature of the research question. Interviews can be useful when the research question focuses on individual perceptions, experiences, attitudes or beliefs. They can also be useful when the research aims to understand complex issues that require more in-depth exploration. The quality of data obtained through interviews can be influenced by several factors such as interviewer bias, social desirability bias and the level of rapport between the researcher and participant. (Kumar, 2011)

2.4.2 Secondary sources

Up to this point, the primary methods of collecting data have been explored where data is gathered either by oneself or by someone else for a specific purpose. With that said, there may be instances where required data has already been collected by others and only the relevant information needs to be extracted for research purposes. Secondary sources of data are used in both qualitative and quantitative studies. Qualitative research typically involves extracting descriptive and narrative data. Both historical and current. Whereas categorical or numerical data is commonly extracted in quantitative research. (Kumar, 2011)

The following section outlines various secondary sources of data, which are categorised as:

- Government or semi-government publications: Numerous government and semi-governmental organisations routinely collect data in various fields and publish it for public use and interest groups. Examples include the census, registration of vital statistics, labour force surveys, health reports, economic forecasts and demographic information. (Kumar, 2011)
- Earlier research: In some cases, an extensive body of existing research on a particular topic may provide the necessary information. (Kumar, 2011)
- Personal records: Historical and personal records such as diaries, written by individuals may contain the required information. (Kumar, 2011)

- Mass media: Reports published in newspapers, magasines, the internet and other media outlets can be another valuable source of data. (Kumar, 2011)

2.4.3 Motivation of data collecting methods

Secondary sources were used as the data collection method for this thesis. Initially formal interviews were supposed to take place, but due to more sufficient secondary sources than anticipated and some cancelled interviews, primarily secondary sources were used. Albeit some of the secondary sources was based on either surveys and interviews, revealing insights into both the Swedish FinTech sector and banking industry.

2.5 Data analysis

Data analysis is a powerful tool in research allowing for researchers to gain a better understanding of the phenomena they study. By using the three main purposes of analysis - description, explanation and interpretation - researchers can identify the constituent elements of a phenomenon, determine how it works and gain an understanding of its meaning. (Denscombe, 2010)

2.5.1 Quantitative data analysis

Quantitative data is characterised by numerical values and is commonly associated with research strategies such as surveys and experiments as well as research methods like questionnaires and observation. However quantitative data is not solely derived from these sources. Numerical data can also be obtained through the use of content analysis with texts such as interview transcripts. Thus it is not the research method that defines quantitative data but rather the nature of the data produced by the method. It is important to acknowledge that various research methods can produce quantitative data. (Denscombe, 2010)

Researchers utilising quantitative data must have a precise understanding of the nature of the numerical data they are working with as different numerical representations can convey various types of information. This distinction holds significant implications for statistical analysis and the deductions that can be made from it. Therefore, comprehending the precise nature of the numerical data is vital for researchers to draw valid conclusions from their analysis. (Denscombe, 2010)

After outlining the data profile, the subsequent phase of analysis involves identifying patterns and connections in the data, which could include examining relationships between variables or multiple data sets. This involves scrutinising whether one category of data corresponds with another or whether one category fluctuates in tandem with another. Researchers need to ensure that they don't assume that the data displays the entire truth, even if it appears straightforward at first glance. (Denscombe, 2010)

2.5.2 Qualitative data analysis

When it comes to analysing qualitative data, there are various forms to consider depending on the type of data and its intended purpose. As such, there is no universal approach that can apply to all scenarios. Nevertheless, there are some overarching principles commonly associated with qualitative data analysis. These principles can serve as guidelines for project researchers to keep in mind during their qualitative research. In general, qualitative data analysis is viewed as follows. (Denscombe, 2010)

- Iterative: the analysis is not a one-time occurrence that takes place at a single point in time, but rather an ongoing process where data collection and analysis phases occur simultaneously. (Denscombe, 2010)
- Inductive: the analysis typically progresses from specific to general. By closely examining localised data, the analysis aims to reach more abstract and generalised conclusions about the topic. (Denscombe, 2010)
- Researcher-centered: The analysis acknowledges the influence of the researcher's values and experiences. The researcher's self-identity is considered significant in relation to the analysis. (Denscombe, 2010)

2.6 Research quality

A study can be valid in different respects: that the conclusions are well founded, that it really addresses the phenomenon you want to study and that the results are general. These categories are usually referred to as validity, reliability and generalisability. (Höst et al, 2006)

2.6.1 Validity

Validity is the degree to which data are both accurate and precise and also relevant to the research question being investigated. Essentially, the question is whether the data are appropriate for studying the topic at hand and whether they have been measured correctly. To increase the validity of a study,

triangulation can be applied, i.e. studying the same object with different methods. (Höst et al, 2006). Triangulation was implemented in this thesis as both qualitative and quantitative methods was used.

2.6.2 Reliability

Reliability refers to whether a research instrument is unbiased in its effect and consistent across multiple uses. In other words, would the research instrument yield the same results on different occasions, assuming all other factors remain constant? In order to achieve good reliability, it is important to be thorough in the data collection and analysis. By reporting the working process, the reader can make an assessment of how the thesis work proceeded. (Höst et al, 2006). The working process including selection method is reported under the methodology chapter.

2.6.3 Generalisability

Generalisability, or external validity, pertains to the potential to apply research findings to other instances of the phenomenon being studied. This involves determining whether research findings can explain or occur in similar phenomena at a general or universal level, rather than being unique to the specific case(s) used in the research. A good and detailed description of the investigated context can contribute to increased representativeness. (Höst et al, 2006). The findings of this thesis is mainly limited to the Swedish market and the banking industry, however the findings could transferred to other countries and industries but with caution of the differences in regulation, digital readiness, customer mobility and trust in the sector.

3 Theory

3.1 Introduction to chosen theories

This theory section focuses on two main theories: Porter's Five Forces and Porter's Generic Competitive Strategies. They are well suited to help us answer the objective “Describe, explain and analyse how Swedish banks are affected by the emergence of financial technologies”. The Five Forces model will help us understand the completive landscape and narrow down the weaknesses and strengths of the incumbents while Porter’s Generic Competitive Strategies will help us understand the responses of the incumbents so far. Basically the theories will help us in narrowing down the study from a broad analysis of the industry to a more specific analysis of the impact of FinTech on banks and their strategic options.

Porter's Five Forces is a framework that provides a comprehensive overview of the competitive environment of the banking industry. It analyses the bargaining power of customers and suppliers, the intensity of competitive rivalry, the threat of new entrants and the threat of substitutes. This analysis identifies potential challenges and opportunities that FinTech presents to traditional banks. It also serves as a foundation for the specific analysis of the strategic options available to banks.

Porter's Generic Competitive Strategies narrows down the study by evaluating the effectiveness of different strategic approaches in responding to competitive pressures. This framework outlines two generic strategies: cost leadership and differentiation. By choosing Porter's Generic Competitive Strategies you can identify the strategic options available to banks and evaluate which strategy may be most effective in responding to FinTech disruption. Specifically, banks can use this framework to determine whether they should compete on cost by offering products or services at a lower cost than competitors or differentiate themselves by offering unique products or services that are perceived as superior by customers. This choice of theories provides a more focused view of the strategic options available to banks in the face of FinTech disruption.

Technology and Competitive Advantage theory narrows down the study even further by exploring how banks can leverage technology to create competitive advantages. This theory provides complement for understanding how banks can use technology to improve their Competitiveness.

3.2 Porter’s Five Forces

Porter's five forces is used to assess the competitiveness of a specific industry on industry level compared to the competitive strategy’s framework used on company level.

According to Porter’s five forces theory the success or failure of firms is greatly influenced by competition. Competition influences a firm's activities, such as innovations and the strength of its culture and plays a crucial role in determining its performance. A competitive strategy is the pursuit of a favourable position within an industry where competition takes place. The goal of a competitive strategy is to establish a profitable and sustainable position against the forces that shape competition in the industry. When a competitive strategy I chosen, the theory emphasises the importance of two important that must be considered. The first question is the level of profitability in a particular industry and the factors that contribute to it. Not all industries offer equal potential for profitability and a firm's ability to thrive in its industry is crucial in determining its overall profitability. (Porter, 1985)

The second question is about the factors that determine a firm's relative competitiveness within an industry. Porter argues that despite the overall profitability of an industry, some firms may be much more successful than others. Neither question alone can fully guide the choice of competitive strategy. A firm in a highly profitable industry may still not be successful if it has a weak competitive position and similarly, a strong competitive position may not result in profitability if the industry is not attractive. Both industry attractiveness and competitive position are constantly changing and the competition among firms is ongoing. Even periods of stability can be disrupted by sudden competitive moves. (Porter, 1985)

Porter argues that the profitability of a firm is primarily influenced by the attractiveness of its industry. A competitive strategy must stem from a thorough understanding of the competitive forces that shape the industry's profitability. The ultimate goal of the strategy is to effectively manage, or even alter these forces in the firm's favour. These five forces, which include new entrants, substitutes, buyer power, supplier power and rival competition, collectively impact a firm's average return on investment (*Figure 1*). The strength of these forces varies among industries and can change over time. Industry profitability is determined by industry structure and not by product appearance or technology level. The five competitive forces determine industry profitability by affecting the prices, costs and investment required for a firm. For instance, buyer power affects prices and costs, supplier power

impacts input costs, rivalry influences prices and competition costs and the threat of entry limits prices and shapes deterring investment. The strength of each force is dependent on the industry's underlying economic and technical characteristics. (Porter, 1985)

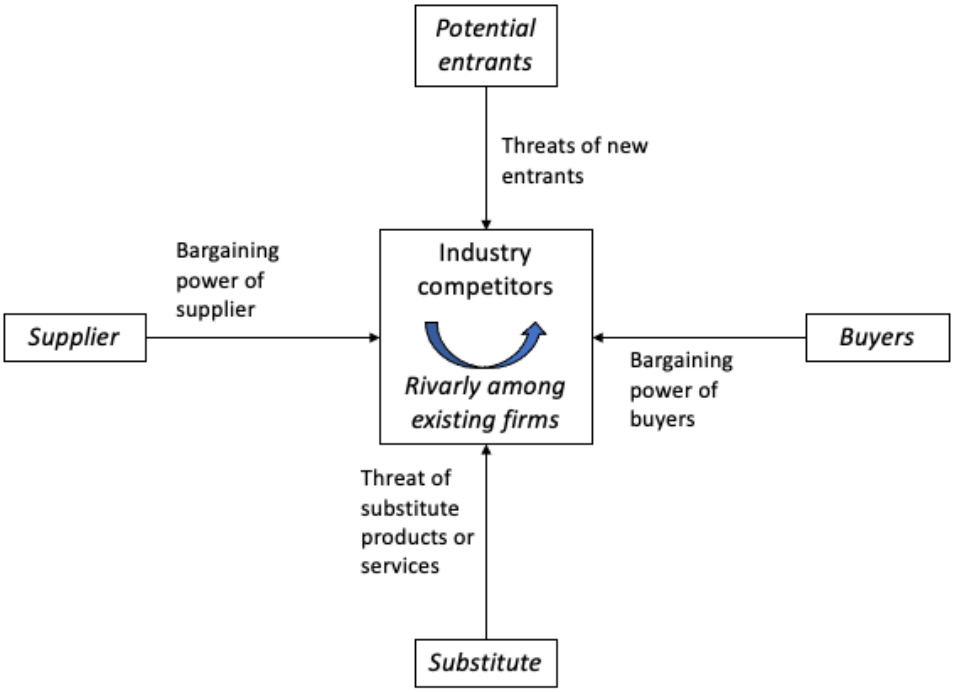

Figure 1, Porter's five forces. (Porter, 1985)

The stability of an industry's structure can change as the industry evolves. Changes in the structure can alter the power of the competitive forces, impacting the industry's profitability. The trends that are crucial for strategy are those that affect the industry's structure. Although industry structure is partially determined by intrinsic factors, a firm's strategy can also influence the five competitive forces. Effective strategies can change the industry's structure, positively or negatively and many successful strategies have altered the rules of competition. The five-forces framework helps firms identify the critical factors affecting competition in their industry and guide their strategy towards long-term profitability. However, strategies that alter the industry structure can be risky, as they can harm both the firm and the industry's profitability. Industry leaders have a greater responsibility to balance their own advantage and the health of the industry. Firms must consider the long-term consequences of their strategies to avoid destroying the industry structure. (Porter, 1985)

3.2.1 Threats of entry

The entry of new firms into an industry can bring about an influx of new capacity and a drive to acquire market share, thereby impacting prices, costs and the level of investment required to remain competitive. Particularly, when new entrants come from other markets, they can utilise their existing skills and financial resources to disrupt the competition. As a result, the possibility of new entrants entering the industry acts as a constraint on the profitability potential of the industry. When the likelihood of entry is high, established firms must maintain low prices or increase investment to deter the entry of new competitors. (Porter, 2008)

The threat of entry in an industry is determined by the level of entry barriers present and the response that can be expected from incumbent firms. If entry barriers are low and new entrants expect little resistance from established firms, the threat of entry is high and the profitability of the industry is moderated. It is the prospect of entry, rather than actual entry that limits the profitability of the industry. (Porter, 2008)

There are several factors that determine the degree to which an industry is conducive to entry by new firms. These include:

Supply-side economies of scale: These occur when firms that produce on a larger scale benefit from lower costs per unit, as they can spread their fixed costs over more units, utilise more advanced technology, or negotiate better terms from suppliers. This makes it difficult for new entrants to enter the market, as they either must challenge established competitors by starting on a large scale or accept a cost disadvantage. (Porter, 2008)

Demand-side benefits of scale: Also known as network effects, these benefits occur in industries where a buyer's willingness to pay for a product increase with the number of other buyers who also purchase the product. Larger companies are often trusted more for crucial products and buyers value being part of a larger network of customers. This discourages entry, as it limits the willingness of customers to buy from a new entrant and reduces the price they can command until they have built up a large customer base. (Porter, 2008)

Customer switching costs: These are fixed costs that buyers face when switching suppliers, such as the need to alter product specifications, retrain employees, or modify processes or information systems. The larger these costs, the harder it will be for a new entrant to gain customers. An example

of a product with high switching costs is enterprise resource planning (ERP) software. (Porter, 2008)

Capital requirements: The need to invest significant financial resources to compete can deter new entrants. This may be necessary for both fixed facilities and for funding start-up losses, building inventories, or extending customer credit. The barrier to entry is particularly high if the capital required is for unrecoverable expenses, such as advertising or research and development. While large corporations have the financial resources to enter almost any industry, high capital requirements in certain fields limit the pool of potential entrants. It's important to note that the impact of capital requirements on deterring entry can be overstated. If the industry returns are attractive and expected to remain so and if capital markets are efficient, investors will provide entrants with the funds they need. For instance, aspiring air carriers can secure financing to purchase expensive aircraft due to their high resale value, which is why there have been numerous new airlines in most regions. (Porter, 2008)

Incumbency advantages unrelated to size: Regardless of their size, incumbents may have cost or quality advantages not available to potential rivals. These advantages may come from proprietary technology, access to the best raw materials, established brand identities, or experience that has allowed incumbents to produce more efficiently. New entrants must try to bypass these advantages to succeed. (Porter, 2008)

Inadequate access to distribution channels: For a new business to succeed, it must ensure the distribution of its products or services. For example, for a new food item to be successful, it must displace others from supermarket shelves by means of price reductions, promotions, intense sales efforts, or other strategies. The less available wholesale or retail channels are and the more existing competitors have already claimed them, the more challenging it will be for a new entrant to enter the industry. At times, access to distribution can be such a significant obstacle that new entrants must either find alternative channels or create their own. (Porter, 2008)

Government policy obstacles: Government policy can directly impact new entry by imposing restrictions through licensing requirements, restrictions on foreign investment and other measures. Government policy can also amplify other entry barriers by imposing regulations such as extensive patent laws to protect proprietary technology from being copied, or environmental and safety regulations that increase the scale economies for new entrants. On the other hand, government policies can also make entry easier through direct

subsidies or by funding basic research and making it available to all companies, old and new, reducing scale economies. (Porter, 2008)

3.2.2 The power of suppliers

Suppliers with significant power are able to secure a larger portion of value for themselves by implementing higher prices, reducing quality or services, or transferring costs to industry players. This can lead to the decrease in profitability for an industry that is unable to pass on cost increases to its own prices, particularly in the case of suppliers of labour. (Porter, 2008)

Companies rely on multiple supplier groups for their inputs and a supplier group becomes powerful if it is more centralised than the industry it serves, does not rely heavily on that industry for its revenue, has high switching costs for industry participants, offers differentiated products, has no substitute and can threaten to integrate into the industry. (Porter, 2008)

For instance, when switching costs are high due to factors such as investments in specialised equipment or production facilities located near the supplier's manufacturing site, industry participants are restricted in their ability to choose among suppliers. Additionally, when a supplier group offers unique and patented products, they hold greater power over the industry participants. (Porter, 2008)

3.2.3 The power of buyers

Powerful customers can have a significant impact on an industry by driving down prices, demanding improved quality or service and using their bargaining leverage to play industry participants against each other. This can negatively impact industry profitability. The level of a customer's bargaining power is determined by several factors, such as the number of buyers and the size of each purchase relative to the vendor, the degree of standardisation or differentiation in the industry's products, the ease of switching vendors and the potential to integrate backward and produce the product themselves. (Porter, 2008)

Some customers are more price sensitive than others, which can be influenced by factors such as the fraction of their cost structure or procurement budget spent on the industry's product, their level of profitability or financial stability, the impact of the product on their quality and the effect it has on their other costs. These factors apply to both consumer and business-to-

business customers, although consumer needs may be harder to quantify. (Porter, 2008)

Intermediate customers, who purchase the product but are not the end user, can also have significant bargaining power if they can influence the purchasing decisions of end customers. Producers may try to counter this by forming exclusive arrangements with certain distributors or by marketing directly to end users. (Porter, 2008)

3.3.4 Threats of substitutes

Substitutes serve the same purpose as an industry's product but through different means. For instance, videoconferencing has replaced travel, plastic has replaced aluminum and email has replaced express mail. The threat of substitution can also come from a different industry, as seen when lawn-care products and services become threatened by multifamily homes in urban areas replacing single-family homes in the suburbs. Substitutes are omnipresent but may go unnoticed due to their difference from the industry's product. For example, a necktie and a power tool may both be substitutes for a Father's Day gift. Alternatives such as doing without, purchasing a used product, or bringing the service in-house are also substitutes. (Porter, 2008)

When the threat of substitutes is high, it negatively impacts industry profitability. These substitutes restrict an industry's profit potential by placing a cap on prices. If the industry does not differentiate itself from the substitutes through improved performance, marketing, or other means, it will struggle with profitability and growth. Not only do substitutes limit profits during normal times, but they also curb the profits an industry can make during good times. For instance, the growth of mobile phones has capped the demand for wired telephone lines in emerging economies. (Porter, 2008)

The threat of a substitute is significant when it offers an attractive price-performance trade-off compared to the industry's product. The greater the substitute's relative value, the more it limits the industry's profit potential.
If the cost of switching to a substitute is low, the threat is high. Strategists should also be aware of changes in other industries that may make them viable substitutes in the future. The substitution threat can also shift in favour of an industry, indicating positive prospects for future profitability and growth. (Porter, 2008)

3.2.5 Rivalry among competitors

Competition among existing players in an industry takes various forms such as price discounting, introducing new products, advertising and improving services. This intense rivalry can negatively impact the profitability of the industry. The impact of rivalry on an industry's profit potential is determined by the intensity of competition and the basis on which they compete. (Porter, 2008)

The intensity of rivalry is the highest when the competitors are either numerous or are nearly equal in size and power. In such circumstances, the companies struggle to stay ahead of each other and the industry lacks an authoritative leader. The absence of an industry leader results in the lack of enforcement of practices that would be beneficial to the industry. The rivalry is also high when the industry growth is slow, as companies try to fight for market share. If the barriers to exit are high, it also contributes to high rivalry. High exit barriers arise from factors such as highly specialised assets or management's loyalty to a specific business. This can lead to companies staying in the market even if they are earning low or negative returns. This leads to excess capacity in use and a decrease in the profitability of healthy competitors, as the struggling ones persist. (Porter, 2008)

When competitors are highly committed to the business and aspire for leadership, rivalry intensifies. This can be driven by various reasons such as the goals of state-owned competitors, the image of larger companies or clashes of personality and ego. The lack of familiarity among firms, different approaches to competition and differing goals also contribute to high rivalry. (Porter, 2008)

The strength of rivalry not only depends on the intensity of competition but also based on competition. The dimensions on which competition takes place and whether competitors are competing on the same dimensions play a crucial role in determining profitability. Rivalry becomes particularly destructive to profitability if it solely revolves around price competition. This is because price competition transfers profits directly from an industry to its customers. Sustained price competition trains customers to pay less attention to product features and service. Price competition is most likely to occur when products or services of competitors are similar and there are few switching costs for buyers. It also occurs when fixed costs are high and marginal costs are low. The need for large capacity expansions in certain industries can also lead to price cutting. Finally, the perishable nature of certain products can also result in price cutting. (Porter, 2008)

Competition on dimensions other than price, such as product features, support services, delivery time, or brand image, is less likely to erode profitability. This type of rivalry focuses on improving customer value and can support higher prices. It also improves value relative to substitutes and raises barriers for new entrants. Although nonprice rivalry can sometimes escalate to levels that impact industry profitability, it is less likely to occur compared to price rivalry. (Porter, 2008)

The way in which competitors compete also plays a crucial role in determining profitability. When all or many competitors aim to meet the same needs or compete on the same attributes, it results in zero-sum competition, where one firm's gain is often another's loss. This leads to a decrease in profitability. However, this can be avoided if companies take care to target their offerings to different customer segments. Rivalry can be positive-sum and even increase the average profitability of an industry when each competitor aims to serve the needs of different customer segments. This type of competition not only supports higher average profitability but also expands the industry, as the needs of more customer groups are better met. (Porter, 2008)

3.3 Porter’s Five forces and Technology

Technology is also an important determinant of overall industry structure if the technology employed in a value activity becomes widespread. Technological change that is diffused can potentially affect each of the five competitive forces and improve or erode industry attractiveness. Thus, even if technology does not yield competitive advantage to any one firm, it may affect the profit potential of all firms. Conversely, technological change that improves a firm’s competitive advantage may worsen structure as it is imitated. The potential effect of technological change on industry structure means that a firm cannot set technology strategy without considering the structural impacts. (Porter, 1985)

3.3.1 Technology and entry barriers

Technological progress significantly affects the level of entry barriers in an industry. It can either increase or decrease economies of scale in various value activities. Technology advancements can also lead to an increase in economies of scale in the development of technology itself, by accelerating the speed of introducing new products or increasing the investment required to launch a new model. Additionally, technology can create absolute cost

advantages, such as low-cost product designs and alter the capital required for competition in an industry. (Porter, 1985)

Technology also has a significant impact on the pattern of product differentiation in an industry. Technology can raise or lower switching costs, as technological choices by competitors can determine the need for buyers to retrain personnel or reinvest in equipment when switching suppliers. Technology can also affect access to distribution, allowing firms to bypass existing channels or, conversely, increasing industry dependence on channels. (Porter 1985)

3.3.2 Technology and buyer power

The impact of technological change can alter the balance of power between industries and their buyers and suppliers. The role that technology plays in differentiation and switching costs has a significant effect on buyer bargaining power. Changes in technology can also affect the ease of backward integration by buyers, which is a crucial aspect of their bargaining strategy. (Porter, 1985)

3.3.3 Technology and supplier power

Technology can also shift the bargaining relationship between industries and their suppliers. It can either eliminate the need for purchasing from a dominant supplier group or require the industry to source from a newly emerged, powerful supplier. Technological advancements can also provide alternative inputs for a firm's product, thereby increasing bargaining leverage against suppliers. Investment in technology can also empower firms to utilise multiple suppliers by creating in-house knowledge of supplier technologies, reducing dependency on any single supplier. (Porter, 1985)

3.3.4 Technology and substitution

The impact of technology on industry structure is perhaps most acknowledged for its influence on substitution. Substitution is dependent on the relative value-to-price ratio of competing products and the costs involved in switching between them. Technology brings about new products or applications that can replace existing ones, impacting both the value-to-price ratio and the switching costs of substitutes. The technological competition between industries producing similar products determines the substitution process, as it centres around the relative value-to-price of these products. (Porter, 1985)

3.3.5 The Internet and industry structure

The Internet has had a profound impact on many industries, both by creating new industries and by reconfiguring existing ones. For example, the rise of online auctions and digital marketplaces are new industries created by the Internet. However, the more significant impact has been on existing industries that were previously constrained by high communication costs, information gathering challenges, or transactional inefficiencies. The potential of the Internet to expand distance learning has been around for decades, but the industry itself was already established. (Porter, 2008)

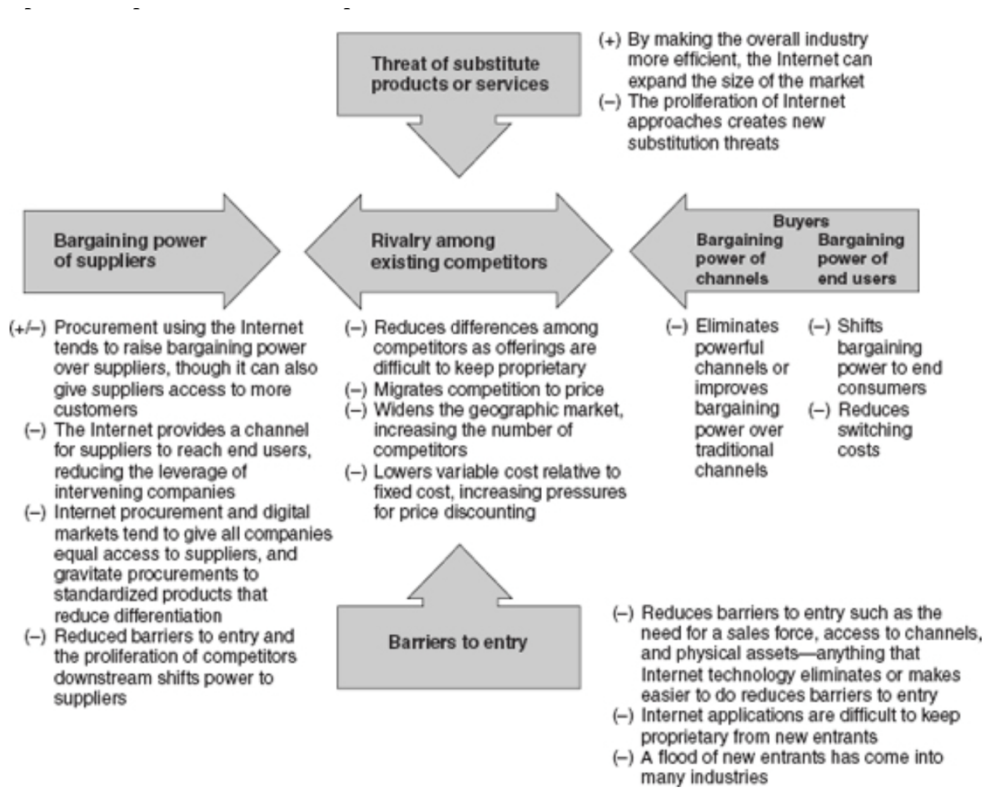

Figure 2, How the Internet Influences Industry Structure. (Porter, 2008)

The profitability of any industry is determined by five competitive forces - rivalry among existing competitors, barriers to entry for new competitors, threat of substitute products or services, bargaining power of suppliers and bargaining power of buyers. Understanding these forces is crucial in analysing an industry's attractiveness and identifying the underlying drivers of profitability. Some have argued that the rapid pace of technological change makes industry analysis less valuable, but it is more important than ever.

Analysing these forces helps to reveal the fundamental attractiveness of an industry, expose the underlying drivers of profitability and provide insight into how profitability will evolve over time. (Porter, 2008)

The impact of the Internet on long-term industry profitability varies considerably from industry to industry and it would be a mistake to draw general conclusions. However, examining a wide range of industries that have been affected by the Internet reveals some clear trends. While some industries experience positive trends such as expanded market size and increased efficiency, others experience negative trends such as reduced barriers to entry, increased buyer bargaining power, intensified competition and reduced pricing power. (Porter, 2008)

The Internet has made it easier for buyers to access information about products and suppliers, reducing their dependence on sales forces and established channels. This, in turn, reduces barriers to entry, creating new substitutes and intensifying rivalry among competitors. The use of the Internet also tends to expand the geographic market, bringing more companies into competition with each other. Furthermore, Internet technologies often reduce variable costs and tilt cost structures towards fixed costs, creating pressure for companies to engage in destructive price competition. (Porter, 2008)

Although deploying the Internet can expand the market, it often comes at the expense of average profitability. The very benefits of the Internet, such as making information widely available and reducing the difficulty of purchasing, marketing and distribution, also make it more difficult for companies to capture those benefits as profits. As a result, the great paradox of the Internet is that it simultaneously creates new opportunities and new challenges for businesses. (Porter, 2008)

3.4 Porter’s Generic Competitive Strategies

The second central concern in competitive strategy is a company's standing within its industry. This positioning affects whether the company's profits are higher or lower than the industry average. A company that has positioned itself well can still generate high returns, even if the overall industry structure is unfavourable and the average industry profitability is low. (Porter, 1985)

The key to long-term success is having a sustainable competitive advantage. A company may have many advantages and disadvantages compared to its competitors, but there are two main types of competitive advantage a

company can have: cost advantage or differentiation. The significance of any advantage or disadvantage a company has ultimately depends on its impact on cost or differentiation. Cost advantage and differentiation stem from the industry structure and come from a company's ability to handle the five forces of competition better than its competitors. The two types of competitive advantage and the scope of a company's goals lead to three generic strategies for exceeding industry average performance: cost leadership, differentiation and focus. The focus strategy has two subcategories: cost focus and differentiation focus. (Porter, 1985)

Each generic strategy requires a different approach to achieving competitive advantage, combining the type of advantage sought with the scope in which it will be achieved. The cost leadership and differentiation strategies aim for competitive advantage in a wide range of industry segments, while focus strategies target cost advantage (cost focus) or differentiation (differentiation focus) in a specific segment. The specific actions needed to implement each generic strategy differ greatly from industry to industry, as do the available generic strategies in a particular industry. Although selecting and implementing a generic strategy is complex, these are the logical paths to competitive advantage that must be explored in any industry. (Porter, 1985)

The idea behind generic strategies is that competitive advantage is the foundation of any strategy and to achieve it, a company must make a choice. If a company wants to have a competitive advantage, it must decide the type of advantage it wants and the scope in which it will attain it. Being "all things to all people" will lead to poor performance, as it usually means the company has no competitive advantage at all. (Porter, 1985)

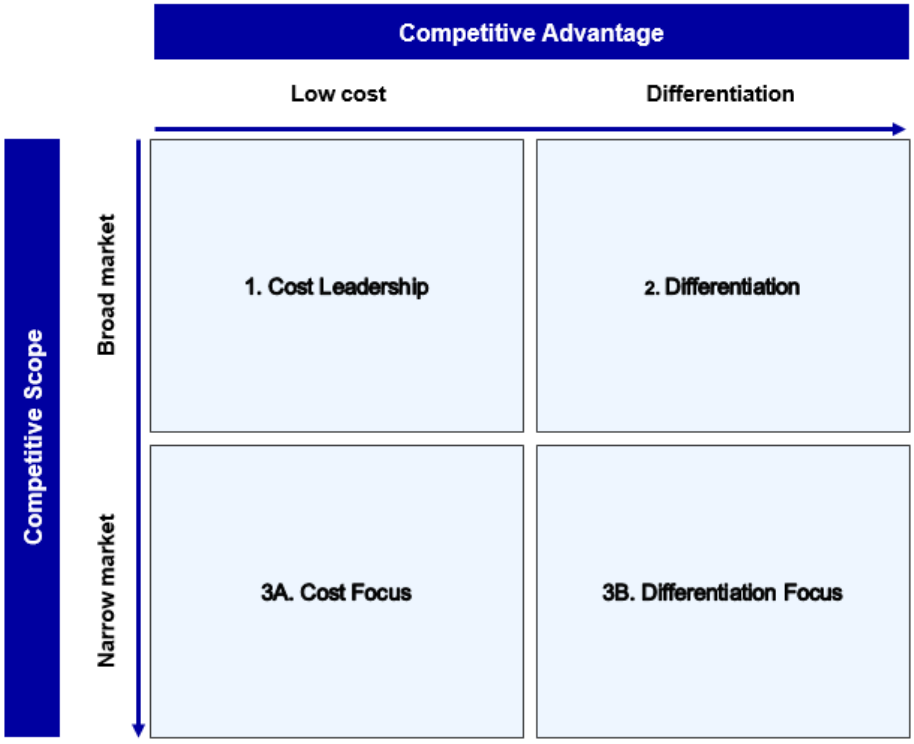

Figure 3, Three Generic Strategies. (Porter, 1985)

3.4.1 Cost leadership

Cost leadership is considered the most straightforward of the three generic strategies. In this strategy, a company aims to become the most cost-efficient producer in its industry. It often operates in multiple industry segments and related industries to maintain its cost advantage. The sources of this advantage can vary and depend on the industry structure and may include economies of scale, proprietary technology, access to raw materials and more. Being a low-cost producer involves more than simply reducing costs over time, as the company must also find and utilise all possible sources of cost savings. Low-cost producers typically offer standard, unadorned products and focus on maximising their scale and absolute cost advantages. (Porter, 1985)

If a company can achieve and maintain a cost leadership position, it can become an above-average performer in its industry if it can sell its products at or near the industry average price. If it can sell at the same or lower prices than its competitors, its cost advantage will translate into higher returns. However, it's important to note that a cost leader must also be comparable or

acceptable to buyers in terms of differentiation. If its product is not well-received, the company may have to lower prices significantly to make sales, which could eliminate the benefits of its cost advantage. (Porter, 1985)

To truly be an above-average performer, a cost leader must have parity or proximity in the differentiation factors compared to its competitors, even though cost leadership is its main competitive advantage. Having parity means that the company can convert its cost advantage into higher profits than its rivals. Proximity means that the price discount required to secure an acceptable market share will not negate the cost advantage and therefore, the company can still earn above-average returns. (Porter, 1985)

Cost leadership is a strategy that is particularly reliant on being the only firm pursuing it, as having multiple firms competing for the same position can result in intense rivalry and negatively impact profitability and industry structure. Thus, cost leadership requires pre-emption unless significant technological changes allow for a drastic shift in cost position. (Porter, 1985)

3.4.2 Differentiation

The second of the three generic strategies are differentiation. In this approach, a company strives to set itself apart from its competitors by offering unique and valuable features that are highly valued by its target customers. It chooses one or several characteristics that are considered important by the industry's buyers and positions itself to meet those needs in a way that is distinct from its rivals. This uniqueness is rewarded with a higher price for the product or service. The methods for differentiation vary greatly between industries. It can be achieved through the product itself, the sales method, the marketing techniques, or a range of other factors. (Porter, 1985)

If a firm can achieve and maintain differentiation, it will be an above-average performer in its industry if the premium price it charges covers the extra costs incurred in being unique. For this reason, a differentiator must always strive to find ways of differentiating that lead to a premium price that is greater than the cost of differentiation. The company also needs to be mindful of its cost position, as having a cost disadvantage may cancel out the benefits of its uniqueness. To achieve this, a differentiator aims to maintain cost parity or proximity with its competitors while reducing costs in areas that do not affect differentiation. (Porter, 1985)

The differentiation strategy requires a company to choose attributes that set it apart from its competitors. It must truly be unique or be perceived as unique

in order to command a premium price. Unlike cost leadership, there can be multiple successful differentiation strategies within an industry if there are multiple attributes valued by buyers. (Porter, 1985)

3.4.3 Focus

The third generic strategy is called focus. Unlike the other strategies, focus involves selecting a narrow target within an industry. The focuser identifies a specific segment or group of segments within the industry and customises its strategy to cater exclusively to their needs. This targeted approach aims to achieve a competitive edge in the chosen segments, even though it may not be the most competitive overall. (Porter, 1985)

The focus strategy has two variations: cost focus and differentiation focus. In cost focus, the focuser aims to achieve a cost advantage in the target segment. In differentiation focus, the focuser seeks to be unique in its target segment. Both variations of the focus strategy are based on differences between the target segments and other segments in the industry. These differences could stem from the unusual needs of buyers in the target segment or differences in production and delivery systems. Cost focus leverages the cost differences between segments, while differentiation focus takes advantage of the specific needs of buyers in certain segments. (Porter, 1985)

The focuser capitalises on the suboptimal performance of broadly targeted competitors in serving the target segment. If competitors are not meeting the needs of a particular segment, the focuser has an opportunity for differentiation focus. On the other hand, if competitors are overperforming in serving a segment, there is an opportunity for cost focus. For the focus strategy to be successful, the target segment must be structurally attractive and the focuser must be able to achieve sustainable cost leadership or differentiation in that segment. This is important because some segments in an industry can be less profitable than others. Several focus strategies can coexist in an industry, if focusers choose different target segments with different buyer needs or production and delivery systems. (Porter, 1985)

3.4.4 Technology and Competitive Advantage

Technology has a major impact on a company's competitive advantage when it plays a crucial role in determining their cost position and differentiation relative to their competitors. As technology is intertwined in all value activities and helps create connections between these activities, it has a strong effect on cost and differentiation. This impact is determined by the extent to

which technology affects the cost drivers or factors that make a value activity unique. The technology utilised in a value activity can also be influenced by other drivers such as scale, timing and interrelationships. However, the technology itself can also be a driver, as companies can choose technologies that give them an advantage over their competitors. (Porter, 1985)

Moreover, technology can impact a company's competitive advantage by changing or influencing other drivers of cost or uniqueness. Technological advancements can increase or decrease scale economies, open new interrelationships, provide advantages in timing and impact many other drivers. This means that a company can use technology to modify drivers in a way that benefits them or be the first to exploit a particular driver. (Porter, 1985)

3.5 Summary of the theoretical framework and application

The theoretical framework can be summarised into three dimensions:

1. Porter Five Forces analysis, described in more detail in section *3.2 Porter's Five Forces*, which is used to assess the competitiveness of a specific industry. It is comprised of 5 forces that will be analysed individually to conclude overall competition. The five forces are:
    a. Threats of entry
    b. Power of suppliers
    c. Power of buyers
    d. Threat of substitutes
    e. Rivalry among competitors
2. Porter's Generic Competitive Strategies framework, described in detail in section 3.4 Porter's Generic Competitive Strategies, which is used to understand a firm's relative position within its industry. The framework is comprised of three different strategies:
    a. Cost leadership strategy
    b. Differentiation strategy
    c. Focus strategy
3. Technology and Industry Structure, described in detail in 3.3 Technology and Industry Structure, which takes technological change into account when using the Porter Five Forces framework.

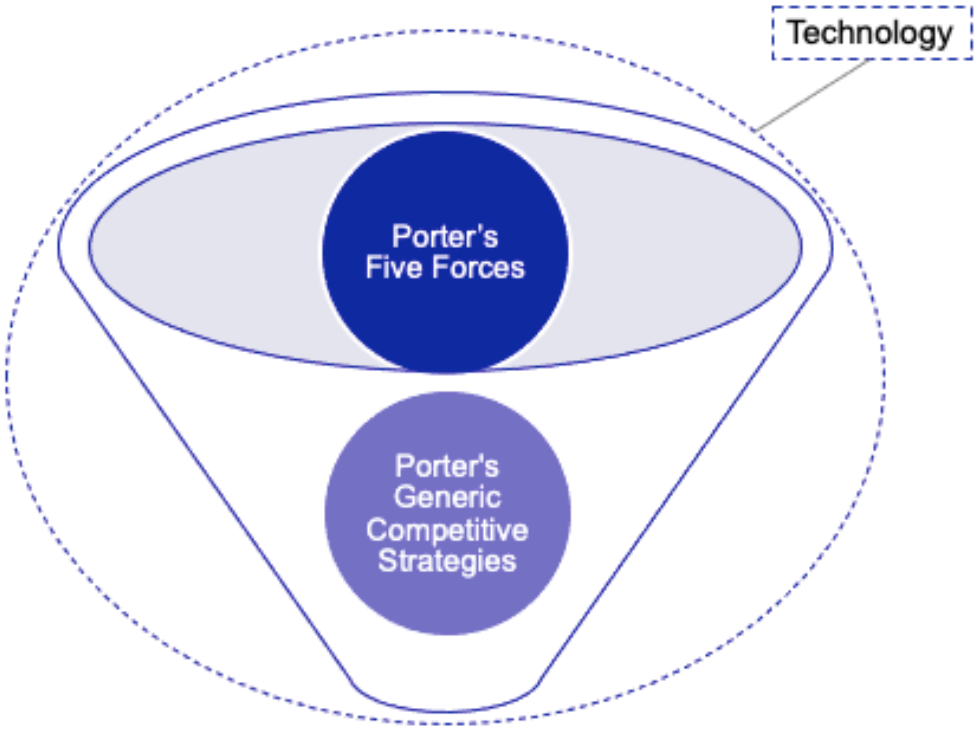

Figure 4, Funneling the theories.

The collection of empirical data will thus follow the structure of the theoretical framework, starting with data from the bank industry, followed by the technological effect on the banking industry, followed by data from FinTechs and lastly the strategy of some of the incumbent banks and FinTechs. After the collection of empirical data, it will be analysed using the two frameworks.

4 Empirics

4.1 Swedish bank industry

To ensure an accurate evaluation of the competition within the Swedish banking industry, it's crucial to establish a shared foundation. To achieve this objective, this chapter outlines the Swedish banking market and presents information regarding its operation, magnitude and composition.

4.1.1 Swedish banks' areas of operations

The concept of banking operations includes facilitating payments through general payment systems and receiving deposits into accounts. The concept of financing operations refers to activities aimed at receiving repayable funds from the public. The definition also includes granting credit and providing guarantees for credit or acquiring claims for financing purposes or leasing out personal property for use. (Konkurrensverket, 2016)

The total number of banks authorised by the Swedish Financial Supervisory Authority to operate in Sweden has remained relatively stable since the beginning of the 2000s. The number of savings banks has gradually decreased during the period, while the number of Swedish bank limited companies (BAB) has increased. This is partly due to some savings banks being converted to bank limited companies. The number of foreign bank limited companies and branches has also increased slightly during the period. At the end of 2015, there were a total of 115 banks authorised to operate in Sweden. Of these, 38 were Swedish bank limited companies, 28 were foreign bank limited companies and branches, 47 were savings banks and 2 were member banks. In addition, a large number of foreign banks have reported cross-border trading with Sweden. (Konkurrensverket, 2016)

One fundamental aspect of banking involves collecting debts from the public, typically in the form of deposits or bonds and channelling them to customers who require funding in the form of credit. The credit extended to the public serves as assets for the bank, while the debts collected serve as liabilities. Deposits are the most prevalent form of credit obtained from retail customers, while institutional investors generally offer debt instruments like bonds. When transmitting credit, the bank compensates debt holders with interest and receives interest payments from borrowers. (Copenhagen Economics, 2019a)

Banks incur specific costs when transmitting credit to borrowers. To cover these expenses, the interest charged to borrowers is greater than the interest paid to debt holders, generating a lending margin, also known as the net interest margin. In Swedish banks, credit transmission generates the majority of revenue, with net interest, derived from the lending margin, comprising around 50% of the banks' total revenue in 2018, as shown in the Figure 5. (Copenhagen Economics, 2019a)

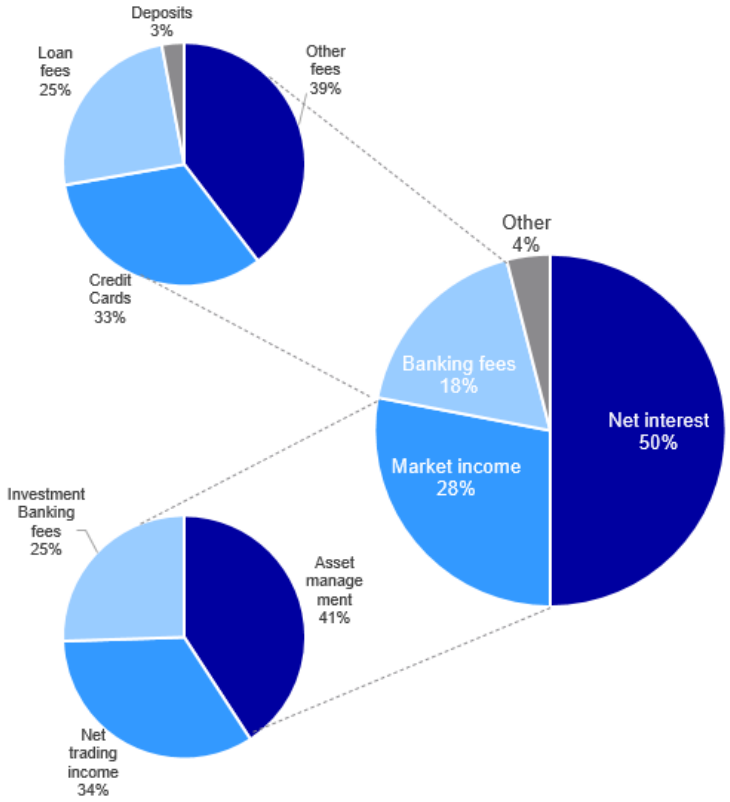

Figure 5, Decomposition of operating income for the four largest Swedish banks in 2018. (Copenhagen Economics, 2019a)

Swedish banks' credit transmission serves the entire economy, as depicted in the *Figure 6*. Household loans, primarily mortgages, constitute roughly 45% of the banks' credit portfolio. Corporate loans account for approximately a quarter of the total credit, while small and medium-sized Enterprises (SMEs) receive roughly 20% of the credit. (Copenhagen Economics, 2019a)

The banks' credit transmission serves a dual purpose. Aside from financing the economy, they also provide an independent service by taking funds from

the public. Deposits are utilised by households and corporations to securely store excess savings and liquidity, earning a return in the process. (Copenhagen Economics, 2019a)

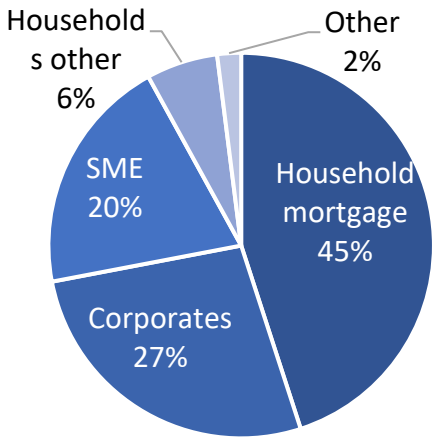

Figure 6, Decomposition of credit portfolio for the four largest Swedish banks in 2018. (Copenhagen Economics, 2019a)

Banks provide electronic payment services through credit card issuance and facilitate currency exchange for both retail and business customers. As shown in *Figure 6*. In 2018, credit card fees accounted for approximately one-third of the total banking fees charged by Swedish banks, as indicated by the *Figure 6*. This represents approximately 6% of the total revenue generated by Swedish banks. In 2018, financial market services, comprising investment banking and asset management, contributed to just under one-third of the total revenue generated by Swedish banks, as shown in the *Figure 5*. (Copenhagen Economics, 2019a)

Investment banking is utilised by larger corporations for various purposes, including underwriting new debt and equity, purchasing derivatives to hedge against currency fluctuations and facilitating mergers and acquisitions. Investment banking is also known as the sell-side since banks sell capital and debt on behalf of companies. Investment banking contributed to approximately 40% of the market revenue generated by Swedish banks or around 12% of their total revenue, through net trading income and fees. (Copenhagen Economics, 2019a)

Banks offer the option to use bank debt to store savings, as mentioned earlier. However, if retail customers or investors are willing to take on risks, banks also offer asset management services to help them invest their savings for higher returns. Asset management is also known as buy-side since banks purchase debt and equity, frequently from investment banks. Pension funds are a common example of asset management that help households save for retirement. (Copenhagen Economics, 2019a)

In 2018, asset management services contributed to approximately 60% of the Swedish banks' total market revenue, equivalent to 17% of their total revenue. Aside from asset management, several financial institutions also provide insurance services through their subsidiaries. In 2018, net insurance income represented approximately 1.5% of the total revenue generated by Swedish banks. (Copenhagen Economics, 2019a)

4.1.2 Concentrated but everchanging market

The Nordic banking market is highly concentrated, with a few large banks dominating the market share. For instance, the four largest banks in Sweden, Nordea, Handelsbanken, SEB and Swedbank, hold a combined market share of over 70% in terms of assets. (NCR, 2021)

Nordea is the largest bank among four major banks with a strong presence in Denmark, Norway and Finland. However, in the Swedish market, Nordea is the smallest of the four big banks, with a market share of approximately 12%. Swedbank and Handelsbanken are the two largest banks in Sweden, with around 21% of the total credit market. From 2010, three out of the four largest banks lost market shares, with Nordea experiencing the biggest decline, losing around 3 percentage points. SEB is the only bank among the four largest banks that has increased its market share. Since 2010, small banks in Sweden have collectively gained market shares through strong growth in lending. For example, Länsförsäkringar Bank has more than doubled its credit portfolio since 2010. Other medium-sized banks, including many non-listed cooperative banks, have also seen strong growth in lending. Many consumer credit banks have also been growing rapidly, including Resurs. Overall, Swedish banks have increased their credit volume by around 50% since 2010, corresponding to an average annual credit growth of around 5%. (Copenhagen Economics, 2019a)

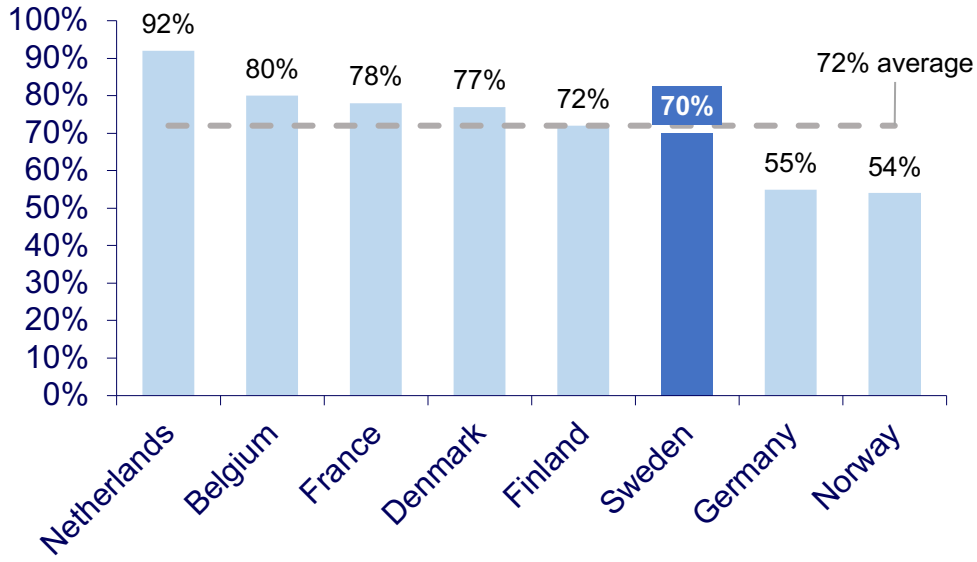

Figure 7, Market share for the four largest banks. (Copenhagen Economics, 2019a)

The banking sector in Sweden is ranked below average in Europe regarding concentration, but the concentration *Figures 7* and *8* suggests that there is sufficient competition in the country. It is important to note that larger countries tend to have less concentrated banking sectors due to the larger market size. In contrast, Germany and Norway have a less concentrated banking sector due to the presence of many smaller savings banks. When using other concentration indices, Sweden is shown to be average among comparable countries. In terms of market shares, Sweden is below average when considering the two largest banks, but close to average when looking at the top four banks. It is not unusual for the four largest banks to dominate the banking market in a country. (Copenhagen Economics, 2019a)

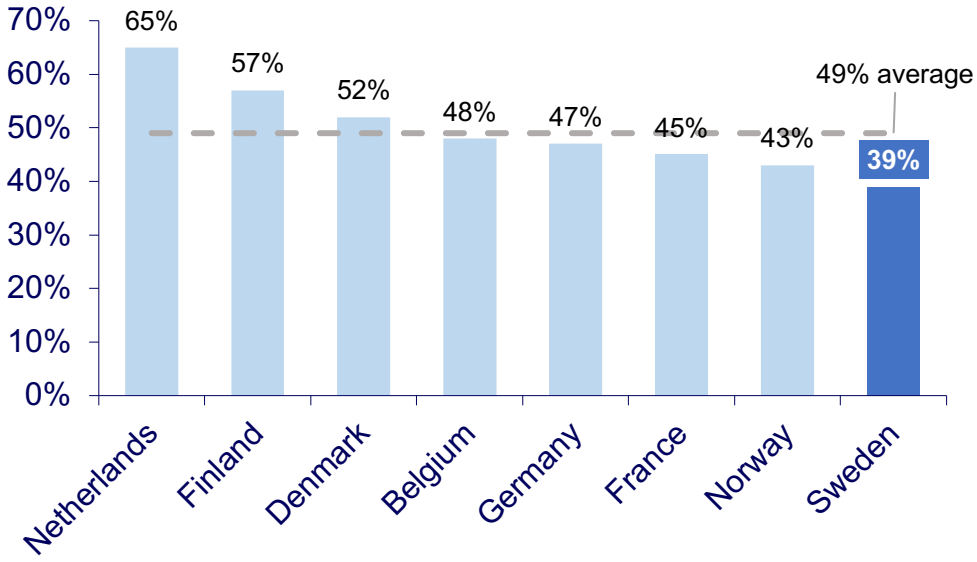

Figure 8, Market share for the two largest banks. (Copenhagen Economics, 2019a)

High concentration in the banking sector is typically indicative of limited competition. However, a banking market with numerous small banks and low concentration could suggest inadequate competitive pressure due to significant economies of scale. In a more competitive environment, larger banks, capable of leveraging economies of scale more effectively, would likely force the smaller banks out of the market. Therefore, achieving the "optimal" concentration in the banking sector requires striking a balance between having large banks that can benefit from economies of scale and maintaining a sufficient number of banks to prevent any one bank from possessing excessive market power. (Becalli et al, 2015; Swedish Bankers' Association, 2019)

Moreover, it is crucial to acknowledge that small banks often cater to non-urban areas that would otherwise face challenges in accessing financial services. Thus, it is important for the economy to have some small banks or banks with a local focus, even though they may be less cost-effective. These institutions play a vital role in providing financial services to underserved regions and ensuring that areas with limited access to finance are adequately served. (Copenhagen Economics, 2019a)

4.1.3 Profitability in the Swedish banking market

The lending margin in Sweden is low, in part due to the efficient operational costs in the banking sector, as previously mentioned. An alternative measure to consider is the operational profit (before impairments) as a percentage of assets. This measure captures the margin between banks' revenue and average costs and provides a broader perspective since it includes all types of business, not just credit transmission. Based on this measure, Sweden performs slightly better than the benchmark countries on average. This result is noteworthy, given that Sweden's lending margin was one of the lowest in Europe. It may suggest that Swedish banks earn relatively higher profits from operations unrelated to credit transmission. The *Figure 9* provides a visual representation of these findings. (Copenhagen Economics, 2019a)

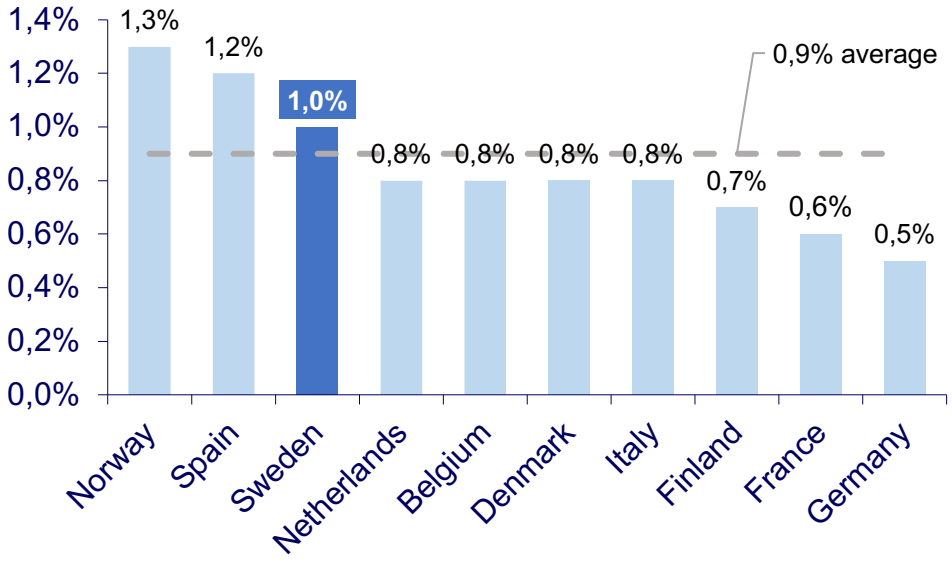

Figure 9, Operational profit in % of total assets, based on four largest banks. (Copenhagen Economics, 2019a)

4.1.4 Swedish banks are cost-efficient

In general, the Swedish financial sector seems to be efficient and there is no evidence that low competition leads to inefficient banks. Operational costs as a percentage of total assets in 2017 were below the average of comparable countries in Europe by 0.4 percentage points. This can be attributed to a rationalisation process that has taken place in the past decade, resulting in declining operational costs. This trend is due to more customers using digital banking platforms instead of physical interactions with bank staff. It should

be noted that the largest country in the sample, Germany, has low banking sector concentration but above-average operational costs as a percentage of assets, which may indicate that the low concentration is due to many relatively small, less cost-efficient banks. (Copenhagen Economics, 2019a)

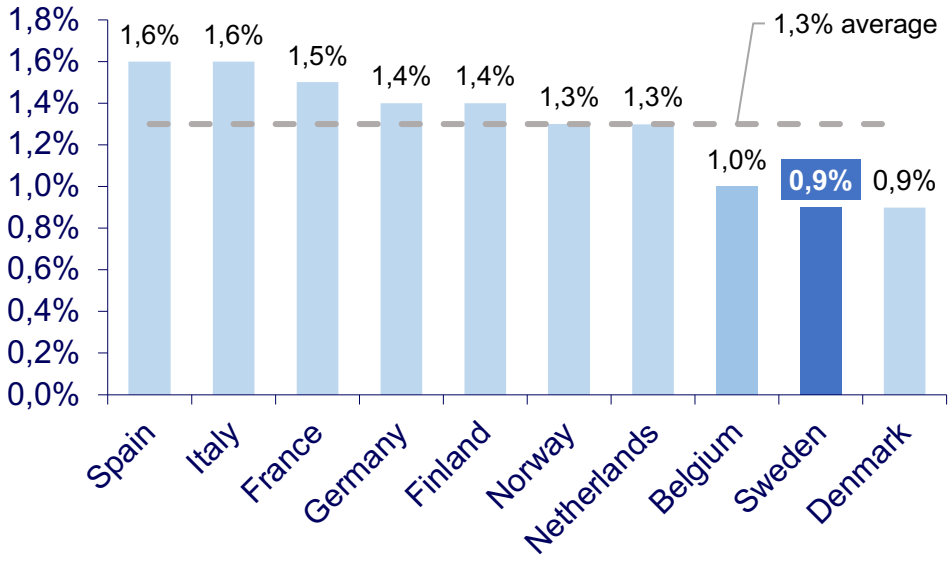

Figure 10, Operational costs, based on four largest banks. (Copenhagen Economics, 2019a)

It is important to note that the operational costs associated with different types of assets can vary. For instance, evaluating the risk of lending money to a start-up is more involved than for a standard mortgage and this can lead to differences in operational costs between countries with different asset compositions. An alternative way to measure operational costs is to look at them as a percentage of total revenue, also known as the "efficiency ratio." This can help to account for differences in asset composition across countries. When looking at this measure, the conclusion remains the same: Sweden is one of the most cost-efficient countries in Europe, with an efficiency ratio 13 percentage points below the average of benchmark countries, as shown in the *Figure 11*. (Copenhagen Economics, 2019a)

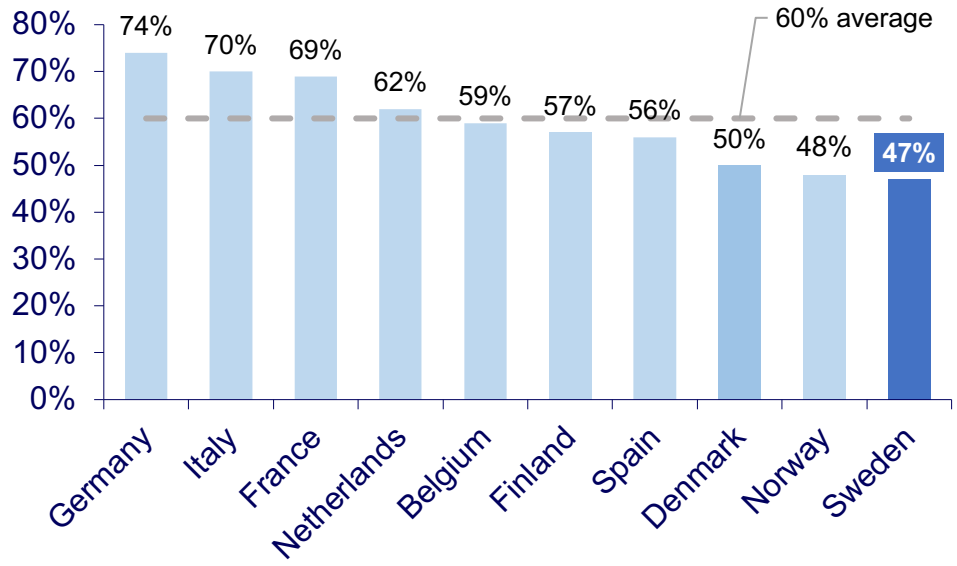

Figure 11, Expenses in % of total revenue, based on four largest banks. (Copenhagen Economics, 2019a)

The pass-through of costs can be used as a measure of competition. It indicates whether low costs in the banking sector are passed on to customers. Banks with substantial market power may be less likely to pass on low costs, leading to higher end-user prices. Conversely, if prices are cost-driven, it is indicative of strong competition, where individual banks have little market power. (Copenhagen Economics, 2019a)

Overall, there is evidence that Swedish banks pass on low costs to their customers. In 2016, Sweden had the lowest average interest rate among all EU countries. The low-interest rate is partly attributed to the low funding costs of Swedish banks, which are approximately 0.2 percentage points lower than those in the Eurozone. Although there is no full pass-through from money market rates to lending rates, Swedish banks have a history of low default rates and efficient funding structures, resulting in low funding costs. (Copenhagen Economics, 2019a)

To adjust for this, the net interest margin, which is the spread between the interest rate and funding costs, can be examined. Based on this measure, the lending margin of Swedish banks is among the lowest in the EU, approximately 0.4 percentage points below the average of the benchmark countries and around 0.4 percentage points below the European average.

However, this measure is also affected by other factors, such as variations in credit portfolios between countries and average operational costs. Nonetheless, it indicates that the Swedish banking sector is generally efficient and provides effective funding to the economy. (Copenhagen Economics, 2019a)

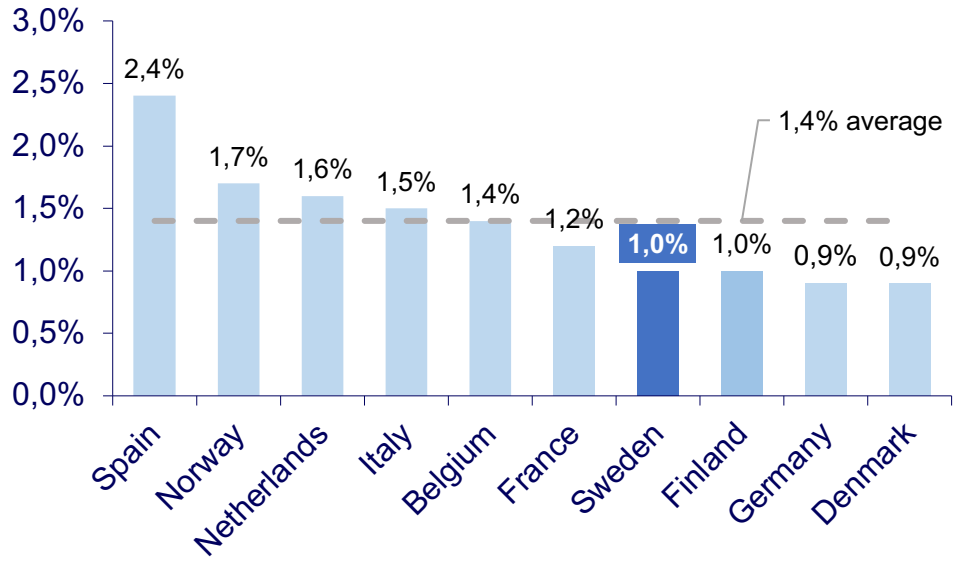

Figure 12, Net interest margin % of total credit, based on four largest banks. (Copenhagen Economics, 2019a)

4.1.5 High Degree of Customer Satisfaction / mobility

Sweden has been recognised as one of the best countries in the world for customer satisfaction in the banking industry. Several studies over the years have consistently shown that Swedish bank customers are highly satisfied with their banks and are more likely to remain loyal to their current bank than customers in many other countries. (Konkurrensverket, 2018)

Even outside Sweden, the loyalty among bank customers has been a widely discussed topic. However, the results of various studies suggest that the level of customer loyalty in Sweden is significantly higher compared to other countries. For instance, a British study from 2015 revealed that nearly 60% of all account holders have remained loyal to their banks for the past decade, which is like the pattern reported in Canada and the Netherlands. Nevertheless, there are indications that this trend might change, as the number

of bank switches has been increasing over the years. (Konkurrensverket, 2018)

Moreover, a survey of the EU's 28 member states conducted in 2016 on behalf of the EU Commission found that Swedes are more inclined to switch financial service providers than the average EU citizen. Only 52% of Swedish respondents reported not having switched financial service providers during the past five years, compared to an average of 71% for the EU as a whole. Swedish customers are also more likely to switch providers of savings accounts, mortgage loans, funds and shares/bonds than other EU citizens. (Konkurrensverket, 2018)

Interestingly, a survey commissioned by the EU Commission in 2012 revealed that it is not always easy to switch banks. However in this regard, Sweden performed exceptionally well in a comparison with other EU countries. All seven Swedish "mystery shoppers" who contacted their banks were able to successfully switch banks. The study showed that administrative barriers, as well as a lack of willingness on the part of the old bank to assist with the process, play a relatively smaller role in Sweden than in other EU countries. Furthermore, 66% of the bank switchers found the process to be easy, compared to an EU average of 50%. This implies that administrative barriers may not be as critical in Sweden, although it is still an important factor to consider. (Konkurrensverket, 2018)

Nordic banks are known for their high levels of customer satisfaction, which has been attributed to their strong focus on customer service and their willingness to adopt new technologies to meet customer needs. For instance, a survey by EPSI Rating found that Swedish banks had an average customer satisfaction score between 70.3-72.5 out of 100 in 2021, which was higher than the average score for European banks (Kvalitetsindex, 2022).

In Sweden, high customer mobility in the banking sector indicates strong competition and high customer satisfaction, according to a survey requested by the European Commission in 2016. The survey revealed that 48% of Swedish respondents have changed their financial service provider in the past five years, including a wide range of financial products such as insurances, securities and core banking services. (Copenhagen Economics, 2019a)

When it comes to banking services, Sweden ranks high in terms of customer mobility. It has the highest share of customers who have changed mortgage institutes and switched savings accounts. Additionally, Sweden also ranks high in the percentage of customers who have switched credit card and current

bank account providers in the past five years. (Copenhagen Economics, 2019a)

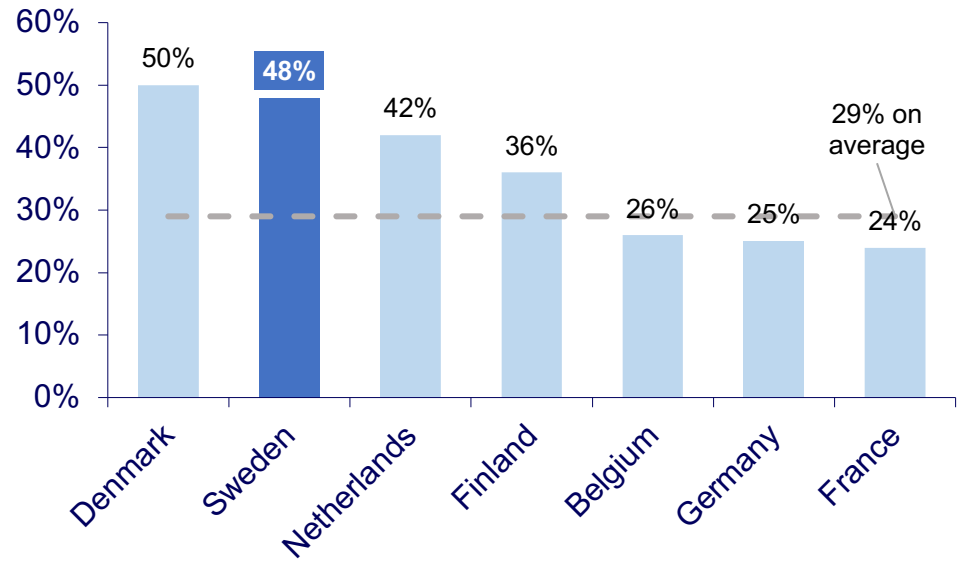

Figure 13, Share of customers that have changed bank provider in the last five years. (Copenhagen Economics, 2019a)

Low customer mobility can be a sign of insufficient competition, but in Sweden, it is not a problem if banks do not exploit their market power by charging prices above costs. Customers respond when banking services are uncompetitive and they change banks if the prices they are paying are higher than the prices charged by competing banks. In Sweden, there are no strong barriers for customers to switch banks, further indicating high customer satisfaction and strong competition in the banking sector. (Copenhagen Economics, 2019a)

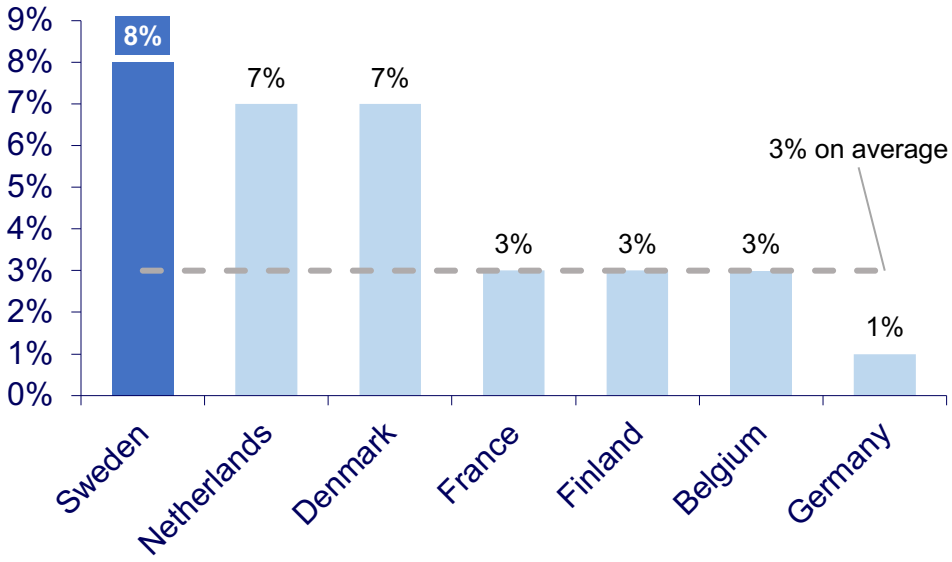

Figure 14, Share of customers that have changed mortgage loan provider in the last five years. (Copenhagen Economics, 2019)

4.1.6 Regulation in the Swedish banking Sector

Nordic countries have a reputation for having strong and stable regulatory frameworks, which has helped to foster consumer trust in the banking sector. For instance, the Swedish Financial Supervisory Authority (FSA) is known for being one of the most rigorous regulatory bodies in Europe, with a focus on financial stability and consumer protection. (Oliver Wyman, 2018)

Sweden's economy is relatively small, with a single currency and a large banking system compared to its GDP. As a result, the Swedish regulator has been implementing post-crisis regulations more stringently than other European countries to prevent vulnerabilities. For example, the Swedish resolution fee is among the highest in Europe and Swedish liquidity rules are more strictly calibrated than in most other countries. Additionally the deposit guarantee fee is high compared to other countries. (Oliver Wyman, 2018)

Due to the stricter capital regulations, the Swedish banking system is more capitalised than the European average. However despite this, Swedish banks have higher rates of return on equity (RoE) compared to their European counterparts. This indicates that Swedish banks have been able to manage

their capital effectively and deliver strong returns, even with higher capital requirements. (Oliver Wyman, 2018)

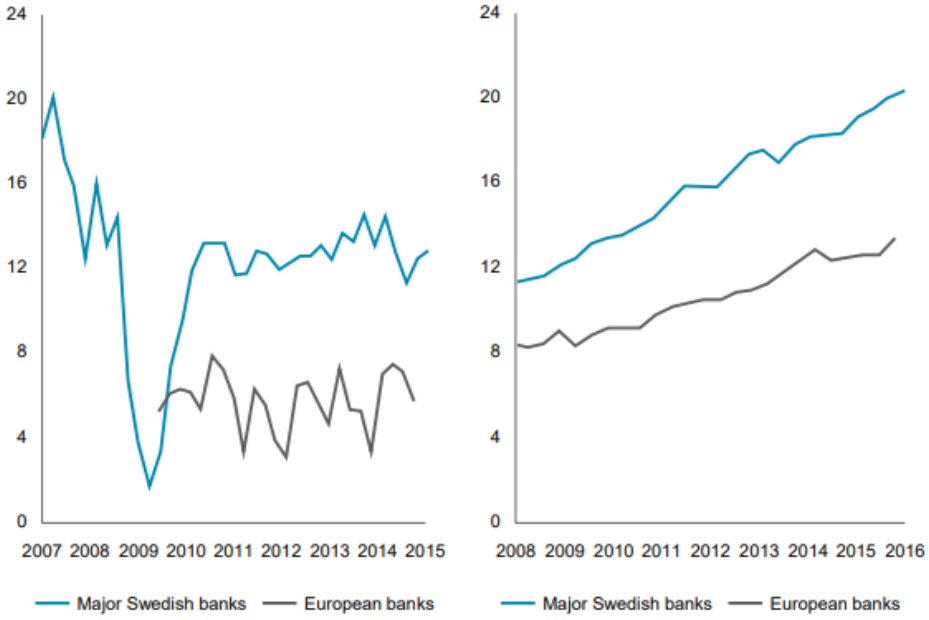

Figure 15, RoE (%) and CET1 capital (%). (Oliver Wyman, 2018)

CET1 capital refers to a bank's core capital, which includes common stock, retained earnings and certain other instruments that can absorb losses. It is a measure of a bank's financial strength and ability to absorb losses. CET1 capital is important to banks because it is a key determinant of a bank's ability to withstand financial stress and continue to operate in adverse conditions. Banks with high levels of CET1 capital are generally considered to be safer and more stable and are more likely to be able to meet their financial obligations to customers and other stakeholders. In addition, banks with high CET1 ratios are often seen as more attractive to investors, who are looking for stable and profitable companies in which to invest. (Bank for International Settlements, 2010)

4.2 Technology impact on the Swedish banking industry

4.2.1 High Degree of Digitalisation in the Swedish banking sector

The Swedish banking sector has undergone a thorough digitalisation process over the last two to three decades, resulting in one of the most digitalised banking sectors in Europe, as shown in the *Figure 16*.

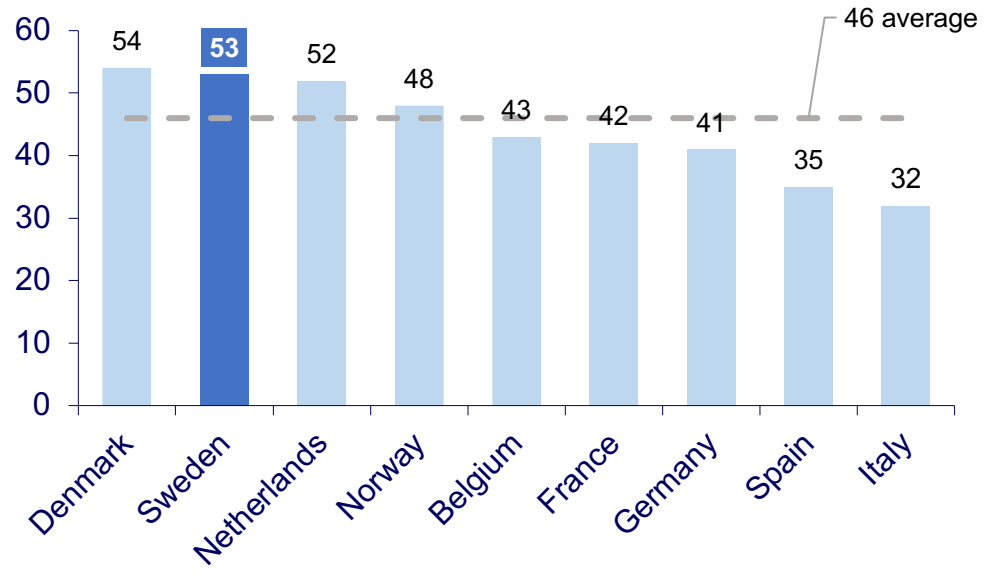

Figure 16, Digital readiness index, based on four largest banks. (Copenhagen Economics, 2019a)

This digitalisation process has facilitated a more efficient delivery of financial services, ultimately benefiting end-users. The resulting advantages are among other reducing operating costs. This accomplishment is attributable to several factors, including the digitalisation of analogue processes, the automation of manual operations in back-office and the shift from paper to digital transactions, which has decreased cash handling expenses. Additionally, the implementation of online banking services, enabling customers to access and manage various aspects of their accounts quickly, has reduced administrative delays and time usage. *Figure 17* shows branch closures have also reduced costs by 1/3 since 2009, attributed to the transition to a cashless economy and internet-based platforms. The automation of services previously done at physical branches has resulted in lower costs. (Copenhagen Economics, 2019a)

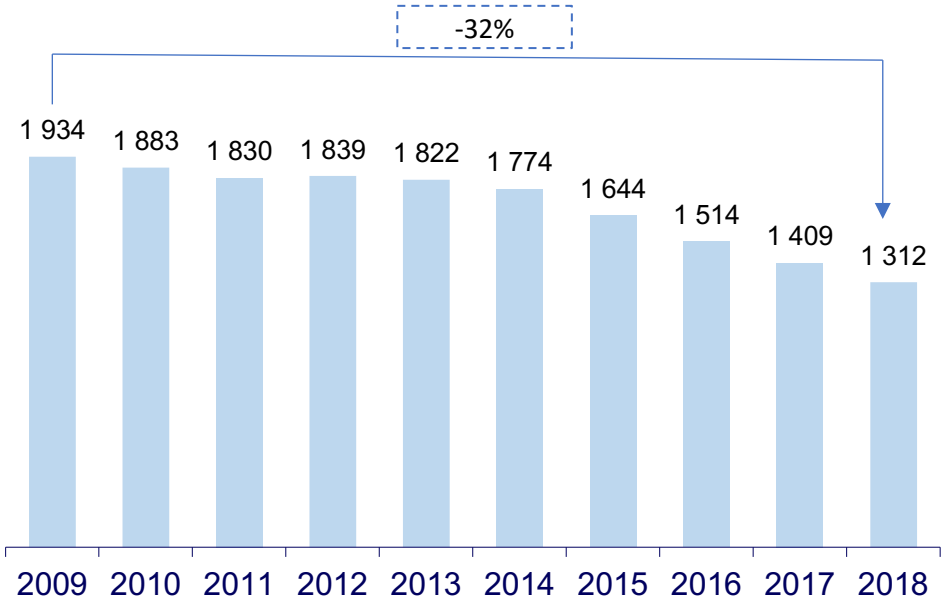

Figure 17, Number of branches in Sweden. (Copenhagen Economics, 2019a)

The online banking penetration is higher in Sweden compared to the European average, but lower compared to Norway, Finland, Denmark and the Netherlands, as seen in *Figure 18*. Sweden's online banking penetration has been higher than the European average since 2013, as also seen in *Figure 18*.

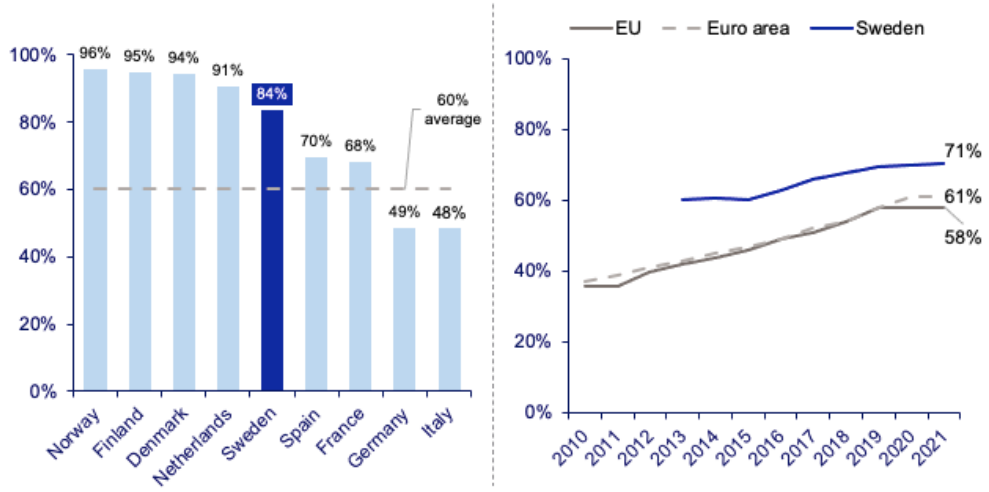

Figure 18, Online banking penetration in selected European markets in 2022 &. Online banking penetration in the European Union, the Euro area and Sweden. (Statista, 2022; Statista, 2021;Statista, 2021)

From a Swedish bank consumer perspective as seen in *Figure 19*, the highest rated strength of the banks is their range of digital services with 31% of consumers saying that this is their current bank's best strength. This is followed by Security (28%) and personal service (25%).

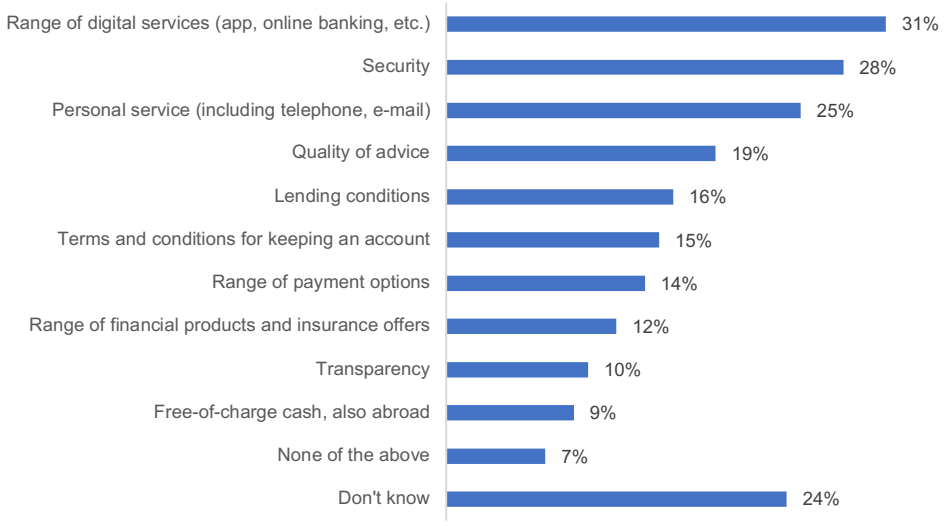

Figure 19, Strengths of primary bank in Sweden 2022 from consumer perspective. (Statista, 2022)

Furthermore, digitalisation has had a significant impact on the banking industry not only in terms of reducing operating expenses, but also in intensifying competition. There are three channels according to the Swedish Bankers' Association in which digitalisation is likely to have intensified competition in the banking sector. Firstly, price comparison websites have made it easier for consumers to compare prices of banking products, enhancing price transparency and lowering consumers' search costs. This generally promotes competition among banks as customers can more easily identify the most cost-effective options. (Copenhagen Economics, 2019a)

Secondly, digitalisation of information has reduced barriers to switching banks and adding an additional bank. It has removed the information advantage of incumbent banks as much of the credit information necessary for credit risk assessment is now digitalised and available to all banks. In the past, incumbent banks typically held customer-specific information, enabling better credit risk assessment. Asymmetrical information bias on the banking market means that a low-risk customer might not be perceived as such in a new bank, as important pieces of the credit information may be missing. In a less digitalised banking sector, the asymmetrical biases are larger, as much of the information is obtained informally, e.g. through physical meetings and information on family situations. However, in a banking sector where almost all the information necessary to conduct credit assessment is digitalised, the asymmetrical information bias is greatly reduced. (Copenhagen Economics, 2019a)

Lastly, digitalisation of the switching process has lowered the direct costs associated with switching banks. This is because the process of switching bank or being serviced by an additional bank no longer relies on people and paper to the same extent. As a result, the switching costs have reduced, and the process is less time-consuming for both customers and banks. This has made customers more responsive to price differences between banks, thus intensifying competition. Overall, these factors have contributed to more intense competition in the banking sector, ultimately benefiting customers with lower prices and more choice. (Copenhagen Economics, 2019a)

For example, Nordea has been at the forefront of digital innovation and was one of the first banks in the world to launch a mobile app in 2009. The bank has also invested heavily in artificial intelligence and machine learning, with the aim of improving its customer service and operational efficiency. (Nordea, 2023)

4.2.2 New regulation change opens up the value chain

Besides from the more traditional regulations some new regulations were introduced in 2019 that will have a significant effect on the Swedish banking sector, namely the revised Payment Services Directive (PSD2). PSD2 can be split into two parts, Payment Initiation Service Provider (PISP) and Account Information Service Provider (AISP). PISP essentially lets third parties initiate account-based transactions on behalf of the customers. AISP essentially gives the customers control of their own financial data and can grant access to this to whom they choose. (Copenhagen Economics, 2019a)

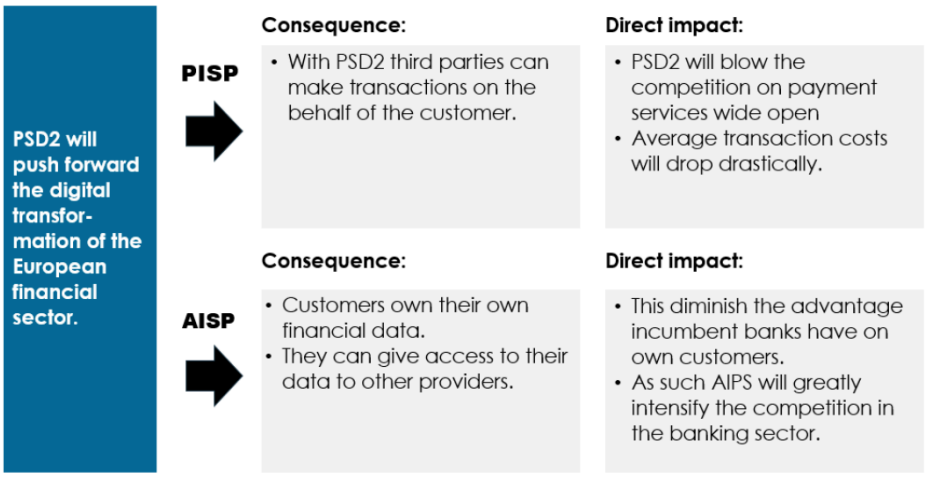

Figure 20, Impact of PSD2. (Copenhagen Economics, 2018a)

The results of this are that the PISP provision under PSD2 creates a more competitive landscape for payment services and significantly reduces transaction costs. In Scandinavia, the payment solutions sector is already highly competitive with numerous alternative payment providers. While payments themselves do not generate significant revenue for banks, Copenhagen Economics (2019) anticipate limited direct impact on fee earnings from payments in Scandinavian banks. However, entities closely tied to card-based payments may face greater challenges on earnings and the current card-based paradigm is likely to be influenced. (Copenhagen Economics (2019)

The AISP provision under PSD2 lets customers with several banks collect all their services in one platform, also known as a Customer Platform. Before AISP the banks would have had to cooperate with a third-party provider to make this happen but are now bound by law to give the proper information if

the customer approves. The customer platform opens the value chain of banking and serve as gateways for banking customers to access a wide range of financial services. These platforms act as intermediaries, letting the customer select the most suitable financial services from various banks through a digital marketplace. Hence, PSD2 lays the foundation of Open Banking. (Copenhagen Economics, 2019a)

Currently, as customers are limited to selecting a single bank, they typically choose the bank that offers the best overall services, as indicated by the grey shading in the *Figure 21*. However, this approach may not necessarily result in the best service for each specific product category, as illustrated by the example of subpar asset management in this case. Moving ahead, customer platforms will serve as the primary interface for customers. These platforms will give customers the ability to select the optimal financial services suited for them from a variety of providers. As a result, customers will gain access to high-quality products across all types of financial offerings. (Copenhagen Economics, 2019a)

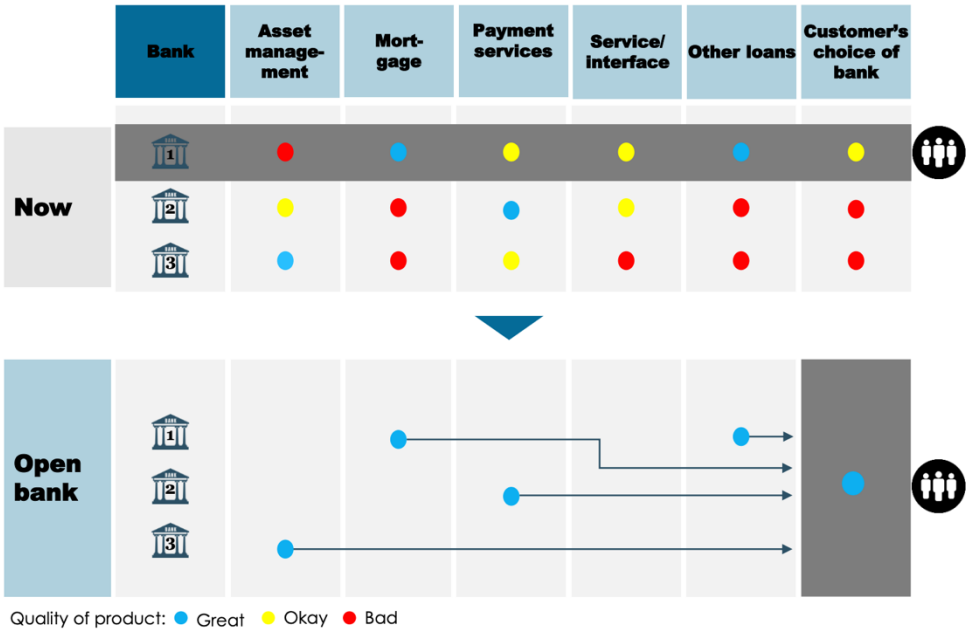

Figure 21, Schematics of how Open Banking works. (Copenhagen Economics, 2018b)

Basically, Open Banking enables the value chain within banking to become more accessible through the integration of new technologies into business platforms, facilitating connections between different components of the value

chain. This newfound connectivity, made possible by open APIs and seamless information flow, as already discussed allows each participant to specialise in specific parts of the value chain and particular products. Compared to traditional services production, this new value chain offers two distinct advantages. Firstly, specialisation leads to economies of scale, resulting in cost-efficient products for customers. Secondly, orchestrators of this value chain can select the most effective producers for each segment, enabling efficient resource allocation. (Copenhagen Economics, 2018b)

An open value chain in banking could look something like this according to Copenhagen Economics. It is made up of the customer platform, a marketplace provider, the core banking system and digital infrastructure. It is important to note that the specific composition of the value chain may vary, but this example demonstrates the concept of an open value chain in banking. (Copenhagen Economics, 2018b)

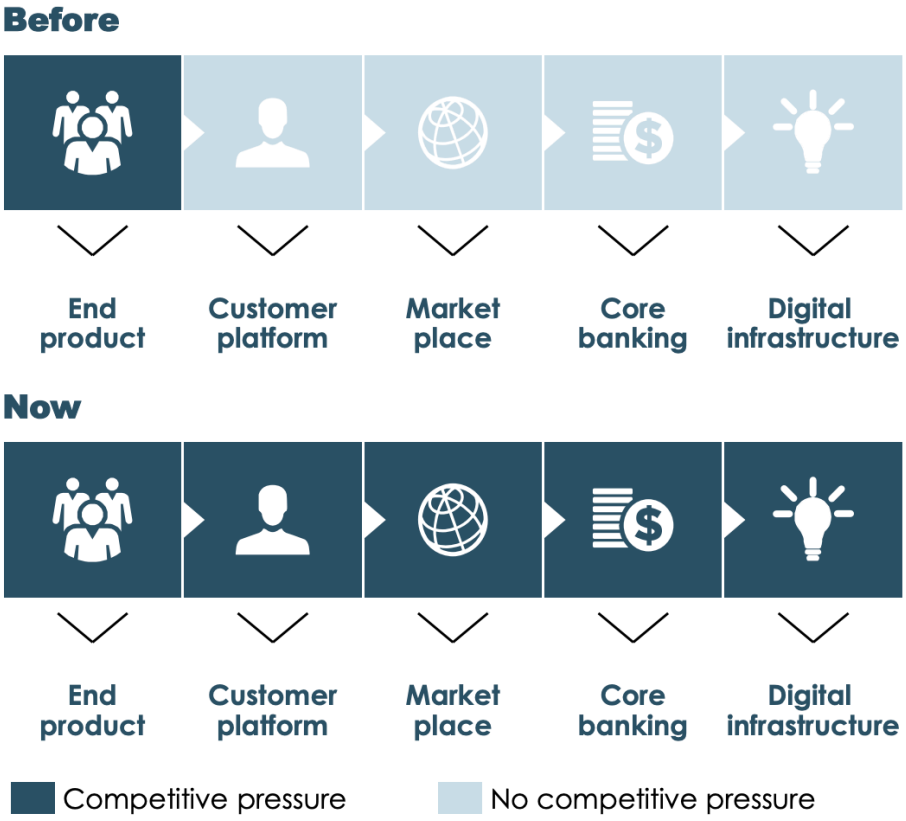

Figure 22, Generic Open Banking value chain. (Copenhagen Economics, 2019a)

The customer platform serves as the primary interface for customers to access financial services. It focuses on meeting customer needs and facilitating interactions but does not produce services itself. Instead, it forwards customer requests to subsequent stages. Behavioural science, customer research and effective marketing are crucial for attracting customers to this platform. A marketplace provider acts as a bridge between customers and financial service producers. It transmits financial data to facilitate credit assessments in the core banking system. This role involves managing big data analytics, integrating open APIs, processing data and ensuring compliance with regulations across countries. (Copenhagen Economics, 2019a)

The core banking system links financial products and services to a regulated balance sheet. It leverages economies of scale to produce offerings at low costs. This segment holds the banking book and license, assuming credit risks, which necessitates robust risk and capital management. The digital infrastructure segment handles tasks such as data handling, mainframe systems management and developing digital infrastructure and services for customers. (Copenhagen Economics, 2019a)

As a result, competition within the value chain will open up and manifest at various stages, shifting from institutional-level competition, such as the choice of bank, to product-level competition. For instance, customer platforms will compete based on their ability to meet customer needs effectively. Marketplace providers will strive to efficiently connect customers with the most suitable products. Service providers, on the other hand, will compete by offering flexible banking products at competitive prices, aiming to minimise costs. (Copenhagen Economics & Norfico, 2019)

In this evolving landscape, banks are shifting their focus from solely providing products to creating value for their clients. Consequently, both traditional banks and FinTech companies competes for control over the client interface. The ability to aggregate accounts and access customer-level data represents a significant opportunity for all market participants. However, both banks and third-party providers must carefully consider their strategic options. Third-party providers must determine their position in relation to banks: friend, partner, competitor, or mere user. While banks currently enjoy a strong customer relationship, the entry of third-party providers weakens that connection as customers interact primarily with these new players. Traditional banks fear becoming mere "utility" providers, solely offering access to payment infrastructure while relinquishing the customer relationship. This scenario would burden banks with costs like maintaining physical branches and accessing payment systems, while receiving limited

benefits in terms of customer loyalty. FinTech companies should likewise consider how they can efficiently interface with banks and vice versa. (Felländer et al, 2018)

4.2.3 The rapid technological development poses challenges

Banks today face a myriad of challenges due to the rapid pace of digitalisation and the rise of platform business models. Customers' needs are changing and banks must adapt to new ways of winning greater wallet share and growing their business. In order to remain relevant, banks must provide relevant, engaging and frictionless experiences that bridge the digital and physical worlds. However, the competition in this space is intense, with nimble FinTech firms and other digital natives leveraging data to hyper-personalise value propositions and grow customer mindshare and wallet share. These companies understand that as customers become more entwined in the platform economy, one-to-one personalisation and experiential banking are critical to enhanced loyalty and growth. (Capgemini Research Institute, 2022)

Incumbent banks have the advantage of customer trust, data and delivery channels to compete in this hyper-personalised environment. However, they face challenges due to organisational and data silos and aging legacy systems. Many banks lack the commitment to build the analytics and digital capabilities needed to drive customer understanding and fuel personalisation at scale. This gap between what customers expect and what banks can deliver poses a significant threat to long-term relevance and growth, especially when customers can switch banks easily with just a tap of their screens. (Capgemini Research Institute, 2022)

To remain relevant banks should embed themselves in customers' digital journeys in ways that are inclusive, invisible and sustainable. Banks must pivot to platform business models that leverage data and new technologies. This is easier said than done, as banks must provide customers with the right products whenever and wherever they are in their digital journeys. Chief marketing officers (CMOs) are at the forefront of this transformation, leveraging technology to orchestrate individual customer experiences and breaking down data silos in coordination with chief data, technology and compliance officers. They must ensure they have the capabilities needed to deliver data-driven experiences in real-time. The goal, as always, is enhanced loyalty and growth, but the means and tools have changed. (Capgemini Research Institute, 2022)

As banks face these challenges, the potential for growth should provide the incentive to embrace new ways of doing business. For example, CIBC, the Canadian bank, has seen customer acquisition rates increase by 65% in three primary lines of business due largely to personalisation efforts. It's clear that banks have the customer trust, data and delivery channels to compete in this hyper-personalised environment. However, they must make the commitment to build the analytics and digital capabilities needed to drive customer understanding and fuel personalisation at scale. (Capgemini Research Institute, 2022)

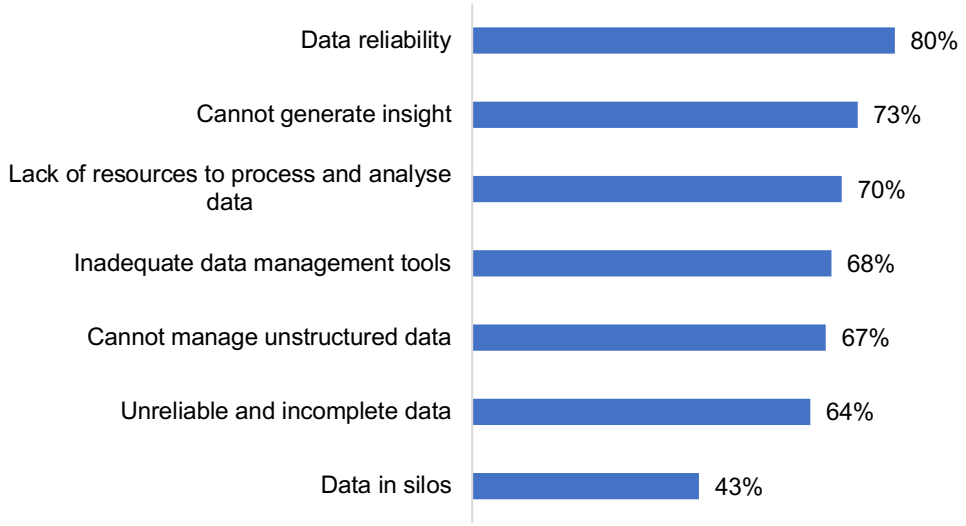

Figure 23, bank's main data challenges. (Capgemini Research Institute, 2022)

The key to incumbent banks competing in this new landscape is to leverage data, new business models and technologies. Capgemini and Efma's Voice of the Customer survey found that many customers want connected experiences with their banks but are disappointed by the lack of personalisation, innovation and seamless integration into their lifestyles. Banks need to modernise their infrastructure and optimise their data-driven growth strategies to attract and retain customers. However, structural challenges, such as outdated core banking systems and underdeveloped data capabilities, prevent most banks from fully leveraging customer data. Additionally, banks struggle to turn their vast data into useful insights, with data reliability and siloed data cited as the primary concerns. To compete with FinTech firms, banks must invest in the technologies required to use data more effectively, understand their customers' needs and behaviours and ultimately enhance their growth strategies. (Capgemini Research Institute, 2022)

4.3 FinTech in Sweden

Sweden and especially Stockholm, was early in the lead as an international FinTech hub (a geographic location with many FinTech companies and good conditions for conducting FinTech projects). Several factors are believed to be behind Sweden's early success. Sweden is and has long been an industrially advanced and innovative country. However, in the financial market, regulations, like in other countries, were extensive up until the mid- 1980s, which was a high threshold for new actors and innovations. In the second half of the 1980s, deregulation took place regarding capital adequacy requirements and interest rate caps, etc.

The fact that Sweden's population early on acquired personal computers, partly thanks to state tax subsidies in the late 1990s, has contributed to high computer literacy in the population. Additionally during the late 1990s, several entrepreneurial companies laid the foundation for today's successful IT and FinTech companies. This in turn, contributed to high internet usage, demands for internet access throughout the country and investments in fiber. When mobile phones were introduced, they quickly spread to broad population groups. In 2003, BankID was launched, on which many of today's FinTech companies depend.

4.3.1 Categories of FinTech activities

The Financial Stability Institute has developed a "FinTech tree" that describes various FinTech activities and underlying factors that enable them. In this tree, the tree crown consists of the FinTech activities themselves, such as payment intermediation, lending, asset management and insurance-related services. The trunk contains various technologies that support FinTech activities. These may include distributed ledger technology (DLT), artificial intelligence (AI) and machine learning (ML). The roots of the tree consist of various policies from authorities that promote the use of technology to enable innovation and activities within the financial system. Examples of this include governmental policies regarding digital identification methods that allow the public to access various digital services (such as BankID and Freja eID in Sweden), facilitating innovation and policies such as regulations for Open Banking. (Financial Stability Institute, 2020; Sveriges Riksbank, 2020)

Open Banking means that third-party developers can access customer data from banks and thus build various financial services and functions based on it. Facilitating innovation can, for example, be done by authorities

establishing so-called innovation centers or regulatory sandboxes, where new actors can test their products or services in the real market, but in a controlled environment. In Sweden, for example, the Financial Supervisory Authority has established an innovation center where companies can receive guidance on how to organise their operations according to applicable law. (Sveriges Riksbank, 2020)

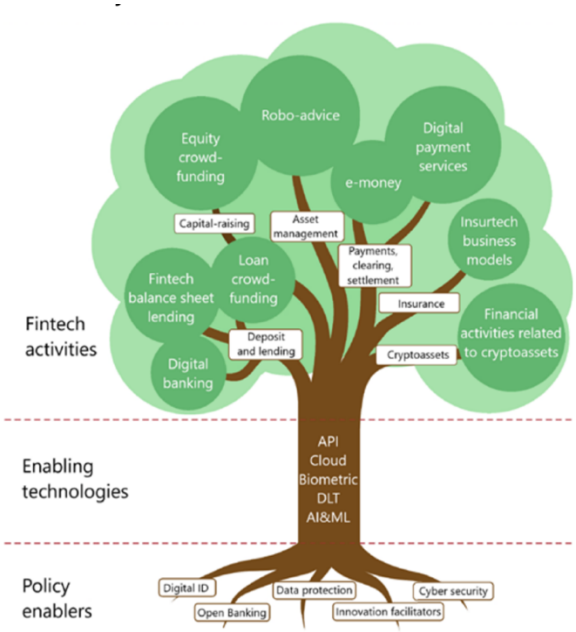

Figure 24, the FinTech tree. (Financial Stability Institute, 2020)

The different activities located in the tree crown is defined as the following by the Financial Stability Institute.

- FinTech balance sheet lending involves credit activities that are facilitated by online platforms, which are not operated by commercial banks and utilise their own balance sheet in the ordinary course of business to intermediate borrowers and lenders. Such platforms do not obtain funding from the "crowd" but rely on other sources, such as own capital or debt issuance. Balance sheet lenders enter into loan contracts directly with borrowers and bear credit risk by keeping originated loans on their balance sheet until they are sold to investors.
- Crowdfunding refers to the practice of matching people and companies raising funds with those seeking to invest for a financial return without traditional financial institutions as intermediaries. Two major types of crowdfunding include equity crowdfunding and loan

crowdfunding. Equity crowdfunding involves investors providing funding to private companies in the form of equity, while loan crowdfunding involves credit activities facilitated by online platforms that match borrowers with lenders. Individual loan contracts are established between borrowers and lenders without the platform engaging in risk transformation.

- Robo-advice, or automated digital advice, refers to financial advice on investment products provided with little or no human intervention, relying instead on technology to automate the client onboarding process and the generation of advice through algorithm- based tools.
- Digital payment services employ technology to facilitate payment transactions by transferring money, clearing or settling balances digitally, without the use of physical money. They digitally channel funds from payers to payees by either handling payers' money themselves or initiating payment orders on behalf of payers with respect to transaction accounts held at other financial institutions.
- E-money services refer to the issuance of debt-like instruments (e-money) that facilitate payment transactions. E-money represents a fixed value claim on its issuer (e-money provider) that guarantees redemption at a pre-established face value denominated in fiat currency. For a claim to be considered e-money, it needs to serve as a multipurpose medium of exchange, be accepted as a means of payment by parties other than the issuer and be issued only on receipt of funds (e-money is prepaid).
- Insurtech refers to the insurance-specific branch of FinTech and insurtech business models refer to technology-driven innovative models that are emerging in two major areas of insurance: distribution and underwriting. Distribution models include comparison portals and digital brokers, while underwriting models include mobile, on-demand, usage-based, or technology-enabled peer-to-peer and parametric insurance.
- Financial activities related to cryptoassets involve the creation, distribution, storage, or exchange of cryptoassets, their use for investment or payment purposes, or their use as a reference in financial products. There is no common definition and categorisation of cryptoassets and related financial activities and new business models in this area pose a challenge in defining a taxonomy for this type of asset.

The Swedish Agency for Growth Policy Analysis published a report in 2020 in which they examined the Swedish FinTech sector. Among other things, they mapped the number of Swedish FinTech companies and how the

FinTech sector has developed from the beginning of the 2000s to the end of the 2010s. Further they categorised the companies into 10 different categories based on product and service offering. In total the identified just over 500 Swedish FinTech companies. (Tillväxtanalys, 2020)

Table 3, FinTech categories. (Tillväxtanalys, 2020)

Category	Description
Credit	Credit, loan and savings products, including crowdfunding and invoice factoring
Financial Management	Financial management services directly targeted towards individuals
Data	Data and analysis
Infrastructure	Technical services sold as products to other companies (usually B2B) to enable financial and FinTech operations. Also includes security, ERP and some blockchain companies
Insurance	FinTech applications primarily in insurance, covering both insurance companies and companies supporting insurance operations
Consultants	Consulting firms offering customised services (e.g. tailored development) within FinTech
Payments	Payment, transaction and money transfer services
Regtech	IT-based services (tech) within regulatory compliance and legislation
Wealth Management	Investment and other wealth management services
Other	FinTech that does not clearly fit into any of the above categories.

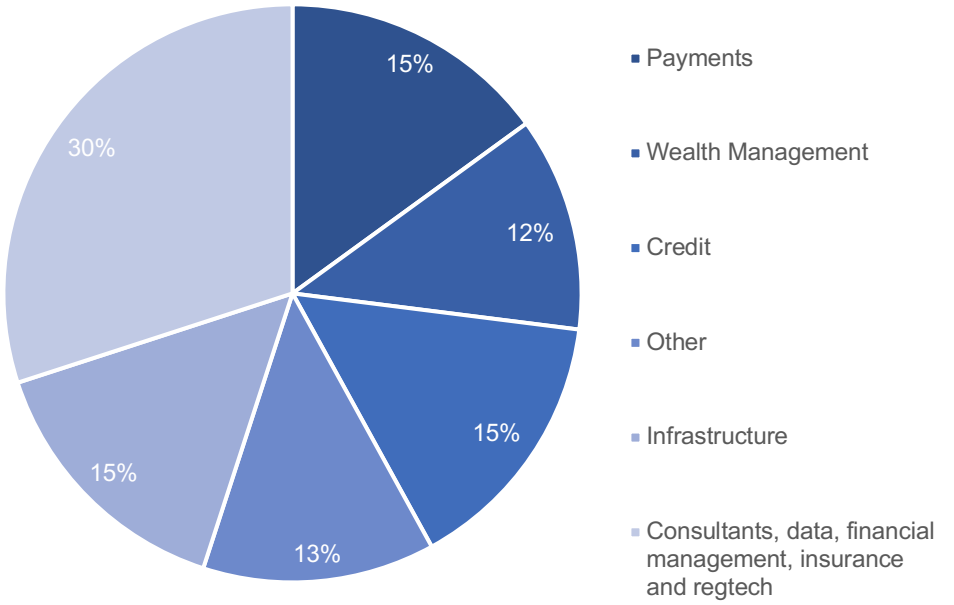

Figure 25, Number of FinTech companies per category. (Tillväxtanalys, 2020)

Three categories are most common, each accounting for 15 percent: credit, infrastructure and payments (approximately 230 companies in total). After that, 13 percent of the companies were classified as "other" (around 70 companies) and 12 percent in the category of wealth management (around 62 companies). The remaining 30 percent were distributed in descending order as consultants, data, financial management, insurance and regtech (totaling approximately 150 companies). (Tillväxtanalys, 2020)

4.3.2 Swedish FinTech Growth

FinTech is a young industry. Only just over 130 companies in our population were registered in 2008 or earlier. Since then, company registrations have increased slowly each year, with a peak of 68 new registrations in 2014. After that, the number of new registrations declined. This may be due to several reasons. One reason for the low level of new startups in 2019 may be due to a lag in statistics. However the trend shows that the number of new startups is generally decreasing in the FinTech sector. This may also partly be due to the fact that the FinTech sector in Sweden may have entered a consolidation phase. Tillväxtanalys noticed that the number of new startups is decreasing while the number of employees is increasing in the existing company population. (Tillväxtanalys, 2020)

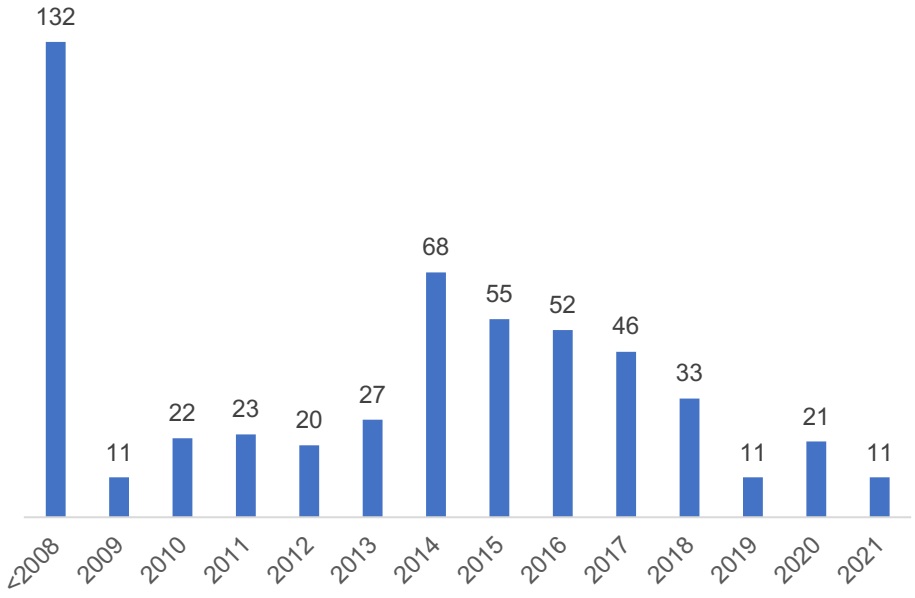

Figure 26, Number of new FinTech company registrations. (Tillväxtanalys, 2020; Sweden Tech Ecosystem, 2023)

According to the Sweden Tech Ecosystem database, as of July 2022, Sweden had a total of 502 FinTech startups and scaleups with registered headquarters. These companies employed 24.3 thousand employees in 2021 and their total enterprise value was measured at EUR 56.8 billion, which represents an 81% growth in value since the previous year. However this growth was mainly due to market overvaluation of the market leading financial services provider, Klarna, which at one point was valued at nearly EUR 40 billion. Nevertheless, Klarna has also been affected by the significant downdrafts in the public markets in 2022, resulting in a drop in the value of many companies by 80-90% compared to their peak valuations. As a result, Klarna's valuation has also undergone an adjustment and as of July 2022, it is valued at EUR 6.1 billion, which is on par with its peers. (National board of trade Sweden, 2022; Sweden Tech Ecosystem database, 2023)

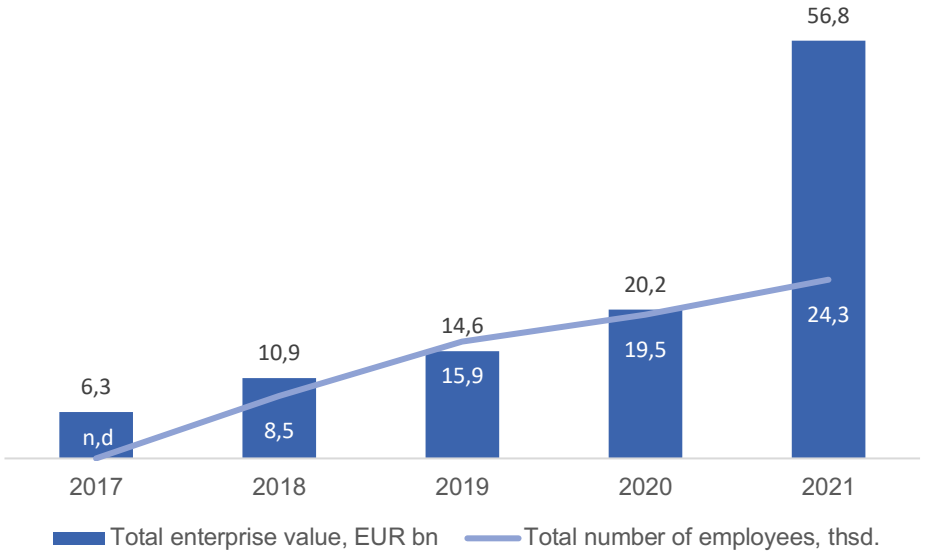

Figure 27, Enterprise value and number of employees for Swedish FinTech actors. (National board of trade Sweden, 2022)

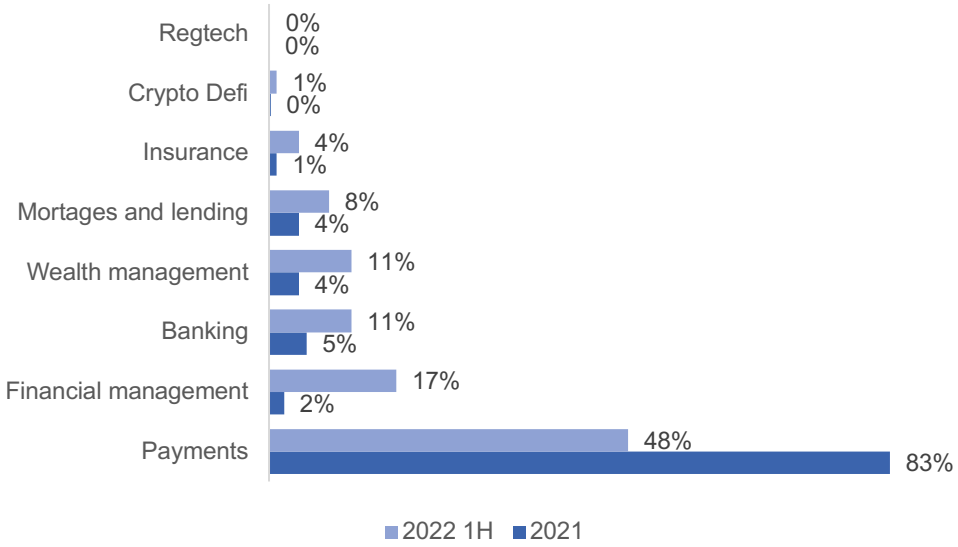

Figure 28, Share of total enterprise value. (National board of trade Sweden, 2022)

Venture capital (VC) plays a vital role in supporting startups and small businesses that demonstrate promising long-term growth potential. It is an essential component of any innovation ecosystem as it involves funding from investors who possess a solid understanding of emerging technologies. These

venture capitalists do not only provide financial support, but also bring valuable expertise in identifying talented entrepreneurs and establishing connections with customers, service providers and potential partners. Their extensive knowledge of go-to-market strategies greatly contributes to the success of entrepreneurs. (Press, 2018)

In the realm of FinTech, the need for industry knowledge on the part of venture capitalists is even more pronounced compared to other domains. FinTech, which aims to disrupt and revolutionise the financial industry, encompasses a wide range of technologies and complex systems. Consequently, venture capitalists investing in FinTech ventures must possess comprehensive knowledge of the sector. Moreover, the FinTech field often requires substantial capital investments and a deep understanding of the existing regulatory landscape. Therefore, venture capitalists operating in this domain need to be well-versed in both financial requirements and the regulatory environment to effectively support FinTech startups and enable their growth. (Press, 2018)

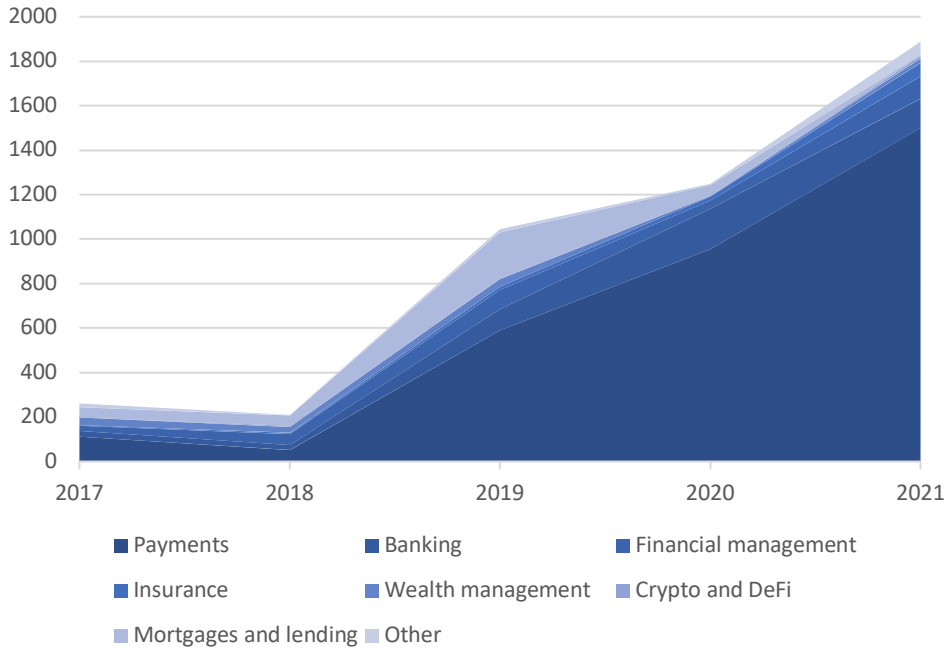

Figure 29, VC investments in FinTech startups and scaleups in Sweden, broken down by subsector (EURm). (National board of trade Sweden, 2022)

4.3.3 FinTech challenges

Based on a survery that went out to SweFinTechs' members companies in the autumn of 2022, several challenges for Swedish FinTech companies were identified. The FinTech industry conditions have changed in 2022 with increasing demands for profitability compared to the record year of 2021 when capital was abundant and focus was on growth. Raising capital has become more challenging and almost half of member companies need new investments in 2023. In summary, the regulatory burden has increased and supervisory dialogue needs to be enhanced to cope with the complexity. Access to financial infrastructure is unequal, hampering competition. To increase innovation, SweFinTech suggest that the Swedish Financial Supervisory Authority should introduce a regulatory sandbox and requirements for high-quality APIs should be heightened. The European Commission's proposal for instant payments within the Eurosone should be implemented as soon as possible as well. (Swedish FinTech Association, 2023)

SweFinTechs' survery from 2022 is quite similar to Tillväxtanalys' survey from 2020 where Swedish FinTech companies were asked to indicate the biggest obstacles they have experienced in their business. The respondents could choose one to three different types of obstacles. The challenge that most respondents mentioned was financing, which over 50 percent of them indicated (*Figure 30*). Then, they stated that recruitment is a major obstacle (32%), followed by problems with the financial infrastructure (BankID, access to user data, etc.; 26%). In fourth and fifth place are problems related to applying for and obtaining permits (excluding regulations) to conduct business (25%) and challenges related to regulations (24%). Other challenges are related to internationalisation/export (13%) and compliance problems (regulatory compliance) (9%). (Swedish FinTech Association, 2023; Tillväxtanalys, 2020)

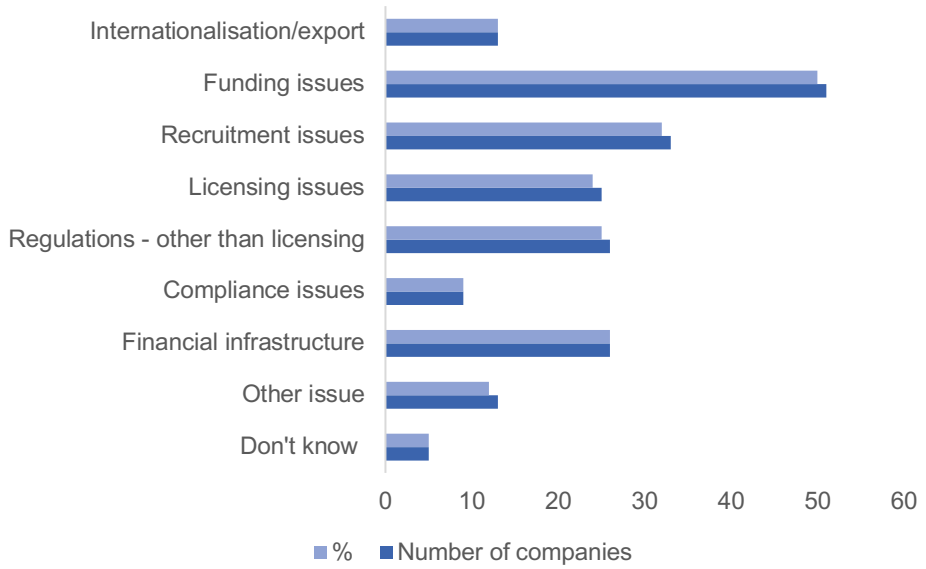

Figure 30, FinTech challenges. (Tillväxtanalys, 2020)

More than half (55%) of the respondents in the survey conducted by Tillväxtanalys feel that there are regulations that have been challenging, while 38% do not think so. The regulations and permits that most respondents mention as the most challenging are: the General Data Protection Regulation (GDPR), Anti-Money Laundering legislation (AML regulations) for preventing financial crime, EU directives and regulations on the securities market (MiFID 2 and MiFIR) and the Payment Services Directive (PSD2). (Tillväxtanalys, 2020)

The permits that are perceived as challenging are permits to conduct insurance mediation, payment mediation and permits for insurance and securities advice. Other regulations and permits mentioned include consumer protection regulations and capital adequacy requirements, as well as the prohibition on advertising one's shares. Many respondents see regulations and permits as something positive and a few explicitly write in the free-text answers that the regulatory framework is positive because it leads to uniform requirements. (Tillväxtanalys, 2020)

Table 44, Regulations and permits that are perceived as particularly challenging for FinTech companies. (Tillväxtanalys, 2020)

Regulation/ permit	**The purpose of the regulation/permit.**
GDPR	The General Data Protection Regulation (GDPR) aims to create a uniform and consistent level of protection for personal data so that the free flow of data within Europe is not impeded.
AML	AML stands for Anti-Money Laundering and is a regulatory framework that banks and financial companies use to prevent financial crime. This regulation requires banks to find procedures and systems to identify and map customers who violate the regulations.
Mifid 2 and Mifir	The EU's directive and regulation on the securities market aim to increase transparency, improve investor protection and strengthen confidence in European securities markets.
PSD2	The EU's second payment services directive PSD2 aims to develop the market for electronic payments and create better conditions for secure and efficient payments.
Permission to conduct insurance mediation and advice.	In order to operate a company that offers financial services, in most cases, permission from the Swedish Financial Supervisory Authority (FI) is required. This applies to banks, payment service companies, companies operating in the stock and clearing industry, fund companies, funds, insurance companies, insurance brokers, mortgage institutions, consumer credit institutions, credit market companies, issuers of electronic money and securities companies.

Furthermore, FinTech companies operating in Sweden face hurdles arising from the local banking system's pervasive influence and the outdated payments infrastructure, which it struggles to maintain and lacks any apparent plan to transition from. However, this scenario has created a pressing need for integration and transition between different systems, providing vast market opportunities. The major banks' slow reaction times have opened up numerous opportunities for FinTech firms to seize. Given the Swedes' proclivity to adopt new technologies rapidly, any new market requirement that emerges is often quickly resolved by some FinTechs, who can bring solutions to market promptly, outpacing the banks' capabilities. This trend was particularly evident during the Open Banking revolution, which followed the implementation of the Revised Payments Directive (PSD2). While Swedish banks perceived the market regulations as a threat, FinTechs such as Trustly, Tink and Klarna quickly capitalised on the opportunity and became

the leaders in Open Banking payments. (National board of trade Sweden, 2022)

Most Swedish financial industry regulations stem from the European level and industry associations have suggested that the national supervisory authority, Finansinspektionen, possesses limited knowledge of new technologies and business models. Consequently, innovative FinTechs, particularly those from other countries, may need to exert additional effort to inform and advocate for the new technology they intend to introduce to the market. (National board of trade Sweden, 2022)

4.4 Competitive strategies

To better understand the different types of strategies banks and FinTechs utilises this section first covers the comparative advantages of banks and FinTechs followed by selection of companies described in more detail.

4.4.1 Comparative advantage of banks and FinTechs

FinTech companies, characterised by their agility and innovative nature, have the advantage of being able to move quickly, identify synergies across different sectors, offer customised real-time solutions and challenge existing regulatory boundaries. However, these emerging players face certain disadvantages, such as the lack of extensive client databases, distribution channels and established financial infrastructure possessed by large banks. Additionally, they often have limited knowledge and resources to navigate evolving regulatory frameworks and ensure robust client security. Furthermore, their societal and historical positions may not grant them the same level of credibility as established banks, which have government-backed deposit guarantees in place. (Felländer et al, 2018)

Therefore, forming partnerships between FinTech companies and traditional banks presents a mutually beneficial opportunity. By engaging in collaborations, the traditional banking value chains are transitioning from closed linear arrangements to open networked ecosystems based on strategic partnerships. As participants within these transparent and co-created networks, maintaining integrity and ensuring client security are deemed essential. This involves investing in agile IT systems that can seamlessly interface with partners. (Felländer et al, 2018)

Harasim (2021) assumes, based on slightly modified IO theory, that the reaction of new entrants (FinTechs) and incumbents (banks) depends on

whether their assets, resources, skills and features complement or substitute each other. If they are complementary, incumbents may accommodate entry, while if they are substitutable, they may try to prevent entry. In the former case, non-aggressive strategies like forming partnerships are usually chosen by the entrant, while in the latter case, incumbents may use tactics like bundling and tying to fight with new entrants. This reaction also depends on industry characteristics, size and market position. (Harasim, 2021)
In the comparison between FinTechs and banks, Harasim found that their assets, skills and features largely complement each other. FinTechs are more agile and flexible, able to respond quickly to changing customer preferences and expectations using their high-tech capabilities. They can improve user experience and meet customer demands at a low cost with transparent pricing. However FinTechs also face challenges like a lack of reputation, installed customer base, capital and experience in risk management and regulatory frameworks. (Harasim, 2021)

Although the growth potential of the FinTech sector is difficult to estimate using traditional measures, it is unlikely to weaken incumbents' market position. FinTechs, being small start-ups, are more likely to choose a cooperation strategy with incumbents, especially banks, as they can become valuable intermediaries between banks and customers, providing advanced technology solutions to improve financial services. banks, on the other hand, with their established reputation, market position and customer base, can be attractive partners for FinTechs, providing access to superior knowledge in risk management and regulation and funding opportunities. (Harasim, 2021)

Table 5, Comparative advantages. (Harasim, 2021)

Assets/Skills	Features	FinTechs	banks
Tangible assets	Size (balance sheet) and reach	+	+++
	Cutting-edge technology	+++	++/+
	Number of employees	+	+++
	Branch network	x	+++
Intangible assets	Customer base/ability to exploit it	+/++	+++/++
	Customer trust and loyalty	+	+++
	Brand recognition	+	+++
	Ability to attract best talents	++	+
Marketing assets	Wide and diversified range of products	+	+++
	Price level	++	+++
	Price transparency	+++	+
	User experience	+++	+/++
	Electronic channels	+++	++
Organisational skills and structure	Organisational complexity	+	**+++**
	Flexibility and agility	+++	+
	Innovativeness	+++	+
	Transaction security	++	+++
	Customer data protection	++	+++
Others skills and experience	Risk assessment and management	+	+++
	Experience in compliance and regulation	+	+++
	Experience beyond the financial industry	++	x
Efficiency	Costs/revenues	+	+++
	Margins	+	+++
	Access to cheap (low-cost) funding	+	+++
	Investment capacity	+	+++
	Cross-subsidisation	x	++
	Economies of scale and scope	+	++
	Network effects	+	++

+ low intensity; ++ medium intensity; +++ high intensity; x—not applicable.

Banks typically initiate contact with FinTechs in the early stages of development through various means such as establishing innovation labs and organising hackathons. Banks also aid FinTechs by setting up accelerators and incubators to help them overcome initial barriers. As cooperation progresses, it becomes more structured and formalised. The most common form of alliance is product-related cooperation, which offers little to no control over the product development process in a FinTech firm. (Harasim, 2021)

Offering FinTech solutions allows banks to maintain their customer base without having to develop new services or applications in-house, which can be difficult due to legacy systems being incompatible with newer user-friendly applications. Large banks tend to invest directly in FinTechs, including acquisition of small start-ups as they are more attractive than larger, more established firms. However, acquiring a FinTech firm can be a risky strategy, as many solutions require customisation to end-user needs and regular updates, which can be challenging for banks post-acquisition. (Harasim, 2021)

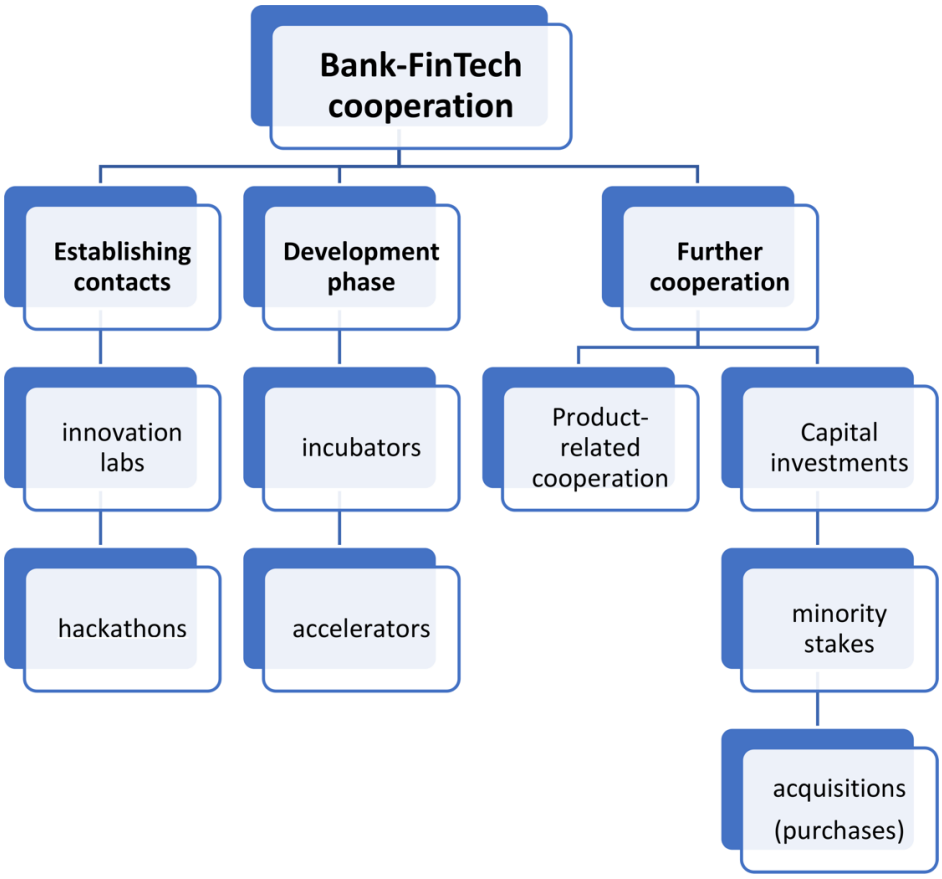

Figure 31, Forms of bank-FinTech interactions depending on the collaboration phase. (Harasim, 2021)

Harasims' theory on the interactions between FinTechs and banks seems to apply on the Swedish market. Numerous partnership strategies and revenue models are being explored and standardised solutions for collaborations between traditional banks and FinTech companies are yet to emerge. In Sweden, many traditional banks have implemented incubators and accelerators to attract FinTech companies, fostering closer dialogue and potential partnerships or acquisitions. (Felländer et al, 2018)

The four biggest banks in Sweden all have interactions with FinTechs. SEB has set up SEB Venture Capital, which is a leading FinTech investor in the Nordics, investing in sustainable, long-term value creation with a dedicated management team. They focus on strategic corporate ventures in FinTech and are interested in innovative solutions for the financial industry. SEB Venture Capital is currently invested in 16 different FinTech companies and have done some exits as well. (SEB, 2023)

Nordea launched Nordea Ventures with the aim to accelerate the launch of new products and services focused on improving customer service. Today Nordea have integrated Nordea Ventures into the different business units but is still active under Nordea Startup and growth. (Dagens industri, 2017)

An example of investment and collaboration between banks and FinTech is the company Tink. Several banks and larger FinTech companies including SEB, Nordea, Nordnet and Klarna has invested in Tink and uses Tink's technology in their mobile consumer solutions. (Dagens Industri, 2017)

4.4.2 Type of banks

In Sweden there are multiple types of banks with different competitive strategies. There are Universal banks that are represented in most of the financial market and offer all types of financial services. In addition, there are a number of niche banks that specialise in one or more market segments, savings banks that operate in local or regional markets and foreign banks with branches or subsidiaries in Sweden. (Swedish Bankers, 2023)

Universal banks are banks that are represented in the majority of the financial market and can offer all types of financial services are usually categorised as universal Bankers. Among them, the main ones are the large Swedish banks - Swedbank, Handelsbanken, SEB and the now Finnish bank Nordea. Together, they have a strong overall position in the Swedish banking market, but their market shares vary in different submarkets. In December 2022. There are many similarities among the major banks, but also differences. For example, there are differences in the types of customers and focus areas. (Swedish Bankers, 2023)

Niche banks is another category of banks consists of those with a background in a niche market such as securities companies that are primarily focused on securities trading and management, such as the banks Avanza and Nordnet. A niche bank is a bank that specialises itself in one or more segment, that can be either customers or products. (Swedish Bankers, 2023; Nationalencyklopedin, 2023)

Savings banks are either independent savings banks and savings bank corporations operate in local or regional markets. Savings banks and savings bank corporations have a market share of just over 10 percent of household deposits in Sweden but can be significantly larger in a local market. The

independent savings banks had 124 branches at the end of 2021, accounting for 12 percent of Sweden's 1,029 bank branches. (Swedish Bankers, 2023)

Other and Foreign banks have been in Sweden since the late 1990s, both other banking corporations and foreign bank branches have established themselves as important players in the Swedish banking market, gaining market share in Swedish household deposits. (Swedish Bankers, 2023)

4.4.3 Selection of banks

In this section, the different banks in each category will be presented, starting with the universal banks, followed by the niche banks and savings banks.

Universal banks are banks that operate in a significant portion of the financial market and provide a wide range of financial services. The major Swedish banks, such as Swedbank, Handelsbanken, SEB and Nordea, fall into this category. They dominate the Swedish banking market but have varying market shares in different sectors. banking services are increasingly conducted online, resulting in fewer branch visits and a decrease in the number of branches. In addition to universal banks, there are niche banks specialising in specific market segments, savings banks operating in local or regional markets and foreign banks with branches or subsidiaries in Sweden. Savings banks, with their focus on local markets, account for a small but notable share of household deposits in Sweden. (Swedish Bankers, 2023)

The large universal banks in Sweden, Nordea, SEB, Handelsbanken and Swedbank offer a variety of products towards their customers. These four banks offer services and products from every aspect of *Figure 5* and display signs of continuing with offering a variety of services to a broad customer base. All these banks have a large presence outside of Sweden with customers in the Baltics and other northern European countries. SEB’s home markets according to their annual report refers to Sweden, Norway, Denmark, Finland, Estonia, Latvia, Lithuania, Germany and the United Kingdom with an international presence in even more countries. To an extent, these four banks are large to a Northern European scale and offer a thorough variety of services in a variety of segments. (SEB, 2022; Nordea bank, 2022; Swedbank, 2022; Handelsbanken, 2022)

Expansion into different markets and customers are joint goals for the established banks as cooperation with other banks and suppliers are a continuing phenomenon. SEB has started an alliance with Humla, a FinTech player. This partnership to strengthen and expand their current offer. While

Handelsbanken focused their expansion on customers in the UK. (SEB, 2022; Nordea bank, 2022; Swedbank, 2022; Handelsbanken, 2022)

SBAB is one niche bank that is heavily tilted towards the housing market and offer residential mortgages to customers in all of Sweden. These residential mortgages are for private individuals and for tenant-owned associations. SBAB is not involved in other areas of banking like the largest banks and have low cost as one of their main strategies for. (SBAB, 2022)

Avanza and Nordnet are two niche banks that are tilted towards retail stock exchanges. Avanza and Nordnet are both Swedish online investment and savings platforms known as digital brokers. They provide individuals with user-friendly platforms to manage their investments. They offer a range of financial services, including stock trading, fund investing, pension savings and other investment products. Both actors are predominantly active in the Swedish market. In recent years both Avanza and Nordnet has begun expanding more within their segment to try to become as Nordnet phrases it, “One-stop-shop”. Both Avanza and Nordnet focuses primarily on having a cost effective but beneficial service. (Avanza, 2022; Nordnet, 2022)

Avanza has expanded its presence to Norway and Denmark. In Norway and offers similar investment and savings services as in Sweden. In Denmark, Avanza provides investment and pension solutions to Danish customers. Nordnet, has also expanded its operations to other Nordic countries. Nordnet operates in Norway, Denmark and Finland in addition to Sweden. (Avanza, 2022; Nordnet, 2022)

Marginalen Bank, Nordax Bank, Collector Bank, Svea and Resurs are all Swedish Niche banks that offer various banking and financial services to individuals and businesses.(Marginalen Bank, 2022; Nordax Bank, 2022; Resurs, 2022; Svea; Collector Bank, 2022)

Marginalen Bank is a niche bank that provides a range of banking services, including savings accounts, loans, mortgages and credit cards. It aims to offer flexible and customised solutions to meet the needs of its customers. Their strategy revolves around offering customised financial products and services tailored to individual needs. They strive to simplify the banking experience, offer competitive interest rates for both deposits and loans. (Marginalen Bank, 2022)

Nordax Bank is a digital bank that primarily focuses on consumer lending. It offers personal loans and refinancing solutions to individuals, emphasising

simplicity, speed and competitive interest rates. Nordax Bank focuses on few products in a relative sense in a niche market segment, consumer loans. Nordax Bank completed the acquisition of bank Norwegian to further improve their offering and growth as a business. The acquisition was for expanding the current customer base and established a better position in their niche segment. (Nordax Bank, 2022)

Collector Bank is a specialised digital bank that provides financial solutions to businesses and individuals. It offers services such as savings accounts, loans, factoring and credit cards. The focus is on tailored financial solutions for e-commerce, retail and corporate clients. Their strategy involves collaborating with retailers and e-commerce platforms to offer customised financing options for their customers. Collector Bank loan portfolio is divided into Sweden (>50%), Finland, Germany, Norway and Rest of the world. Collector Bank seeks to further strive towards a more expansive offering in their market segment and geographical expansion, but in a cost-efficient manner. (Collector Bank, 2022)

Svea is a Swedish niche bank that offers various financial services, including savings accounts, loans, leasing and factoring. It serves both individuals and businesses, aiming to provide flexible and customised solutions to meet their financial needs. Svea, like other niche banks offer cost effective loans for primarily consumer loans. (Svea, 2022)

Resurs is a Swedish niche bank that specialises in consumer finance, offering products such as payment solutions, credit cards and loans. It collaborates with retailers and e-commerce platforms to provide financing options for their customers, focusing on seamless and convenient purchasing experiences. (Resurs, 2022)

Ålandsbanken is a Finnish niche bank with a presence in Sweden. The company operates with a distinctive strategy that sets it apart from traditional banks. Ålandsbanken focuses on wealthy customers and offer both Private and Premium banking. In the annual report of 2022, Ålandsbanken writes “On the Finnish mainland and in Sweden, the bank of Åland has a niche strategy targeted to entrepreneurs, wealthy families and individual customers with sound finances”. Their strategy also revolves around maintaining a strong focus on customer relationships and sustainable banking practices. They prioritise building long-term partnerships with their customers and strive to provide personalised financial solutions that meet their individual needs. (Ålandsbanken, 2022)

In Sweden, there are a lot of savings banks that have roots in regional communities. Three examples of those are Sparbanken Skåne, Sparbanken Syd and Sparbanken Sjuhärad.

Sparbanken Skåne focuses on being a strong and local bank deeply rooted in the Skåne region of Sweden. They strive to be a trusted financial partner for individuals, businesses and the local community. Their strategy revolves around providing personalised and sustainable financial solutions, supporting local initiatives and contributing to the region's development. Sparbanken Skåne offers a comprehensive range of banking services, including loans, savings accounts, payment solutions and advisory services, all with a customer-centric approach. (Sparbanken Skåne, 2022)

Similarly, Sparbanken Syd aims to be a regional bank with a strong presence in southern Sweden. Their strategy centers on understanding and meeting the specific needs of individuals, businesses and organisations in their local communities. They provide personalised financial advice and solutions, incorporating digital innovation to enhance customer experiences. Sparbanken Syd places emphasis on sustainable banking practices, community engagement and responsible investment. Their services encompass banking, financing, savings and insurance, all with a focus on building long-term customer relationships. (Sparbanken Syd, 2022)

Likewise, Sparbanken Sjuhärad focuses on supporting the economic development and well-being of the Sjuhärad region in Sweden. Their strategy involves actively engaging with the community, businesses and individuals to drive local growth. They position themselves as partners for entrepreneurship and local initiatives, offering customised financial solutions, advisory services and access to capital. Sparbanken Sjuhärad places importance on contributing to sustainable development, social responsibility and local prosperity. (Sparbanken Sjuhärad, 2022)

All in all, these savings banks are similar, they operate in their regional communities and provide a wide range of services for the customers. Everything from insurances, personalised loans or corporate. (Sparbanken Sjuhärad, 2022; Sparbanken Skåne, 2022; Sparbanken Syd, 2022)

4.4.4 Selection of FinTechs

To get a better understanding of the Swedish FinTechs competitve strategies a selection from different FinTech categories was made. FinTech in Sweden

operate with different strategies and a wide range of offer and services, all from payment focused to wealth management.

Before looking into some of the FinTech players one major difference between FinTech and traditional banks are that FinTech are “born global”. "Born global" is a term used for young companies that become highly internationalised early on and export a large portion of their products/services to several foreign markets. The tech industry, in general, has a significant advantage in global expansion from the start since the product or service relies on gaining many users and can be continuously developed. To enable more Swedish FinTech companies to "go global" in the early stages, capital from investors, competitive taxation to compete on an international market and common legislation for financial companies are required. (Swedish FinTech Association, 2020)

96% of SweFinTechs’ member companies plan to expand their operations in the next five years. The most natural approach is usually to first tackle the Swedish market and then expand to the Nordic market. The other Nordic countries' markets are very similar to the Swedish market because laws and regulations are similar and customer behaviours resemble those in Sweden. Even though not all Nordic countries are members of the EU, they still follow EU-compatible legislation, making the Nordic region a natural next step for many FinTech companies. After the Nordic region, many are eager to enter the European market, where legislation is uniform within the EU's internal market and where a permit in one member state is valid throughout the union. For these reasons, it is natural to expand to the remaining EU countries after the Nordic region and then to step outside Europe in the next stage. (Swedish FinTech Association, 2020)

Stabelo is one of the Swedish FinTech companies that has gained traction within the residential mortgage lending market. It operates digitally in Sweden and bypasses banks to offer customers residential mortgages directly to investors. Stabelo currently only operate in Sweden within this niche lending space. Their primary strategy is offering cheaper and more cost-effective residential mortgages. (Stabelo, 2022)

Looking deeper into Stabelo’s business model it completely bypasses traditional banking balance sheets. Instead, credit is placed on the balance sheet of major pension funds and from a regulatory standpoint, it falls under the purview of an alternative investment fund. This approach is feasible because Stabelo has effectively mitigated many of the risks typically managed by banking balance sheets. There is limited maturity and interest rate

mismatch and any potential credit losses are directly absorbed by the balance sheet of the pension funds. This means that Stabelo cannot default on its obligations. The risks associated with this model are effectively managed on the balance sheet of the pension funds through Solvency II regulations. Therefore, there is no questionable or dubious nature to Stabelo's business model. (Copenhagen Economics, 2019a)

Another FinTech company in Sweden is called Trustly that specialises in fast payments. Trustly's strategy is centred around simplifying online payments by offering a fast and secure payment platform. They aim to streamline the payment process by enabling consumers to make direct bank transfers without the need for credit cards or e-wallets. Their focus is on enhancing the user experience, reducing friction in online transactions and expanding their presence through partnerships and market expansion efforts. Currently, Trustly has a global customer base in their market segment. All in all, Trustly’s strategy is to be a low-cost alternative to bank payments globally. (Trustly, 2020)

Lastly, the FinTech and bank player Klarna, has a strategy centred around providing innovative and convenient payment solutions globally. They target online shoppers, offering "buy now, pay later" options and instalment plans to enhance purchasing power. Klarna collaborates with e-commerce merchants to create a seamless checkout experience, driving sales and reducing cart abandonment. With a focus on global expansion and becoming a leading FinTech player, Klarna aims to serve a large customer base and revolutionise the payment landscape by offering easy and low-cost services. (Klarna bank, 2022)

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5 Analysis

Industry level analysis will be made using Porter's five forces seen under section *3.2 Porter's Five Forces.* The competitive strategies will be analysed using *3.4 Porter's Generic Competitive Strategies.* Both analysis chapters will take Porter's theories of the technology effects seen in chapters *3.3* & *3.4.4.*

5.1 Porter's Five Forces analysis

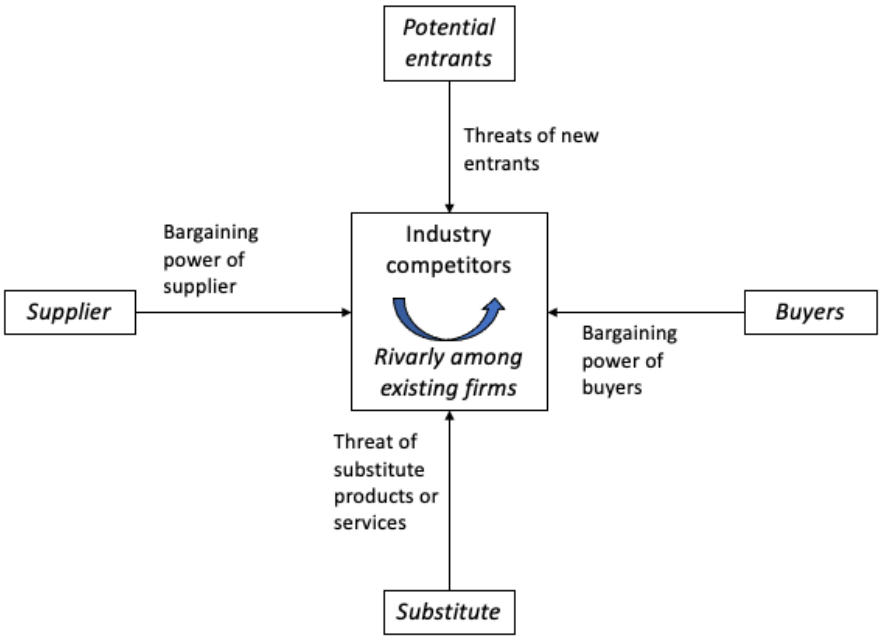

Figure 32, Porter's Five Forces. (Porter, 1985)

Porter Five Forces analysis, described in more detail in section 3.2 Porter's Five Forces, which is used to analyse the competitiveness of a specific industry. It is comprised of 5 forces that will be analysed individually to conclude overall competition complemented with the technology impact in each one. The five forces are:

a. Threats of entry
b. Power of suppliers
c. Power of buyers
d. Threat of substitutes
e. Rivalry among competitors

5.1.1 Threats of entry

As described in the theory chapter, the threat of entry in an industry is determined by the level of entry barriers present and the response that can be expected from incumbent firms. If entry barriers are low and new entrants expect little resistance from established firms, the threat of entry is high and the profitability of the industry is moderated.

Supply side economies of scale: The *supply side economies of scale* have been significant for a long period of time in the banking sector. As described under section *4.1.2* in the empirics' chapter, smaller banks may struggle to achieve the economies of scale needed to operate efficiently. Resulting in declining operational costs because of the increase in the number of customers using digital banking platforms instead of physical interactions with bank staff. The number of bank branches has declined significantly as well because of the digitalisation process, seen in Figure 17.

Porter's theory on technological progress is in line with the changes in economies of scale as it can either increase or decrease economies of scale in various value activities. In this case many of the incumbent banks faced challenges switching to a digital world, as seen in *figure 23*, the supply of digital infrastructure seems to be characterised by the *supply side economies of scale*. On the other hand, the technological advances have opened a new door for FinTech that rely mainly on technology. Thus, looking from the perspective of FinTech companies the *supply side economies of scale* have shifted the other way.

Demand-side benefits of scale: Looking at the *demand-side benefits of scale,* which essentially relates to that a buyer's willingness to pay for a product increase with the number of other buyers who also purchase the product, described in detail in the theory chapter. This entry barrier is particularly large in the banking sector since it among other things, is a trust issue. As Harasim (2021) pointed out the level of trust as a comparative advantage for banks vs FinTech companies is big. Especially the Nordic countries have a reputation for having strong and stable regulatory frameworks, which has helped to foster consumer trust in the banking sector. But the trust in the Nordic countries might also be a good thing for FinTech companies as they might become trusted faster in the Nordic region than elsewhere.

Customer switching costs: The *customer switching costs* in the banking industry have decreased significantly because of digitalisation. Firstly, it has

removed the information advantage of incumbent banks as much of the credit information related to risk assessment now is digitalised and available to all banks. As outlined in section *4.2.1*, incumbent bank in the past held customer-specific information to themself, enabling better credit risk assessment. The asymmetrical information flow resulted in higher switching cost for customers. Secondly, the digitalisation of information and new technology for risk assessment made the process of switching banks less costly for banks and easier for customers, since the switching process does not rely on paper and people to the same degree anymore. As a result, the *customer switching costs* have been reduced and the process is less time-consuming for both customers and banks. This has made customers more responsive to price differences between banks, thus intensifying competition.

Capital requirements: Accessing the capital requirements for the banking industry is not straight forward, it depends very much which part of the banking industry it concerns. Becoming a traditional bank is associated with high capital requirements as it is needed to operate a bank, thus the entrants would need to raise substantial funds to meet the regulatory requirements. This is very time consuming and cost heavy both at early and late stages of companies as they scale along the way. Especially Swedish banks are required to maintain a very high level of CET1 capital ratio. The capital requirements are substantially higher than Europeans comparisons.

As described in chapter *4.3.1* FinTechs are often categorised by product offering. The regulatory burden and capital requirements associated with becoming a full-service bank is not the same as for example only offer wealth management service. Thus, the FinTechs are avoiding some of the capital requirements. Nevertheless, capital requirements are still one of the biggest challenges for FinTech companies. But often, as Porter states the impact of capital requirements on deterring entry can be overstated. If the industry returns are attractive and expected to remain so investors will provide entrants, the funds they need. As seen in section *4.3.2* there have been a significant rise in venture capital into the sector since it been successful which is in line with Porter's theory.

However, the FinTech industry conditions have changed in 2022 with increasing demands for profitability compared to the record year of 2021 when capital was abundant and focus was on growth. Resulting in that raising capital has become more challenging and almost half of member companies of the Swedish FinTech Association need new investments in 2023. But it is important to note that funding is an issue for many startups and not only those

within FinTech. Still, the capital requirements in the banking industry I large and ultimately has a big impact.

Incumbency advantage unrelated to size: The incumbency advantage unrelated to size is rather large. As outlined by (Felländer et al, 2018), emerging players face certain disadvantages, such as the lack of extensive client databases and established financial infrastructure possessed by large banks. As well as limited knowledge and resources to navigate the regulatory frameworks and ensuring robust client security gives the incumbents a large advantage. However, venture capital investment firms might help with this since the venture capitalists operating in the fintech domain is well-versed in both financial requirements and the regulatory environment.

Inadequate access to distribution channels: Digitalisation has had a big impact regarding inadequate access to distribution channels. Nowadays a significant part is done online instead of in-person. As consequence the number of bank branches declined by 32 percent between 2009 and 2018, showed in *Figure 17*. Thus, there is no need to start up a branch network to reach out to customers. Consequently, the distribution landscape has changed drastically. The new entrants can now choose to distribute their services exclusively online and completely disregard physical contact with clients which has significantly affected the ability to enter the banking industry.

Government policy obstacles: Government policy obstacles plays a vital role for new entrants into the banking industry. As mentioned in chapter 4.1.6 the Swedish Financial Authority is known for being one the most rigorous regulatory bodies in Europe and implementing some of the strictest capital regulations resulting in hardship to enter the market. However new regulations, namely PSD2 has had significant impact reducing incumbent banks advantage's giving the customers ownership of their own financial data and letting third parties make transactions on the behalf of the customer. Thus, the competition in the banking industry and specifically payment services have increased significantly. But the FinTech companies still find regulation and compliance is hard to cope with.

5.1.2 The power of suppliers

Porter (2008) argues that the bargaining power of suppliers is high if the industry players rely heavily on supplier products and the options are limited. This is because the suppliers have high leverage and can charge higher prices if the constant demand is still present. The supply chain of banks is complex, but essentially banks are backwards vertically integrated, thus controlling

their value chain as described in section *4.2.2,* resulting in low dependence on suppliers, thus the bargaining power of suppliers is low in that aspect.

Nevertheless, due to new regulation (PSD2), the value chain has become more accessible through the integration of new technologies into business platforms, facilitating connections between different components of the value chain. This connectivity allows participant to specialise in specific parts of the value chain and particular products. The results of an open value chain are that there could be an increased number of players that supply different kind of services. Thus, these new players could supply and buy services from both each other and the incumbent banks, creating new suppliers for banks. How the dynamics between these new players and the incumbent banks will be is hard to say, but it should lead increased power of suppliers and competition.

However, banks are proactive and partners up with Fintechs. This partnership allows banks to maintain their customer base without having to develop new services or applications in-house and to some extent, FinTechs becomes the suppliers of banks. But as banks partner up with Fintechs they often invest into them. Resulting in that the banks essentially control their suppliers, effectively reducing the competition and limiting the bargaining power of the suppliers.

5.1.3 The power of buyers

Porter argues that switching costs is important when it comes to the bargaining power of buyers as high switching costs lead to low mobility. Low mobility leads increased difficulty switching vendors for the customers. Resulting in increased market and pricing power for banks. The low switching cost in the Swedish banking industry, as described in *5.1.1*, has led to a relatively high degree of mobility for the customers, see *Figure 13* and *14*. In fact, the Swedish bank customers are one of the most mobile customers in the European banking industry. In combination, the relatively low switching cost and the high degree of customers mobility has increased the bargaining power of customers.

Another aspect of the power of buyers is hindering regulations that prevents customers from changing vendors. Porter argues that the ease of switching vendors for customers significantly affect competition. The more barriers for switching vendors, the less switching ease a customer has. The survey from the EU commission showed that Sweden has relatively low regulations that hinder customers from switching banks, seen in section *4.1.5*. The study all

in all, showed that administrative and regulating barriers are not necessarily a problem for customers in the Swedish bank industry.

Technology has significantly impacted the power of buyers. Firstly, price comparison websites have increased the transparency letting customers evaluate different services much easier. In addition to increased transparency, technology driven regulations like the PISP provision of PSD2 have increased competition. The PISP provision have increased competition by letting third parties make transactions on behalf of the customers, resulting in several new players offering payment services and letting customers play them against each other, which according to Porter increases the power of buyers. Secondly, the AISP provision of PSD2 have given the customers ownership of their own financial data, thus diminishing the information advantage of the incumbent banks and reducing the asymmetrical information bias. Ultimately increasing the power of buyers and the overall competition.

A high degree of standardisation leads to high bargaining power of customers according to Porter. The banking industry is quite standardised when it comes to products, but at the same time, the banking industry is big and offer a lot of different products. Hence the overall offering is not standardised. Nevertheless, the entering FinTechs often specialises in one or very few products. Thus, utilising the standardisation of products and starts competing in that specific product segment.

5.1.4 Threats of substitutes

Porter (2008) argues that substitute products serve the same purpose but by different means. In the banking industry, finding substitute products are not as straightforward. For example, Trustly's, Zimpler’s and Klarna's products can be considered substitutes for certain traditional banking services due to their offerings in the areas of online payments and consumer financing.

Regarding online payments, both Trustly and Zimpler provide alternative payment methods that bypass traditional credit cards or bank transfers. Essentially, they offer customers the ability to make secure payments directly from their bank accounts. This can be seen as a substitute for traditional payment methods, especially for online transactions. In consumer financing, Klarna, offers "Buy Now, Pay Later" options and instalment plans, allowing customers to make purchases without immediate full payment. This alternative financing method serves as a substitute for traditional bank loans or credit cards. Stabelo on the other hand offers residential mortgages but bypasses traditional banking balance sheets by placing the credit on the

balance sheet of major pension funds, thus, Stabelo falls under the purview of an alternative investment fund and are not subject for the same regulations as banks offering traditional mortgages.

Another substitute is crowdfunding as it allows individuals and businesses to raise funds directly from investors without involving traditional banking institutions. As described in section *4.3.1* there are two major types of crowdfunding: equity crowdfunding and loan crowdfunding. In equity crowdfunding, investors provide funds to private companies in exchange for equity. Loan crowdfunding, on the other hand, involves online platforms that connect borrowers with lenders for credit activities. Although crowdfunding does not pose a significant threat to the Swedish banking at the moment, it might do so in the future.

The phenomena of Open Banking might also pose a threat to incumbents as it facilitates the possibilities to create new products that might become substitutes by opening up the value chain. The core banking products might stay the same, but the new entrants might position themselves as substitutes for some of the current intermediation channels which could reduce the incumbent banks to commodity providers. As of now it seems hardily unlikely, but in theory it could happen. Looking back at the previous years instead, the substitute that changed the Swedish bank industry was online banking. It revolutionised banking and led to the closing of regional branches and focus on digitalisation as seen by *Figure 17* and *Figure 19*. The digital readiness for Swedish banks is one of the best in Europe. This increases the threat of the substitute products since technology has the potential to disrupt industries according to Porter.

Furthermore, Since banks work proactively with the threat of substitute products, see chapter *4.4.1*. The threat of substitute products gets both stronger and weaker. The help gives FinTechs a better chance of succeeding and entering the market with a new potential substitute product, but since the banks offer capital and partnership with the FinTech, the product itself is then already available to the banks. Overall, the new products compete with the market standard as of now but does not compete with the banks offering at the same time. Nordea and SEB are two examples of banks setting up venture capital funds to stay proactive.

5.1.5 Rivalry among competitors

The Swedish banking market is relatively competitive, with numerous incumbent banks and emerging FinTech players challenging for market

shares. Porter argues that the rivalry amongst competitors is as highest when there is no clear market leader which is the case in Sweden. Nordea is the largest bank in the Nordics but has the smallest market share in Sweden of the four universal banks. The market share for the two largest banks is 39% and for the four largest banks its 70%, as seen in *Figures 7* and *8*. These Figures indicates that all four banks have similar market shares with no clear leader. Despite that the concentration in the Swedish banking industry is one of among the lowest of its European Peers, it is still quite high. But as explained in section *4.1.2*, concentration as a measure of competition in the banking industry might not be appropriate as there are significant economies of scales involved.

Porter also argues that the way competitors compete plays a crucial role for the profitability of the companies. If they compete very similarly, it becomes a zero-sum game, where one firm's gain is often another's loss, which negatively impacts the profitability and leads to higher rivalry as they then mainly compete on price. The large Nordic banks as described in chapter *4.4.2* are similar in their approaches and their offering, but as seen in *Figure 12* and *15*, the profitability of Swedish banks is higher than European peers. Thus, they must compete in other dimensions than price, such as product features, support services, delivery time, or brand image, as is less likely to erode profitability according to Porter. So, by differentiating themselves and catering to different customer segments, rivalry can instead be positive-sum and might even increase the average profitability of an industry. However, it might also be the case the industry is characterized by high switching costs or low marginal costs combined with high fixed costs. Since the switching costs are low and the mobility relatively high combined with high capital requirements it might explain the better profitability than the European peer, but it seems more likely to be a combination of differentiation and high entry barriers.

Another factor that is contributing to a high level of rivalry among existing firms is the increasing digitalisation of the banking industry, as described in *4.2.3.* Swedish customers are known to be highly digitalised and therefore have high expectations when it comes to the services and offerings that they receive. This is seen in *Figures 16*, *18* and *19*, where the Swedish market is one of Europe’s most digitalised markets with high customer expectation. Swedish consumers stated that the best strength of their current bank is their digital offering. This in combination with favourable Open Banking regulation, has led to new players such as FinTechs to enter the market. By rapidly growing, see *Figure 27* on FinTechs enterprise value growth,

FinTechs poses challenges and rivalry to the existing established banks which adds to the existing rivalry among competitors according to Porter.

5.1.6 Summary of Porter's Five Forces analysis

Threats of entry: In summary the threat of entry is relatively high. The supply side economies of scale are still large, but the technological advances have opened a new door for FinTech that rely mainly on technology. The demand-side benefits of scale are a big advantage for the incumbents as they still hold the trust of the consumers. The customer switching costs are low as the information advantage of the incumbents have vanished. Capital requirements and government policy obstacles still pose large challenges for fintech companies, although specialising in a certain sector could reduce the impact. The incumbency advantage unrelated to size is still large, but getting help from venture capital could potentially reduce it. Finally, the inadequate access to distribution channels is low as the entrants now can distribute their products exclusively online.

The bargaining power of suppliers: In summary the bargaining power of suppliers is low. banks basically have full control of the value chain, however new regulations have resulted in increased competition as it has open up the value chain allowing new entrants to compete in different parts of the value chain, effectively becoming suppliers to the banks.

Power of buyers: In summary the power of buyers is large. The combination of customer mobility, regulatory transparency, digitalisation and industry standardisation has given customers significant bargaining power as Fintechs. Furthermore, technology has empowered buyers through increased transparency and competition. Price comparison websites allow for easier evaluation of services, while regulations like the PSD2 has enabled third-party transactions, granted customers ownership of their own financial data, reduced banks' information advantage, ultimately resulting in increased power if buyers and enhanced competition.

Threat of substitutes: In summary, the threat of substitutes is low. There are currently few established alternatives to the core banking services. However, the treat is looming and there are promising alternatives like crowdfunding. Furthermore, FinTechs are not conducting traditional banking business and uses innovative strategies to conduct business differently, effectively bypassing existing regulations or adopt fast to new ones. But overall, the banks traditional ways are still the market standard and the banks works very proactively in trying to be part of the changing environment.

Rivalry among competitors: In summary the rivalry among competitors is high. It has no clear market leader despite a relatively high concentration, but measuring competition solely based on concentration may not be appropriate due to economies of scale. Competitors in the market, particularly the large banks have similar approaches and offerings. However, the profitability of Swedish banks is higher than their European peers, suggesting that the banks differentiate their offer and cater to different customer segments. The increased digitalisation of the banking industry, driven by high customer expectations has in combination of favorable regulations led to the entry of FinTech players. Consequently, intensifying the rivalry among existing players. This rivalry impacts profitability, with the incumbents needing to compete in dimensions beyond price to maintain their advantage. Overall, the Swedish banking industry exhibits a dynamic and competitive landscape.

5.2 Competitive Strategies

The analysis of this chapter will comprise of Porter's Generic Competitive Strategies framework, described in detail in section *3.4 Porter's Generic Competitive Strategies*, which is used to understand a firm's relative position within its industry. The framework is comprised of three different strategies complemented with the technology impact in each one:

- Cost leadership strategy
- Differentiation strategy
- Focus strategy

Furthermore, the determination of the categorisation is not binary nor straightforward, but instead relative. Note that the underlying drivers for categorisation of the competitive scope is geographical presence and range of products.

5.2.1 Cost leadership

Porter describes cost leadership as a straightforward strategy, which in the banking industry is not direct comparable since it is a very broad market with very many different segments and products. As earlier stated, the determination of the categorisation is not binary nor straightforward, but instead relative.

Klarna is an international FinTech player with a "buy now, pay later" strategy. Even though Klarna is relatively new compared to other banks, Klarna have already established an international customer base due to their

internationalisation strategy and favourable prices. The international stamp is a clear sign on Klarna focusing on a broad market in terms of geography. Klarna also offer a variety of services in their operating segments, however, the focus still lies on payment services. By comparing Klarna's products and services with established banks', it is clear that Klarna is not as differentiated as the established banks due to the vast difference in service and product variety. This puts Klarna in the *Cost leadership* bracket due to the very broad presence in terms of geography, combined with relative focus on low costs.

FinTech companies Trustly and Zimpler are similar in their competitive strategies. Both companies offer simpler payment solutions than banks, according to themselves. Both companies operate worldwide in their payment solutions segment. In accordance with Porter's theory on competitive scope, the FinTech company's broad geographical scope is aligned with a semi-broad market. Porter argues that a company in the broad market often operates in multiple industries, which the Trustly and Zimpler does not. All in all, the international presence of the companies is enough to place them in the broad market when comparing against the other players. Therefore, a *semi-broad market* is the competitive scope of these FinTechs.

In the competitive advantage segment, both Trustly and Zimpler have low cost as their competitive edge. The companies work within a niche segment and emphasise low cost and simplicity as their main drivers. The large emphasis on low cost indicates a positioning tilted towards cost focus rather than differentiation. All in all, the semi-broad market scope combined with emphasis on low-cost, positions them in *Cost Leadership* as *Competitive Strategy.*

5.2.2 Differentiation

The universal banks in Sweden operate with differentiation as their main competitive advantage. Nordea, SEB, Handelsbanken and Swedbank all offer a variety of products and services towards their customers. These four banks offer services and products from every aspect of *Figure 5*, indicating a clear differentiation strategy. Furthermore, these banks have a large presence outside of Sweden with customers in the Baltics and other northern European countries. Consequently, their position is Differentiation.

Collector Bank differs slightly from the other niche banks. Collector Bank is highly digitalised and focus on retail purchasing and e-commerce, similar to Klarna. However, they also offer loans to consumers and corporates as their main value driver which separates it from Klarna. With that said, Collector

Bank target a narrower market compared to the universal banks. Since Collector Bank have market shares in multiple countries, albeit the majority from Sweden, Collector Banks geographical scope is still considered international. The broad geographical scope combined with a relatively broad service offering, this puts Collector Bank in the *differentiation* bracket but closer to the edge compared to the universal banks.

Avanza and Nordnet both offer services and products to a relative broad audience within the Nordic countries. However, both Avanza and Nordnet operate in a niche segment. Both companies offer similar services with their main offering being retail online brokerage and investment services, however they consider themselves using a "one-stop-shop" strategy. But compared to the universal banks, they operate in a niche segment, but that specific segment is relatively big. Neither Avanza nor Nordnet operate in a true cost leadership manor according to Porter. This is due to cost not being the most contributing factor to their success.

Both Avanza and Nordnet operate to offer a complete package in their shared segment, which tilts them towards the *differentiation* bracket according to Porter. Simultaneously, in order to qualify for the differentiation bracket, they need to offer customers unique set of attributes or services in order to truly exhibit a differentiation strategy according to Porter. All in all, Avanza and Nordnet display attributes that puts them in the *differentiation* bracket, but close to the edge.

5.2.3 Focus

SBAB mainly offers residential mortgages, but also offer savings account and sometimes corporate funding related to the residential sector. In comparison to most of the other players, their offering is quite small. SBAB offering extends throughout Sweden but is limited to the Swedish market. This places SBAB's competitive strategy in the *Narrow market* according to Porter's theory. SBAB unlike the savings banks, does not have a geographical connection to its customers and does not tailormade its solutions to the same extent. SBAB focuses on providing cost favourable mortgages, thus placing them is in the *cost focus* group.

The other niche banks, Nordax Bank, Svea, Marginalen Bank and Resurs operate similarly to each other. Their offering ranges from smaller consumer loans up to providing loans for mid-size corporations, sometimes services and products around factoring and invoicing. They all primarily have Sweden as their main customer base within their niched segment, but also has presence

in the Nordics. Their geographical scope combined with relatively small offering places their competitive strategy in the *narrow market* with Porter's reasoning.

In general, Nordax Bank, Svea, Marginalen Bank and Resurs all aims to offer customised solutions to meet the needs of their customers. However, they emphasise doing this at low cost and their offering is quite limited. Svea is more tilted towards smaller segments around purchasing such as invoicing. Nordax Bank is focused more on consumer lending, while Marginalen Bank offers credit cards and surrounding segments. All in all, they operate within quite a small segment and does so in a cost-efficient manner which positions them in the *cost focus* bracket with Porter's reasoning. However, since they do not meet the criteria fully for a cost focus strategy nor the uniqueness of the differentiation. These niche banks are placed on the edge of the *cost focus* bracket due to their own mentions of low-cost products.

Ålandsbanken on the other hand target a wealthier clientele and provides services like premium and private banking exclusively in the Nordic region. This separates Ålandsbanken from the universal banks as they target a specific segment. The universal banks also offer similar services, but Ålandsbanken is more focused around the customers' needs and providing a more personalised service. This combined with Ålandsbanken's limited geographical presence positions them in the *differentiation focus* bracket.

The savings banks, Sparbanken Skåne, Sparbanken Syd and Sparbanken Sjuhärad are regional banks that offer a wide range of services to a small geographic segment. In a sense, the specific targeting of a segment is similar to Ålandsbanken. However, the target segments are quite different witch Ålandsbanken targeting wealthy individuals and the savings banks the regional community. The small geographical presence in combination with a variety of products and tailormade solutions places the savings banks competitive strategy in the *narrow market*. Albeit, the savings banks are more inclined to serve the customers with tailormade solutions instead of competing on price which in accordance with Porter's theory position the savings banks in the *differentiated focus* bracket.

The FinTech company Stabelo is currently only offering residential mortgages to private customers. Like Trustly and Zimpler, Stabelo operates within a niche market segment but only in Sweden. This in combination with its limited service offering places their competitive strategy in the *narrow market*.

Stabelo's competitive edge compared to peers, according to themselves, is a better price. This clear strategy of having the best possible price is according to Porter's theory, a sign that the company operates in the *low-cost* bracket. In order to achieve the differentiation strategy, the company must offer premium offers or be unique in its offering, which Stabelo is not. All in all, Stabelo with its current offering, is positioned in the *Cost Focus* bracket.

5.2.4 Summary

To summarise the chapter, *Table 6* was constructed for the purpose of visualising the different players strategy. *Table 6* shows the categories, geographical presence, service offering, combined market scope and the competitive advantage. As outlined in the beginning of the analysis the competitive scope was based on a combination of the companies' geographical presence and service offering. However, the combined results are an overall determination of all gathered information and not only the classification in the table. Their respective competitive advantage is elaborated in the analysis.

Table 6, Summary of competitive strategy of banks.

		Competitive Scope			Competitive Advantage
Category	Name	Geographical presence	Service offering	Combined market scope	Strategy
Universal bank	SEB	International	Full service	Broad market	Differentiation
	Nordea	International	Full service	Broad market	Differentiation
	Handelsbanken	International	Full service	Broad market	Differentiation
	Swedbank	International	Full service	Broad market	Differentiation
Niche bank	SBAB	Sweden	Few products	Semi Narrow market	Low cost
	Avanza	Nordic	Several products	Semi Broad market	Semi Differentiation
	Nordnet	Nordic	Several products	Semi Broad market	Semi Differentiation
	Marginalen Bank	Nordic	Several products	Semi Narrow market	Low cost
	Nordax Bank	Nordic	Several products	Semi Narrow market	Low cost
	Collector Bank	International	Several products	Semi Broad market	Semi Differentiation
	Svea	Nordic	Several products	Semi Narrow market	Low cost
	Ålandsbanken	Nordic	Several products	Semi Narrow market	Differentiation
	Resurs	Nordic	Several products	Semi Narrow market	Low ost
Savings bank	Sparbanken Skåne	Parts of Sweden	Several products	Semi Narrow market	Differentiation
	Sparbanken Syd	Parts of Sweden	Several products	Semi Narrow market	Differentiation
	Sparbanken Sjuhärad	Parts of Sweden	Several products	Semi Narrow market	Differentiation
FinTech	Klarna	International	Few products	Broad market	Low cost
	Trustly	International	Very few products	Semi Broad market	Low cost
	Zimpler	International	Very few products	Semi Broad market	Low cost
	Stabelo	Sweden	Very few products	Narrow Market	Low cost

Figure 33 summarises the positioning of the selected companies. It made up of four different brackets and similar to *table 6,* the positioning is based on the companies' geographic presence, service offering, combined market

scope and the competitive strategy. The logos of the company are marked out with dotted rectangles indicating their respective category. As outlined earlier, the positioning is relative and not definitive.

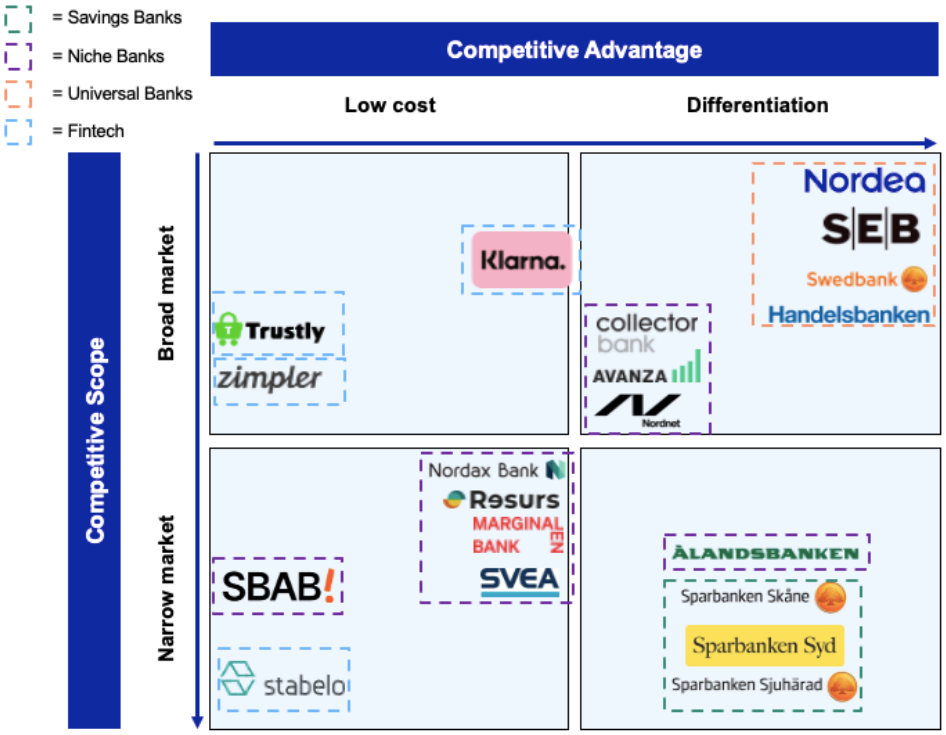

Figure 33, Swedish banks competitive strategies according to Porter's theory

To summarise, the competitive strategies differ a lot between the players, as shown in *Figure 33*. The universal banks, SEB, Nordea, Swedbank and Handelsbanken display a distinct differentiation strategy as they are offering a very wide variety of services to a large segment of customers. Although cost is important, it is not the competitive advantage of the universal banks.

In comparison to the universal banks, the niche banks cater to specific segments. As a consequence, their competitive scope is narrower, both regarding their geographical presence and service offering. To which degree differs among them. Avanza, Nordnet and Collector Bank are placed in the differentiation bracket due to their relatively large geographical scope and offering. But as they are more focused on cost and not differentiated to the

same degree as the universal banks nor reaching as broad market, they are placed below and to the left of the universal banks.

The other niche banks, Marginalen Bank, Resurs, Nordax Bank and Svea are placed in the cost focus bracket due to their competitive strategies being centred around low-cost and at the same time their competitive scope is narrower than the other niche banks Collector Bank, Avanza and Nordnet.

The savings banks, Sparbanken Skåne, Syd and Sjuhärad are due to their regional presence, wide and personalised offering placed in the *differentiated focus* bracket. Ålandsbanken is also placed in the *differentiated focus* bracket since it targets a specific segment and offer differentiated services. However, Ålandsbanken target wealthy individuals in all Nordic countries instead of the local population. SBAB are placed *cost focus* bracket as it mainly offers mortgages and has big cost focus.

The FinTechs differs from the banks in their competitive strategies. Three of the chosen FinTechs, Trustly, Zimpler and Stabelo operate with low-cost competitive strategies. The Fintechs, just like the niche banks target specific segments. Klarna, the FinTech player which can be seen as the most established of the three, has widened their offering and has become a bank. Klarna operates like Trustly and Zimpler on a global scale, but offers a wider variety of services which almost places Klarna into the differentiation bracket, but not quite as Klarna is more focused on cost than differentiation and does not offer personalised service.

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6 Conclusion

In conclusion, Swedish banks are affected by Fintech in several ways. FinTech's entry into the Swedish banking industry has increased the threat of entry, strengthened the bargaining power of buyers and suppliers, and increased the rivalry of the incumbent banks. FinTechs have done so by leveraging technology and customer mobility to compete in the industry by offering customers new innovative solutions.

The increased customer mobility is mainly due to the digitalisation of the industry. However, new regulation has opened the value chain resulting in new opportunities which FinTechs quickly seized with the most successful example being Klarna, that revolutionised the payment industry. As consequence of the new open value chain, FinTechs have become both suppliers and competitors to the banks. Subsequently, the universal banks take the threat of FinTechs seriously. Resulting in that the universal banks have started to proactively work with FinTechs to create strategic partnerships and integrate FinTechs innovative services into their own offering.

The collaboration between Fintech and banks seems to be fundamentally based on FinTechs targeting small segments and great offering. This specialisation characteristics of FinTechs might be a consequence of Fintechs avoiding the traditional entry barriers. However, the current industry barriers are still significant.

The changing industry dynamic has of yet not severely impacted the positioning of the incumbents. However, they are positioned quite differently as FinTechs are more focused on cost and is offering less customised services. This might become a problem for banks as the trend using online services increases, the number of banks branches has decreased significantly and the comparative advantage of offering personalised services is getting weaker. But as already mentioned, the banks works proactively and by investing in FinTechs early and integrate their services into their own offering might limit the impact of FinTechs. As the banks strategy are largely based on differentiation in relation to FinTechs, cooperation with FinTechs or using Fintech suppliers might become essential to keep their comparative advantage.

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7 Contribution and future research

7.1 Contribution

This study aims to contribute with knowledge to several actors, primarily in the banking and FinTech industries. Firstly, it contributes with knowledge surrounding the industry, with its competition and its market drivers which is valuable to current and potential entrants. Secondly, the study contributes with a understanding of the industry from a technology perspective, which today, is highly valuable. Since most industries pass though periods in which the landscape is changing. Getting an understanding on what is changing and what is staying the same is highly valuable information for both existing competitors as well as new potential entrants.

Thirdly, this study gives insight to the different players and their competitive strategy. This gives insight to how different segments of the industry tackles the current environment, with clear distinction of both the types of actors and companies. Furthermore, it contributes to the understanding of how FinTech and banks operate not only as competitors, but also and partners. The market dynamics this interaction is both analysed from an industry and strategy perspective which is compelling for all types of stakeholders embedded in the industry.

Overall, the study contributes with a broad and deep analysis of a steady, but at the same time uncertain market under constant change.

7.2 Future research

For future research, it would be interesting to deep dive into the potential of Open Banking. As this study is relatively broad and mainly look at the industry as of today, it only touches the surface of Open Banking. Thus, for deep understanding, a more in-depth analysis is required. Open Banking seems to have the potential to revolutionise the industry cause major disruption. Furthermore, big technology companies such as Apple, Amazon and Google might also enter the market. Looking into how that might play out would also be quite interesting.

For future research, it would also be interesting to study the how the changing landscape in the banking industry interact with other industries, analysing the spillover effects.

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