Strategic actions to regulatory change
- How banks adapt to PSD2

Master's Thesis 15 credits
Department of Business Studies
Uppsala University
Spring Semester of 2018
Date of Submission: 2018-06-01

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Abstract

Title Strategic actions to regulatory change - How banks adapt to PSD2

Background PSD2 is an EU directive implemented 1st May 2018 that forces banks to share information related to account information and payment initiations to third-party providers. The aim of the directive is mainly to increase integration, effectivity and competition on the European payment market.

Problematization With increased competition for banks revenues are expected to decrease and previous literature on PSD2 are consistent with the fact that strategic actions beyond compliance have to be made. However, there is no previous studies on how banks are strategically adapting to PSD2.

Research question What strategic actions are being performed within banks due to PSD2?

Purpose The purpose of this thesis was to examine how banks are adapting strategically to PSD2, this to provide a better understanding about how banks are adapting to new regulatory changes.

Method The research question was answered through a qualitative research by conducting semi-structured interviews with the four largest banks in Sweden. The interviews were analyzed through a thematic analysis approach.

Conclusion Five main implications could be concluded: (1) strategically, the researched banks are doing more than merely complying to PSD2, (2) some of the researched banks are planning to provide services that goes beyond PSD2, (3) the researched banks are creating digital platforms through open APIs, (4) innovation in the researched banks increases due to PSD2 and (5) collaborations in the researched banks increases due to PSD2.

Keywords PSD2, Regulation, Bank, API, Third-party provider, Strategic action
Definitions

API
API stands for Application Programming Interface and is the software that makes it possible for two applications to interact and share data between each other. Open APIs means that the data is accessible by external partners and developers, for example by third-party providers.

Fintech companies
Fintech companies are providing new technology and innovations that are aiming to compete with traditional financial services.

Open Banking
Open banking is a model where banking information is shared through open APIs. In this thesis open banking implies a platform created by banks that enables sharing of data through open APIs to third-party providers as well as between banks.

PSD2
PSD2 stands for second Payment Service Directive and is an EU directive that requires European banks to share their customers’ account information, after customers’ consent, to third-party providers, for example fintech companies and non-banks, and give them authority to initiate payments. The purpose of the directive is to increase integration and efficiency on the European payment market as well as to provide cheaper, more secure and more innovative products and services to customers.

Regulation
Regulations can be defined in a variety of ways, legal and economic literature are inconsistent. Generally and simply explained regulations can be described as rules made by governments or other authorities.

Regulatory technical standards
The regulatory technical standard is defining the technical framework of how PSD2 should be implemented primary focusing on a common and secure connection, but also a strong customer authentication.

Screen scraping
Screen scraping is a process where third-party providers collects screen display data, normally captured from a legacy application by obtaining login credentials from the user. The collected data is translated and later displayed in another application, that may have a more modern user interface.

Strategic actions
Strategic actions can be defined as practical actions that are made in order to execute long-term goals and objectives. In this thesis, merely complying to a regulation is not considered to be a strategic action, since it is required by everyone. A strategic action is made when the company does something beyond the regulation that is related to their strategy.

Third-party provider
A term that includes both Account Information Service Providers (AISPs) and Payment Initiation Service Providers (PSIPs), which is for example fintech-companies and other non-banks. Third-party providers will after PSD2 has come into force get access to account information and use information from banks to initiate payments.
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1. Introduction

Following chapter provides a background of the research topic followed by a formulation of the problem, which leads to the research question and the purpose of the thesis. The chapter ends with a disposition of the thesis and an explanation of the delimitations.

1.1 Background

European banks are experiencing increasing developments of innovative payment solutions as a result of an accelerating digitization (Accenture, 2018). Visits to physical bank offices have been replaced by logins to the Internet bank and other easily accessible products and services such as the mobile application Swish (Tinnilä, 2013). The customer expectations have increased and incumbent banks are becoming more vulnerable. In order to remain relevant to customers, banks have to become more innovative (Accenture, 2018; Clemes, Gan & Dy, 2012; Nejad, 2016) and maintain their loyal customers, which is important as the performance among banks are largely dependent on maintaining a long-term relationship with their customers (Guibaud, 2015).

More changes are to come, in January this year PSD2, or the Second Payment Service Directive, was implemented (European Commission, 2018). However, implementations dates have varied among the European countries and in Sweden, it was not until 1st May it came into force. The security measures that are outlined in the regulatory technical standards will on the other hand not be applicable until September 2019. PSD2 is an EU directive that requires banks to share their data related to customers accounts and payments by building up APIs, or Application Programming Interfaces, which can be accessed by third-party providers (European Commission, 2018). The main goals with PSD2 are according to the European Commission (2018) to provide consumers with cheaper, more secure and innovative electronic payments, it aims to contribute to an increased integration and efficiency on the European payment market to improve the conditions for payment service providers including new participants. PSD2 is a revised version with new updates and complements to the Payment Services Directive, PSD1, who was implemented to institute payments that were safer and more innovative than before (European Commission, 2018). However, one major flaw with PSD1 was that new market innovations were not regulated which was considered to cause a legal uncertainty and potential security risk in the payment chain as well as towards the customers.
1.2 Problem formulation

The banking industry has for a long time been characterized by high entry barriers and low competition (Menicucci & Paolucci, 2016). PSD2 will help to provide a more consolidated payment market within EU which will promote competition as it will be possible for several actors to compete, or collaborate, with the banks. The competition will increase as new actors will be able to provide improved financial solutions that previously only was offered by the banks, now customers will have the opportunity to choose among more actors and there will be a competition about being the most attractive one (Cortet, Rijks & Nijland, 2016).

To customers, the new directive will imply possibilities to use other financial actors than the traditional banks to perform some of the tradition bank errands like checking the account balance, perform transactions, transfer money, pay the bills etc., while the money is safely stored on the bank account (Hellström, 2018). Banks need to become more attentive to the market conditions and the potential threat in form of competition that arises in connection with the changes (Hedley, White, Petit dit de la Roche & Banerjea, 2006). The lack of capability to develop among banks compared to other branches have resulted in a frustration and a low customer satisfaction, which in combination with higher prices of banking products and services due to Basel III, implies a great opportunity for third-party providers to expand and provide alternative products and services. This could result in lower customer loyalty towards banks, which in turn could lead to loss of profit (Reichheld & Teal, 1996). In order for banks to remain their financial strength, strategic actions have to be made to prepare for an environment increasingly influenced by regulations as well as technological development and social changes (Kotarba, 2016).

PSD2 is being described as a game changer of the payment industry (Financier Worldwide, 2017; Cortet, Rijks & Nijland, 2016; PwC UK, 2018). Banks lose their oligopoly of account information and payment services (Guibaud, 2015) and as consequence revenues are predicted to decrease substantially during the upcoming years, in 2020 nine percent of the revenue from retail payments are expected to be lost (Accenture, 2016). In addition to that, PSD2 is likely to have indirect effects on revenue as well, increased competition, as well as changed customer expectations, put pressure on banks to adapt and become innovative in order to stay competitive in the long run (Holm & Hellström, 2018). Many banks are aware that extensive changes might have to be made, 70 percent believe that PSD2 will have an impact on all functions of the company. Despite the need for banks to comply with the new
regulations, strategic changes might have to be made as well (PwC, 2017). Cortet, Rijks and Nijland (2016) states that if banks are adapting to PSD2 in a good way, they can continue being competitive actors on the market.

Markets that are subject to imperfect competition, unfavorable results or unbalance can favor from a government regulation, with regulations certain market operations can be facilitated, stabilized, maintained or imitated in favor of the public’s interest (den Hertog, 1999). Banks are considered to be a part of the central nervous system of the market economy since they are controlling the resource allocation within the economy (Crockett, 2011) and are facing regulatory pressure, where European banks today have to change their business models as they are no longer practicable (Ernst & Young, 2016).

More or less every industry is subject to regulatory control (Wiseman & Catanach, 1997), but the influences of regulations on companies have not been explored to its fullest (Reger, Duhaime & Stimpert, 1992). Further, there is little understanding of why responses by companies differ during regulations (Lounsbury, 2001). After a new regulation has become effective different responses can be seen in different companies and to get a deeper understanding of the dynamics of strategy, innovation and operation research should be made to get a better understanding of the effects of regulations. Further, current research is mainly focused on the negative aspect of regulation, how companies try to minimize the effect of it, but research of companies that embrace regulations are less apparent (Freij, 2017). PSD2 seems to be perceived in a more positive way than a majority of previous regulations towards banks, numerous sources point out the opportunities in conjunction with PSD2 (Cortet, Rijks & Nijland, 2016; Guibaud, 2015; Holm & Hellström, 2018). This thesis aims to provide a better understanding of how regulations affect strategic actions in banks, especially regulations which may be perceived as an opportunity rather than a mere constraint.

1.3 Research question
The paper aims to answer the following research question:

➢ What strategic actions are being performed within banks due to PSD2?
1.4 Purpose
The purpose of this thesis is to examine how banks are adapting strategically to PSD2, this to provide a better understanding of how banks are adapting strategically to new regulatory changes.

1.5 Disposition
The second chapter of the thesis *Theoretical Framework* provides the theory on which the thesis is based upon and further an analytical framework is presented. The third chapter *Research design* describes how the collection of data is performed followed by a critical discussion regarding the chosen method. In the fourth chapter *Empirical findings*, the results of the study are presented followed by chapter five *Discussion* containing an analysis of the presented results applied to the analytical framework presented in chapter two. Finally, chapter six *Conclusion* presents the implications of the thesis, theoretical and empirical contribution, limitations of the results and provides proposals for future research.

1.6 Delimitations
The thesis is delimited to the strategic actions made by banks within Europe. Since PSD2 is an EU directive, they are to the highest extent influenced by PSD2.
2. Theoretical Framework

This chapter provides an introduction to regulations within the banking industry and how companies act strategically to regulatory changes as well as to what extent. Further, an analytical framework that will be used in the discussion is presented.

2.1 Regulations within the banking industry

Regulations can be defined in numerous ways, legal and economic literature are inconsistent. One definition presented by den Hertog (1999:223) is “the employment of legal instruments for the implementation of social-economic policy objectives”. A distinction can be made between economic and social regulations (Viscusi, Vernon & Harrington, 1996) where economic regulation often is exercised on markets with limited or excessive competition as well as on monopolies, while social regulations are made to enhance consumer protection, labor conditions or of environmental purposes (den Hertog, 1999).

Regulations within the banking industry are a well-discussed topic within the EU, especially after the financial crisis which started in 2007 and resulted in severe effects on banks, financial systems and economies. The scope and unpredictability of the crisis, as well as the speed in which it spread from the US to become a global issue, made it clear that banks have to improve their ability to handle internal and external shocks (Bank for International Settlements, 2010). A resilient banking system is a requirement for stable economic growth since it provides critical services for customer, companies and governments, which makes them able to perform their businesses (Bank for International Settlements, 2010).

Banks have been faced with many regulations during the last decades, but all of them have more or less had the same objective, to stabilize the banking industry and make banks more resilient. The most prominent regulation during the last years is Basel III. The Basel Committee on Banking Supervision (BCBS), which is the primary standard setter for banks on a global level, has after the crisis introduced Basel III which is a reform aiming to strengthen banks liquidity and capital stability as well as increase their transparency and disclosures to create a more resilient banking industry. Previous research made by Cosimano and Hakura (2011), Deli and Hasan (2017) and Gavalas and Syriopoulos (2014) on Basel III has shown that the main effects on banks are increased equity-to-asset ratios and a reduction of their lendings). However, almost no previous literature has shown that strategic actions
have been made by banks to go beyond compliance and seize opportunities. A few studies have mentioned opportunities for banks related to Basel III, including increased management insights and improved technological architecture (Chabanel, 2011) as well as the opportunity to reassess their business portfolios looking at relative importance, links and interdependencies between different segments with insights from the new requirements regarding for example capital, liquidity and leverage (Härle, Lüders, Papanides, Pfetsch, Poppensieker & Stegemann, 2010). However, research on banks that have seized these opportunities is very limited, instead, compliance to the regulation seems to have been the main focus for banks.

Current research is as mentioned mainly focused on the negative aspect of regulation, how companies try to minimize the effect of it, but research of companies that embrace regulations are less apparent (Freij, 2017). Many researchers are highlighting the importance of seizing opportunities created by regulations. Levitt (1968) states that companies have to find the possibilities in conjunction with new regulations since regulations affect companies radically as well as have a large impact on industries which creates possibilities for companies to seize new business opportunities. Smith and Grimm (1987) also point out that opportunities are created after regulations for companies to adapt, and hence be more successful than those who do not adapt. Companies that fail to see these opportunities with regulations and perceive them as restrictions might end up as a loser in the market (Levitt, 1968). Actors within a changing market have to understand the opportunities with new regulations and how they can shape the environment they are operating within but also affect the knowledge and power within its division (Brusoni, Jacobides & Prencipe, 2009).

PSD2 is different from a majority of previous regulations, for example, Basel III in the sense that instead of merely being a challenge for banks where the main focus is to comply, numerous sources have highlighted the opportunities in relation to the regulation. Cortet, Rijks and Nijland (2016) and Guibaud (2015) state that PSD2 provides an opportunity for banks to create new revenue streams, develop digital platforms that can offer services that better meet customer demands and to become more innovative, to mention some examples. The main purpose of PSD2 is further to increase competition, which is a significant difference from previous regulations towards banks. Further, it is directly beneficial for the customers in a way that for example Basel III and other regulations that emphasizes stability are not. Many regulations that banks are facing at the moment have another approach than previous
regulations, PSD2 as well as for example GDPR and Mifid are all focused on the customers, to enhance openness and security for them. One can assume that these regulations are creating more opportunities to increase customer value than regulations that are less focused on the customers, which makes them an interesting area to investigate further.

2.2 Strategic actions due to regulations

Previous research on strategic actions by banks to go beyond compliance and seize opportunities is as mentioned limited. However, they examine how companies in general acts strategically on regulations and environmental uncertainty. Hickson, Hinings, Schneck and Pennings (1971) categorize possible strategic alternatives to environmental uncertainty into three different categories: prevention, forecasting and adaptation. Companies can either prevent uncertainty by forestalling the unpredictability, try to forecast environmental changes and thus be prepared and have time to act with an appropriate response or as a third strategic alternative try to diminish the negative effects of environmental uncertainty that could not be prevented or forecasted. Katz and Kahn (1978) have a slightly different approach to strategic actions when faced with environmental uncertainty and classifies adaptation strategies into direct and indirect ones. Invention strategy, as well as diversifications, are according to the authors’ examples of direct strategies since it is direct attempts to decrease uncertainty by either internal or external control. Indirect strategies include strategies that for example create external constituencies, such as including external members of the board, attending trade associations or adding more members to the board of directors.

Birnbaum (1984) found that it is the competitive uncertainty that affects strategic adaptations directly, and not other environmental uncertainties such as regulations. However, indirect effects are possible since environmental uncertainties lead to an increase in competitiveness. Further, the results of the study show that larger firms are more inventive than smaller ones and that increased oligopoly leads to less risky strategies. PSD2 will decrease the banks’ oligopoly (Guibaud, 2015) and it is thus possible that an increase of risky strategies will be seen instead. Engau and Hoffmann (2009) examined three response strategies to regulatory uncertainty: participation in policy making process, strategic flexibility and postpone strategic decisions. The result shows that companies respond by participating in policy making and by increasing their strategic flexibility, the higher uncertainty the company perceives the higher participation and flexibility it shows. However, it only partly makes companies postpone strategic decisions.
2.3 Strategic alternatives due to PSD2

Only a few academic articles have been written on the topic of PSD2. One of them is Guibaud (2015) who states that banks, due to PSD2, have significant opportunities to implement strategies that are open and digital, meaning that they open up and share information in a higher degree than necessary by PSD2 as well as increase their interactions and collaborations with other banks as well as third-party providers. Banks have failed to keep up with innovation and customer expectations which have increased the number of fintech companies on the market. With PSD2 these companies will have a strengthened position and banks need to understand the opportunities and threats in conjunction with this. The main opportunities presented by Guibaud (2015) are for banks to find new revenues streams by open up more than what is required by PSD2 and provide new, innovative and more advanced services, to create their own front-end services that integrate with open APIs of other banks, to includes services created by fintechs in their service offering as well as to take advantage of partnerships with third-party providers which could lower the innovation cost and time to market. If banks do not seize these opportunities there is a large threat for banks to become more or less invisible to the customers.

Cortet, Rijks and Nijland (2016) presents four generic strategies which banks can adopt in their strategic work with PSD2. Banks can, according to them, either Comply, Compete, Expand or Transform and all alternatives include different levels of actions that can be placed out on an interval, see Figure 1. To comply implies that the bank merely does what is required by them which means that they open up their APIs related to account information and payment initiations. To compete banks have to offer similar products and services third-party providers will be able to provide due to the regulation, to expand includes products and services through open APIs beyond what is required by PSD2 and to transform requires a multi-sided digital platform as well as changes in the banks business model. The strategies are not mutually exclusive meaning that banks go from one strategic option to another and to continue to the next option on the scale, previous options have to be accomplished. The position on the interval according to the authors depends on the bank’s positioning and service portfolio.
Previous studies have been presented on regulations impact on companies and their strategy. However, the research made by Guibaud (2015) and Cortet, Rijks and Nijland (2016) are directly related to banks and PSD2 and are thus of great relevance for the research question in this thesis. In order to get a deeper understanding of the extent of strategic actions that are made within banks due to PSD2 the strategic options presented by Cortet, Rijks and Nijland (2016) will be applied as a foundation for the interviews and discussion. The detailed classifications will be used in order to assess how the researched banks adapt and to what extent. However, other theories related to the different strategic alternatives are being presented as well.

### 2.3.1 Comply to PSD2 by opening APIs in the most limited way

Companies can either comply with regulatory requirements, fail to meet the requirements due to lack of understanding or deliberately choose not to comply (Wireman, 2003). The author states that compliance requires a complete understanding of the regulation and efforts made by the company to meet the new requirements and that the cost associated with a new regulation is lower than the penalty of not complying to it. The compliance department in financial institutions has during the last decades become more important and have come to change many of the financial institutions’ operations (Griffith, 2016; Fanto, 2013). The reason for the increased importance of financial compliance is according to Miller (2014) due to an increased regulatory scrutiny as well as an increased complexity of both the financial regulations and the financial markets.

According to Bird and Park (2014) now is a critical time to study compliance. It is increasingly complex, the stakes are high due to extensive fines for not complying and tremendous resources are spent on compliance, but still, there is an increasing amount of compliance failures. They point out that compliance is often inefficient in practice, companies have to assess and weigh the risk of non-compliance with the necessary investments to comply and make a trade-off, which many companies are unable to do correctly.
Cortet, Rijks and Nijland (2016) explain that compliance to PSD2 implies that banks need to build a new infrastructure with open APIs to provide data regarding customer accounts and payment initiations to third-party providers if the customer approves it. Banks also need to find a technique for identifying if third-party providers are having a PSD2-licence or not (Gustavsson, 2017).

2.3.2 Compete with services related to PSD2
According to Smith and Grimm (1987) companies that adapt their strategies to regulations are more successful than those that do not, those involving innovation perform even better. When a new regulation is implemented companies must decide whether they want to implement the regulation safe and secure, or if they want to provide new, innovative solutions. Chen & Liu (2005, p. 771) state that an accelerating innovation is “a key issue in seeking rapid response to market demands” and according to Dyerson and Pilkington (2000) innovations may accelerate due to new regulations. Jacobides and Winter (2010), who did a study on the US mortgage banking industry, concludes that regulations have a significant impact on the innovation, regulatory changes are making companies launching new products and processes.

Compliance to PSD2 is mandatory for all banks within Europe, but depending on the ambitions of the future and what position in the value chain a company is aiming for, banking executives could perceive PSD2 as more than just something to comply to, but a window of opportunity to do more by developing an offensive strategy to become more innovative, customer friendly and attractive among third-party providers (Cortet, Rijks & Nijland, 2016). The authors state that the choice of strategy may imply a significant outcome on the banks’ future business and its customer relevance.

If the company, in addition to compliance, takes a more offensive strategy and create innovative solutions related to PSD2 in order to keep being attractive and relevant to the customers, they are making the strategic option to compete (Cortet, Rijks & Nijland, 2016). This implies providing services related to account information and payment initiations in order to compete with third-party providers that after the regulation has become effective will be able to provide those kinds of services. The goal is to create front-end services, including their own as well as other companies’ services, that customers will prefer to use. With open
APIs, it will be possible for banks to retrieve information related to account information and payments from other banks and thus be able to provide services for customers that are not their own. It is not too different from the option of complying, however, it is according to Cortet, Rijks and Nijland (2016) a more offensive strategy which increases customer relevance and is a way to go heads-up and compete with third-party providers.

2.3.3 Expand by offering services that go beyond PSD2

A company can go beyond the strategy to compete and instead chose to adopt the expand-strategy. For banks to expand, innovation through open APIs beyond the payment and account information services that are controlled by PSD2 have to be made (Cortet, Rijks & Nijland, 2016). In 2015, a quarter of the total revenues of European retail banks were related to payments (Deloitte, 2015) and nine percent of the revenue from retail payments are calculated to be lost in 2020 (Accenture, 2016). This puts banks in an urgent position to try to create new or adapted revenue streams. One alternative is to use open APIs to provide information to third-party providers that go beyond the information regulated by PSD2, such as identity information or providing existing and/or new products and services such as comparison services, digital identity services and creditworthiness verification (Cortet, Rijks & Nijland, 2016). Other services that can be provided that go beyond PSD2 is, for example, real-time payments, conditional payments, age verification and payment status reports (Guibaud, 2015).

Guibaud (2015) strongly believes that banks should embrace the opportunity of providing services that go beyond what is required by PSD2 to find new revenue streams and provide services that are more customer-focused. Banks have been faced with repeated financial crises during the last two decades which have resulted in increased regulations as well as lower budgets for IT. This, together with usually hierarchical structures and a large number of stakeholders have made banks inadequate when it comes to adaptability and meeting new customer demands. With PSD2, there is a chance for banks to serve their customers better by providing new services that better meet customer demands through open APIs and collaborations with innovative third-party providers. This ability has previously been lagging behind (Guibaud, 2015).

Mishkin (1990) states that profit is the main reason for companies to be innovative and changes in the economic environment, especially within the financial industry with its many
restrictive regulations, increase the incentives of companies to become more innovative since it enables them to obtain higher profits. This is in line with the view of Cortet, Rijks and Nijland (2016) and Guibaud (2015), that innovation has to increase in banks to be able to find new ways to increase revenue and thus profit.

2.3.4 **Transform by offering a multi-sided digital platform based on open APIs**

The last strategy on the scale of generic strategies that Cortet, Rijks and Nijland (2016) presents is to transform, which includes all three of the previous strategies but also includes a greater amount of collaborations and development of business and operating models of the banks. In order to transform banks have to carry out a multi-sided digital platform strategy that provides not only their own services but also other companies’ services. This strategy does not only imply changes in the business and operating models, but also a change in culture and behavior. Customer experience, reach and scalability is in focus. Companies choosing to transform need to collaborate with fintechs, other banks and other actors that can help with the development to be able to accelerate the growth of usage of transaction services. It does, in other words, become more essential for companies adopting this strategy to decide their partnership strategies and build a business model that makes it possible to in an efficient way create money out of open API platforms.

Guibaud (2015) argues that banks should implement an open strategy, where the banks rethink the way they work with other banks and third-party providers. In addition to having their own services that use the information from other banks and third-party providers, banks can also take advantage of partnerships and include their services in their own offering and on their own digital platforms. Collaborations with start-ups will increase the banks' ability to create innovative services, make innovation cheaper and decrease time to market. With collaborations, it is possible for banks to create digital platforms with an “app store approach” where customers have access to a wide range of services, both their own and those provided by third-party providers (Guibaud, 2015).

Cortet, Rijks and Nijland (2016) as well as Guibaud (2015) argues that collaborations between banks, as well as collaborations between banks and non-banks, will be favorable for banks after PSD2 have become effective. Startup companies have an advantage when it comes to creating innovative solutions since creativity can easily be exposed to the whole
company instead of parts of it, employees’ creativity is easier to assess and ideas can be put into effect faster (Yuan, 2018). However, there might be challenges in the interactions between actors after a regulation which results in a change of conditions for collaborations. Collaborations demand integrations by using interfaces and regulations may imply limitations in the interfaces as in turn may limit the operational activities, demanding alterations of the conditions when it comes to collaborations between firms (Jaspers, Prencipe & Ende, 2012).

Furthermore, companies may feel increased concerns about collaborating with other firms as they feel insecure regarding the security and other reliability issues as they know that violating a regulation could harm the image and trustworthiness of the company. Regulations that may contribute to these kinds of concerns among companies are therefore implying a risk of limiting the combination of capabilities with complementary resources where companies, particularly in collaborations within different industries, develop product and services (Jaspers, Prencipe & Ende, 2012).

2.4 Analytical framework

With an analytical framework, it will be possible to illustrate what the thesis aims to examine and what the data is aimed to be used and analyzed for, to be able to answer the research question presented in 1.3. The questions to the respondents are based on the box Strategic actions in Figure 2, to be able to get an understanding of how the banks actually are working with the directive, how they embrace possibilities and to what extent they are making strategic actions.

PSD2 is a regulation that will affect banks since it requires them to open their APIs related to account information and payment initiations, in other words, banks have to share information, that they previously have had an exclusive right to, to third-party providers. In order to be able to classify the strategic actions that are being made and to what extent, the strategic options presented by Cortet, Rijks and Nijland (2016), for banks to either Comply, Compete, Expand or Transform, have been used as a foundation for the analysis. But other theories and previous literature are being discussed in the discussion as well to get a wider view of regulations impact on strategic actions.
Figure 2. Analytical Framework
3. Research design

This chapter describes the methodological approach of the study and how the data was collected, the chapter ends with a critical discussion regarding the sources and choice of method.

3.1 Research approach

The thesis aims to describe what strategic actions banks are making due to the implementation of PSD2 to create a greater understanding of the work that is being made within the banks. It could therefore be described as an inductive research. According to Bryman and Bell (2013) a qualitative research examines how individuals act in heterogeneous situations and in order to get an understanding of each of the bank's’ attitude and strategic actions interviews were the most appropriate method for this thesis.

3.2 Selection

PSD2 is an EU directive that will have an impact on several actors within the financial industry, however, it is the banks that are obligated to comply to the directive which makes them an interesting object of study. Furthermore, previous literature is consistent with the fact that strategic changes in banks have to be made in order to stay competitive after the implementation of PSD2 (Cortet, Rijks & Nijland, 2016).

The empirical data has been collected from the four largest banks within Sweden: Nordea, Skandinaviska Enskilda Banken (SEB), Swedbank and Handelsbanken, who together owns 63 percent of the deposits market in Sweden (Swedish Bankers’ Association, 2017). Due to their sizes and market shares, it could be argued that these four actors represent the banking industry well. Furthermore smaller actors on the market would have been interesting to interview as well, but due to lack of resources among many of them, too few interviews could be booked to provide enough data to represent the smaller actors on the market too.

The researched banks were limited to Swedish banks positioned in Stockholm, which is the financial center of Sweden (The Global Financial Centres Index, 2018). PSD2 are being applied to all of the banks within EU and for that reason, one could assume that this research could be applied to all banks within EU. However, what could be problematic with that assumption is that countries within Europe are under different previous regulations which
might affect the influence of PSD2. Further, different countries may interpret PSD2 differently. As an example, screen scraping is forbidden in Finland (Yle, 2018), implying that the changes within the banking industry in Finland might be bigger compared to Sweden where screen scraping is allowed and services like Tink, where third-party providers collect screen display data, already exist. However, the authors made the assumption that even though the effect of PSD2 may vary slightly between countries, the strategic actions made by the bank would be similar.

Through articles about PSD2 or with help of contacts within the banks that could provide contact information to colleagues working with PSD2, the respondents were found and contacted. To get as accurate information as possible about the research question all of the respondents have in some way been involved with PSD2. The respondent from Nordea, Gunnar Berger, is responsible for PSD2 compliance and the open banking project. Per Åström, representing Swedbank, works in a department for digital innovation which focuses on innovation processes, changes, finding partnerships, etc. Right now the focus is high on PSD2 and open banking. The respondent from SEB, Mika Burman Götz, represent the Corporate Private Customer division which includes retail business. She is one of the sponsors for the PSD2-initiative, meaning that she is one of two that have the responsibility to make SEB compliant with PSD2. The respondent from Handelsbanken preferred to be anonymous but is well informed regarding the banks work with PSD2.

### 3.3 Interview method

All of the respondents were offered to be anonymous in the thesis since it can make them feel more confident to talk more about the work behind PSD2. However, Bryman and Bell (2013) state that there is a risk that data can be distorted when hiding a respondent’s identity, therefore the names of the respondents that did not wish to stay anonymous have been presented. A majority of the respondents being interviewed were public persons and had no problems having their names published, with an exception of the respondent from Handelsbanken who wished to remain anonymous.

During the interviews the responsibilities were divided, one interviewer was active and one passive. The active interviewer asked the majority of the questions to the respondent, while the passive interviewer focused on listening, taking notes and helping with supplementary
questions. Choosing to have a passive interviewer can be helpful as the passive interviewer can observe and provide another approach to the supplementary questions than the active interviewer have (Bryman & Bell, 2003).

All interviews were held in a quiet room at each of the banks and lasted between 30 minutes and one hour. To facilitate the data analysis the interviews were recorded and later transcribed, which is important in qualitative research since it requires detailed analysis and due to the interpretive nature, it is important to collect the data using the respondents’ exact words (Bryman & Bell, 2013).

<table>
<thead>
<tr>
<th>Company</th>
<th>Respondent, title</th>
<th>Interview</th>
<th>Follow-up interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordea</td>
<td>Gunnar Berger, Head of Open Banking</td>
<td>Face to face, one hour</td>
<td>Telephone interview, 15 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recorded and transcribed</td>
<td>Transcribed by one person</td>
</tr>
<tr>
<td>SEB</td>
<td>Mika Burman Götz, Head of Product Areas</td>
<td>Face to face, 30 minutes</td>
<td>Email with additional questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recorded and transcribed</td>
<td></td>
</tr>
<tr>
<td>Swedbank</td>
<td>Per Åström, Open Banking Manager</td>
<td>Face to face, 30 minutes</td>
<td>Email with additional questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recorded and transcribed</td>
<td></td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>Anonymous, Involved within the work around PSD2</td>
<td>Face to face, 30 minutes</td>
<td>Email with additional questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recorded and transcribed</td>
<td></td>
</tr>
</tbody>
</table>

*Table 1. Respondents and interview method*

### 3.4 Interview template

The interviews were semi-structured with questions regarding the strategic work around PSD2 and were divided into five variables: *Brief information about the respondent, Comply, Compete, Expand* and *Transform*. The first variable was to obtain information about the respondent and his/her involvement around PSD2 within the bank. Remaining four variables were providing information about to what extent strategic actions are being made within the banks to be able to understand how they are adapting to this new regulatory change. The interviews were flexible through open questions, providing the respondent the possibility to answer the questions according to what is relevant to the bank without being led to a certain answer due to the authors’ own interpretations (Kvale, 1996; Bryman & Bell, 2013).
3.5 Operationalization

The interview questions below were developed based on the theories that put the theoretical foundation for this essay. The aim of the questions was to find what strategic actions are being made by each bank due to the implementation of PSD2 to be able to answer the research question of the thesis.

The first category *Brief information about the respondent* provided, as mentioned, a background about the respondent and how it was involved in the work with PSD2. The category *Comply* was used to obtain information of how each of the banks is working to achieve compliance to PSD2. The category *Compete* focused on how banks are going to compete with third-party providers and how they are going to act strategically related to innovation and new products and services. The questions related to *Expand* investigated how banks are going to deal with potentially decreased revenues from retail payments and what kind of products and services they will provide. The last category *Transform* looked at the banks’ digital platforms and what they thought about initiating strategic collaborations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question</th>
<th>Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief information about respondent</td>
<td>- Name?</td>
<td>Bryman &amp; Bell (2013)</td>
</tr>
<tr>
<td></td>
<td>- Position?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Can you describe your main assignments and responsibilities shortly?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- How are you involved with PSD2?</td>
<td></td>
</tr>
<tr>
<td>Comply</td>
<td>- How are you going to ensure compliance to PSD2?</td>
<td>Bird and Park (2014)</td>
</tr>
<tr>
<td></td>
<td>- Are you doing anything beyond compliance?</td>
<td>Cortet, Rijks and Nijland (2016)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fanto (2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Griffith (2016)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Miller (2014)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wireman (2003)</td>
</tr>
<tr>
<td>Compete</td>
<td>- How are you going to compete strategically with third-party providers?</td>
<td>Chen &amp; Liu (2005)</td>
</tr>
<tr>
<td></td>
<td>- How could PSD2 have an impact on your level of innovation?</td>
<td>Cortet, Rijks and Nijland (2016)</td>
</tr>
<tr>
<td></td>
<td>- What kind of innovations are you doing as a consequence of PSD2?</td>
<td>Dyerson &amp; Pilkington (2000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jacobides &amp; Winter (2010)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Smith &amp; Grimm (1987)</td>
</tr>
<tr>
<td>Expand</td>
<td>- Are you going to launch new products and services due to PSD?</td>
<td>Cortet, Rijks and Nijland (2016)</td>
</tr>
<tr>
<td></td>
<td>If yes, what kind of products and services?</td>
<td>Guibaud (2015)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mishkin (1990)</td>
</tr>
</tbody>
</table>
Table 2. Operationalization

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- What are your plans regarding your digital channels?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- How do you think PSD2 will impact your level of collaboration with other companies?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- What kind of collaborations are you planning to make?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- How are you planning to become a desirable collaborator?</td>
<td></td>
</tr>
</tbody>
</table>

3.6 Method of analysis

A thematic analysis is a flexible and widely used method to analyze qualitative data and the method is built around identifying and analyzing themes in the collected data in order to draw conclusions (Braun and Clarke, 2006). By using a thematic analysis material is processed by using categorization of themes which in this thesis mainly were Comply, Compete, Expand and Transform which represented the base for the development of the interview template.

After the collection of data, the first step is, according to Braun and Clarke (2006), to familiarize yourself with the data, this was done by recording all of the interviews to make it possible to transcribe them and thereafter read it all through. Relevant areas were identified and later categorized into relevant themes. By connecting information into different themes it was easier to later analyze the data and draw conclusions. After reviewing all of the themes and data, all of the respondents were contacted a couple of weeks after the interview and asked some additional questions that the authors found were missing out. The themes and conclusions were later summarized in a table to make the information comprehensible to the reader.

3.7 Method discussion

Qualitative research is often evaluated by measuring trustworthiness, a criterion presented by Lincoln and Guba (1985). To increase trustworthiness and to ensure that the information given by the respondents were correct and correctly understood, collecting other sorts of data would have been desirable to be able to make a triangulation to ensure a higher trustworthiness of the essay. However, no internal documents were able to be gathered and therefore other actions have been made to ensure correct presented information and a reliable
thesis. Articles and websites where other employees within the banks are talking about the actions they are taking have been read to make sure it matches with the respondents’ answers.

To make sure our results correctly represent what the respondents have told during the interview, the results were sent to each of the respondents where they had the possibility to approve the results or propose a revised version to make sure that the authors had interpreted the information correctly. Another aspect to question is whether the results would have been the same with other respondents on the chosen banks since the separation between attitudes, opinions and thoughts of the company and the individual might be difficult to detect. Additional respondents on each bank would have been preferable both to verify what has been told and to decrease the effect of individual opinions and thoughts.

This thesis examined the four largest banks in Sweden, which are representing a large share of the Swedish banking industry as well as banks under PSD2. However, the result could still be difficult to generalize since smaller actors have not been interviewed. Further, the transferability of the results in this thesis might be weak due to the small number of respondents. The social environment plays an important role in the data collection and due to small selections, the result is not always possible to generalize into other situations or social environments (LeCompte & Goetz, 1982). To make readers able to assess to what extent the result is transferable to other situations, a description of the method and research settings has been provided. Studies with a higher number of researched banks, including smaller banks, will be left to future research.

3.7.1 Criticism of sources

Sources of primary data are respondents of qualitative interviews. It is likely that the respondents are highlighting favorable attributes of the bank in which they work, which could provide excessively positive data in terms of what they are doing. This was taken into consideration while making the analysis of how the banks strategically are acting due to PSD2. It is also possible that the respondent fails to present a picture that fully represents the company due to individual interpretations, lack of detailed knowledge, etc. Further, it is only their current view that is being measured, it can change over time. Lastly, the respondents might not feel comfortable sharing information about the company’s strategic plans, since it might be confidential to some extent.
Academic articles have been collected mainly from Uppsala University Library and Google Scholar. Most of the articles are academic and can be considered reliable, however, during the selection of non-academic articles have been included as well. Since PSD2 is a relatively new phenomenon there is lack of academic resources about the subject and the authors have, therefore after having critically analyzed the reliability, used these too.

The analytical framework is largely based on an article by Cortet, Rijks and Nijland (2016) which can be criticised. However, the article and the different categories of strategic actions have as mentioned only served as an inspiration and foundation to be able to classify what the researched banks are doing and to what extent, other sources were included in each category as well. Previous research on strategic actions in banks due to regulations, especially PSD2, is very limited and thus the research made by Cortet, Rijks and Nijland (2016) as well as Guibaud (2015) have been valuable sources since they are focusing on the same research area as this thesis.

3.7.2 Ethical aspects

Bryman and Bell (2015) discuss four ethical principles that should be considered in business research which the authors of the thesis have taken into considerations. The four principles are harm to participants, lack of informed consent, invasion of privacy and deception, however, the authors explain that the principles may overlap to some extent.

To avoid potential harm to participants it was of great importance to offer anonymity to all of the respondents as well as to retain the anonymity of the respondent that wished to be anonymous, neither the respondent’s name or title have been published in the thesis. All of the respondents have been sent the written result for approval to make sure nothing is revealed that could harm their reputations or is incorrect due to misunderstandings during the interviews.

The principle lack of informed consent states that the participants within a research should be provided with as much information as possible regarding the research and that the participants after that should have the ability to make a decision on whether they want to participate or not. All of the respondents were introduced via email what the thesis was about and was able to make a decision from there whether to set up a date for an interview or not. Furthermore, before starting the interview each of the respondents received another presentation of the
thesis as it was easier to explain face to face, compared to email. This was also a way to delimit deception. There have been smaller alterations within the thesis, such as a modification of the research question since the interviews were conducted. However, no alterations have been done to that extent that it could have affected the willingness of the respondents to participate. Furthermore, all of the respondents were asked if they approved that the interview would be recorded and later transcribed, to make sure the authors did not write anything they recalled wrong. To avoid invasion of privacy the respondents were able to abstain from answering questions that they did not want to answer.
4. Empirical findings

This chapter provides an overview of the findings from the interviews with the researched banks Nordea, Skandinaviska Enskilda Banken (SEB), Swedbank and Handelsbanken. The chapter ends with a summary of the most important results.

4.1 Nordea

The interview respondent from Nordea, Gunnar Berger, is responsible for PSD2 compliance. He has a large project group consisting of around hundred IT-technicians and twenty business employees, which is working with the technical implementation related to PSD2, i.e. to open up APIs so that third-party providers will be able to access information related to customer accounts and payments. To ensure compliance to the directive, fundings were given which also have been used to develop products and services that go beyond compliance to PSD2, meaning products and services developed by sharing information through open APIs that is not related to account information and payments.

Nordea is taking a proactive strategic approach to PSD2 and is aiming to seize the opportunity of being a first mover when it comes to open APIs. The bank is currently developing an open banking platform, where PSD2 will be the base of the platform. Open banking can be seen as an indirect action to PSD2, according to Berger, the shift towards open APIs in Europe would not have become as extensive if it were not for PSD2 and open APIs are a prerequisite for open banking. The platform will be a place where the bank can include both its own services as well as other companies’ services to offer a great selection of services to customers and seamless transitions. Account information and payment initiations are included in PSD2, but Nordea is aiming to create more sophisticated products and services in order to compete with third-party providers and create a new kind of revenue stream related to open APIs since these sophisticated services can be delivered against payment. Two examples are real-time solutions and foreign currency exchange, which are not demanded of the banks to deliver according to PSD2. Berger also mentions that Nordea is already providing payments through Facebook in Norway and that if Nordea would see a greater demand for social media payments the bank will invest in improving these kinds of services. These strategic actions are direct actions related to PSD2 since it is a way for Nordea to handle increased competition and loss of revenue due to the directive.
The open banking platform that currently is under development in Sweden is only the first step in Nordea’s platform strategy. Berger describes the bank’s strategy with parallels to existing companies and explains that the first step is to become like Netflix by creating a platform that combines its own digital channels with material from external providers. The next step is to become a more multisided platform, like YouTube. The final goal is a platform strategy similar to Amazon, where the company provides the platform and external actors provide the products and services.

Short term, no bigger alterations is being made in Nordea’s business model, however, in the long run conditions and expectations from customers might have changed as an indirect consequence to PSD2 which makes alterations necessary. It is likely that this differ among countries, in Sweden PSD2 is not as big as in Finland, Poland or the Netherlands since screen scraping is forbidden in the three last-mentioned countries. Screen scraping is a method used by third-party providers to collect screen display data from for example banks and use it in their own application. This implies that in Sweden banks already have third-party providers providing services, such as Tink, while PSD2 will imply greater changes to banks within countries where screen scraping is forbidden.

An indirect change can be seen in the culture of Nordea due to the rapidly changing banking industry. Banks have been having monopoly on the relations with the customers and the banks have not had to adapt to any new competitors, customers have always had to go directly to the bank to do their errands without the possibility to do it via a third-party provider. Now when this monopoly is disappearing, Nordea as a bank together with its employees have to change their view regarding Nordea’s role on the market and make efforts to improve and stay relevant.

Collaborations is another important aspect of Nordea’s direct strategic actions to handle increased competition and the need for innovation, in order to be able to offer attractive services to its customers, the bank is dependent on third-party providers with new and innovative ideas and their services. Nordea also intends to work together with third-party providers to create solutions valuable to the customers. The open banking platform currently under development aims to attract the best third-party providers. To further ensure meaningful collaborations Nordea has a specific partnership team within its open banking organization that searches for potential third-party providers to collaborate with.
The digital contact with customers is extremely important. Applications themselves are not particularly profitable, they are mainly used to get the customers to buy additional products and services through cross-selling. With third-party providers as possible intermediaries between Nordea and its customers, it is important to Nordea to find new ways to remain visible for the customers. This can be considered one of the largest threats to Nordea that they will need to deal with in their work with PSD2 as well as open banking.

4.2 SEB

The respondent from SEB, Mika Burman Götz, is one of the two sponsors of the PSD2-initiative where she represents the Corporate Private Customer division, which is the retail business. All initiatives and larger projects within SEB have sponsors and she is working together with Anna-Maria Nyström, who is the other sponsor and represents the large corporate finance institutions. Together they are looking primarily at how to accomplish PSD2 compliance and to find the right competencies. They are also planning what they want to achieve related to the directive and guiding the employees toward the goals. When it comes to PSD2, SEB wants to do a lot more than merely comply. This includes direct strategic actions to retrieve information from other banks through open APIs, to develop their digital platform to include other companies’ services and initiate collaborations with third-party providers which will be more valuable after PSD2 has become effective, this since third-party providers will be able to access information from banks and build valuable services around it. The directive has had a large direct impact on the entire line operation when it comes to payments.

Except a project group working with regulatory compliance, SEB also has a project which is working with market compliance, meaning that they investigate where the market is moving and how to stay competitive. Burman Götz explains that everything that can be digitized will be digitalized, that the transparency will be higher and that there will be a shift towards open banking and open APIs. To adapt to this the group working with market compliance is focusing on distributing SEB’s own products and services effectively so that they can be used in other companies or banks platforms and interfaces. The group is also looking at how SEB will be able to retrieve information, products and services and integrate them into their own digital channels. It is important to look at it from both ways, SEB has to share information due to PSD2 but it also creates an opportunity to get access to other banks information. SEB
wants to create a digital channel that is appealing to the customers by being user-friendly and having access to information from other banks, in order to pursue the customers to choose SEB’s interface instead of other banks’ or third-party providers’ interfaces.

Burman Götz describes SEB’s strategy within open banking as an indirect effect of PSD2, with a metaphor where some banks are building the rails and others following by building the trains. She says that SEB does not have the ambition to be the one creating the rail since the bank is too small for that kind of infrastructural investment. Instead SEB will distribute its products and services through its developer portal, but the intention is not to become the aggregator of APIs, but instead to focus on customer experience and appealing interfaces.

Customer focus is important at SEB, third-party providers are created on customers’ terms which is forcing banks to become more customer oriented, which includes lowering their prices on the products and services. In its work of being a customer-focused bank, SEB is collaborating with third-party providers, for example Tink, to be able to provide attractive products and services to the customers and the bank intends to increase its collaborations as a direct consequence to PSD2. The bank is constantly searching for potential third-party providers to invest in. The bank is focusing a lot on user experience interaction design in its digital channels and instead of creating more complex products and services the bank focuses on investigating what the customers think is important, how they approach customers and what customers mention in ratings.

4.3 Swedbank
Per Åström, the interview respondent from Swedbank works in a department of digital innovation which is a part of the digital banking division. He is working full time with open banking, which is the next step after PSD2 compliance. Today, Swedbank is primarily focusing on PSD2 compliance by opening up APIs related to account information and payments. The directive is complex and the technical implementation is not completely defined yet, leaving room for interpretation and several ways to solve things.

Swedbank predicts a changing environment together with an increased competition that might lead to less frequent contact with the customers as they will be able to get access to banking services via third-party providers too. The expectations among customers are changing which increases the importance of developing new products and services in order to remain relevant.
to the customers. These changes require Swedbank to make alterations within its business model and to develop the process of developing products and the digital platforms. It is according to Åström also possible that PSD2 will have an indirect effect on the culture within the company, that employees become increasingly aware of the fact that opportunities do not always appear due to internal factors but can emerge from for example collaborations and partnerships as well.

A clear shift can be observed, Swedbank and other banks have previously had an exclusive right to the transaction data for the customers’ payment accounts, but with PSD2 this isolation of information will disappear and the banks have to build up open APIs to share this data. In order to embrace this shift, Swedbank is developing an open banking platform. Through the platform, the bank will offer products and services that are regulated by PSD2, but also services that go beyond PSD2, which can be services related to for example mortgages, car loans and credit cards, as a direct consequence to PSD2. The bank will open its APIs with this kind of information, with the customer’s consent, and let partners build products and services around it. To encourage third-party providers to start working on their ideas as soon as possible, Swedbank has already launched a test environment consisting of open APIs and test data that is working just like the platform will after production.

By encouraging entrepreneurs with good ideas to start testing and developing products and services as soon as possible, there are great opportunities for Swedbank to find potential collaborations fast. Valuable collaborations are according to Åström one of the main reasons for Swedbank’s open banking initiative. Instead of having one-to-one collaborative relationships, it is with open APIs possible to connect numerous companies to the same interface which facilitates collaboration, it does not matter if it is one, two or ten companies anymore since they all access the same APIs and will not require individual work or integrations.

Another strategic factor being considered is the balance between products/services and channels. With open APIs, it is possible for partners to sell their products and services and hence get them new customers, however, there is a risk that Swedbank loses some of the direct contact with the customers since they have a connection to the third-party provider instead of Swedbank. Due to this, it becomes essential for Swedbank and other banks to ask themselves where their focus should be.
4.4 Handelsbanken

The respondent from Handelsbanken preferred to be anonymous but is involved in Handelsbanken’s work with PSD2 and open banking. The respondent points out that details of their strategy could not be revealed of competitive reasons, Handelsbanken prefers to not go out with as much information as its competitors regarding what the bank is doing and how far it has come. Since Handelsbanken is a very decentralized bank there is no general project group for PSD2 at the moment, instead, the bank is working with these questions in respective areas. However, they had a general project group for PSD2 at the beginning of the process.

Today Handelsbanken is working with the compliance, where the bank is opening up to share account information and let third-party providers initiate payments. Furthermore, the bank sees more possibilities in doing more than to just comply and is soon launching its own open banking platform as an indirect effect of PSD2. The platform will, among other things, enable new collaborations with new actors on the market. Test APIs where third-party providers can start testing their products and services have been launched and at the same time the bank is developing its own services. One example is the personal finance manager function that recently was launched in Handelsbanken’s mobile application, it has similar functions as the third-party provider Tink and is an easy way for customers to get an overview of their payments. The mobile application will in the future not only include the customers’ accounts in Handelsbanken, but also the customers’ accounts in other banks. This is a way to compete with third-party providers and a direct action to PSD2.

The open banking platform will, in connection with new collaborations, result in development of new products and services as well as other solutions that will contribute to a strengthened business model and a higher customer experience since it, according to the respondent, will become even more important to have digital services that appeal to customers in order not to lose them. However, even though the digital channels will become even more important to Handelsbanken as a result of PSD2, the respondent points out that strategically Handelsbanken will continue to focus heavily on the customer experience by being local, in terms of supplying physical bank offices that may help customers with their errands. While other banks are closing many of their banking offices, Handelsbanken believes that to be able to continue having a close relation to its customers, customers should have the option to decide how they want to contact the bank, whether it is via phone, the app or visiting a
banking office. The bank aims to have local offices, with personal relationships with customers in addition to good digital services. As the respondent describes it, if all banks were focusing solely on digital services, nothing would distinguish one bank from another and here Handelsbanken wants to differ from the others.

### 4.5 Summary of the empirics

<table>
<thead>
<tr>
<th>Banks</th>
<th>Strategic actions</th>
</tr>
</thead>
</table>
| Nordea       | ➢ Open banking platform  
               ➢ Products and services through open APIs that goes beyond PSD2  
               ➢ Collaborations with third-party providers  
               ➢ First mover when it comes to open APIs |
| SEB          | ➢ Open banking platform  
               ➢ Digital channels that makes customers choose its interface  
               ➢ Distributing its own products and services effectively to enable use of them in other platforms  
               ➢ Collaborations with third-party providers |
| Swedbank     | ➢ Open banking platform  
               ➢ Products and services through open APIs that goes beyond PSD2  
               ➢ Collaborations with third-party providers  
               ➢ Test environment consisting of open APIs |
| Handelsbanken| ➢ Open banking platform  
               ➢ Products and services through open APIs to compete with third-party providers  
               ➢ Collaborations with third-party providers  
               ➢ Test environment consisting of open APIs |
5. Discussion

This chapter uses the analytical framework previously presented to connect previous literature on strategic actions due to regulations with the results of this thesis. The chapter begins with a general overview of strategic actions due to PSD2 and continues with an analysis of the banks’ strategic actions with the variables Comply, Compete, Expand and Transform as a foundation.

5.1 Strategic actions due to PSD2

According to Smith and Grimm (1987) firms that adapt their strategies to regulations perform better than firms that do not. It is yet too soon to investigate how banks will perform due to their strategic actions as a consequence of PSD2, however it is clear that strategic actions are being made in all of the researched banks. The researched banks seem to be of the same opinion as previous literature, that actions have a positive correlation with performance after regulations, otherwise they would not have invested in the strategic actions that they have. The strategic actions seen in the researched banks are mainly a shift towards open APIs and open banking, as well as development of new innovative services through collaborations with third-party providers.

A company might end up as a loser if they see the regulation as a restriction rather than an opportunity (Levitt, 1968). In the interviews with the researched banks, they are all optimistic about PSD2, but this should be interpreted with caution, they would probably not say otherwise even if that was the case. However, looking at how they act in practice they have all chosen a strategy where they seize the opportunities related to open banking, which is a development of open APIs where they open up more than what is required by the directive. According to Brusoni, Jacobides & Prencipe (2009) this is an important factor, companies have to understand opportunities in conjunction with new regulations and how it shapes the environment they are operating within. It is evident that the banks are seeing opportunities with the changing markets, which PSD2 contributes to, and are acting upon that.

5.2 Comply

Regulations are increasingly complex and there is an increase in the number of companies that fail to comply (Bird & Park, 2014). Miller (2014) agrees that both the financial regulations and the financial markets are increasingly complex and that financial compliance
has become of greater importance. Further, Griffith (2016) and Fanto (2013) states that the compliance departments have come to change financial institutions operations during the last decades. PSD2 is no different according to the respondents, the directive is being described as both complex poorly defined and significant strategic changes are being made.

According to Wireman (2003) companies can either comply with regulations, deliberately abstain from them or fail to comply due to lack of understanding. The researched banks are determined to comply to PSD2, but due to complexity, the researched banks fall into one of two alternatives presented by Wireman (2003), they will either succeed with compliance or in worst case fail due to lack of understanding. Compliance requires high effort and a complete understanding (Wireman, 2003) where the later might be questionable regarding PSD2.

Regulations are associated with high cost (Wireman, 2003), regardless of the chosen option. To ensure compliance the researched banks have received funding. Nordea, SEB and Swedbank have large project groups working on PSD2 compliance at the moment, while Handelsbanken is working with PSD2 on a more local level where each office have to investigate how they will be influenced by PSD2. This year the focus is primarily on interpreting PSD2 and to comply with it. However, all of the respondents agree that more has to be done with open APIs. SEB talks about regulatory compliance as one thing, and market compliance as another thing, where market compliance includes analyzing how the market is developing, how the competitors are acting, etc. The other banks seem to be doing the same thing since none of them think merely compliance to PSD2 is enough. According to Cortet, Rijks and Nijland (2016) PSD2 compliance implies that the banks share information in the most limited way and only open APIs related to account information and payment initiations. However, all of the banks are planning to share information that goes beyond that and thus go to the next step on the scale of the extent of strategic action, to compete.

5.3 Compete
In order to compete with third-party providers that after the implementation of PSD2 will have access to account information and payment initiations via the APIs, banks have to create front-end services that both their own customers and other banks customers will prefer. It is a question of creating innovative digital solutions related to PSD2 in order to go heads-up with third-party providers. Further, it is a question of keeping customer relevance (Cortet, Rijks &
Nijland, 2016). The respondent from Nordea explains that one of the largest threats is that third-party providers might become intermediaries between them and the customers, which will make the bank more or less invisible to the customer and could aggravate cross selling.

Cortet, Rijks and Nijland (2016) describes competing as an offensive strategy where banks should perceive the directive as a window of opportunity. Nordea has a strategy involving being a first mover and seizing the opportunities related to PSD2 and open banking. The other respondents agree that an offensive strategy is necessary, but Nordea seems to be aiming for a leading position with high investments and speed to make sure it will be first among the banks.

To compete, innovative solutions related to account information and payment initiations have to be made (Cortet, Rijks & Nijland, 2016). Chen and Liu’s (2005) state that innovation makes it possible to quickly respond to market demands. SEB has a strong focus on customer experience and aims to create digital channels that appeal to customers and makes them choose their interface instead of the ones provided by third-party providers. This is in line with the strategic option to compete that is presented by Cortet, Rijks and Nijland (2016). Also, Handelsbanken mentions that good digital services are of great importance and that the bank is focusing a lot on customer experience by being accessible both online and by keeping its bank offices. The bank has recently launched a personal finance manager function in Handelsbanken’s mobile application which uses information from the customer’s account to help the customer to get an overview of his or her payments. This is a clear example of competing, Handelsbanken is offering a service that is related to account information that third-party providers soon will have access to for the purpose of keeping customers in their digital channels instead. Further, Nordea has already launched social media payments in Norway where they provide payments through Facebook. This is a service that third-party providers soon will be able to provide, but Nordea seizes the opportunity to be one step ahead by launching this kind of service now before third-party providers have the ability to do it.

When facing a new regulation, companies have to choose a strategic response to either comply or create innovative solutions (Jacobsides & Winter, 2010). The researched banks all chooses the second alternative where they create new products, services and/or digital platforms beyond what is regulated by PSD2. Dyerson & Pilkington (2000) show that
technological and product innovation can be significantly accelerated due to regulations, which is something that is being observed in the results of this thesis as well, the researched banks shows technical innovation in terms of developed digital channels and platforms, product innovation in terms of new products and services to compete with third-party providers or to enhance customer value. Smith & Grimm (1987) concludes that companies that are innovative perform better, this is still too early to assess in the researched banks but one can assume that the banks are of that belief due to the investments in innovations.

5.4 Expand

For banks to take the next step and expand they have to develop new products and services beyond what is regulated by PSD2, in other words, what is beyond account information and payment initiations. Comparison services, digital identity services or credit services are some examples of services that banks can provide by opening up and sharing more information than what is required by the directive (Cortet, Rijks & Nijland, 2016). Guibaud (2015) argues that new revenue streams have to be created as well as innovative services that meet changing customer demands. Further, Mishkin (1990) shows that innovation and change are mainly conducted to obtain higher profit, which the alternative to expand would imply.

The researched banks all create new revenue streams through their open banking platforms and new services. Further, Nordea is going to provide more sophisticated product and services that go beyond PSD2 and mentions real-time solutions and foreign currency exchange as examples. The bank takes the strategic option to invest in open APIs to create new kind of revenue streams as the products and services that the bank will provide can be delivered against payments. Swedbank makes the same strategic choice as Nordea and opens up to offer products and services related to for example mortgages, car loans and credit card. Swedbank will provide third-party providers access to these kinds of information so that they will be able to build products and services that are value-creating to customers. To further encourage innovative solutions by third-party providers Swedbank has already opened up a test API consisting test data to encourage the third-party providers to start developing already. Both Nordea and Swedbank are clearly expanding and seizing the opportunity of using open APIs to their advantage.
5.5 Transform

Transform is a strategic option that affects several areas of the bank. Banks that choose to transform need to create a multi-sided digital platform that provides the banks own products and services as well as other companies’ products and services (Cortet, Rijks & Nijland, 2016). Guibaud (2015) agree that an open strategy is the best way to adapt to PSD2. According to her, banks should provide their own services as well as other banks and third-party providers services. Further, they should initiate collaborations with third-party providers since this can lower the cost of innovation as well as decrease time to market. Nordea specifically points out that the bank is going to provide other companies’ services in order to provide a wide range of services to its customers. The bank is aiming for a similar strategic model as Netflix, YouTube and ultimately Amazon. All of these three companies have a distinct platform strategy and includes services from other companies. SEB, Swedbank and Handelsbanken are going to provide digital platforms as well where they will offer mainly their own products and services.

If a bank chooses the strategic option to transform changes in the banks business model, culture and behavior can be expected (Cortet, Rijks & Nijland, 2016). Changes in the business model can to some extent be seen in all of the researched banks, at least when it comes to retail payments. Swedbank describes it as a silo that has burst and that banks from now on have to work with open channels and open APIs instead. Changes in culture and behavior in the researched banks were difficult to assess at this early stage, Nordea is predicting a change in their culture as the banking industry now is changing from monopoly on the information to a more open market. Both Nordea and its employees have to alter their view regarding Nordea’s role on the market and make harder efforts to remain relevant to the customers.

Collaborations will be an important factor when it comes to the strategic option to transform (Cortet, Rijks & Nijland, 2016). According to previous research on regulations impact on collaborations, collaborations tend to decrease after regulations, this since collaborations demand integrations by using interfaces and regulations may imply limitations in these interfaces. Further, it is difficult to assess a potential partners risk of violating the regulation and due to the negative consequences on a company’s reputation and image if the regulation is violated, companies may be cautious when it comes to initiating new collaborations after a new regulation (Jaspers, Prencipe & Ende, 2012). However, within all of the four investigated
banks, collaborations between banks and third-party providers are most likely to increase substantially due to PSD2.

All of the four banks are seeing opportunities in collaborating with third-party providers to create customer value. Nordea is aiming to create a digital platform that is attractive to third-party providers and makes them want to collaborate with Nordea. Further, Nordea is in the long run aiming for a platform that consists of products and services developed by external providers, like in Amazon. To find attractive partners Nordea has a specific partnership team within the open banking organization that is focusing on finding third-party providers that contribute to new and innovative ideas. For Swedbank, collaborations are one of the main reason for the open banking initiative within the bank. With an open banking platform, it will be possible to connect numerous third-party providers to the same interface and thus facilitate collaboration. SEB intends to increase its collaborations too and is constantly searching for new third-party providers to collaborate with in order to develop products and services together to create customer value. Handelsbanken also points out that the open banking platform that Handelsbanken will launch will facilitate collaborations. Increased collaboration is not in line with previous research, where regulations have had the opposite effect on the strategic collaborations.
6. Conclusion and implications

This chapter summarizes the most important implications that can be drawn from the research and provides an answer to the thesis research question. Further, the theoretical and empirical contribution, as well as the limitations of the research, will be provided. The chapter ends with recommendations for future research.

6.1 Conclusions

The research question “What strategic actions are being performed within banks due to PSD2?” has been answered with the help of the analytical framework presented in chapter 2.4. The variables Comply, Compete, Expand and Transform have been used to assess what strategic actions that have been made as well as to what extent they have been made. After analyzing and discussing the result, the following conclusions can be drawn:

➢ **Strategically, the researched banks are doing more than merely complying to PSD2**
Compliance to PSD2 is not enough according to any of the researched banks, they all believe that strategic actions have to be made in order to handle increased competition, changed customer demands and decreased visibility to the customers as a consequence to PSD2. Strategic actions that have been detected is among other things creation of new services, digital platforms, increased innovation as well as strategic collaborations with third-party providers. These will be explained further below.

➢ **Some of the researched banks are planning to provide services that go beyond PSD2**
To create new revenues streams some of the research banks are developing services that go beyond PSD2, i.e. services through open APIs that are not related to account information and payment initiations which is required by PSD2. Example of these services can be credit card services, mortgages, real-time solutions and foreign currency exchange to mention some examples and these can be provided against payment and thus create a new kind of revenue stream for the bank.

➢ **The researched banks are developing digital platforms through open APIs**
Open banking platforms are created in all of the researched banks and this can be seen as an indirect effect of PSD2. Without PSD2 which requires banks to open APIs, there would probably not be a favorable market for open banking platforms since open banking platforms
are based on open APIs to connect with other companies to provide a wider offering of products and services. Open banking platforms are something bigger than PSD2 where banks open up a lot more, however, it can still be seen as a strategic action that takes PSD2 to the next level to handle increased competition and decreased visibility to the customers.

➢ **Innovation in the researched banks increases due to PSD2**

New products and services are launched, new revenue streams are created and open banking platforms are developed which can be seen as innovative developments. Further, innovation is likely to increase even further through collaborations with innovative third-party providers.

➢ **Collaborations in the researched banks increases due to PSD2**

All of the researched see opportunities in collaborating with third-party providers in order to increase innovation, provide services that better meet customer demands and/or as a step towards open banking where banks are dependent on third-party providers and their services in addition to their own.

### 6.2 Implications

The conclusions presented above implies that banks takes strategic actions to PSD2 and that these strategic actions can be generalized in some extent to banks in other countries within EU and to regulations with similar characteristics as PSD2, i.e. with the same opportunities, customer focus and increased pressure from competitors. First of all the conclusion affects banks, the competition among banks will increase which puts pressure on banks to do more than merely comply to PSD2. In order to continue to be a competitive actor on the market strategic actions have to be made including to provide new and innovative services as well as developed digital platforms. With a regulation that include this amount of opportunities, banks that do not take strategic actions to seize them might get behind since banks, at least in this research, have shown to take actions.

Third-party providers will face higher competition due to banks strategic actions to compete with them through new services and digital platforms. The result implies that third-party providers have the opportunity to collaborate with banks and that this is encouraged through the development of test APIs in banks where third-party providers can start to test and develop services even before PSD2 becomes effective. For customers, PSD2 will most likely
provide services that are better meeting their expectations and demands. Increased competition will most likely pressure both banks and third-party providers to provide new and innovative services, and this is something that will favor customers.

The purpose of PSD2 is to increase integration and efficiency on the European payment market as well as provide customers with more innovative payment services. From the conclusions drawn from this thesis, it is likely that the purpose will be fulfilled, integration has been shown in the researched banks in terms of increased collaborations with third-party providers, and more efficient and innovative services are being developed by all of the researched banks.

6.3 Limitations of the results
PSD2 is slightly different from a majority of previous regulations in terms of its purpose and how it is perceived by banks, PSD2 implies increased competition and offers opportunities on a whole new level than previous regulations where compliance have been the main focus. This makes the strategic actions found in this thesis difficult to apply on regulations with other characteristics. However, this thesis contributes to new knowledge of banks strategic actions on regulations where considerable opportunities can be seized and where compliance is not considered to be enough by the banks.

Another limitation of the result is that different countries have different previous regulations in place which can make the effect of PSD2 differ. Screen scraping is one example, in Sweden screen scraping where third-party providers collect screen display data from other companies permitted which have resulted in services like for example Tink that already uses the account information to create services. This makes PSD2 have less impact in Sweden and other countries where it is permitted than in countries where it is not. However, the effect on banks strategic actions due to PSD2 is evidently significant despite that, but it might have an even larger impact in other countries. Since PSD2 only applies to countries in EU, the generalizability of the result cannot reach further than to banks within EU.

6.4 Theoretical and empirical contribution
There are previous studies on how banks are adapting to new regulations, however, no specific research have been found of the impact of PSD2 or other regulations with similar
opportunities by banks to take strategic actions beyond compliance. The purpose of this thesis was to examine how banks are adapting strategically to PSD2, to provide a better understanding of how banks are adapting strategically to new regulatory changes. The result has provided a better understanding of strategic actions due to regulations, but as mentioned, a generalization to regulations with other characteristics should be made with caution as well as generalizations to other countries. However, the conclusions provide new information to fill an important theoretical gap since there is little understanding of what strategic actions banks are taking as a result of new regulations, especially regulations that offers a great number of opportunities and increased competition. Considering the increased digitization and new kinds of regulations, new regulations where companies have to open up and share information might increase, which makes this an interesting area to explore even further.

6.5 Recommendations for future research

The impact that regulations have on companies and their responses have not been fully explored, especially not PSD2 since it has not been completely implemented yet. Until it has been implemented, it is difficult to draw conclusions about the effects that PSD2 will have on the banking industry. PSD2 provide third-party providers with the opportunity to provide financial services related to account information and payments, which implies that banks have to compete with more actors about the customers to stay relevant. This thesis is focusing on the strategic actions that the banks are doing right now to adapt to PSD2, but a future research examining the actual outcome due to PSD2 would be interesting to find out whether the directive is the game changer that it has been referred to or not.

Furthermore, this thesis presents a result consisting of the strategic actions among the four largest banks in Sweden, but it is not certain that the results can be applied to all of the banks who are regulated by PSD2 since the regulations today differs within the countries, screen scraping is such an example, implying that PSD2 may have different impact within the European countries. A future research on banks in other countries as well as research including smaller banks would be interesting to provide an understanding of how it can differ depending on size. Moreover, there is technical work to comply to PSD2, while this thesis examines the strategic actions it leaves room for studies regarding the technical aspect of complying to PSD2.
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Appendix 1 Interview questions

Background
- Name?
- Position?
- Can you describe your main assignments and responsibilities shortly?
- How are you involved with PSD2?

Comply
- How are you going to ensure compliance to PSD2?
- Are you doing anything beyond compliance?

Compete
- How are you going to compete strategically with third-party providers?
- How could PSD2 have an impact on your level of innovation?
- How could innovation will be an important factor when tackling PSD2?
- What kind of innovations are you doing as a consequence of PSD2?

Expand
- Are you going to launch new products and services due to PSD? If yes, what kind of products and services?
- What possible new revenue streams could emerge as a result of you work with PSD2?

Transform
- What are your plans regarding your digital channels?
- How do you think PSD2 will impact your level of collaboration with other companies?
- What kind of collaborations are you planning to make?
- How are you planning to become a desirable collaborator?