PSD2 - A Catalyst for the Future of Retail Banking

Banks’ strategies to reach a competitive advantage from PSD2 in Sweden

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The Revised Payment Service Directive, A Catalyst for the Future of Retail Banking

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Andra Betaltjänstdirektivet,
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Bankernas strategier för att nå en konkurrensfördel från PSD2 i Sverige

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Abstract
The new EU regulation, revised payment services directive (PSD2), will change how the retail banking market works today. It will obligate banks, with the consumer’s consent, to provide access to account information and thus open up the market for new actors. This study aims to provide an understanding of the effects PSD2 will have on the retail banking market in Sweden and how the banks will act to cope with the changes it entails. There is a lack of academic articles on PSD2, and the reports that do exist are to the greater extent published by consultants. Hence, this report seeks to bridge that gap by exploring banks from a strategic point of view, taking a starting point in the theory of competitive advantage and open innovation, in order to analyse different banks’ strategies that they are considering when PSD2 is enforced. This will be a cornerstone for understanding the future development of the Swedish retail banking market.

To gain in-depth knowledge about the banks’ strategies to cope with PSD2, a case study has been made where 10 semi-structured interviews have been conducted with 10 different banks operating in Sweden - this represents the greater majority of all banks in the Swedish retail banking market. From the empirical findings in this report, it is clear that very few banks consider that only complying to PSD2 is a good strategic alternative. Instead, most banks see greater business opportunities in PSD2 and from this study it is evident that the market is heading towards an open banking approach. However, the path towards open banking differs between banks. All banks will focus on becoming compliant but due to differences in size, capabilities and resources, the banks try to differentiate themselves through different approaches. Some banks will attempt an open banking approach immediately, while others will start by becoming a producer of services and from there decide whether or not to move into open banking. What has been made crystal clear from the analysis of the empirical findings, is that no banks will start off by becoming a distributor of more advanced customer data to third parties.

Keywords: the revised payment service directive, PSD2, retail banking, strategies, competitive advantage, open innovation, open banking, digital platforms, network effects, future banking.
Abstract


För att få en djupare förståelse av bankernas strategier för att möta PSD2 har en fallstudie gjorts där 10 halvstrukturerade intervjuer har genomförts med 10 olika banker som är verksamma i Sverige - det motsvarar större delen av marknadsandelen på den svenska bankmarknaden. Från de empiriska resultaten i denna rapport är det uppenbart att väldigt få banker anser att endast följa PSD2 är ett bra strategiskt alternativ. I stället ser de flesta banker större affärsmöjligheter i PSD2 och från denna studie är det uppenbart att marknaden är på väg mot "open banking". Vägen mot "open banking" skiljer sig mellan bankerna. Alla banker kommer att fokusera på att bli kompatibla men på grund av skillnader i storlek, kapacitet och resurser försöker bankerna skilja sig genom olika metoder. Vissa banker kommer omedelbart att ta sig an "open banking", medan andra börjar med att bli en producent av tjänster och därmed bestämma huruvida de ska gå in i "open banking" eller inte. Vad som har tydliggjorts från analysen av de empiriska resultaten är att inga banker kommer att börja med att bli distributör av mer avancerade APIer till tredje parter.

Nykkeord: andra betaltjänstdirektivet, PSD2, retail banking, strategier, konkurrensfördel, öppen innovation, open banking, nätverkseffekt, digitala plattformar, framtidens bank.
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<td>Account Information Service Providers</td>
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<td>API</td>
<td>Application Programming Interface</td>
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<tr>
<td>BigTech</td>
<td>Big Technology</td>
</tr>
<tr>
<td>BigTechs</td>
<td>Big Technology Companies (Google, Amazon, Facebook, Apple etc.)</td>
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<td>EBA</td>
<td>European Banking Authority</td>
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<td>EEA</td>
<td>European Economic Area</td>
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<td>EU</td>
<td>European Union</td>
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<td>FinTech</td>
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<td>FinTechs</td>
<td>Financial Technology Companies offering FinTech-services</td>
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<td>PISP</td>
<td>Payment Initiation Service Providers</td>
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<td>PSD</td>
<td>Payment Service Directive</td>
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<td>PSD2</td>
<td>Revised Payment Service Directive</td>
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<tr>
<td>Retail banking</td>
<td>The part of the bank that provides financial services to individuals</td>
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<tr>
<td>RTS</td>
<td>Regulatory Technology Service</td>
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<td>SEPA</td>
<td>Single Euro Payments Area</td>
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Martin Broderick
Stockholm, June 6th 2018

Rasmus Palm
Stockholm, June 6th 2018
“Not all banks will survive... Banks that lack an understanding of the need for change, or that are not sufficiently strong financially to undergo this change, are at risk.”

-Erik Zingmark, Head of Transaction Banking at Nordea (2017)
1. Introduction

This section introduces the current trends that will affect the future of retail banking. It serves as an introductory part to the thesis and gives a general background to the problem, followed by the problem formulation, purpose and research questions. Lastly, the thesis’s contribution is presented followed by delimitations and limitations.

1.1 Background

The revised payment service directive (hereafter PSD2) has recently been introduced as a regulation that will change retail banking in Europe. PSD2 mandates banks to provide access to their customers’ accounts, given that the customer consents, to third parties (Crompton et al., 2016). This opens up the retail banking market for non-banks to offer financial services by utilizing account information and initiating payments, which before has been owned by the banks. The aim of PSD2 is to create a more efficient and integrated payment market in Europe, increase the competition by encouraging new entrants, increase new types of payment services and increase consumer protection (Payments UK, 2016). For European retail banks, payments stand for about a quarter of their revenue which makes PSD2 a big potential threat (Ley et. al., 2015). Hence, banks will be heavily affected by the new regulation and according to Erik Zigmark, Head of Transaction Services at Nordea "PSD2 will fundamentally change banking as we know it forever. It is not a fad. Life will be different in 2018 when banks have to open up to third parties to offer services to account holders".

In the “universal banking model”, banks usually provide a wide range of products and services tied to commercial-, private-, transaction-, investment-, and retail banking, as well as wealth management and insurance services (The Riksbank, 2016). However, the third party providers that PSD2 allow into the market focus on specific parts in the universal banking model and by doing this they can create niche services that are faster, better and cheaper than what the banks currently provide (Ley et. al, 2015). These third party providers mainly consist of agile financial technology companies, known as FinTechs, and potentially large technology companies, known as BigTechs, which have the potential of changing the market previously controlled by banks (Evry, 2017). Seeing that there are so many FinTechs with high innovation rate, they constitute a potential threat in what can only be considered as “sandblasting” for banks. One grain of sand does not do any harm but by blasting a beam of grains at a specific point, it can cut through any material. Considering this, it can be argued that FinTechs are positioned to steal business from traditional, incumbent banks in all parts of the universal banking model. However, the innovative FinTechs lack in market reach and adoption by consumers, while banks have the advantage of sitting on large customer bases. This has created a fragmented market which has put the banks in a position to create counter-strategies of whether to collaborate or compete with the FinTechs (Cortet et al., 2016).

This dynamic market, caused by PSD2, will put huge challenges on banks, but with change opportunities arise and as the author Seth Godin (2012) stated “Change is not a threat, it’s an opportunity. Survival is not a goal, transformative success is”. Hence, the competitive advantage that banks pursue will play a significant role in their strategic decisions to cope with PSD2, since they need to gain an understanding of how to capture and sustain firm advantage in such a dynamic market. In the academic field, competitive advantage has been explored from two perspectives: Market-Based view- and Resource-Based view. They are based on different underlying concepts but to reach a competitive advantage one has not been said better than the other.
Therefore it is important to understand both paths when analysing the strategies banks are considering to cope with PSD2, also because different banks may consider different ways of reaching competitive advantage. Even so, the Resource-Based view may be the most important view of competitive advantage since the resources and capabilities differs greatly between banks, which will have a significant role in the strategic decisions banks will have to cope with PSD2 (Helfat et al., 2007).

Further, in fast changing markets such as the one PSD2 creates, dynamic capabilities will be important to consider. Dynamic capabilities evolved from the Resources-Based view of competitive advantage and is a firm’s ability to integrate, build and reconfigure internal and external resources in order to cope with rapidly changing environments (Teece, 1997). This will be important for banks since the banks who cannot capture value from PSD2, and cannot provide their customers with what they crave will have a hard time surviving, especially when PSD2 pushes the development forward (Light et al., 2016; Cortet et al., 2016). Therefore, one way of gaining dynamic capabilities is to consider open innovation. The foundation of open innovation is that a single organisation cannot innovate alone, but has to acquire ideas and resources externally by engaging with different types of partners (Dahlander & Gann, 2010). This raises the question if banks will collaborate when PSD2 opens up for a sandstorm of new FinTechs into the market.

1.2 Problem formulation

The new EU directive, PSD2, obligates banks to provide information to third parties, which will change how the payment system works today. As PSD2 changes the retail banking market, it creates an information asymmetry for banks, meaning that banks are unaware of which direction their competitors are moving towards. Therefore, there is value in understanding the business opportunities that PSD2 may entail. However, there is a lack of academic articles on PSD2, and the reports that do exist are to the greater extent published by consultants. Even if some reports discuss business opportunities around PSD2, none of them explicitly consider the Swedish market and how Swedish banks intend to cope with PSD2.

1.3 Purpose and research questions

The purpose of this study is to bridge the research gap by investigating how PSD2, from a bank’s perspective, will affect the payment system and in turn retail banking in Sweden. By determining this, the report should give a clear understanding to why banks are considering different strategies and the value it creates. It will explore banks from a strategic point of view by analysing what actions banks are considering as PSD2 is enforced. This will bring an understanding of the future development of Swedish retail banking. The purpose will be accomplished by answering the following main research question and its sub-research questions:

Main RQ: What is the nature of the strategies put in place by retail banks in Sweden to cope with PSD2?

SRQ1: How will PSD2, from a bank’s perspective, affect the Swedish retail banking market?

SRQ2: How will banks, from a theoretical aspect, try to reach competitive advantage from PSD2 and will the concept of open innovation play a significant role?
1.5 Contribution
Since the payment market is exposed to rapid change caused by PSD2, the banks are faced by a big challenge. This study provides an understanding to how banks in Sweden address a current challenge and what strategies they have to cope with the changes it may entail. By mapping the strategies of several different types of banks, this thesis contributes to a real-time understanding of how retail banking in Sweden will change. Further, it brings knowledge on how different types of banks will act to reach a competitive advantage when facing disruptive change.

1.6 Delimitations and limitations
To increase the validity of the report, delimitations and limitations need to be set. Even though PSD2 covers all countries in the European Economic Area (EU, Iceland, Norway and Liechtenstein) this research is delimited to the Swedish region, since covering all countries within the European Economic Area would go beyond the time frame of this study. Also, since the retail banking market can be considered as very local and differs a lot between countries, it would not be fair to draw conclusions on all countries within this area. Therefore, the local retail banking market of Sweden was chosen since it is in the forefront of digitalisation. Furthermore, the report focuses only on PSD2 and the effect it will have on retail banking - other factors, such as changes in consumer behaviour, new technologies and other regulations (e.g. GDPR), are not covered but will certainly impact the development of the market as well.

The research is further delimited to a bank’s perspective since PSD2 is targeting the banks. The reason for only interviewing banks was because this report focuses on what strategies banks take to cope with PSD2 and understanding the direction banks are heading towards. Since the strategy a bank takes is based on their own beliefs about the effects and opportunities PSD2 entails, and not what any other party believes, the decision was made to interview only banks and not any other third parties such as FinTechs. It can further be stated that the banks’ strategies are based on the complexities of the changing retail banking market, where potential entrants and threats play a big part. However, since these threats and potential entrants have been considered by the decision maker of the bank when forming their strategy, there was no major reason to interview other parties than banks.

PSD2 will have a large impact on all levels of retail banking; industrial, functional and individual/organizational, since they all affect each other. However, due to the limited time of the research the focus will be on an industrial level, meaning that it will focus on how PSD2 will affect the retail banking market as a whole, rather than how it will affect banks’ processes or internal operations.
2. Literature review of previous theory

In this chapter, relevant theory has been reviewed and an analysis of different views is presented. In the fast changing retail banking market which is caused by PSD2, it will be important to gain a competitive advantage. Therefore, the chapter starts by introducing the many aspects of competitive advantage and progresses by discussing more specific theories which are important to gain a competitive advantage in regards to PSD2. These theories include open innovation, since PSD2 mandates banks to open up towards third party providers, and can therefore gain an advantage by opening up to different degrees. Further, the emergence of digital platforms are discussed as this will play a central role in coping with PSD2, and network effects are discussed as it is important when considering digital platforms.

2.1 Competitive advantage

Before the concept of competitive advantage emerged, Moore & Penrose (1960) suggested that there is a connection between firm performance and its resources. They argued that a firm consist of a collection of resources and the way these resources are utilized determine the growth of a company (Moore & Penrose, 1960). Competitive advantage is a popular topic in the academic world and has been the major area of research in strategic management during the last decades. The concept of competitive advantage was first introduced by Porter (1979) which he described as a firm’s ability to different themselves from its competitors. Barney (1991) defined competitive advantage as a strategy to create value and Hofer & Schendel (1978) argues that competitive advantage can be derived from a firm’s resources and be deployed within its strategy. Even though their definitions differ, Barney (1991), Hofer & Schendel (1978) and Porter (1980) agree that in order to reach above average return, the objective for companies should be to focus on achieving a competitive advantage.

However, it is important to understand that it is assumed that competitive advantage is sustained and not easy to erode (Slater, 1996). Slater (1996) argued that if the competitive advantage is easily eroded then it should be seen as short-lived rather than an advantage. Hence, in order to reach above average performance the competitive advantage must be sustained (Barney, 1991; Slater, 1996). There has been several major studies that investigate the source of competitive advantage and the results show how difficult it is to achieve above average return. Deven et al. (2005) studied 266 companies during 1984 to 2004 and Wiggins & Ruefli (2002) studied 672 companies over a time period of 25 years and both concluded that there are very few companies that reach high performance over time.

There are two main focus areas of competitive advantage in the literature; the Market-Based view and the Resource-Based view. Porter’s (1980) and Hofer & Schendel’s (1978) view of competitive advantage refers to the Market-Based view in literature which focus on external factors and how a company can position itself in order to reach an advantage over its competitors. Teece’s (1982), Wernerfelt ‘s (1984) and Barney’s (1991) view of competitive advantage refers to the Resources-Based view focusing on firms’ internal capabilities and resources rather than the external factors. The Resource-Based view has evolved to be the most influential theory for understanding how companies can create and preserve competitive advantage. To enhance the
Resource-Based view, the concept of dynamic capabilities was developed by Helfat et al. (2007) and Teece (2007) which considers competitive advantage in a fast changing environment.

In this study, the focus lies on the Resource-Based view of competitive advantage due to that: i) as previously stated, it has been the most influential theory for understanding competitive advantage in strategic management, and ii) the phenomenon of the study is based on a fast changing market caused by PSD2. In such a situation, the Resources-Based view followed by the dynamic capabilities was a natural choice to focus on. Even so, it is important to understand the Market-Based view as well to gain a full comprehension of the concept of competitive advantage. Therefore, the rest of this section will introduce competitive advantage from a Market-Based view, followed by a more in-depth literature review on competitive advantage from a Resource-Based followed by the concept of dynamic capabilities.

2.1.1 Market-Based view

The source of competitive advantage from a Market-Based view lays in the position it has compared to its competitors. According to Porter (1980), competitive advantage can be described as the trade-off companies make between having lower cost, or by being different than competitors. This means that either a company competes by being more efficient than their competitors which enables them to lower the price for comparable goods, or a company competes by providing unique goods that separates them from their competitors, which lets them sell it at a premium price. Hence, Porter (1998) argues that competitive advantage is a race to achieve the ideal position in the market - which is being perceived as better or more relevant by the customers. This can be further confirmed by Hofer & Schendel (1994) who argue that competitive advantage is a unique set of activities that are different from competitors, and a firm’s performance depends on the competitive dynamics and structures within the market it competes in (Hofer & Schendel, 1994).

2.1.2 Resource-Based view

From Penrose’s and Moore’s (1960) early work of the Resource-Based view, Teece (1982), Wernerfelt (1984) and Barney (1991) built theoretical frameworks from a resource based perspective. Barney (1991) suggested that firms can be clustered together as a collection of resources that are heterogeneously scattered among firms and thus, the difference in resource funds over time enables Resource-Based competitive advantage (Barney, 1991). Furthermore, Wernerfelt (1984) argued that resources and products are closely connected and enabling superior return depends on the ability to identify and acquire the critical resources needed in order to develop appealing products.

It is difficult to measure competitive advantage (Ketchen, 2007; Hult & Slater, 2007), but a common way in literature has been to link empirical strategies with firm performance. Thus, competitive advantage is used as a synonym to company performance - assuming that if strategic resources is connected to the performance of a firm, then it exist a competitive advantage (Crook et al., 2008). However, all resources are not connected to competitive advantage. Barney (1991) proposed that there are four fundamental attributes of strategic resources that are of importance for competitive advantage: i) ‘valuable’ - the resources must be valuable to enable the firm to implement strategies that improve its effectiveness and efficiency; ii) ‘rare’ - the resources must be rare to enable the firm to create unique value; iii) ‘inimitable’ - the resources must be difficult to
reproduce and imitate in order to sustain the competitive advantage; iv) ‘non-substitutable’ - the resources should not be able to be replaced by substitutable resources that are not rare (Barney, 1991).

2.1.3 Dynamic capabilities

Teece et. al. (1997) define dynamic capabilities as ‘the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments’. This view of dynamic capabilities allows the firm to proceed with new strategic alternatives that differ from those afforded by the firm’s assets, and different from how the firm has previously evolved. Further, Eisenhardt & Martin (2000) consider dynamic capabilities as the firm’s processes and strategic routines - hence, the firm’s ability to exploit resources to match market demand and perhaps even create new markets. Eisenhardt & Martin (2000) opposes Teece’s (1997) view of that dynamic capabilities only take place in rapidly changing environments, but also takes place in balanced dynamic markets which follow more predictable and linear change curves. Another view of dynamic capabilities is provided by Helfat et al. (2007) who considers that they are the organisation’s capacity to create, extend, or modify its resource base. By this, Helfat et al. (2007) mean that dynamic capabilities can take any form as long as they modify the resources needed in a changing environment - e.g. from obtaining new resources through acquisitions and partnerships, transformation into new businesses, innovation activities etc.

There are several more theories on dynamic capabilities. However, what they all have in common is that they share the idea of dynamic capabilities being a way for organisations to overcome path dependencies and unwillingness to change. This is done by reconfiguring and altering their resource base and allows firms to produce valuable offerings in changing market conditions (O’Reilly & Tushman, 2007). By either discarding idle resources, reusing resources in innovative ways, or gaining new resources from acquisitions and strategic alliances, the organisation can leverage from dynamic capabilities (Jiang, 2014). In Jiang’s (2014) analysis of dynamic capabilities, he proposes that dynamic capabilities are related to the organisation’s performance. Further, dynamic capabilities mediate the relationship between organisational resources and organisational performance, and in turn the relationship between organisational capabilities and organisational performance and the advancement of new organisational capabilities (Jiang, 2014).

2.2 Open innovation

One way of gaining dynamic capabilities could be to consider open innovation. Essentially, firms use an open innovation approach to reduce time, risks and costs associated with new technologies and markets (Tidd & Bessant, 2016). The starting point for the concept of open innovation is that a single organisation cannot innovate alone, but has to acquire ideas and resources externally by engaging with different types of partners (Dahlander & Gann, 2010). Chesbrough (2003) further argues that open innovation is a paradigm that assumes that firms “can and should use external ideas, as well as internal ideas, and internal and external paths to market, as firms look to advance their technology”. This view of open innovation is the most commonly used in literature. However, other literature presents open innovation differently; e.g. Henkel (2006) describes it as revealing previously secret internal ideas, while Laursen and Salter (2006) relates it to the number of external sources of innovation.

To grasp the concept of open innovation, Dahlander & Gann (2010) provide an analysis on different forms of openness and the advantages as well as disadvantages for each type. In their analysis, they have reviewed all
papers published on open innovation prior to 2010, and from it they could categorise open innovation into two dimensions: i) inbound innovation and ii) outbound innovation. These two dimensions of open innovation are further supported by previous literature on the subject (Chesbrough & Crowther, 2006; Enkel et al., 2009; West & Bogers, 2014). Inbound and outbound innovation can be classified into two sub-categories each, which are described throughout the rest of this section.

2.2.1 Inbound innovation - sourcing

In this type of openness, organisations source external ideas and knowledge from various sources; typically from suppliers, customers, competitors, universities etc. (Dahlander & Gann, 2010). According to Chesbrough (2006), organisations scan the external environment for existing ideas and knowledge they can use, rather than investing in internal R&D-costs. Further, it has been found that external knowledge increases the open innovation processes (Laursen & Salter, 2006; Garriga et al., 2013). According to Dahlander & Gann (2010), sourcing innovation is often about leveraging the invention and knowledge of others. They continue by emphasizing that organisations that can create a synergy between their own processes and external ideas can generate profitable new products. Such synergies can provide a single organisation with more resources than they can handle, enable innovative ways to market and create standards in new and emerging markets (Dahlander & Gann, 2010). Further, a study by Parida et al. (2012) studying 252 technology-based small and medium-sized enterprises in Sweden, showed that searching and sourcing inbound innovation has positive effects for incremental innovations and radical innovations respectively.

Nevertheless, disadvantages of this type of innovation are also present. Hertwig & Todd (2003) brought up that there are limits to how much can be understood and that there are limits to how many tasks can be focused on simultaneously. A problem for some organisations is that they spend too much time on searching for external ideas. In Dahlander’s & Gann’s (2010) paper, they bring up two examples where they both came to the conclusion that there is a curvilinear relationship between an organisation’s search for new innovations and the organisation’s performance. If too much time is put on searching for external ideas, the organisation could become too dependent on the outside environment which could inhibit internal success.

2.2.2 Inbound innovation - acquiring

In this type of openness, organisations acquire inventions and input to the innovation process through informal and formal relationships in the marketplace (Dahlander & Gann, 2010). An example of this within the banking sector is that banks acquire card services from payment technology companies such as Visa, meaning that banks acquire innovation from Visa (Visa, 2018). Even though the idea of in-sourcing external ideas opens up new possibilities, there needs to be structured ways of handling the information. By acquiring inbound innovation, expertise is needed that can search and assess which ideas are worth pursuing. With such expertise, it allows the organisation to control essential parts of their network and invest in external ideas (Dahlander & Gann, 2010). Garriga et al. (2013) found that acquiring external knowledge increases the performance and Cheng & Chen (2013) argue that inbound innovation in general increases an organisation’s dynamic capabilities.

A disadvantage of acquiring inbound innovation is that it can be hard for organisations to understand which knowledge is best to incorporate. Organisations might incorporate knowledge which is too similar to what they already know, which counteracts the purpose of acquiring external knowledge. On the other hand,
organisations can try to incorporate external knowledge which is to distant and hard to align with existing practises and thereof fail to leverage from the acquisition (Dahlander & Gann, 2010).

2.2.3 Outbound innovation - revealing

In this type of openness, organisations reveal internal resources to the external environment in order to receive indirect, non-pecuniary, benefits (Dahlander & Gann, 2010). In the payment market, an example of such an innovation is Payments in Real Time which is Bankgirot’s payment system that was launched in November 2012 in Sweden. It is characterised by its ability to process instant transactions 24/7 every day of the year and hence, provides the opportunity of faster and more available payments. Payments in Real Time provides an open infrastructure for banks and payment institutions to create their own services. The first example of such a service is the mobile payment application, Swish (Bankgirot, 2018).

According to Enkel et al. (2009) and Schroll & Mild (2012), most research focuses on inbound innovation and that future studies should focus on outbound innovation as well, since the coupled innovation process entails that both types of open innovation should be adopted concurrently. Nevertheless, numerous literature describing the advantages of outbound innovation has been found. In Dahlander’s & Gann’s (2010) article, they mention that one of the first advantages from revealing outbound innovation dates back to 19th century England’s iron production. The iron producers shared their ideas and designs openly and since the ideas were not usually protected by patents, competitors could build upon each others’ work which resulted in a continuous flow of incremental innovations. Further, it has been shown that openness caused by intentional and unintentional revealing of information to the outside not always reduces the chance of being successful (von Hippel, 2005; Henkel, 2006). In fact, Henkel (2006) proposes that organisations adopts strategies to selectively reveal some information to the outside. By doing so, they draw out collaborations which contributes to more innovative solutions. In Dahlander & Gann’s (2010) article, they also emphasize that organisations with too high focus on ownership and protection of their knowledge miss out on for instance: cumulative advancements, gained interest from other parties and the opportunity to commercialise inventions.

However, even though there is seemingly many advantages of revealing knowledge there is one crucial challenge: it can be difficult to capture the benefits that occur from it. The competitors might be better positioned and have a larger competitive advantage which they could benefit from. This makes it hard for organisations to understand which internal resources they should reveal to the outside (Dahlander & Gann, 2010).

2.2.4 Outbound innovation - selling

In contrast to ‘Outbound innovation - Revealing’, this type of openness focuses on selling or out-licensing internal resources, such as selling or out-licensing products in the marketplace (Dahlander & Gann, 2010). If considering Visa again, the same example can be given as previously. Banks acquire inbound innovations from Visa through their card services, but at the same time Visa sell outbound innovation to the banks (Visa, 2018). Further, Chesbrough (2006), argues that organisations can benefit from selling or licensing-out ideas that have been ignored internally. Some organisations have an excess of patents and by partnering with actors who want to bring these inventions to the marketplace, the organisation can fully leverage their R&D
investments (Chesbrough & Rosenbloom, 2002). According to Dahlander & Gann (2010), licensing-out inventions and technologies is becoming more common and has become a strategic priority in some firms.

Dahlander & Gann (2010) further discuss the disadvantages of selling outbound innovation. They debate that when out-licensing or selling an invention, inventors can sometimes be reluctant to reveal information about the invention itself. Nevertheless, when licensing the invention, the licensee is obligated to receive some information. This creates a ‘disclosure paradox’ since it implies that the licensee can receive the information without paying for it, and can steal it if acting opportunistically. In open innovation, the buyer and seller are required to reach an agreement and thus, intellectual property rights are important to overcome this disclosure paradox (Dahlander & Gann, 2010). Another disadvantage in this kind of innovation is that organisations fail to see the potential value in out-licensing technologies and might be better suited to commercialise the invention by themselves. Often the organisations lack a clear strategy for out-licensing technologies and in a paper by Lichtenthaler & Lichtenthaler (2009), it is discussed that strategic planning is a major key in an organization’s potential to leverage from out-licensing.

2.3 The emergence of digital platforms

In the last few decades, the emergence of digital platforms has transformed the global economy. Companies such as Amazon, Facebook, Google and Uber are shaping how people behave, socialize, create services/products and formulate strategies (Kenney & Zysman, 2016). These companies have created multi-sided digital platforms that have changed the way people interact and communicate. Multi-sided platforms has two fundamental characteristics: first, it has direct contact between two or more sides on the platform and second, each side is also connected with the platform. In literature multi-sided platforms (also defined as markets with network externalities) are defined as platforms that enable value creation among the customer (demand side) and the developer (supply side), and in that way creates a multi-sided market (Zachariadis & Ozcan, 2017). De Revuer et al. (2017) argues that digital platforms have the advantage of being easy to change and adopt, which makes them more responsive to new types of complementary services from third party developers which enhances functionality on the platform.

Gawer & Cusumano (2002) studied how the emergence of digital platforms has formed companies during 1990-2000. Companies such as Intel and Microsoft went from being a producer of microprocessors to being the leading innovator for an entire industry. This was achieved by building offerings in which other companies could build complementary products and services on and hence create a business network of innovation (Gawer & Cusumano, 2002). To illustrate this phenomenon, the iPhone is an excellent example. The iPhone had huge success due to the enabling of third party developers to build applications on their platform (known as the App-store). This led to a network of innovative applications that Apple never would have been able to build themself, and in that way they created more value for the iPhone users (Zachariadis & Ozcan, 2017). This phenomenon is known as “network effects”.

2.3.1 Network effects

Network effects is a phenomenon where the value of a product or service increases for each user as more users adopt it (Katz & Shapiro, 1985). There are two types of network effects; direct and indirect (Lee & Colarelli O'Connor, 2003). These are described throughout this section.
Direct network effects

Direct network effects refer to the phenomenon in which the number of users has a direct effect on the value of the product or service (Farrell & Saloner, 1985; Katz & Shapiro, 1985). An example of direct network effect was the invention of the fax machine. In the beginning, the customer base was small which limited the users’ options for sending faxes. However, as the adoption of fax machines grew, the larger the network became which resulted in increased utility for using the product since each new user widened the potential for sending and receiving faxes (Lee & Colarelli O’Conner, 2003).

Indirect network effects

Indirect network effects refer to the phenomenon when the economic utility of a primary good increases as more customers use it, or more suppliers offer complementary goods. With increased number of adopters using the network it becomes more attractive for firms to enter with complementary goods. An example of an indirect network effect is the iPhone software. As the number of applications were developed for the iPhone (the complementary good) the value for the users of the iPhone software (the primary good) increased and vice versa (Lee & Colarelli O’Conner, 2003).

Direct and indirect network effects are closely correlated and generate a positive feedback effect, see figure 1 which illustrates this effect for the PC industry. In this case, a large amount of PC users (installed based) leads to increased availability of the application, which draws more users into the network (Lee & Colarelli O’Conner, 2003). The positive feedback effect generates a self-reinforcing loop which leads to that strong networks become stronger and weak networks become weaker. Hence, in the most extreme case it can lead to a “winner takes it all” scenario, in which a single network outcompetes the rest (Lehr & Jeppesen, 2013). Lee & Colarelli O’Connor (2003) describe the key for succeeding in a networking context is to use first mover advantage by maximizing the installation base rather than focusing on profits. Once the product or service becomes the dominant design it is difficult to reverse the process even if new superior alternatives are introduced, due to high switching costs for the users. This implies that the conventional product strategy, which focuses on increasing the value of the product alone, is insufficient in a networking context. Instead, the first priority should be to increase the customer base which will attract complementary goods and thus create a positive feedback effect (Lehr & Jeppesen, 2013).

![Figure 1](image-url)

*Figure 1, illustrates the feedback effect of the relation of direct and indirect network effect (Lee & Colarelli O’Conner, 2003).*
Nevertheless, Zachariadis & Ozcan (2017) argue that network effects are not always positive, and a growing amount of users on a platform can in some cases lead to negative effects instead. Considering a platform much like Apple’s App Store, in most cases the increase of applications creates value for the users since it offers a wider diversity of services. However, if the applications that enter the platform are of bad quality or make it more difficult to find what the user needs, the network effect will be negative instead of positive and thus lead to migration from the platform. Therefore, it is of importance to consider the openness of the platform to avoid this negative effect. This can be avoided by applying filters that control and limit the access to the platform, which is called platform curation in literature (Zachariadis & Ozcan, 2017).

There are several different strategies to consider for managers when choosing a platform strategy - from a closed system (owned by one party that controls everything on the platform) to a wide open platform (full access to public domains). This brings up the dilemma of “adoption versus approriability”. A wide open platform will increase the number of bad quality services on the platform. Further, the low switching cost for this kind of platform will lower the lock-in effects. However, a wide open platform encourages a high adoption rate and stimulates innovation which enables high diversity of complementary goods. Even though a wide open platform may lead to negative network effects, there has been several cases when a closed platform has been outcompeted. Two famous examples, who tried to develop everything in-house and did not let any outside development of complementary goods, are Nokia and Myspace (Zachariadis & Ozcan, 2017).
3. Literature study

In order to understand PSD2 and how it will affect the retail banking market in Sweden, this chapter aims at first giving an understanding to what retail banking actually is and what role banks have in the payment system. After understanding this, an introduction of PSD2 is given to show how retail banking and the roles will change. Lastly, the chapter describes what strategies banks can have for coping with these changes that PSD2 will bring.

3.1 Retail banking in Sweden

In Sweden, the bank's role can be divided into several functions. The first function, which represents the banks' core business, can be divided into two smaller functions: i) accept deposits and provide credit, and ii) lend money to the public. Secondly, another important function for the banks is to provide a means of payment, which is further discussed in section 3.2. Thirdly, the banks provide corporate and retail customers the possibility to decrease, redistribute and spread risks by for instance offering trading in futures and options (Swedish Bankers, 2014; 2017).

In Sweden, there are in total 117 banks who provide these functions to different degrees - some offer services in all of the functions while others only offer services in specific functions. The Swedish banks can be divided into four main categories: i) commercial banks, ii) foreign banks, iii) savings banks, and iv) member banks (The Riksbank, 2016; Swedish Bankers, 2017). Throughout this section a brief description of each is described, in order to gain an overview of the banking landscape in Sweden.

3.1.1 Commercial banks

In Sweden, there are 39 Swedish commercial banks, which can be divided into into three groups. The first group consists of the four largest banks: Nordea, SEB, Handelsbanken and Swedbank. They dominate the Swedish banking landscape and account for 72 percent of the banks' total assets (The Riksbank, 2016). Since the mid 1990's, these four banks have grown into large financial groups with cross-border operations mainly in the Nordics and Baltics. The banks have similar business models and are usually described as universal banks since they offer a wide range of financial services within all functions (Finansinspektionen, 2017). The second group of commercial banks are the former savings banks. There are 13 of these in Sweden and many of them are partly owned by Swedbank. The third group of commercial banks consists of other banks which have a different ownership structure and business orientation. These banks specialise in different areas and can often be considered as niche banks that do not provide the full range of services as the universal banks. There are 22 of this kind of bank in Sweden (Swedish Bankers, 2017).

3.1.2 Savings banks

There are 47 savings banks in Sweden that operate on a regional or local market. The number of savings banks is decreasing due to mergers with other savings banks or conversion into commercial banks. Many of them cooperate with Swedbank by providing common products and services, and several of them have been acquired by Swedbank as previously stated (Swedish Bankers, 2017). Unlike the commercial banks, the
savings banks have no shareholders or equity capital, meaning that the profits are not distributed as e.g. dividends. Instead, any surpluses are kept as reserves in the bank (The Riksbank, 2016).

3.1.3 Member banks

A member bank is an economic association with the purpose of providing banking services on behalf of its members. By paying a members fee you become a member that can take part of the bank’s services and be part of decisions that influence the bank’s activities (Swedish Bankers, 2017). The member banks do not have any shareholders, so the surpluses are reinvested and to some extent paid as dividends to its members. Currently, there are only two members banks in Sweden (The Riksbank, 2016).

3.1.4 Foreign banks

The first foreign banks established themselves in Sweden in 1986, when it became allowed to have affiliates in other countries. In 1990 foreign banks were allowed to open branches, rather than creating affiliated companies, which led to an increase of foreign banks in Sweden and today there are 29 of them in Sweden. Most of the foreign banks are large universal banks but in Sweden they focus mainly on the corporate market and the securities market. However, there are some foreign banks in Sweden that operate as universal banks within all functions. An example of this is Danske Bank who offers a wide range of services, and has grown to become the fifth largest bank in the country, see table 1.

Table 1. The ten largest banks’ balance sheet at year end 2015 (SEK billion)

<table>
<thead>
<tr>
<th>Bank</th>
<th>Balance Sheet (SEK billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEB</td>
<td>1580</td>
</tr>
<tr>
<td>Nordea</td>
<td>1552</td>
</tr>
<tr>
<td>Swedbank</td>
<td>1139</td>
</tr>
<tr>
<td>Handelsbanken</td>
<td>1013</td>
</tr>
<tr>
<td>Danske Bank</td>
<td>866</td>
</tr>
<tr>
<td>SBAB</td>
<td>181</td>
</tr>
<tr>
<td>Länstextingar Bank</td>
<td>138</td>
</tr>
<tr>
<td>Landshypotek</td>
<td>81</td>
</tr>
<tr>
<td>DNB</td>
<td>67</td>
</tr>
<tr>
<td>Skandibanken</td>
<td>58</td>
</tr>
<tr>
<td><strong>Total 10 largest</strong></td>
<td><strong>6565</strong></td>
</tr>
<tr>
<td><strong>Total all</strong></td>
<td><strong>7288</strong></td>
</tr>
</tbody>
</table>

Table 1. The ten largest banks in Sweden (The Riksbank, 2016).

3.2 The Swedish payment system and the bank’s role

The payment system - or the financial infrastructure - is defined as the task of creating secure and cost-efficient payments, i.e. settling payments between buyers and sellers, at minimal risk and cost necessary to process the transaction. The payment system includes all actors who are directly involved within payment transactions. Examples of such actors are banks, consumers, merchants, suppliers of payment means (e.g. cash and cards), and suppliers of technology and systems (e.g. card-chip technology, computer software and
point of sales systems) (Arvidsson, 2014). This chapter starts off by introducing the different types of payments; simple payments and intermediary payments, and ends by describing retail payments.

### 3.2.1 Different types of payments

The central bank of Sweden (The Riksbank) divides the financial infrastructure into different areas depending on what type of payment is intended. Firstly, payments are divided into large payments and mass payments, where large payments are usually made by large corporations and governments to amounts between 10 and 100 million SEK. Mass payments are the most common type of payment and stand for the majority of all payments between individual companies, organisations and households. The size of mass payments are much smaller than large payments and can consist of payments regarding for instance payrolls, dinners, movie visits, or sports fees (Arvidsson, 2009). This report only considers mass payments which can be divided into i) simple payments, and ii) payments using intermediaries.

#### Simple payments

A simple payment, as shown in figure 2, is a direct exchange of a product or service for an amount of money (Arvidsson, 2009). An example of a simple payment is when using cash, where the payment is handled directly between two parties without intermediaries which cause time lag between the initiation and completion of the payment (The Riksbank, 2016). Since no intermediaries are necessary in this kind of payments, banks are not involved.

![Figure 2, payments without intermediaries.](image)

#### Payments using intermediaries

In contrary to simple payments, payments using intermediaries require an underlying infrastructure. This means that, unlike simple payments, the payment is not direct but has to go through intermediaries before it reaches the intended account. An example of payments using one intermediary are account transfers between two parties with the same bank. However, in most cases several intermediaries are involved which complicates the financial infrastructure, see figure 3. An example of this would be if the two mentioned parties have different banks. The first step in this type of payment process is that the payment is verified and authorised which assures the seller that the payer has sufficient funds (Arvidsson, 2009). The second step of the process is performed by a clearing organisation which clears the transaction, meaning that instructions and information about the transfer are compiled. In the last step, the payment is settled (The Riksbank, 2016).
3.2.2 Retail payments

Retail payments is a collective name for payments made between non-banks, and consist of relatively small payments in large amounts, usually between individuals, companies and authorities. Retail payments can take the form of both simple payments, such as cash payments, and payments using intermediaries, such as card payments. The cards issued by banks are almost always connected to an international card system such as Visa or Mastercard. Card payments are the primary method used in retail payments and usually take place between a seller and a buyer directly at a point of sale, where the payment is initiated electronically through the seller’s card terminal. Other examples of this kind of payment include credit transfers and direct debits which are used for remote payments. Cards are also used at a high degree in remote payments and online payments (The Riksbank, 2016).

When payments are not made through the underlying card infrastructure, the banks part as an intermediary in the payment system can be surpassed. With the revised payment service directive, which will be explained in the next section, third party providers can initiate payments for consumers without the banks, which means that they can take over parts of the banks’ retail banking activities. Additionally, the regulations allows third parties to access the banks’ customers account information and create services on this, which further challenges the banks’ retail banking (Evry, 2017).

3.3 The revised payment services directive (PSD2)

In 2007, the first payment services directive (PSD) was developed by the European Union to bring the same set of rules regarding payments cross the European Economic Area, which includes the European Union, Iceland, Norway and Liechtenstein. PSD set the rules for how payment service providers should deal with consumer information and cover all types of cashless payments such as direct debit, card payments and digital payments (online and mobile) (European Commission, 2015).

The European Union has the goal of creating an efficient market for payment services which should guarantee: the same rules, clear guidelines for payments, fast payments, protection of consumers, and competition that enables a wide choice of services. Therefore, the European Union aims to create a Single European Payment Area in which PSD is the legal foundation. Single European Payment Area allows consumers and businesses to conduct and receive transactions of: i) credit, ii) direct debit payment and iii)
cross-border card payments - enabling cross-border payments in Euro to be as easy as domestic payments (European Central Bank, 2017).

In 2012, the PSD legislation was reviewed by the European Commission to ensure it was achieving the objectives it was set up to do. They found that it has led to several benefits such as: i) increased competition and choice by enabling non-bank players to enter the market, ii) improved economies of scale and iii) enhanced the transparency of the market (Payments UK, 2016; European Commission, 2015). However, since the payment market is constantly changing, the regulations need to stay relevant to the market environment. In recent years, the payment market has gone through rapid change due to digitalization where several new technologies have emerged, and this has brought an ocean of new payment service providers into the market. In order to meet this change and take a step towards a Single European Payment Area, the regulation needed to be updated to fit the digital ages. Hence, the revised payment services directive (PSD2) was created to extend the rules to more services. The aim of PSD2 is to further: create a more efficient and integrated payment market in Europe; increase the competition through a regulatory framework which encourages entering of new players; increase protection of the customers from fraud and other schemes by enhancing the security direction; and finally, extending the reach of the directive (Payments UK, 2016).

The PSD2 legislation will change and impact the payment market in four key areas: i) market efficiency and integration, ii) consumer protection, iii) competition and choice, and iv) security (European Commission, 2015). These are further described below.

3.3.1 Market efficiency and integration
PSD2 will extend to cover payments with all currencies and one leg transactions (where only one of the payment service providers is located in European Economic Area). In practice, this means that the payment service provider is obligated to provide information regarding the fees and conditions, in which they are involved with, for national and international payments in the European Economic Area. They are also accounted for the problem related to the services (European Commission, 2015).

3.3.2 Consumer protection
PSD2 will increase the protection of the consumer in many ways. First, it will cover payments where one of the payment service providers is outside the European Economic Area, and also when payments are made in non-European Economic Area currencies. Second, the amount in which a consumer can be accounted for in case of unauthorised payments decreases from 150 Euro to 50 Euro. Third, in case of card payments when the final amount is unknown in advance, such as hotel bookings or car rentals, the payee is only allowed to pinpoint the exact amount that the account holder has approved (European Commission, 2015).

3.3.3 Competition and choice
The main changes PSD2 will bring is the access to account, which enables authorized third parties to access customers’ account information, with the customers’ consent. This allows the third parties to initiate payments and monitor accounts, which banks previously have had monopoly on, see figure 4. This encourages new players, such as FinTech companies or BigTech companies (e.g. Amazon and Facebook) to become third party providers and thus, steal customers from banks in the payment market. Thus, in the financial services market, the banks will no longer only compete with each other but with everyone that
provides financial services. PSD2 will change how the value chain looks today and have significant impact on the profitability of today’s business models. By giving third party providers legal rights to build services on top of banks’ data and infrastructure, it enables them to create similar services as the banks offer but also completely new financial services. Hence, it allows third parties to transfer money, monitor spending behaviours and initiate payments. PSD2 therefore creates two new types of service providers: Account Information Service Providers (AISP) and Payment Initiation Service Providers (PISP) (Payments UK, 2016; European Commission, 2015).

Figure 4, illustrates the effect PSD2 will have on the value chain (Ekroth & Eneroth, 2017).

**Account Information Service Provider (AISP)**

The definition of an Account Information Service Provider (AISP) in the European Banking Federation’s (2016) article 4(16) is “an online service to provide consolidated information on one or more payment accounts held by the payment service user with either another payment service provider or with more than one payment service provider”. In other words, an Account Information Services Provider extracts information from the banks, with the consumer’s consent, and utilizes the data to build new services (Agarwal et al, 2016), see figure 5. This information can consist of transaction history or balance account data, and can enable services regarding consumers’ spending habits or an overview of the finance for consumers using several banks (Crompton et al, 2016).
Figure 5, illustrates the Account Information Service Provider (AISP) role when PSD2 is enforced (Crompton et al., 2016).

Payment Initiation Service Provider (PISP)
The definition of a Payment Initiation Service Provider (PISP) in the European Banking Federation’s (2016) article 4(15) is “a service to initiate a payment order at the request of the payment service user with respect to a payment account held at another payment service provider”. In other words, a Payment Initiation Service Provider (PISP) can be described as a “software bridge” between the payer and the payee, i.e. the consumer’s bank account and the retailer. This encourages new innovations by enabling third party providers the ability to initiate payments directly from the payer’s bank account via online portals (Agarwal et al., 2016). The Payment Initiation Service Provider (PISP), see figure 6, enables for fewer parties to be involved in payments, which can reduce the prices but with same security standard - since it does not need to reveal the consumer’s card information in the process (Crompton et al., 2016).

Figure 6, illustrates the Payment Initiation Service Provider (PISP) role when PSD2 is enforced (Crompton et al., 2016).
3.3.4 Security
PSD2 will enhance the security direction for payment service providers. PSD2 states that at least once a year, the payment service provider is obligated to report following to the national authority: i) updates of their security, operational and risk assessment, ii) a report that shows that control and mitigation measures are deployed, and iii) statistical data of fraud related to different payments. Although the banks are obligated to provide consumer information to third party providers, there are strict authentication directives for third party providers to follow. The third party providers must ensure that security measures are in place to protect customer integrity and the confidentiality of customer’s personalised security credentials (European Commission, 2015).

3.3.5 Timeline
The PSD2 regulation had a deadline for implementation into national laws on the 13th of January 2018. However, the European Banking Authority (EBA) needs to develop new Regulatory Technical Standards (RTS), which will not be finalised until September 2019. The Regulatory Technical Standards will act as the guideline for how PSD2 is going to be carried out, and more specifically it will ensure that all banks have the same standards regarding customer authentication and secure communication. Before that it will be difficult to know if any parties are breaking the law and therefore, PSD2 may not have its full effect until then (Payments UK, 2016). Furthermore, every country needs to interpret and implement PSD2 into national laws which may delay the enforcement of PSD2. In Sweden, due to the extent and difficulties PSD2 raises, it is delayed until 1st of May 2018 at the earliest (Regeringen, 2017)

3.3.6 Application programming interface (API)
Even though PSD2 does not state how the account information should be shared, application programing interfaces (APIs) have emerged as the most likely standard. There are several groups on a European level that recognize APIs as the standard - such as the Berlin Group (consisting of almost 40 banks, associations and payment service providers), the Open Banking Initiative in the UK and CAPS in the Netherlands (Accenture, 2017).

API is a computer application that uses a common language, which both applications understand, enabling them to “talk” to each other over a network (Zachariadis & Ozcan, 2017). The Chief editor of ProgrammableWeb, David Berlind (2017), explains APIs as ”electric sockets that have predictable patterns of openings, into which, other electrical plugs that match those patterns can fit and consume them. Likewise, APIs specify how software components should interact with each other”. This type of technology is commonly used internally in organization as it allows for exchange of data across departments in a systematic way, which makes it easier to collaborate and access information (Zachariadis & Ozcan, 2017). Furthermore, APIs can also be used for sharing data beyond the boundaries of a company, which can consist of company information that is used to build new services or products. This integration with external partners can potentially enable cross selling or upselling opportunities (EBA, 2016).
3.4 Banks’ strategies to cope with PSD2

As stated in the previous chapter, PSD2 allows third party providers to access banks’ account information and initiate payments, on behalf of the banks’ customers. This means that third party providers are invited to engage in a small part of the banks’ retail banking activities. However, even though PSD2 only allows for these two services, many opportunities within retail banking open up which means that banks can use PSD2 as a catalyst towards becoming more innovative and provide their customers with new services (Evry, 2017). This acts as a foundation for the strategies that banks can take in order to cope with PSD2.

In order for banks to seize the opportunities that PSD2 enables, there are two strategic questions that the banks need to address in order to cope with PSD2: i) how should the banks position themselves in the value chain, and ii) what should their transaction service portfolio contain? To answer the first question, the banks can either allow third party providers to offer front-end account information services and payment initiation services to the banks’ customers, or they can develop these front-end services themselves and compete directly with third party providers for customers. Secondly, the banks can choose to provide a small transaction service portfolio which contains only payment and information services that comply to PSD2. They can also provide a larger portfolio that goes beyond payments and includes e.g. digital identity services or lending (Cortet et. al., 2016). This leads to four types of strategies banks can have to cope with PSD2, which are further described throughout this section.

3.4.1 Strategy 1 - Comply

Banks must at the very least be compliant to the new regulation, which means “opening up” to provide access to their customers’ accounts for third party providers. The banks need to open certain APIs letting third party providers access and execute payment initiation and account information services, see figure 7 (Light et al., 2016; Cortet et al., 2016). According to Strategy& (2017), banks taking such a bare minimum approach believe it is too early to see how PSD2 can create value, and decide to passively wait and see what changes PSD2 brings. Further, there have been many unanswered questions regarding the regulation which may entice banks to take a bare minimum approach. For instance, since the Regulatory Technical Standards will not be ready and implemented in all countries affected by PSD2 until September 2019, there are uncertainties regarding if the banks for example can be both an Account Information Service Provider (AISP) and a Payment Initiation Service Provider (PISP) (Crompton et. al., 2016). Before the Regulatory Technical Standards is enforced and standards have been established, some consider that there are too many safety concerns regarding investments in new and innovative solutions (Berghuijs et al. 2017). However, de Jong et al. (2017) consider that banks taking the bare minimum approach give away important assets while gaining nothing in return, and by doing so risk loss in volume and closeness to the customers.

Another factor for choosing this strategy is that since the financial crisis in 2008, banks have been introduced to many new or upcoming regulations regarding: counter terrorism financing and anti-money laundering, capital requirements, privacy and personal data protection. These are regulations that banks have to comply with in addition to PSD2, and entail severe penalties for non-compliance which makes it hard for banks to allocate time and budget for innovation. With these strict regulations, regulators are demanding that banks take less risk but at the same time, the retail banking market is evolving quickly. FinTechs are threatening to disrupt the market and the public is exposed to today’s digital world and demand more innovative solutions.
This forces banks into an innovation paradox, since being innovative always involves taking risks to some extent (Crompton et al., 2016).

3.4.2 Strategy 2 - Distributor

Instead of only providing the mandatory APIs, an alternative is to develop more advanced ones with additional customer data. PSD2 mandates banks to open APIs concerning account payment transactions, account identity authentication, balance data and credit transfer initiation, but by opening up more advanced APIs that go beyond regular payment and account information services, it will give the banks the opportunity to collaborate with third party providers who in turn can create new services based on the shared datasets (Light et al., 2016; Cortet et al., 2016). This allows banks to go beyond the scope of PSD2 (Berghuijs et al., 2017). An example could be if the banks’ share information on customers’ data mortgages with an insurance company (Light et al., 2016). This is a slightly more offensive strategy than the first and by offering these additional APIs, third party providers can create more valuable services to the customer which allows the banks to monetise their investments, see figure 8 (Kanniainen, 2017; Cortet et al., 2016).

3.4.3 Strategy 3 - Producer

Through this strategy, the bank becomes a third party provider that provides customers with informational services in the form of a one-stop-shopping interface to all other banks. By becoming a third party provider, the banks will become more integrated in the customer’s value chain, see figure 9 (Kanniainen, 2017). The
banks will be able to gain deeper insights to account information, identity information and leverage new financial services. According to Cortet et al. (2016), examples of new services include comparison services (e.g. bank accounts, loans, and mortgages), personal financial planning management, advanced loan application processes, real-time financial advisory, and digital identity services such as authentication and online contracting.

As seen in figure 9, this strategy allows banks to compete with the third party providers by becoming a third party provider itself. Through this strategy the banks will actively seek new possibilities that are offered by PSD2 (Berghuijs et al. 2017). Another aspect to figure 9, which is not shown, is that the banks can choose to gather information from other banks’ APIs and provide the information to other third party providers. By doing this, the banks can enable other third party providers (for instance FinTechs) to create more innovative services.

![Figure 9, illustration of Strategy 3, where the bank becomes a third party provider.](image)

### 3.4.4 Strategy 4 - Open banking ecosystem

The fourth strategy combines the three previous strategies and focuses on “banking as a platform” which allows banks to pursue an open banking ecosystem, meaning creating an entire network of third party providers and integrating APIs into customer’s shopping experience, see figure 10 (Kanniainen, 2017; Cortet et al., 2016). This lets the banks adopt a platform strategy model and by doing so, the banks need to reconsider their role as a financial intermediary in the payment system (de Jong et al., 2017). Instead, they take on a new role as a re-intermediary by providing “online automated tools and systems that offer valuable new goods and services to participants on [all] sides of the platform” (Zachariadis & Ozcan, 2017).

The bank’s platform facilitates financial services of others, e.g. peer-to-peer lending and risk and payment services. Investing in open APIs would create closer partnerships between banks and third party providers, within and outside of financial services. These partnerships would make it possible for banks to provide new products and services that are owned by third party providers on the bank’s online portal. This would also let
the banks take part of customer data that is stored on the third party providers systems, but shown on the bank’s online portal. By creating this type of partnership with multiple third party providers, banks will have transformed their online portals to an ecosystem of data, which makes it possible for banks to understand their customers’ daily needs. (Light et al., 2016; Cortet et al., 2016). Further, competing with other bank platforms, the bank with the easiest and best experience for developers as well as customers will succeed (Zachariadis & Ozcan, 2017). According to Evry (2017) this strategy is prosperous not only for the banks who gain value created by other members in the ecosystem, but also for the customers who gain more innovative solutions, and the third party providers who gain new customer which they could not previously access. However, Berghuijs et al. (2017) state that there could be an ownership question regarding who owns the platform; will each bank create its own platform or will the platform be co-owned by banks, or perhaps even other parties will own it.

Figure 10, illustration of Strategy 4 where the banks pursue an open banking ecosystem.

3.5 Strategic Framework

Based on a combination of the four strategies from Chapter 3.4, a strategic framework has been created, see figure 11. The framework was triangulated with the pre-study interviews described in the Chapter 4. Methodology and will be a tool for understanding different strategies that banks are considering to reach a competitive advantage when PSD2 is enforced.

The framework is based on the main condition PSD2 enables - access to account. PSD2 obligates banks to share customer information, with the customers’ consent, through open APIs. Therefore, the x-axis on the framework considers the product portfolio of the banks. The banks can either compete by providing the bare minimum APIs which lowers the risks, or offer more advanced APIs and through this be more relevant to its customers. The access to account will also enable new types of services which are built on utilizing the account information that banks are obligated to provide. Therefore, the framework’s y-axis considers the position in the value chain, where banks can either be in the back-end or in the front-end of the value chain. In the back-end, the banks are only information providers and compete with other banks to be relevant in the
market, while in the front-end the banks will compete both with other banks and new entrants that provide financial services, such as FinTechs. The competition will be higher but it allows the banks to be closer to the customers. Furthermore, an open banking ecosystem can be achieved by offering both advanced APIs as well as being in the front-end of the value chain, which creates an ecosystem of services. This means that the bank is both a provider of information that goes beyond PSD2, and collector of data from other banks which they utilize to build new types of services.

Which of the strategies a bank takes is based on the theories on competitive advantage, which were discussed in Chapter 2. The choice of strategy will differ between banks because they all have different preconditions regarding resources and capabilities, as well as different positions in the market. The theories from Chapter 2 will also help in analysing the banks’ position in the framework, based on their answers from the interviews.

![Figure 11](image.png)

*Figure 11. Illustrates the strategic framework which explains the competitive advantages that can be gained from PSD2.*
4. Methodology

This part presents the methodology used in order to answer the research questions. It explains the choice and motivation for the research design and the method of collecting data. Furthermore, it discusses the reliability, validity, generalisability and ethical aspects of the study.

4.1 Research design

The methodology used in this study has been an inductive approach - starting with a topic of investigation which was narrowed down by research questions. An inductive approach allows continuous new insights to the phenomenon during the process (Blomkvist & Hallin, 2015), which was suitable since the banking landscape is quickly changing. Collins & Hussey (2003) explains that an inductive approach is often to move from individual observations to drawing general patterns, which is in line with the purpose of this study - to investigate individual banks in order to draw conclusions about the transition of the retail banking landscape in Sweden.

There is a lack of academic articles on PSD2, and the reports that do exist are to the greater extent published by consultants. The purpose of this study is therefore to bridge that research gap by investigating how PSD2, from a bank’s perspective, will affect the payment system in Sweden. For this reason, a qualitative study is suitable since much effort lays in understanding individuals in a certain situation, in this case different types of banks (Bryman & Bell, 2013). Also, in studies when important variables are unknown beforehand a qualitative approach is suitable (Creswell, 2013), which in this case is appropriate since PSD2 is an unexplored field of research.

4.1.1 Case study of retail banking in Sweden

The strategic standpoints of different types of banks will be central for the development of the Swedish retail banking market when PSD2 is enforced. To gain in-depth knowledge about the strategies different banks are considering, focus lies both on the interplay between banks and the banks’ resources and capabilities, which makes a case study appropriate. This method was preferred since it was used to collect detailed and complex knowledge for each bank, which enabled for discovering new and vital dimensions to the phenomenon (Blomkvist & Hallin, 2015).

4.2 Data collection

The primary data derives from interviews with 10 banks that are present in the Swedish market. Since some of the information shared in these interviews was sensitive, the banks wanted to be anonymous and therefore, no names of the banks are presented in the report. Instead, the banks have been named Bank 1, Bank 2, Bank 3, etc. The method used to gather data was semi-structured interviews which increases the validity of the result but reduces the reliability. However, due to the complexity of the transition of the market, semi-structured interviews with open-ended questions were conducted because it allows for new insights to the phenomenon, which is useful when having an inductive approach (Blomkvist & Hallin, 2015). In order to generalise the results and increase the reliability the same initial questions were asked, which is further
described in chapter 4.3.2. The interview questions in the pre-study were designed for each interviewee’s expertise and was used to gain a deeper understanding of the topic.

4.2.1 Pre-study interviews

Several pre-study interviews were conducted at Bank 1 to gain further understanding of PSD2 and the strategies regarding it. The interviews were conducted with employees with different expertise about PSD2: the Head of Open Banking, a Senior Business Developer/PSD2 Expert, the Head of Community and a Partner Manager of FinTechs. The Head of Open Banking is a strategic expert within PSD2, and was therefore interviewed to gain a deeper understanding of the different strategies banks can consider to cope with PSD2. This interview was important as it made it possible to clarify uncertainties regarding the strategies that were found from the research, which in turn made it possible to alter the strategic framework in chapter 4.2. The Senior Business Developer/PSD2 Expert is a regulatory expert that was interviewed to shed light on the legal aspects of PSD2 and to gain a deeper understanding of how PSD2 will affect the market. This was of course important, because it helped in better preparing for interviews with other banks. Being prepared made it possible to get out the right information from interviews with banks, which was important as these interviews acted as the foundation of this report. Further, the Head of Community was interviewed to gain deeper knowledge about platforms and how the collaboration with FinTechs works. Since the fourth strategy in the strategic framework is based on platforms it was important to gain a deeper understanding of how such a platform will work in the banking industry. Lastly, the Partner Manager was interviewed to gain a different perspective regarding PSD2 and its implications. The Partner Manager acted as a general sounding board throughout the report period, and assisted in describing and clarifying concerns regarding any parts of the research.

<table>
<thead>
<tr>
<th>Company</th>
<th>Title of interviewee</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank 1</td>
<td>Head of Open Banking</td>
<td>2018-02-06</td>
</tr>
<tr>
<td>Bank 1</td>
<td>Senior Business Developer/PSD2 Expert</td>
<td>2018-02-22</td>
</tr>
<tr>
<td>Bank 1</td>
<td>Head of Community</td>
<td>2018-04-04</td>
</tr>
<tr>
<td>Bank 1</td>
<td>Partner Manager of FinTechs</td>
<td>Continuous</td>
</tr>
</tbody>
</table>

Table 2. Pre-study interviewees.

4.2.2 Semi-structured interviews

The primary source of data collection comes from 10 interviews with 10 different banks. These banks were categorised into four categories: i) large sized banks, ii) medium sized banks, iii) small/niche banks, and iv) foreign banks. The reason for categorising the banks in this way was to gain insights to how the large banks in Sweden will cope with PSD2 in relation to medium sized and small/niche banks, and investigate whether their coping mechanisms differ due to differences in size, resources and capabilities. The foreign banks were interviewed since they have similar capabilities as the large banks but on a global scale and have the ability to disrupt the market.
The interviews with the banks were conducted to gain understanding of how banks perceive PSD2, how they think it will change the retail banking market, and what strategies they have to cope with PSD2. Table 3 and table 4 show the interviewed banks and the semi-structured interview questions that were asked. Interview questions 1-6 were asked to gain the banks' view of PSD2 as a whole. This was important, because without first understanding this, it would be hard to understand the deeper meaning of the strategies. After these questions were asked, the interviews moved into the second part of the interview which concerned the strategies. Question 7-10 represent the different strategies, i.e. question 7 represents the first strategy, question 8 represents the second strategy and so on. Even if it was clear that a bank had a certain strategy, questions 7-10 were discussed with all banks to gain their view. Then, depending on the answers from these questions, more specifics were discussed regarding the strategy of the interviewed bank.

All the interviewed banks were commercial banks and foreign banks. The reason for only interviewing these is that savings banks work on smaller local markets - at the same time as many of them are converting into commercial banks - while member banks are too few and have very low market share. Therefore, the interviewed banks were grouped into four different categories: i) large sized banks, ii) medium sized banks, iii) small/niche banks and iv) foreign banks. Out of the 10 interviews that were conducted, four of the interviewed banks were classified as large banks, two were medium sized banks, two were small/niche banks and two were foreign banks. The reason for having more interviews with large banks compared to the other type of banks, is simply because they represent a bigger part of the market. However, to gain a full representation of the market it was of course important to interview the other types of banks as well, even though the main focus laid on the large banks. In total, the interviewed banks represent the greater majority of the total retail banking market in Sweden.

The reason for only interviewing banks was because this report focuses on what strategies banks take to cope with PSD2 and understanding the direction banks are heading towards. Since the strategy a bank takes is based on their own beliefs about the effects and opportunities PSD2 entails, and not what any other party believes, the decision was made to interview only banks and not any other third parties such as FinTechs. It can further be stated that the banks' strategies are based on the complexities of the changing retail banking market, where potential entrants and threats play a big part. However, since these threats and potential entrants are considered by the decision maker of the bank when forming their strategy, there was no major reason to interview other parties than banks.

<table>
<thead>
<tr>
<th>Bank</th>
<th>Type of bank</th>
<th>Title of interviewee</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank 1</td>
<td>Large bank</td>
<td>Head of Open Banking, Senior Business Developer</td>
<td>2018-02-06, 2018-02-22</td>
</tr>
<tr>
<td>Bank 6</td>
<td>Medium bank</td>
<td>Head of Risk and Regulatory Coordination, Retail Banking</td>
<td>2018-02-21</td>
</tr>
<tr>
<td>Bank 9</td>
<td>Foreign bank</td>
<td>Business Transformation Manager</td>
<td>2018-02-26</td>
</tr>
<tr>
<td>Bank 2</td>
<td>Large bank</td>
<td>Head of PSD2 Offerings</td>
<td>2018-03-09</td>
</tr>
<tr>
<td>Bank 3</td>
<td>Large bank</td>
<td>Chief Digital Officer</td>
<td>2018-03-23</td>
</tr>
<tr>
<td>Bank</td>
<td>Type</td>
<td>Position</td>
<td>Date</td>
</tr>
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<td>--------</td>
<td>-----------------</td>
<td>------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Bank 5</td>
<td>Medium bank</td>
<td>Project Manager for PSD2</td>
<td>2018-03-26</td>
</tr>
<tr>
<td>Bank 7</td>
<td>Small/niche bank</td>
<td>Senior Technical Advisor</td>
<td>2018-04-05</td>
</tr>
<tr>
<td>Bank 10</td>
<td>Foreign bank</td>
<td>Senior Manager, Open Banking</td>
<td>2018-04-16</td>
</tr>
<tr>
<td>Bank 8</td>
<td>Small/niche bank</td>
<td>Senior Project Manager</td>
<td>2018-05-04</td>
</tr>
<tr>
<td>Bank 4</td>
<td>Large bank</td>
<td>Project Manager for PSD2</td>
<td>2018-05-11</td>
</tr>
</tbody>
</table>

Table 3. The interviewed banks.

### Semi-structured interview questions

1. What will the effects of PSD2 be on the banking market?
2. What does your bank think of PSD2?
3. How will PSD2 affect your bank?
4. Are there any business opportunities in PSD2?
5. What are the biggest risks with PSD2?
6. Who are the biggest threats in regards to PSD2?
7. What do you think about only complying to PSD2 - do you see any advantages/disadvantages of this?
8. What do you think about creating more advanced APIs?
9. What is your view of creating your own payment services (or any other additional services that PSD2 enables), and by this becoming a third party provider?
10. Open banking platforms have become a hot topic, how do you consider these?

Table 4. The interview questions asked to all interviewees.

### 4.3 Validity & reliability

Validity refers to the extent in which the study is well founded, and how accurately the study describes what it aims to describe. Hence, validity is to study the right phenomena and by doing so, the theory and literature should correspond to the problem formulation, purpose and research question. Reliability refers to the extent in which the study is performed correctly, regarding the repeatability and consistency. In other words, reliability is the extent to which similar studies, if repeated, would show the same results (Blomkvist & Hallin, 2015).

Regarding the strategies proposed in this thesis, they were based mainly on consulting reports which could be argued for lowering both the validity and reliability. However, PSD2 is an ongoing directive that will be enforced on the first of May in Sweden. Therefore, to understand the transition of the payment market as well as to determine the strategic options for banks, academic articles were considered as out of date in this case. To increase the reliability of this study, the data from the consulting reports was triangulated with the interviews. Further, the literature was based on academic books and articles in order to gain an understanding
of previous research on strategic theory. Since the theory served as a part of the strategic framework, the reliability is further increased. By also triangulating the strategic framework with several parties from the pre-study interviews, it could be established that the strategies in the framework were well-founded and hence, the validity was increased.

As this study used semi-structured interviews the reliability is decreased, but since a high number of banks were interviewed an objective view was gained which strengthens the reliability. Further, the reliability, but also the validity, is increased due to that the interviewees had leading positions in the banks strategic work to cope with PSD2. This increased the probability of gaining answers which reflected how the bank thinks rather than how an individual employee thinks. Lastly, since the interviewed banks were categorised into different types and sizes, a broad view of the bank market was presented which increases the validity of the study. To gain an even more objective view of how PSD2 will change the market, one could argue that third party providers should have been interviewed. However, the motivation for only interviewing banks has previously been stated and the reason for this is that this report focuses on what strategies banks take to cope with PSD2 and the business potentials it entails. The strategies that banks take is not affected by any other parties, and therefore an outside view was determined as unnecessary in this case. Therefore, the focus of this report was to get as many banks to participate as possible, in order to get an objective view of the market. Also, it was decided that in order to gain a deep understanding of how banks act in regards to PSD2, the sole focus should be on them. Nevertheless, if there was more time, interviews with outside participants such as market experts would have been conducted. This could have increased the validity of the results.

4.4 Generalisability
This study has its focus on one given case - namely how PSD2 will affect the banking market - and since it is a case study some argue that this lowers its generalisability. To meet this criticism, the choice of case, data gathering method and analytical method have been well-motivated and reflected upon. However, since it is a case study it cannot be statistically generalised, but it can be analytically generalised. To conduct analytical generalisability in studies, Blomkvist and Hallin (2015) state that one needs to provide detailed information about the case, so that the reasoning in the analysis can be supported. In this study, this is aimed for though a transparent and detailed presentation of the empirical results. By providing an in-depth discussion of the results, analytical generalisability is achieved and can be applicable to other cases with similar conditions - for instance it could be useful in industries undergoing high change caused by new regulations or legislations.

4.5 Ethical aspects
The authors of this study emphasized the importance of being transparent and fair to all the interviewed participants and readers of the study, and have therefore followed the engineering code of honor (Sverigesingenjorer.se, 2018). All the interviewees have been provided upfront with the interview questions to give them a fair chance of preparing their answers. The authors have also been clear to the interviewees on how the information is going to be used and in what way their name and company is going to be be presented. Furthermore, all the interviewees have received a copy of the report, which can be used as they see fit. Also, the authors have tried to be as objective as possible when presenting the result and if uncertainties have arised the interviewees have been informed for a chance to clarify their statement.
5. Empirical findings

This part presents the empirical findings of the study, which is based on 10 semi-structured interviews with 10 different banks that operate in the Swedish market. The banks are categorised as large banks, medium banks, small/niche banks and foreign banks. The part is divided into two sections: i) the effect PSD2 will have on the banking market and ii) banks strategies to cope with PSD2.

5.1 PSD2’s effect on the bank market

The first part of the interviews focused on PSD2 in general: how it will affect the market, what the banks think of PSD2, to what extent PSD2 will affect their bank and if there are any business opportunities in PSD2. Further, this part of the interviews discussed which are the biggest risks associated with PSD2 and who are the biggest threats for the banks.

5.1.1 Large banks

All large banks agreed that PSD2 in itself will not disrupt the market in ways many think. However, they had slightly different opinions on what the outcome (both short- and long term) of the regulation will be.

In the short term, meaning before the Regulatory Technical Standards (RTS) have been enforced in September 2019, Bank 1 stated that PSD2 will have little positive impact on the market. In fact, PSD2 could on the contrary decrease the innovation and inhibit competition. Today, everyone has been able to create services around bank’s infrastructures but with PSD2 a license from Finansinspektionen is required, which inhibits innovation since it becomes harder for smaller companies to enter the market. Bank 2 had a similar view and thought that in the short run, PSD2 will not have such a big impact due to that the delayed Regulatory Technical Standards creates an interim period where it is not clear how the banks should act. This will lead to that in the the short run, the focus will be on compliance rather than innovation. Bank 2 also stated that since all actors who are affected by PSD2 have different interpretations of the regulation, it is hard to determine which interpretation is right which means that any differences between parties will have to be settled in court. This will make the process of adoption slow which is another factor to why the regulation will not have an immediate impact. Bank 4 concurred that it will take time to optimize the legal framework for PSD2, but not only because everyone has different interpretations of the new regulation, but also because the new services that PSD2 enables (account information services and payment initiation services) are uncharted territories. Bank 4 further stated that in Sweden, where the financial infrastructure is far ahead and the innovation rate is high compared to many other countries in Europe, PSD2 will not have such a big impact in the short run. Moreover, Bank 3 agreed that PSD2 will not have have such a big effect in the short run. They said that today, it is in some ways easier for companies to create services and with PSD2 they will be prohibited to do some of the things they do today (such as screen scraping). So, even if PSD2 opens up the market in some ways, the FinTechs will in other ways be restrained.

In the long term, meaning when both PSD2 and the Regulatory Technical Standards have come into force and been established, Bank 1 stated that PSD2 will result in high innovation. Today, FinTechs have to find
their own ways of creating financial services around the banks (through for instance screen scraping), but with PSD2 there will be a clear structure which makes it easier to create innovative services. Bank 4 agreed that the innovation will increase but emphasized that the development of financial services has already been flourishing for quite a while. With this said, Bank 4 meant that PSD2 will act as a catalyst and push the innovation forward, rather than disrupt the market and change the current innovative direction. Bank 2 on the other hand, found it harder to predict what will come from PSD2 in the long run. They claimed that the regulation only reaches out to the early adopters on the market and today, only early adopters use FinTech-services such as Tink. Since PSD2 enables similar services they were unsure if the majority of customers will embrace the change. Further, Bank 3 did not think PSD2 will have a big effect in the long run. Today, it is already possible for FinTechs to create services, such as Tink and Bofink, and PSD2 alone is not effective enough to change the entire market. Bank 3 gave an example of the telecom market, where mobile operators were allowed to build services on top of telecom companies’ already existing infrastructure - this did not disrupt the entire industry. This is very similar to what PSD2 is doing to the retail banking market, and therefore Bank 3 considered that it serves as a good example that no big change will happen.

All large banks seemed to agree on that the scope of PSD2 is too narrow and that the regulation by itself will not disrupt the market. However, most of them agreed that it will serve as a catalyst for change and that from it the market will eventually transform. Bank 2 and Bank 3 considered that the scope of PSD2 is too narrow to create the change it intends, and that a “PSD3” should be introduced.

From the interviews, the large banks agreed that the biggest competitors enabled by PSD2 are either BigTechs or FinTechs. Bank 1 considered BigTechs as the big threat, where companies like Amazon or Google can enter the market. They considered FinTechs to be too small and that they do not have the capacity to take over large banks’ market shares. Bank 2 agreed that BigTechs are the biggest threat but they highlighted that they would have been able to enter the market in either case, even though PSD2 of course is a push in the right direction. BigTechs who enter any industry will be a threat but Bank 2 stated that BigTechs will not enter the Nordics for quite some time, since their target markets are the US and Asia. Bank 3 further concurred that BigTechs are a substantial threat since they have the resources, a large customer base and are experts in utilising data to build services. However, Bank 3 was unsure if BigTechs will enter the market since they want to be closer to the customers and create entertaining services. By entering the retail banking market, BigTechs would have to focus on compliance to a much greater degree than they do today, which they might not find appealing enough. Bank 3 also considered FinTechs to be a threat and thought that large banks have historically underestimated such companies. They gave examples of Klarna and Tink and stated that with PSD2 it is important pay attention to the FinTechs.

5.1.2 Medium banks

Both medium banks agreed that PSD2 will have a big effect on the market. Bank 5 believed that since PSD2 obligates banks to provide open APIs, it entails that the innovation moves to a new group that existing players are not familiar with and thus, PSD2 will be a roadmap towards open banking. Bank 5 pointed out that even though the effect of PSD2 will be big and change the underlying business models for banks today, it is impossible to predict what it will look like. Hence, they stated that PSD2 will be the foundation of a new journey. Bank 6, agreed that PSD2 will indeed have an effect on the market - in form of increased transparency and openness. However, Bank 6 pointed out that the process will be long, as with all new
regulations and legislations, and due to the delayed Regulatory Technical Standards as well as other factors, it is unclear how big the effect will be. Both banks stated that there are already many FinTechs on the Swedish market who offer services based on account information, which they do through screen scraping. Today, the FinTechs are able to do it through collaboration with the banks but when PSD2 is enforced the collaboration is no longer needed since banks are obliged to give the information to third parties. However, Bank 6 stated that after the Regulatory Technical Standards is enforced, the screen scraping is not allowed which will cause problems for the already established third party providers that need to change their entire infrastructure in order to access the information they previously could.

Furthermore, both medium banks agreed that it will be much harder to become a third party provider after PSD2 due to the compliant issues that appear - it will almost be as hard as becoming a bank. Both medium banks stated that not many third party providers are prepared for this, which will hold back the effects of PSD2. Bank 6 pointed out that in order for the FinTechs to succeed they need a certain “strength”, meaning that they for instance need defense lines, and this will act as a threshold for many FinTechs. Without collaborations with the banks most FinTechs will therefore not be successful. Bank 5 stated that because of the compliant issues, in the beginning of PSD2, the banks are the ones who will act as third party providers since they have the maturity to deal with the infrastructure. Bank 6 also believed that there will be changes even before the Regulatory Technical Standards is enforced because the banks are already trying to comply and open up towards third party providers today. The reason for having the Regulatory Technical Standards later than the enforcement of PSD2 is because it allows everyone time to become compliant (if they are not approved by Finansinspektionen, they will still have time to change before the Regulatory Technical Standards). Also, it gives third party providers time to become compliant.

Bank 6 pointed out that the effect PSD2 will have on banks depended on the bank. Large banks that have operation in all areas, especially transaction, will be most affected. Other banks, like Bank 6, which has a limited product portfolio consisting of deposits, mortgages and private loans - deposits is the only part that is covered by PSD2, and hence the effect will be limited.

Regarding threats that are enabled by PSD2, Bank 6 sees BigTechs as the biggest threats - Facebook and Amazon. Bank 5, on the other hand, was more concerned about the FinTechs since the interaction with the customer will move from the banks to the third parties and hence, make banks less relevant to their customers. However, Bank 5 also pointed out that when PSD2 was announced a few years ago, the banks focused a lot on the potential threats, but today the focus has shifted to the potentials instead such as collaborations of different kinds which will bring more value-added services.

5.1.3 Small/niche banks

Bank 8 states that in the short run, before the Regulatory Technical Standards and customs are set, no big change will happen due to that there are uncertainties that need to be clarified. Bank 7 states that they are not that affected by PSD2 since APIs have for a long time been part of their core business.

Both Bank 7 and Bank 8 stated that in Sweden, there has already been an effect on the market where many new and exciting FinTechs have entered. Sweden has a good financial infrastructure and by incorporating PSD2 on top of this infrastructure, Bank 7 considered that it will provide better solutions for the customers. Further, Bank 8 stated that PSD2 will make the market more structured which will lead to that new FinTech
services can be released quicker. With this structure, the collaboration between banks and third parties will become easier and both Bank 7 and Bank 8 considered that PSD2 will in the end result in fantastic services for the customers.

However, both banks considered that the scope of PSD2 is too narrow, since it only treats the payment part. Bank 8 stated that there still is a lot of opportunities to make the bank’s operations more efficient and better suited for the customer needs. Therefore, they suggested that a “PSD3” should be introduced within a near future which treats more parts of the bank’s operations, such as mortgages and pensions. Further, Bank 7 said that today, third parties are allowed to do more than they are with PSD2, so when PSD2 is enforced it gives banks the possibility to shut out third parties in some ways.

Regarding the threats of PSD2, Bank 7 acknowledged BigTechs as well as FinTechs as a threat. Bank 7 invests in FinTechs and a reason for this is that they feel threatened by them, but also because they believe in collaborating with them to provide innovative services. Neither of the small/niche banks saw larger banks as a threat since they think that they will provide better services for the customers. They stated that they have the advantage of being smaller and niched since it gives them a more flexible organisation that can adapt better to change, while larger banks will have a harder time adapting. Bank 8 stated that customers today want better interfaces and better services, and that many banks compete mainly by offering the cheapest services. With PSD2 the market will demand more innovative services and that will put pressure on many banks. Bank 8 further stated that they do not see many other types of banks as threats, since they operate in different areas and compete for different customer segments. Therefore, the biggest threat for them is other small/niche banks who can compete for the same market shares. With PSD2, Bank 8 said that it will thus become even more important to know what your customer segment wants. As PSD2 enables banks to collect data from other banks, it will be critical to know what to do with that data, and by knowing what your customer needs it will be easier to create value from that data.

5.1.4 Foreign banks

Bank 9 stated that until now, before PSD2 is enforced, the banks have not been obligated to do anything even if they could. As PSD2 obligates banks to act, the market will open up and it will lead to new partnerships. Bank 10 had a similar view and believed that PSD2 will have a large effect on the market, but emphasized that it is not only PSD2 that is driving the change but also new technologies and changing consumer behaviours. For example, if looking at consumers today, they visit their local bank office on average once every fifth years but visit the bank’s website on average once every second day. However, even though there are different factors that affect the retail banking market right now, PSD2 is an important factor and can be perceived as a catalyst for change.

Before the Regulatory Technical Standards, the market will be messy because of all the unclarity PSD2 entails and hence, PSD2 will not have much effect until then. Further, the new general data protection regulation (GDPR) may complicate the API processing which will slow down the effects that PSD2 has. Bank 10 agrees that in the short run, PSD2 will not affect the market to great extent but that it is important for banks to prepare themselves if they want to stay relevant for their customers. Bank 10 states that most banks have
already started their journey to becoming compliant, so they will be ready to gain benefits from PSD2 when the Regulatory Technical Standards comes into force.

Bank 9 stated that the effect PSD2 will have depends on the type of bank - Bank 9 is a relatively small bank in Sweden and hence, PSD2 will have limited effect on them. Banks that are secondary banks, providing additional services, will be less affected by PSD2 than customers’ first banks because they do not need to give away information to the same extent as the primary banks. Furthermore, Bank 9 believed that in the long run the line of being a bank will blur out and it will move towards being a distributor of financial services - both a supplier and a provider. This will force banks to collaborate with other actors that have different expertise. An example is that banks will need to collaborate with both FinTechs and other banks - in one case to share information which enables customers to use that service, and in the other case to collect information in order to build services in-house. Bank 9 emphasized that this type of “give-and-take” strategy will emerge with PSD2. Bank 10 agreed that PSD2 will open up the market which will lead to much more collaborations between different players: both with new FinTechs but also, in the long run, between banks.

Bank 9 believes that FinTechs will be more of an IT-provider to the banks. A few large FinTechs may enter the market and become a threat for the banks, such as Tink, but the question is if they will be strong enough to be an alternative. Both banks believe BigTechs has the potential of being a big threat. Bank 10, stated that if BigTechs want to move into and disrupt the retail banking market they will, because of their huge customer base and enormous resources. However, Bank 9 pointed out, that BigTechs have not moved into the retail banking market and if they do they will have problem due to their lack of customer service. If for instance a Facebook user gets its profile hacked, Facebook does not help in any way.

Additionally, Bank 9 pointed out that banks are a commodity - all banks offer payment cards but the cards are identical which means that banks compete by offering the lowest price. Another example is loans, where the banks compete by offering the cheapest loans. The question is therefore if banks will be able to move from being a commodity and focus on other things than costs? It is a possibility and if banks succeed with this, the outcome will be very interesting and could change retail banking. To undergo this change, Bank 9 stated that the key is to understand and be able to use customer data. Data enables better understanding of the customers’ needs and behaviours which in turn can be used to create more personalised services that go beyond commodity services.

5.2 Strategies to cope with PSD2

The second part of the interviews served as a discussion on which approaches the banks can take to cope with PSD2. The four strategies that this report proposes were discussed with all banks, to gain insights to what they considered were the advantages and disadvantages of each strategy. Then, the specific strategy that the interviewed bank is considering was further discussed.

5.2.1 Large banks

Strategy 1: Compliance

All the large banks stated that the biggest advantage of taking a bare minimum approach to PSD2 is that it is less expensive than the other strategic alternatives. However, according to Bank 1, banks who invest only in this strategy will not stay within transaction banking in 5-10 years because they will not be able to stay...
relevant for the customers (in form of innovative offerings). To stay relevant and adapt to the coming changes, banks need to start investing in APIs now and those who do not do this will become more niche banks in the future. Bank 2 implied that even though investing in APIs is important, it will not matter which strategy a bank takes within the coming 5 years since the adoption process of PSD2 will be slow. Therefore, focusing on being compliant can be a good idea in the beginning, but after that it will be hard for the bank to compete if it does not create any value from PSD2. Bank 4 agreed with Bank 1 and Bank 2 and stated that banks who do not transform and invest in becoming more digital, will have a hard time competing in the near future.

Further, Bank 3 stated that taking this strategy and having a “wait and see” approach can be good since they are not sure if their customers will want the new services that PSD2 brings. By only complying and not investing too much in more advanced APIs, the bank can shield themselves from making bad investments. Bank 3 wants to differentiate itself by offering simple digital services combined with physical person-person contact. They will do that by keeping many physical offices, at the same time as trying to create partnerships with carefully selected FinTechs.

**Strategy 2: Supplier**

Bank 1 and Bank 4 saw big potential in opening up more advanced APIs. Bank 4 stated that in order to take advantage of the benefits of PSD2, they need to stay innovative and take it one step further. One way of doing this is to offer third parties additional APIs which would give their customers access to more innovative services. Today, both Bank 1 and Bank 4 collaborate with FinTechs and with PSD2, they point out that those collaborations will only become more important. Bank 1 said that since PSD2 increases the competition, banks will no longer have the same monopoly and in order to stay relevant for today’s digital customers, they need to be able to provide the best possible offerings.

Bank 2 also stated that it saw potential in opening up more advanced APIs and becoming a supplier to third parties. However, in the banking market it is important to look at what the competitors are doing and Bank 2 stated that it cannot take too big risks by going out on its own. Therefore, before Bank 2 understands what creates value, they will not provide additional APIs. At the same time, they found it important not to open up to everyone but rather to create partnerships with third party providers. By doing this, only certain third party providers would be granted access to more advanced APIs from which the third party providers could create new services that are based on Bank 2’s customer data. Currently, Bank 2 mainly focuses on customer relationships but with PSD2 they emphasize the importance of managing partner relationships as well. By managing partnerships they will be able to close out some third party providers and only give them access to the mandatory APIs, while opening more advanced APIs to other third party providers.

Bank 3 also highlighted the importance of managing partnerships but for them, the biggest focus will still be on building customer relationships and listening to what the customers want. Bank 3 differentiates itself by having a good relationship to their customers, and they do so by for instance having local offices which provide physical meeting to greater extent than competitors. They will only close down offices when the customers show that they do not want them anymore. In the same way, they will only provide more advanced APIs if the customers demand them.
Strategy 3: Provider
According to Bank 1, Bank 2 and Bank 4, the banks are the first actors to gain benefits from PSD2. To start with, banks will be the first actors to become third party providers, meaning they will collect information from other banks to create their own services. According to Bank 1, all banks will create their own services and so will they. Further, Bank 1 stated that it could also be easy for them, as well as other banks, to collect information through other banks’ APIs and let other third party providers create white-label services which Bank 1 brands as its own. Bank 1 said that this is where the business opportunities of PSD2 starts to change the role of a bank today. The traditional roles will no longer exist and it will be possible for everyone to be everything.

Further, Bank 2 stated that it is a tough process to become a third party provider and that you need approval from Finansinspektionen first. This puts FinTechs and other third parties in a disadvantage compared to the banks who have long been under the supervision of Finansinspektionen. Bank 2 said that there lies big business potential in collecting information through other banks’ APIs, but processing that much information can be hard. Therefore, Bank 2 will collaborate with so called API-hubs who collect the information and manage it for them. This strategy allows them to be able to be closer to the customers, and provide more value to them.

Bank 3 also said that they see the potential in becoming a third party provider but in contrast to the other large banks, it does not see the value in building financial services by itself. There are many innovative FinTechs that they are currently in contact with and collaborating with and thus, Bank 3 wants to provide new services through them instead. Bank 3 believed that by collaborating with FinTechs in this way, they receive new innovative solutions from the FinTechs while Bank 3 can offer knowledge in compliance and security. Bank 3 is careful in their choice of FinTech partners and look for simple solutions that are personalised, since they want to keep the personal service that Bank 3 offers its customers today.

Strategy 4: Open banking ecosystem
Bank 1, Bank 2 and Bank 4 all stated that they see the potential of open banking and intend to create developer portals which are based on APIs. These developer portals will however differ in some ways as the banks intend to offer different degrees of openness towards third party providers.

Bank 1 said that it sees open banking as the future and by combining all previous strategies, Bank 1 aims to create an open banking platform. The platform would serve as a two-sided platform where Bank 1’s customers would be connected to third party providers in a similar way to how Amazon connects sellers with buyers, or how Apple connects iPhone users with app-developers on the App store. Bank 1 said that the first step in creating an open banking platform is to attract developers so that it is as easy as possible to develop financial services on the platform. To do this, Bank 1 needs to provide the right APIs, expert help, documentation, IBM Watson and so on. The external developers, who are the ones providing services on the platform, is the main target group. After pleasing the developers a spinoff-effect would be to collaborate with them and co-create services. The next step would be to, like Amazon or Apple, connect the customers with the third party providers but that is first after the external developers are pleased and have helped Bank 1 develop the platform to make it better. Lastly, the platform could be developed to go beyond financial services and include other services that the customers use on an everyday basis. This concept could turn out
to be bad but they are willing to try it out and see where it leads. Bank 1 said that they are a big bank that will make money in either case and have the possibility to experiment.

Bank 4 further stated that it finds open banking to be the future and that PSD2 acts as an accelerator towards this. However, they differ from Bank 1 slightly as they do not intend to open up towards everyone but instead want to focus on closer relationships with the third parties. This means that only third parties who have been granted by Bank 4, will have access to more advanced APIs on the platform, while the rest of third parties will only have access to the APIs mandated by PSD2. Today, Bank 4 collaborates with several FinTechs but by creating a developer portal they will gain a better infrastructure that will make the process of creating partnerships quicker, which will benefit Bank 4’s customers. On the platform they intend to integrate information from other banks, as well as FinTech services, to create a universal application that offers all services their customers need - a form of “lifestyle app” that makes everyday living easier in a digital way.

Bank 2 stated that there are many different types of approaches to open banking you can consider. All banks will need to open up a developer portal where third party providers can access the bank’s accounts through certain APIs. However, the question is which additional APIs that should be offered on the developer portal. Bank 2 explained that the platform could include both the bank’s own services, FinTech-services or even other banks’ services. Bank 2’s open banking is under development and they are not yet sure which direction it will take. Ideally they want to create a platform where they provide their own services, as well as take in only the best FinTech-services, rather than creating an entirely open platform where anyone could provide their service. However, there are a lot of uncertainties and risks involved in developing such a platform, so even if they aim to create one in the long run they will have to wait and see how it turns out.

Bank 3 does not believe in creating an open banking platform. They say that allowing everyone on the platform makes it harder to have a good relationship with FinTechs and lowers the security. Instead, Bank 3 takes part in various FinTech-events and create partnerships with the FinTechs they believe will bring the highest value to their customers. Bank 3 believes in providing simple digital services and having a local, physical presence and provide personal offerings. If they were to create an open banking platform they would lose their personal touch, and there is a big risk that banks who do take this strategy will lose their relationship with customers to FinTechs and hence, move further down the value chain. Another big challenge in creating an open banking platform is to attract all FinTechs so that they will want to have their services on the platform. This can create competition between banks on who can provide the most, and best, services which will lead to a war on who pays the most kickback to the FinTechs.

5.2.2 Medium banks

Strategy 1: Compliance

Both medium banks believed that it is extremely important to be compliant due to the reputation of their bank. Bank 5 stated that PSD2 is very broad and does not only cover the APIs but also puts high requirements on a wide range of areas that affects different processes. Therefore, it is difficult to get all the processes ready in time and if the focus lays beyond PSD2 the bank may miss the deadline. Bank 6 had a similar view and explained that it is important to act right away because new regulations are constantly being introduced, which means that soon there will be other regulations to comply to and other projects that need attention and resources. Hence, Bank 6 expresses the importance of being compliant to PSD2 before any new
regulations are introduced. However, both banks pointed out that banks in general have the resources to be compliant and therefore all banks will be in time - the challenge will be for the FinTechs. Further, both banks agree that the disadvantage of only complying to PSD2 is to fall behind their competitors and in that way becoming less relevant to their customers.

**Strategy 2: Supplier**

Both medium banks agreed that opening up more advanced APIs is a good business opportunity - with the right business model and innovative ideas there is potential to reap profits from this kind of strategy. Bank 5 pointed out that the degree of opportunity that this strategy entails depends on the type of bank. For instance, banks that have a broad product portfolio will have larger potential to expand their APIs. Further, banks that offer services outside the banking range, such as insurance, will in the future need to have this kind of strategy to increase their value offering. However, even though Bank 6 believes there is much potential with this strategy, they pointed out that there is also risk for the customers since PSD2 puts more responsibility on them. Many customers are not aware of what it means that PSD2 puts ownership of data in the hands of the individual, which may entail a trust issue against the banks. Bank 6, is a relationship banks and losing their customer’s trust will be devastating. Hence, if considering this strategy of opening up more advanced APIs the banks need to establish safe processes to ensure that the customer’s trust is kept.

**Strategy 3: Provider**

Both medium banks stated that all banks will become a provider of services because if they do not they will lose contact with their customers. Bank 5 stated that if this strategy is not considered, the customer contact will move away from the banks to the third party providers which will lower the banks’ profitability. Also, bank 5 pointed out that banks are known for being trustworthy and when PSD2 enables new actors into the retail banking market, the security against fraud may decrease. Bank 5 is therefore worried that if something goes wrong, the customers are going to blame the banks. Bank 6 further stated that there are different approaches to becoming a provider: either by acquisitions, in-house development or through collaborations. Bank 6 is looking at different FinTechs which they can collaborate with and in that way provide new innovative services to their customers. However, Bank 6 pointed out that this is not only due to PSD2 but has to do with the entire digitalization of the retail banking market.

**Strategy 4: Open banking platform**

Bank 5 believed that this kind of platform strategy will increase the value offerings for the customer by making it smoother to access services. However, the transparency that the retail banking market is heading towards, due to PSD2, will create a lot of competition among banks. The large banks have a competitive advantage when it comes to this strategy because they have a large customer base. Therefore, Bank 5 stated that the large banks are the only type of bank that will offer these kinds of platforms, but that large third party providers also have this opportunity since they can offer a good interface for customers. Even though the large banks have an advantage, Bank 5 pointed out that because of their size it is difficult to change since it requires a lot of effort and resources to do it successfully.

Bank 6 stated that all banks will create a developer portal which includes the mandatory PSD2-APIs. This kind of platform can be bought as a standard API management product, which allows bank to easier manage their API based platform, and Bank 6 states that most banks will buy such a product rather than creating it in-house. Bank 6 pointed out that this platform can then easily be used to open up more advanced APIs,
which allows third party providers to build their services on the platform. Bank 6 explains that it will be too expensive for them to develop services in-house and the lead times will be too long. However, this platform will only be one-sided (bank-developer) rather than two-sided (developer and customer have direct contact).

5.2.3 Small/niche banks

**Strategy 1: Compliance**
Both small/niche banks are already compliant-ready for PSD2 so simply complying to the new regulation will not be a problem for them. They are already using APIs as a core part of their business so simply complying would mean that they would have to close down some APIs. Therefore, this strategic alternative is not an option for either Bank 7 or Bank 8 since it would make their current offerings worse. They do not consider that small/niche banks will have a problem with complying due to that they are more flexible, so small/niche banks will have it easier to create value from PSD2. Bank 7 stated that it will be harder for larger banks to create value from PSD2, so perhaps this strategy is a good option for them - at least to begin with. However, both banks emphasized the importance of going beyond compliance in the long term, and that banks who only comply will lose their competitiveness. Furthermore, Bank 8 stated that with PSD2, the customer segments that different banks target - especially small/nilsch banks’ customer segments - will become clearer which means that banks will need a more innovative and specialized strategy. Bank 8 already operates in markets that are under pressure in regards to prices, therefore it is even more important for them to differentiate themselves by offering innovative additional service to enhance the customer experience.

**Strategy 2: Supplier**
Both Bank 7 and Bank 8 will create more advanced APIs in order to reach out to more customers and to be able to provide better services. Bank 7 stated that they will not charge third parties for using their additional APIs - instead they see it as a competitive advantage. Both banks see the opportunity of providing more advanced APIs because it enables them to be more innovative and as a result of providing this service to third parties, they intend to create collaborations that will benefit both parties. Bank 8 stated that PSD2 enables collaborations and pointed out that PSD2 was the reason for their current collaboration with Tink. Furthermore, Bank 8 pointed out that they already have APIs that goes beyond PSD2 which they offer to selected partners, but emphasized that this strategy has much more potential to enhance all areas of financial services - e.g. improving the mortgage process and improving the overview of peoples pension.

**Strategy 3: Provider**
Bank 7 stated that they will become a third party provider and create their own services. That is also one of the reasons for collaborating with FinTechs. By doing this they will be closer to their customers and retain ownership. However, for Bank 7 the ownership of customers is not the most important part, but instead they want to be an infrastructure for FinTechs and collaborate with them. By focusing on providing this infrastructure, Bank 7 will sometimes be close to the customer and sometimes not. Further, Bank 8 already collects information from other banks, and with PSD2 they will collect more information which makes it possible for them to improve their services. They stated that as PSD2 creates new opportunities, it will be important to collect data and be able to analyse it in order to understand customer behaviours. An important part will be to understand your customer segment and then know what to do with the collected data.
Strategy 4: Open banking platform

Since the financial crisis in 2008, a lot of new regulations have been enforced, which has forced Bank 8 to change their organisational structure - from being a silo organisation to working more agile. Bank 8 pointed out that they already have, for some time now, opened up more advanced APIs and provided services utilizing data from other banks, which gives them a great position when PSD2 is enforced. They also emphasized their history of collaborating with FinTechs, which has been one of the keys to their success and PSD2 will therefore be a great opportunity because it will lead to an ocean of new FinTechs into the retail banking market.

Bank 7 stated that they appreciate the concept of open banking and that going beyond PSD2 and opening up for other parts of the bank’s services is important, and this is something Bank 7 already works with. Bank 7 said that the entire retail banking market is heading towards the same direction as the electricity- or telecom industry, where everyone provides the same commodity services. It is therefore important to be able to differentiate the bank’s offerings and for Bank 7, open banking is a big part of that. However, even though they want to take advantage of opening up, creating an open banking platform will be hard for Bank 7 due to their smaller size. In fact, they are sceptical if the retail banking market will move towards open banking platforms at all. If comparing it to Apple who have created an open platform, they have only been able to do that through their strong branding, and Bank 7 does not consider that banks in general have the same brand appeal. Bank 8 had a similar view and believes that large banks will face challenges with their platforms because of regulatory issues and their inability to quickly adapt to change. Even so, Bank 8 pointed out that large banks have the strength and capabilities to succeed with the change, but it takes time. Further, Bank 7 stated that if open banking platforms would emerge there would not be room for many of them, and then Bank 7 would have to compete with BigTechs and large banks, which would be hard for them. Instead, Bank 7 will leverage open banking by becoming a producer of services that can be consumed on other platforms - for instance FinTech-platforms.

5.2.4 Foreign banks

Strategy 1: Compliance

Both foreign banks stated that they see PSD2 as an opportunity. They considered that there are not any opportunities of only being compliant, since it means giving away information for free and gaining nothing in return. Bank 9 stated that there could be some small/nisch banks who only have part of their operation which is affected by PSD2, and hence could benefit from only being compliant. However, both foreign banks are sceptical towards this strategy and believe that you need to create more value from PSD2.

Strategy 2: Supplier

Both banks believe that all banks will go beyond PSD2 and become a supplier of more than the mandatory information. Bank 9 stated that there are several business opportunities of providing more advanced APIs because it enables more information which in turn creates potential for better services to their customers. Bank 10 had similar view as they pointed out that opening up more advanced APIs will enable more advanced services based on customer data which will increase their value offerings. Furthermore, Bank 9 stated that banks can become a supplier of information through two different approaches - either by collaborating or by creating a profit driven model. However, there are risks associated with this strategy -
when banks give out more information than they are required to by PSD2, it increases the potential for leaks in case of e.g. hacks.

**Strategy 3: Provider**
Both banks believe that every bank will collect information from others and use it to provide better services. Bank 9 stated that it will be easy for non-banks to collaborate with other banks (e.g. Tink) but collaboration between banks may be difficult because today they perceive each other as competitors. However, Bank 9 believes that the value lies in understanding the customer needs - with the data that can be collected after PSD2 there is enormous potential for building interesting services based on the customer data. Furthermore, Bank 9 pointed out that if a bank chooses to become a third party provider it means that you are closer to the customer and can retain the customer ownership, which will lead to higher profitability. Bank 10 had similar views as they stated that owning the customer will be of great importance because the profit margin is better, but also because it enables a better understanding of the customers' needs. However, Bank 9 pointed out that after PSD2 - since the competition will be much higher - being close to the customer will be much harder and require more investments. Providing a wide range of services will therefore be too expensive and the key will instead be to differentiate the bank's strategy - do what you do best and let someone else do what they are good at, because it will be impossible to do everything yourself. Therefore, partnerships will be the key to succeeding with PSD2, and that is something Bank 9 and Bank 10 already do, but they will go much further.

**Strategy 4: Open banking platform**
Bank 10 said that they see open banking as the future and an opportunity to combine all the previous strategies. They stated that by opening up their infrastructure to third parties, in which the third party developers can build services by utilizing the data, will enable them to stay innovative in the fast changing market. In time, they will open up more advanced APIs that reach beyond PSD2, consisting of e.g. APIs with their customers' mortgages which will make it possible for the third parties to create mortgage services. By sharing more of their customer data in this way, Bank 10 stated that they will value opportunities of open banking. They stated that it is their ambition to be the leader in digital solutions and be close to their customers, and therefore it will be important to continue developing new digital solutions that meet the customers' needs.

Bank 9 believes that PSD2 alone is too small to work as a catalyst towards open banking, but together with other factors such as changing consumer behaviours and new technologies, it will lead to open banking and new innovative solutions. Further, Bank 9, stated that it will be difficult to create business models that support open banking platforms because it brings challenging questions that need to be solved, such as “what is openness?” and “how will the model generate revenues?”.

Furthermore, Bank 9 stated that some banks will use an open banking platform strategy, but there will not be only one dominant platform. Bank 9 gives an example of the online travel industry where even though companies such as Trivago have entered the market and taking market shares, companies such as TUI still exist. It is not like Trivago has stolen all of TUI's market share but rather that they speak to different kinds of customers. In the same way, Bank 9 does not think that there will only be one banking platform that serves all the customers. Bank 9 believes that the retail banking market is too local, with local infrastructures, for one platform to emerge as the dominant one. Therefore, every large bank will have their own platform which FinTechs can connect to. Bank 9, pointed out that if considering it from a FinTech perspective, why would
the FinTechs only want to join one platform? Imagine a large bank that has 40 percent market share, why would the FinTechs be satisfied with reaching only 40 percent of the market when they could connect to all platforms and reach 100 percent. Further, Bank 9, stated that global banks who are active in many countries, could have an advantage if they were to create an open banking platform. Even if many banks work on local markets, FinTechs are more likely to go global and by connecting to global banks’ platform they would have a much bigger reach.
6. Analysis

This part presents an analysis of the empirical findings and provides answers to the research questions. Firstly, the two sub research questions are answered, which helps in answering the main research question. The analysis provided in answering the research questions is then critically discussed in order to provide an assessment of the empirical findings’s legitimateness.

6.1 SRQ1: How will PSD2, from a bank's perspective, affect the Swedish retail banking market?

The European Commission’s (2015) main objective with PSD2 is to contribute to a more open banking market, and to accomplish that the directive focuses on enhancing: the efficiency of the market, the competition and choice, and the consumer protection. However, from the interviews, the majority of the banks agree that PSD2 will not lead to the high innovation it intends, because after the regulation the requirement for becoming a third party provider will be almost as strict as to becoming a bank, and thus makes it more difficult for FinTechs to enter the market. Furthermore, there are already a lot of FinTech companies in the Nordics today, which offer services by utilizing consumer information, such as Tink and Bofink, and those companies will be forced to change their infrastructure and comply to the new regulation. Therefore, in the beginning of PSD2, most banks agree that the efficiency of the market will stiffen and inhibit the competition and choice.

Furthermore, most banks agree that PSD2 needs to be refined and cover more than payment services. Especially the small banks that stated that they are afraid that, when PSD2 is enforced, large banks will shut out third parties and small banks from their infrastructure that is not covered by PSD2. Even though most of the interviewed banks believe that PSD2 will not entail the high innovation it intends in short term, they agree that in the long term, it will serve as a catalyst towards a new banking landscape. The European Commission first introduced PSD, which did not have the wanted effect on the market so they revised the regulation and introduced PSD2. This shows the persistence and determination the European Commision has for achieving a more open market. Hence, if PSD2 is not sufficient the enforcement of a new PSD3 is highly possible.

Regarding the threats that PSD2 entails, one of the most discussed matters are FinTechs. The results in this report show that the size of the banks is important for how they perceive FinTechs as a threat. Large banks do not consider FinTechs as a big threat because they are too small to compete with them. The large banks seem to consider that the FinTechs do not have the capacity to steal market shares and to succeed, most FinTechs therefore need to collaborate with the banks. Furthermore, medium sized banks see FinTechs as a threat because the interaction with the customers may move from the banks to the FinTechs, which means that they become less relevant to their customers. Foreign banks have a similar view but only believe that a few large FinTechs, such as Tink, have the potential of threatening banks. Lastly, small/niche banks perceive FinTechs as their biggest threats because they compete with similar services. They both adapt well to change, compete through innovation and appeal to comparable customer segments.
Further threats discussed in the interviews were BigTechs. In overall, all banks agrees that BigTechs, such as Amazon and Google, are the biggest threat for the retail banking market because of their big customer base, massive resources and expertise of utilizing large amounts of data. However, most banks are not worried that they will enter the retail banking market due to different reasons reaching from: that the retail banking market is not appealing enough, to BigTechs lack of capabilities regarding for instance customer service. Even if BigTechs were to enter the retail banking market, it is not likely that they would enter into Sweden, at least not for a long time, since their target markets are in North America and Asia.

Furthermore, it is interesting that the banks only mention FinTechs and BigTechs as the big threat and focus little on the competition between banks. In the Swedish retail banking market, banks have had their specific role in the market for a long time. There have been four large banks that have dominated the market for decades, providing a wide range of financial services, and a couple of medium and small sized banks that have had a more narrow focus. This could be the reason why they do not perceive each other as a big threat, because they are familiar with one another and their different capabilities. BigTechs, on the other hand, have a heritage of disrupting industries and since they are unknown in the retail banking market it makes them unpredictable. Banks entire business models is based on reducing risk and the unknown is hard to prepare for which could be why the banks fear BigTechs more than each other.

6.2 SRQ2: How will banks, from a theoretical aspect, try to reach competitive advantage from PSD2 and will the concept of open innovation play a significant role?

Of all banks, the large banks have the biggest customer- and resource base which gives them the best competitive position to gain benefits from PSD2. Most of the banks consider that only complying to PSD2, is a poor alternative as the retail banking market is changing in such a fast pace. In this dynamic market, caused partially by PSD2, it is important to gain a competitive advantage over competitors. Historically, large banks have had a competitive advantage in the retail banking market due to their size, and have been able to compete against all actors on the market through offering commodity services. With digitalisation in the forefront of changing the retail banking market, and PSD2 which allows new entrants into the market, traditional retail banking is challenged. Therefore, the competitive advantage that all banks have had for centuries is no longer sustained and needs to be reconsidered.

PSD2 allows new entrants into the market and therefore it is important for banks to track the new competition, at the same time that the banks need to consider what capabilities they have to face the new entrants. This since all the large banks try to achieve a competitive advantage through collaboration with FinTechs in order to gain the resources needed to offer innovative services to their customers. Before PSD2, banks did not have much competition but since PSD2 enables new innovative FinTechs into the market the competition for services will increase. As Barney (1991) states, in order to reach a strategic competitive advantage from a Resource-Based view, the company’s resources must be: “valuable”, “rare”, “inimitable” and “non-substitutional”. Providing a wide product portfolio is difficult and expensive, and as PSD2 increases the competition, it will be even harder. Hence, to reach a competitive advantage after PSD2 the banks need, as the foreign banks stated, to understand its resources, capabilities and do what they do best and let someone
else do what they do best. In the long run, as the foreign banks stated, the role of the bank will be blurred out and everyone will become providers of financial services, both a supplier and provider.

Further, in the fast changing financial landscape it can be argued that banks need dynamic capabilities to cope with PSD2 and the changes ahead. As many banks state, PSD2 will in the long run demand that you stay innovative and a big challenge for especially the large banks will be their ability to adapt to change. As Teece et al. (1997) state, a firm needs to be able to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. This is supported by the small/niche banks, who consider that flexibility is important to cope with change and that smaller banks have an advantage over bigger banks when it comes to this. Therefore, small/niche banks can gain a competitive advantage over large banks due to their ability to quickly integrate and reconfigure their resources and capabilities. The foreign banks state that today, the banks are a commodity and that in the end the banks compete by offering the cheapest services. If the banks are to move away from being a commodity it can be argued that they need dynamic capabilities which makes it possible for them to transform their business models. As Jiang (2014) states, this means that banks would have to discard idle resources, reuse resources in innovative ways, or gain new resources from acquisitions and strategic alliances. If any analysis can be made from this, it is that all banks - even though they do not mention the specific name - consider dynamic capabilities as one of the most important ways to stay competitive. The results from the interviews show that most banks focus on benefiting from dynamic capabilities mainly through strategic alliances and collaborations with third parties. For instance, by partnering up with FinTechs so that the banks can offer the FinTech’s services on their platform.

In order to gain these dynamic capabilities, many banks are considering an open innovation approach. As many of the large banks state, even though PSD2 will not have a big impact within the coming years, it will in the long run be important for banks to create innovative solutions for their customers. Therefore, the majority of the large banks will attempt to reach competitive advantage through open innovation and are in the early stages of creating an open banking initiative, with the purpose of not only opening up the mandatory PSD2-APIs but taking it several steps further and exploring the true business opportunities that PSD2 entails. This approach is in line with Tidd’s & Bessant’s (2016) view of open innovation which is meant to reduce risks, time and costs associated with new technologies and markets. By opening up towards more innovative actors, the large banks will be able to gain external resources as well as reveal internal resources. By doing this they aim at co-creating new innovations with external actors which will evolve the entire retail banking market, rather than just improving their own services. Through this, the large banks embrace Dahlander’s & Gann’s (2010) research by adopting both inbound and outbound innovation. However, more specifically, if they will use sourcing, acquiring, revealing or selling either inbound or outbound has not been made clear and the banks themselves do not know yet which of these types of open innovation they will pursue. Since there are too many uncertainties, it can be argued that the banks will wait and see which approach that will give them the most value.

Further, the foreign banks also believe that open innovation will play a big part of the future of banking and consider that by becoming both a provider and supplier, it will create new types of collaborations with experts in different fields. This indicates that banks’ competitive advantage will be as an infrastructure provider, experts within financial services and experts within compliance. By offering this to other actors, in return
banks will be able to source innovation in form of for instance FinTech services. Therefore, foreign banks consider that by offering outbound innovation to external parties, they will as a result gain inbound innovation in return. This is in accordance with Henkel (2006), who states that by revealing outbound innovation, the organisation draws out collaborations which contributes to more innovative solutions.

The medium sized banks agree that PSD2 will act as a foundation for open banking, yet they embrace open innovation to a much lesser extent than the large banks. This could be because they have less resources and an inferior position on the market compared to the large banks and cannot afford to go out on their own and hence, need to wait and see what other banks do first. Due to the lack of resources, they will not be able to gain a competitive advantage by going head to head with the large banks. Further, their less aggressive approach towards open innovation could depend on that they emphasize that it will become harder to become a third party provider due to compliance issues. Since PSD2 increases the competition among FinTechs it means that they have to collaborate with banks to survive, and this gives banks a leverage which they can convert into a competitive advantage. Therefore, the medium banks may not see the point in handing out internal resources and knowledge to FinTechs (outbound innovation). Instead they will pursue inbound innovation by acquiring or sourcing innovations from FinTechs.

The small/niche banks on the other hand, see open innovation as a tool. Their smaller size makes them flexible and as previously stated gives them the possibility to leverage from dynamic capabilities. Due to their smaller size, they become more dependant on others and focus on co-creation rather than disrupting the market on their own. Due to this, they do not see the large or medium sized banks as a threat but instead, see other small/niche banks and FinTechs as a threat since they operate in similar ways.

**6.1 MRQ: What is the nature of the strategies put in place by retail banks in Sweden to cope with PSD2?**

The banks agree that the retail banking market is changing rapidly and even though there are many factors that contribute to the change such as changing consumer preferences and digitalization, PSD2 is a significant factor that will speed up the development. Hence, in the long term it will act as a catalyst to a more open market and change it significantly. Therefore, banks are preparing for this change by reconsidering their business models. The challenge of mapping the banks in the strategic framework in chapter 4.2 is that all interviewed banks will for sure be compliant, but in the future many of the banks state that they will also open up more advanced APIs and provide third party services. Thus, most banks will to some extent take both strategy 1, 2, 3 and 4. However, even though the strategic framework cannot be used to map the strategies, it can be used to identify trends and be a tool for understanding the development of the Swedish retail banking market. Therefore, the answer to this research question will first provide an analysis of the strategies that banks in Sweden are considering, and then illustrate the trends of the Swedish retail banking market in the strategic framework - as seen by the coloured arrows in figure 12.

Regarding the strategies, most banks stated that they will first focus on being compliant which represents the bottom left square in strategic framework, see figure 12. In the long run however, the majority considers that if you do not have a more innovative approach you will have a hard time competing within retail banking.
Therefore, the banks who do not embrace one of strategy 2-4, might not be able to sustain a competitive advantage.

After becoming compliant, the banks have different approaches towards coping with PSD2 and the changes ahead. The majority of the large banks will move towards strategy 4, which represents the top right corner in figure 12, but the pace in which they reach it differs. Two of the banks are in the process of creating an open banking platform, while one of the other large banks will create an open banking platform but is waiting to see how the other banks act before they invest further. The last of the large banks has a wait and see approach and will not invest in open banking due to that it does not coincide with their existing strategy. However, since the other banks are clearly moving towards open banking it is only a matter of time before the market changes and customers expect more from them, which indicates that in the future they will also have to move towards open banking. From this, it is clear that two of the large banks are going head to head and trying to position themselves as the most digital and innovative banks, and by doing this they truly embrace the concepts of dynamic capabilities and open innovation, as discussed in sub research question 2. After becoming compliant (strategy 1), these two large banks intend to move directly to strategy 4, as illustrated by the navy blue arrow in figure 12. The other banks, with a less aggressive approach, try to reach a competitive advantage by focusing on their core business and waiting to see the changes on the market. One of them intends to only focus on strategy 1, while the other one will most likely move towards strategy 4 since they are in the process of creating an open banking approach. Further, as this bank states that it is important to first see how the other large banks act - and since two of the other large banks clearly are moving towards strategy 4 - it indicates that this bank definitely will move towards strategy 4 as well. However, this bank states that they will first become a third party provider which indicates that they will take a detour towards strategy 4, as shown by light blue and grey arrows in figure 12.

Regarding the medium sized banks, it is clear that they do not have the same approach as the large banks. Even though they seem to consider that open banking is a good approach, their capabilities and resources are limited and will therefore not attempt to create an open banking platform. The medium sized banks cannot afford to focus on becoming compliant at the same time as investing in open banking platforms, so before they become compliant they cannot start investing in innovation. Therefore, the first step after becoming compliant, for the medium sized banks, is to become a third party provider and thereby move into strategy 3, as seen by the light blue arrow in figure 12. Since the medium sized banks do not have the same power as large banks, this can be a good approach as it differentiates them from the large banks and lets them focus on different customer segments. By becoming a third party provider, the medium sized banks can utilize data from other banks which will give them better insights to their customer segments and provide them with what they want. Both medium sized banks further stated that they see potential in opening up more advanced APIs but due to security measures involved they will not open up more advanced APIs in the short run. However, in the future they see business potential in this which indicates that they will move into open banking. How long this will take is uncertain and is not planned for, but since the medium sized banks are pressured by how the large banks act, it suggests that the medium sized banks will eventually move in the same direction. Therefore, even though the timeline for this is very uncertain, the medium sized banks will eventually move into strategy 4 as well, as shown by the grey arrow in figure 12.

The foreign banks consider similar strategies as the large banks. Bank 10, was one of the first to launch their sandbox platform and have been in the forefront of the market regarding PSD2. They are clearly trying to
position themself as a digital and innovative bank. They have the resources and capabilities of being compliant and at the same time preparing for an open banking approach. Hence, Bank 10 will move directly to an open banking approach as shown by the navy blue arrow in figure 12. Bank 9, on the other hand, have only a small part of their business in Sweden and therefore their Swedish office is focusing on complying to PSD2. However, Bank 9 stated that their company has a global reach and therefore can benefit a lot from an open banking approach, so their head office, outside Sweden, is focusing on an open banking approach and when they move towards this strategy the Swedish office will follow. This shows that Bank 9, even though they are only complying in Sweden at the moment, will move towards strategy 4. However, from the empirical findings, it is hard to interpret which path they will take towards this strategy - either they will go straight towards strategy 4 as shown in figure 12, or they will at first become a third party provider and then move into an open banking approach, as shown be the light blue and grey arrows in figure 12. As the foreign banks have a global reach they consider that this gives them a competitive advantage, and since they are large banks they have the resources and capabilities to compete in local markets such as Sweden.

The small/niche banks are only partly affected by PSD2 because most of their offerings do not cover payments, which entails that they have no problem of complying. Further, their main strategy lies in being innovative so that they can provide a better customer experience than their competitors. They have therefore already, for some time now, explored the open banking approach, with close collaboration with FinTechs - providing them with customer information through APIs that goes beyond PSD2 and offered services based on customer information. This mean that the small/niche banks already use strategy 4, as seen by the orange circle in figure 12, and with PSD2 they will explore it even more.

To summarize, it is clear that the market is heading towards an open banking approach. However, the path differs between banks but even so, significant trends have been discovered from the analysis. All banks will focus on becoming compliant but due to differences in size, capabilities and resources, the banks try to differentiate themselves through different strategies. Some banks will attempt an open banking approach immediately, as shown by the navy blue arrow in figure 12, while others will start by becoming a producer, as shown by the light blue in figure 12, and from that decide whether or not to move into open banking, as shown by the grey arrow in figure 12. What has been made crystal clear from the analysis of the empirical findings, is that no banks will start off by taking strategy 2, but rather take strategy 3 at first and then expand into strategy 4 and hence, explore the opportunities of open banking.
Figure 12 illustrates the strategic trends of coping with PSD2 in the Swedish retail banking market.

Strategic framework to reach competitive advantage

- **Strategic advantage**: PSD2 APIs - Premium APIs
- **Competitive positioning**: Information collector - Information provider

- **Strategy 1**: Comply
- **Strategy 2**: Distributor
- **Strategy 3**: Producer
- **Strategy 4**: Open banking ecosystem

*Figure 12, illustrates the strategic trends of coping with PSD2 in the Swedish retail banking market.*
It seems that the smaller the bank is, the bigger they see FinTechs as a big competitor. This seems reasonable as the small/niche banks have many similarities to FinTechs and hence, are trying to differ themselves through the same competitive advantage. Not many large banks however, see FinTechs as a big threat and this can arguably be naïve. Nevertheless, one of the large banks did point out the importance of keeping track of FinTechs since they have been underestimated in the past, which has led to the rise of companies such as Tink and Klarna. The reason for why large banks do not see FinTechs as a big threat can most likely be explained by that they do in fact keep track of FinTechs through participating in various FinTech events and being part of FinTech hubs etc. The banks put a lot of resources in staying up to date on the latest FinTech services which has made it possible for them to collaborate with them and hence, they see FinTechs as potential business partners rather than threats. Further, all banks state that BigTechs are the biggest potential threat, but do not think it is likely that BigTechs will enter the retail banking market due to various reasons. The question is if this is reasonable and what would happen if the BigTechs would enter the market. Would banks be able to compete or would they die out? It can be argued that due to the BigTechs’ size and capabilities, the banks would be considerably challenged. This is definitely one of the biggest factors to what would disrupt the entire market - a good example of this is when Apple entered and disrupted the mobile phone market by introducing the iPhone.

Additionally, it is odd that no banks mention other banks as a threat. In this fast changing financial landscape, where they see FinTechs as business partners and BigTechs as unlikely challengers - and where they do not mention any other threats - does that mean that the banks consider that they do not have any threats? It can be argued that they should see each other as threats and that especially medium sized banks should be concerned. They will have a hard time competing with large banks’ initiatives to becoming more innovative, at the same time as small/niche banks already are innovative. Further, it can be discussed that large banks should see foreign banks as threats since they intend to take similar strategies. Small/niche banks should see larger banks as threats, as PSD2 pushes them to become more innovative which perhaps lets them enter the small/niche banks’ territory. The question is why no other bank sees each other as threats? From the analysis it was stated that it could be due to that the banks in Sweden have always had their specific territories, but with the fast change that the entire financial landscape is going through and with PSD2 that is pushing that change forward within retail banking, the boundaries of those territories are loosening up. This means that the perception of what a bank is today is changing and as many of the interviewed banks state, the roles of the banks will become fuzzy.

Further, most banks have high intentions to innovate which they have not historically been known for. It can be argued that large banks will not be able to change or and the time it will take to observe any significant change will be longer than predicted. The large banks ability to change can be questioned as most of them for instance are tied into old legacy systems that might not be compatible with the changes they intend for. This is only one factor to why the large banks might not be flexible enough to change. Another one is that in large organisations, internal politics are always a problem when dealing with fast changes - every decision needs approval from upstairs, which takes time. Furthermore, as the majority of the banks state, PSD2 is a catalyst for open banking and that will change the underlying business models for banks. This means that current services in the bank, that generate a lot of money, need to change to stay competitive in the future. The
leaders of those departments have a lot of power because they generate significant amount of revenues for the banks and their bonuses are based on the departments performances, which may lead to a lot of resistance for change. The challenge will be to convince these people that change is needed to stay competitive in the future. Further, it is important for the board and the CEO to understand the value of moving away from what is working right now to invest for the future, and their ability to communicate that throughout the organisation.

The empirical findings of this study further concludes that all the interviewed banks are heading towards open banking, but is it reasonable to think that all banks will be able to compete with that? There are different approaches to reach open banking where some banks are taking a “wait and see approach” and others are heading towards open banking right away - the strategies have their own benefits and risks, but what all have in common is that they collaborate with FinTechs to innovate externally. Hence, the ones that are able to attract the FinTechs will reach a competitive advantage. If all banks are going to collaborate with FinTechs, who will be able to attract them? It can be argued that the success of attracting FinTechs lies within two areas: the platform’s interface and the collaboration process. The ones who are able to provide the most user-friendly interface on their platform, which enables FinTechs to easily understand and connect to it, will be successful in attracting FinTechs. It can also be argued that for banks to successfully attract FinTechs to their platform, the collaboration process needs to be easy. Firstly, as mentioned earlier, banks are tied into old legacy systems which make every decision time consuming, while FinTechs want to move quickly. To be able to attract FinTechs, the decision time and process need to be as short as possible and the banks that are able to deliver this will have a competitive advantage. Secondly, FinTechs are young, innovative companies that want to change the status quo of the entire industry and thus want to focus all their efforts on improving the business. Operating in the retail banking market entails a lot of paperwork and regulatory issues that need to be followed, which many FinTechs are not prepared for and lack the capabilities for. The banks on the other hand, are experts in this areas and to attract FinTechs they need to offer this expertise to make it as easy as possible for the FinTechs to operate.

Further, the empirical findings and analysis show that even though it is clear that most banks will embrace open banking, it is has been hard to define exactly what open banking is. The term open banking varies between banks and this study shows that even though most banks in the Swedish retail banking market are considering an open banking approach, they will not provide the same type of platform. There are various types of open banking approaches, where some banks see open banking as a more collaborative nature, meaning that they will work closer and more open with chosen third party providers. By doing this, the banks not only let third party providers build their services on top of their infrastructure, but also provide their expertise regarding for example compliance issues. Other banks see open banking as a “give-and-take” strategy where they give away certain information to third parties in return for other information - this way the banks focus on what they do best and let others do what they do best. This will lead to more open collaborations that focus on improving the entire retail banking market, rather than improving individual banks’ services. Lastly, some banks see open banking as providing a completely open two-sided platform (the customers and third party providers have direct contact), where all authorized third party providers have complete access to the platform in order to provide their services to the bank’s customers - much like how Apple connects their customers with third party providers on the App Store.
In regards to creating an open banking platform, some banks are looking into creating two-sided platforms. In order to succeed with a two-sided platform, the literature emphasizes the importance of considering the degree of “openness” on the platform. The literature states that the platform needs to be open enough to achieve a network effect, but not too open because it may lead to a negative network effect which means that the customers have a hard time finding the services they want, or that the quality of the services drop. The degree of “openness” will play a significant role if the strategy is going to be successful, especially in the retail banking market where the banks’ customers consider “trust” to be one of the most important attributes. This creates even more challenges for building a two sided platform in the retail banking market. Hence, if the customers experience bad quality content on the platform, it may lead to a loss of trust for the platform which leads to decreased trust for the bank in general. Even though the open banking platform is protected by PSD2 and only allows third party providers who are approved by Finansinspektionen - which decreases the number of fraudulent companies - FinTechs in general have lower security than banks. Therefore, the degree of “openness” will be a huge challenge for banks that are considering multi-sided platforms, but finding the right “openness” will also be the key for succeeding.

Furthermore, for a two-sided platform to be successful it needs to attract enough users to achieve a network effect, which history has shown is very difficult. There are several initiatives in the Swedish retail banking market where individual banks have tried to launch networking products on their own, but failed because they were not able to attract enough users to achieve a network effect. An example of this is when Swedbank introduced their own payment app, Bart (Privata Affärer, 2014). However, there are other successful examples where big banks have come together and created a mutual platform - such as Swish in Sweden. Swish succeeded because they were able to reach enough users to achieve a network effect, which was accomplished because all large banks’ customers had access to the platform - if an individual bank would have attempted to create Swish alone, it would never had worked.
8. Conclusions

The purpose of his study has been to explore the nature of strategies different banks, that operates in Sweden, are considering to cope with PSD2, to gain an understanding of the future development of the market. This section presents the conclusion of the study and summarizes the most important findings.

To conclude, according to the banks in Sweden, the short-term effects of PSD2 will not be as large as it intends due to stricter rules for offering payment services and the limited scope of the regulation. Therefore, many banks proposed the enforcement of a new regulation (PSD3) that reaches beyond payments and includes other parts of retail banking, such as mortgages and pensions. However, in the long run, most banks state that PSD2 will act as a catalyst for a new retail banking landscape and that banks who are not prepared will not stay in transaction banking in the future (approximately 5 years). Regarding the competition that PSD2 enables, all banks perceive BigTechs as a potential threat because of their large customer base, enormous resources and heritage of disrupting markets. However, the banks do not believe that the BigTechs will move into the retail banking market due to a variety of reasons. Furthermore, the size of the banks determine if they perceive FinTechs as a threat. Small/nische banks compete with similar offerings as FinTechs and therefore perceive them as a big threats, while large- and foreign banks have wider product portfolios and therefore see FinTechs as potential business partners rather than a threat. The study also concludes that banks do not perceive each other as a big threat, which we argue is due to the set roles banks have had in the Swedish retail banking market for years.

As for the strategies that banks in Sweden are considering for coping with PSD2, it is clear that the market is heading towards an open banking approach. However, the path towards open banking differs between banks and it has been made clear that the time it will take to reach open banking, as well as the degree to how much banks will embrace open banking, will differ between the types of banks. Significant trends have been discovered from the analysis that all banks will focus on becoming compliant but due to differences in size, capabilities and resources, the banks try to differentiate themselves through different strategies. The majority of large banks will try to gain a competitive advantage by embracing an open banking approach at once. They have a big customer base which attracts FinTechs, as well as the needed resources and capabilities to create an open banking platform which puts them in a first mover position to reap the benefits of PSD2. As for the foreign banks, they see the same business opportunities as the large Swedish banks, but will at first attempt an open banking approach in their main markets before they introduce it to the Swedish market. Further, the medium sized banks also see the potential of open banking but due to their lack of resources and inferior position in the retail banking market compared to the large banks, they cannot afford to go out on their own and hence, need to wait and see what the large banks do first. Lastly, the small/niche banks claim to already have an open banking approach but with PSD2 they will be able to explore it even further. Their smaller size and flexibility gives them a competitive advantage since it makes it easier for them to adapt to change. However, since they are much smaller than the large banks, they will not compete by creating an open banking platform but instead try to create innovative services in collaboration with FinTechs - by doing so, they reach out to a different customer segment.
From this it is clear that most banks will embrace open banking, but it is has been hard to define exactly what open banking is. The term open banking varies between banks and this study shows that even though most banks in the Swedish retail banking market are considering an open banking approach, they will not provide the same type of platform. Firstly, the banks will either provide a one-sided platform or a two sided platform and secondly, the degree of openness on the platforms will differ. Further, in these open banking platforms, this study concludes that the most important aspects to gain a competitive advantage will be: the banks’ ability to attract FinTechs on to the platform, the safety aspects of the platform, finding the right degree of openness of the platform, and if the platform manages to reach a network effect. Only time will tell how these platforms will evolve, and the question if all banks will be able to compete by providing an open banking platform remains.
9. Sustainability

This study focuses mainly on the economic and social aspects of sustainability. PSD2 is a regulation that will have many benefits for the customers because it will encourage innovation which in turn enables better and cheaper services. PSD2 also forces banks to open up and change, which this study argues will encourage the majority of the banks to take the initiative to go beyond PSD2 and become more transparent, which will significantly enhance the economic and social benefits for the customer. However, as PSD2 obligates banks to provide account information, with the customers’ consent, it may lead to security issues since third party providers have in general lower protection against fraud than banks. This security aspects may cause negative effects on the social aspect of sustainability. However, this study shows that the security issues plays a role in the banks’ choice of strategy and they emphasize the importance of keeping their customers’ trust to gain a competitive in the future.

Furthermore, even though there are alot of benefits for the customers from PSD2, it is worth mentioning that the changes PSD2 entails may cause negative effects on the bank’s employees. With new technology and digitalisation many of today’s manual tasks may be digitised in the future and thus lead to massive layoffs, which already can be observed in the retail banking market today. Since, PSD2 is pushing the development forward it is of importance for banks to protect and take responsibility for their employees by finding new areas of work.
10. Future research

This study has explored the nature of strategies that different banks operating in Sweden are considering to cope with PSD2. Even though different banks are considering different paths the study has concluded that the retail banking market is moving towards open banking. The authors therefore suggest that future research explores the open banking strategy on a deeper level. It would be of interest to research how the different open banking platforms will work, and to further research the network effect needed to successfully achieve an open banking platform.

Further, this study is delimited to an industrial perspective and little effort has been put on how the strategies are going to be implemented into an organization. The authors therefore suggest that future research should explore the functional and organisational perspective, by studying how the strategies will be implemented and the challenges it entails - especially for large banks that have traditionally been know to be tied into old legacy systems. Hence, understanding the strategies from a functional or organisational point of view could lead to a better understanding of if the strategies are likely to be successfully implemented, and thereby how the future market will develop.

Lastly, this study focuses on banks’ perspectives and how they perceive PSD2. Since PSD2 enables new third party providers into the banking market, this study concludes that banks will innovate through strategic alliance with such companies (mostly FinTechs) and in that way reach a competitive advantage. Future research should therefore exploit the FinTechs’ views and needs to gain a better understanding of how to successfully attract FinTechs. By conducting a similar study from the FinTechs’ perspective, it would also be possible to compare their view of PSD2 and what it entails with how the banks in this study interpret PSD2.
11. References


