Is the Revised Payment Service Directive a Threat?

A Study on Strategic Opportunities as a Necessity for a Traditional Swedish Bank in the Payment Industry

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Är det nya betaltjänstdirektivet ett hot?

En studie om strategiska möjligheter som en kärnkompetens för en traditionell svensk bank i betalindustrin

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Abstract

During recent years, the payment industry has faced increasing competition. Technological development is paving the way for new market entrants that have managed to claim market space. To regulate the new entrants the European Commission proposed the second payment service directive where banks are obligated to provide them, with the permission from the customer, access to their customers accounts.

The purpose of the study was to provide insights on what key capabilities are necessary for a traditional retail bank in the future payment landscape. To investigate and understand the payment sector the study adopts a system perspective. The research has mainly been qualitative, thus, the findings are based on interviews with market experts and bank representatives.

The study shows that the most intense competition is at the point of sale interaction and that the revised payment service directive is not a threat. From the investigation it is concluded that card transactions will remain, for the foreseeable future, the dominant payment instrument, but also what is being regulated should be utilized. The necessary capabilities for a traditional retail bank is therefore to continue innovate around cards and continue to issue them. To take advantage of the new payment directive it will be necessary to aggregate and compile customer information from multiple banks and facilitate transactions between customer accounts held in different banks. Finally, any strategic approach should not revolve around the regulation posed by the European Commission. Instead, it is necessary to consider the global trend that is changing the payment landscape.

Key-words Payments, PSD2, Revised Payment Service Directive, Multi-sided platforms, socio-technical systems
Sammanfattning
Under senare år har konkurrensen på betalmarknaden ökat. Teknologiska framsteg banar vägen för nya marknadsaktörer som har börjat vinna mer och mer marknadsandelar. För att reglera dessa nya tjänster föreslog Europa kommissionen det andra betaltjänst direktivet. Direktivet tvingar banker, givet kundens medgivande, att de nya marknadsaktörearna får tillgång till bankkundernas bankkonton.

Syftet med den här studien var att identifiera kärnkompetenser som är nödvändiga för en traditionell bank i framtidens betallandskap. För att undersöka och förstå betalmarknaden tillämpar studien ett system perspektiv. Forskningen har varit i huvudsak kvalitativ och således har resultaten primärt baserats på intervjuer med marknadsexperter och personer verksamma inom bank väsendet.

Studien visar att det är främst vid försäljningstillfälllet som det råder hårdast konkurrens och att det nya betaltjänstdirektivet i sig inte utgör något större hot. Från undersökningen är det möjligt att dra slutsatsen att kortbaserade transaktioner kommer att dominerande instrument för att genomföra en betalning och att en bank borde dra nytta av de möjligheter som regleringen innehåller. Kärnkompetenser för en traditionell bank är därför att fortsätta utveckla sina korterbjudanden och fokusera på att ge ut sina kort. Vidare för att dra fördel av de förändringar som det nya betaltjänstdirektivet innebär kommer det vara nödvändigt för bankerna att kunna inhämta och sammanställa kundinformation från flera banker, samtidigt som man underlättar för kundens möjlighet att flytta kapital mellan dessa konton. Slutfinalen, föreslås att strategiska beslut inte primärt ska antas för att möta nya lagstiftningar från Europa kommissionen, istället bör dessa utvecklas med hänsyn till de större globala trenderna som närvarar på betallandskapet.

Nyckelord Betalningar, PSD2, Nya betaltjänstdirektivet, platforms ekonomi, sociotekniska system
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A2A  account to account. 7
AISP  Account Information Service Providers. 6
API  application programming interface. 5, 6
ASPSP  Account Servicing Payment Service Providers. 6
EBA  European Banking Authority. 6
EU  European Union. 2
Fintech  Financial Technology. 1
IT  Information Technology. 1
MLP  multi-level perspective. 15
MSP  Multi-sided platforms. 16
PISP  Payment Initiation Service Providers. 6
POS  Point of Sale. 28
PSD1  Payment Services Directive 1. 1
PSD2  Payment Services Directive 2. 2
PSP  Payment Service Providers. 1
RTGS  real-time gross settlement. 14
SME  small and medium enterprises. 5, 30
TPP  third party providers. 1
USP  unique selling point. 28

XS2A  access to accounts. 5
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Oskar Andersson and Michael Wang
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"Ingen skal fördrista sig at fråga efter en annans partie uti Böckerna, men skulle sådant ske, då skal Bokhållaren ingalunda någon besked derom gifwa."

– Decree 1668,
Rikets Ständers Bank
Chapter 1

Introduction

This chapter describes the background for the study. Followed by a problem formulation, the stated purpose operationalized by the research questions. The chapter ends by covering the delimitation and scope of the study and outlining the study’s disposition.

1.1 Background

The payment industry is becoming an increasingly important arena for economic competition. It has been in a constant state of flux the recent years, where the industry has witnessed rapid growth in technological innovations (Capgemini, 2016), in terms of new electronic and mobile payments. The new entrants are pushing into the market by competing more aggressively on customer experience and price (PWC Consulting, 2016).

These new actors are known as third party providers (TPP) and they offer consumers, for instance, the possibility to complete online payments in real-time without the need of a credit card. These services establish “a payment link between the payer and the online merchant via the payer’s online banking module” (European Commission, 2015). Several TPPs within EU have already become successful, these include, SOFORT in Germany, iDeal in Netherlands and Trustly in Sweden. These TPPs do not require the customer to register, install any software or open an account directly with them (e.g. Trustly, n.d). Instead, they collect and gather information on the consumer’s different bank accounts, as the customer log-in with their identifiers to their bank accounts on either an Information Technology (IT) device or on a website (European Commission, 2013).

The current European legal framework for the financial industry, Payment Services Directive 1 (PSD1), is not fully equipped to deal with these new payment services and Financial Technology (Fintech) companies. Prior to the PSD1, only banks and credit institutions were seen as payment service providers Payment Service Providers (PSP). As a result of the increasing online sales, other companies in addition to banks started to handle payments on behalf of the web shop owners. These companies’ ability to handle different payment methods relieved the web shops to handle payments on their own.
However, these companies did not have the same legal status as a bank. Therefore, the objective with PSD1 was to harmonize the payment market access for other parties not being banks or credit institutions to offer payment services, to create a level playing field - where all actors play by the same set of rules, improve competition, and the reflection of market developments (European Commission, 2016).

1.2 Problematization

With the rise of popularity in TPPs and the sensitivity around their activities toward customers’ information, they are not covered by the current PSD1 legislation. Thus, these actors are currently not regulated at the European Union (EU) level. Therefore, as a response to these new entities that provide payment, the European Commission has proposed a new set of rules - The revised Payment Services Directive 2 (PSD2). The directive takes aim to bring the TPPs under the same standards of regulation and supervision as existing payment service providers. However, banks are obligated to provide these TPPs, with the permission from the customer, access to their customers’ accounts. This will enable TPPs to build/use their financial services based on the banks’ rich customer data and infrastructure. Banks will no longer only be competing against banks, but everyone offering financial services. Fundamentally, PSD2 will change the payments landscape, what business models are profitable and customer expectations. There is, therefore, a need for traditional retail banks to manage this new environment. However, since the legislative procedure is still ongoing, the precise scope of the directive remains unknown. It is unclear if the proposal will succeed and what the exact relation the TPPs will be under PSD2.

1.3 Purpose

The purpose is to investigate what key capabilities are necessary for a traditional retail bank in the future payment landscape. To fulfill this purpose, the following research questions will be answered:

RQ1: How does the second payment service directive impact the payment landscape?

RQ2: How can a traditional retail bank respond to these effects?

1.4 Delimitations and Limitations

The payments industry has a global relevance, where payment instruments between products and services are present in similar forms in most countries. However, the industry also consists of a broad range of firms. Therefore, even though bank A has operations in other countries, to make meaningful observations and analyses given the timeframe in relation to the comprehensive nature of the phenomena under study, the re-
1.5. DISPOSITION

search scope is delimited to one country. Delimitation to one country is needed to limit the complexity and disturbances from different paths of evolution in different country markets (Jacobides, 2005). This delimitation is considered appropriate because Sweden is a well-developed and innovative market for financial services and has a high degree of innovation; Sweden has a high number of Fintech investments (Wesley-James et al, 2015) and was ranked second on the overall innovation index (Global Innovation Index, 2016). At the same time, exogenous factors are required since Sweden is a small country and a small market, and is therefore largely influenced by global trends and events.

Further delimitation include block-chain technology which crypto-currency payments (e.g. bitcoin) is based on. Also, even though PSD2 includes more elements than the access to accounts by TPPs, this is the main focus. By doing so, consequently, the thesis will not cover all aspects of PSD2. However, a systems approach will be conducted. Meaning that the study will touch upon possible research fields that are considered interesting and important to answer the purpose, but not examined in-depth.

1.5 Disposition

The remainder of the thesis will have the following structure:

Chapter 2 Introduction to PSD2 and Payments: This chapter presents the revised payment service directive and its disruption in terms of new roles in the ecosystem. Thereafter, payments are defined and its main layers and key actors are presented.

Chapter 3 Literature Review and Theoretical Framework: This chapter provides an understanding of previous theories and studies related to the previous chapter. The analysis and discussion will be based on the findings here.

Chapter 4 Method: This chapter describes how the study was conducted. The methodology and research process is presented and evaluated.

Chapter 5 Result and Empirics: The empirical findings from the interviews are presented.

Chapter 6 Analysis: This chapter analyses the empirical findings from the literature and theory from chapter 3. By doing so, the leanings from chapter 2 triangulated and put into context.

Chapter 7 Discussion: This chapter presents the main findings to the purpose and research questions. The theoretical and practical contribution is also discussed.

Chapter 8 Conclusion and Recommendations: This chapter presents the final conclusions and recommendations for the bank and further studies.
Chapter 2

Introduction to PSD2 and Payments

This chapter provides an overview of PSD2 from a bank’s perspective and the disruption PSD2 has on the payments ecosystem in terms of new roles. To put this new ecosystem into context a brief introduction for payments and what processes a payment consist of are given. In addition, the payment ecosystem with key actors is given.

2.1 PSD2 Overview

Regulations do not prevent innovation (Tidd & Bessant, 2013) and are identified as one of the main determinants of innovation in the payment industry (Mention & Torkkeli, 2012). As European Commission (2015) describes PSD2, the aim is to harmonize the fragmented European payment industry and level the playing field by allowing non-banks to compete on the market, and will thereby increase the competition and spur innovation.

PSD2 was adopted by the European parliament on the 8th of October 2015 and has to be implemented in national law of member states on the 13th of January 2018 (McInnes, 2017). The implementation of PSD2 is expected to have a large impact on the payment industry for both established players such as banks and also for smaller more niche financial services (Capgemini, 2016; Valcke et al, 2015). Although being a quite extensive directive the most important changes imposed in the directive, at least from a bank perspective (McInnes, 2017; Terfelt, 2017):

- More market players will be legitimized on the market
- Account managers (Banks) will be forced to allow third parties access to payments accounts and the information
- New technical demands on identification, verification and authorization, and
- More payments will be covered by information - and implementation demands.
2.2. COMPETITION FROM WELL-ESTABLISHED NON-BANKS

These points, especially the first two in the list above, are a direct result of the development seen in the European payment sector over the last couple of years. The new services that have been emerging in the market offer niched financial solutions in payments and financial advising and are threatening the status quo on the European payment market. These actors described as TPPs are in the front edge of technological development and are using new ways of utilizing big data. These services initiates payments between accounts without the use of credit cards, or services that scrapes account for information to private end-customers with condensed financial overview independent of which one, or how many bank commitments said banks customer have (European Commission, 2015). TPPs have faced high entry barriers for a market penetration on a European scale since they as of now and up until the implementation of PSD2 have been unregulated and therefore not have gotten the same access to the financial infrastructure (accounts and networks) as established and regulated market players (European Commission, 2015). So by legitimizing the new players, TPPs, on the market and forcing them to comply with the same rules as traditional payment services the security for the end customer will be increased and together with the forced access to payment accounts and account information the barriers will be easier to overcome and competition will be increased (European Commission, 2015).

In essence, the new revised payment service directive, PSD2, recognizes a market demand for PSPs and is about the right to access to information. For centuries, banks have had sole right to financial information, PSD2 will change that. When implemented in 2018, the legal framework that it is, will regulate the operation of payment and financial information services within the EU and force banks to provide these services access to financial data about its customers. In the directive’s terminology, it grants TPPs access to PSPs online payment services in a regulated way. Also known as the access to accounts (XS2A) rule, it will force banks to allow access through application programming interface (API) to their customer accounts and provide account information to TPPs if the account holder agrees (Finextra Research Ltd, 2015).

2.2 Competition from Well-established Non-banks

The XS2A rule creates a range of new business opportunities for new entrants. In addition to the regulated TPPs, the payment industry will face even more competition as other companies well-established companies see business opportunities (Finextra Research Ltd, 2015). These include large technological companies (e.g. Google, Apple, Facebook and Amazon) and telecommunications companies (e.g. Samsung). For instance, Amazon has launched small and medium enterprises (SME) lending (Amazon.com, 2015). Facebook is already providing payment solutions in US (Facebook.com, 2017) and is now entering the European market (Hernæs, 2017). Similarly, Samsung Pay is available in US. Samsung Pay is a mobile payment service that enables mobile payments at brick and mortars and points of sale (POS). It enables the customer to add their plastic cards to their Samsung phone (Samsung, 2017) and has already partnered
with Visa and Mastercard and is working to get major banks involved (Brewis, 2017).

However, the belief is that it will be harder for the western large companies to replicate the success from the eastern large companies. These companies include Tencent (WeChat) and Ant (Alipay). The case is unique in China, where it centered on inclusion rather than packaging payments services (Citigroup, 2017). To clarify, the eastern big techs enabled the growing middle-class to access debit/credit. Whereas, in more mature markets focus will be on the packaging and bundling of services for value added activities as majority of the population already have access to debit/credit. According to a Citigroup report (2017), the messaging app, WeChat, of Tencent acts as a platform and offers financial services through TPPs. The app has successfully embedded payments into a lifestyle app (Citigroup, 2017), similar to the Uber case - less visible finance. In this case, controlling social aspects is an advantage when it comes to cross-selling products, since consumers rely on the app for its financial services, including ordering a taxi, booking flight tickets, booking movie tickets and exploring special offers and so on (Citigroup, 2017). WeChat is equivalent to Whatsapp and Facebook, and have over 800 million active users (Statista, 2017) and over 200 million consumers have linked their account with a credit/debit card (Citigroup, 2017).

2.3 The New Payment Ecosystem

The directive introduces new competitors in the form of two new actors - which will be disruptive for the ecosystem. Payment Initiation Service Providers (PISP) and Account Information Service Providers (AISP). However, it is not possible to describe PSD2 and its impact without mentioning the definitions on the existing market players, participating in the payment environment, notably, Account Servicing Payment Service Providers (ASPSP). PISPs and AISPs belong to the category of TPPs where the notion differs from the ASPSPs or the traditional payment service providers in the sense that ASPSPs hold the accounts of the payment user or end customer (Valcke et al, 2015).

2.3.1 Traditional Payment Service Providers

Under PSD2, regulated banks or ASPSPs will be obligated to allow TPPs access to account and transaction information and cannot, by law, discriminate any TPPs access to payment accounts and account information (article 65 revised payment service directive). In practice this access will be made possible by letting TPPs access account information either through direct access or indirect access, where direct access refers to the access ASPSP customer use today, eg. a banking app or online interface. While indirect access refers to the access through an application programming interface (API) (Ludvigsson, 2016), which PSD2 enables. The guidelines are to be set forth by the European Banking Authority (EBA), but are however as of this date January 24 th 2017 yet to be published (European Commission, 2015).

Besides forcing the ASPSPs to provide the access PSD2 further states that more than
just access - they have to provide the TPPs with a secure connection that not only pro-
tects the information sent out, but also that the information is only sent to TPPs that
is both authorized and have permission from the end-customer to request said infor-
mation (Valcke et al, 2015). In the case of a wrongfully executed transaction, even if
not guilty, the ASPSP hold liability and have to, if requested, financially compensate the
account holder (European Commission [recital 65], 2016) before having the right of re-
course vis-à-vis the TPP. Without getting too deep in the area of compliance, what this
essentially means for the banks is that on top of having to update and rework the heavily
invested data infrastructure they use today (Wikander, 2017), they have to do this at the
cost of increasing the competition against them.

2.3.2 Payment Initiation Service Provider

A PISP is a service that initiates an account to account payment given that the account
holder has instructed it to do so. Since the payment is done using an account to ac-
count (A2A) transfer the card scheme is bypassed, as depicted in Figure 2.1 and either
issuer or acquirer receives interchange fees - a lucrative revenue stream for many banks
(Deloitte, 2015). PISPs works using overlay, in other words utilizing the customer’s in-
ternet bank interface to perform the transfer. The customer is unaware of this, and are
only prompted with the PISP’s interface and asked to enter credentials when needed.
Since the PISP uses the customer’s internet bank interface in the background it has the
possibility to do everything a customer can do on the internet bank; buy bonds, initiates
transfers, apply for credit etc. At the same time the PISP receives access to the customers
full financial information, like savings and transactions history. This poses a consider-
able risk for the customers and was one of the main reasons behind regulating PISPs
in PSD2. The overlay makes it possible for the PISP to add any bank to their network
whether or not the bank wants it or not. This provides the PISPs with a competitive edge
in markets with large numbers of banks. Since the banks cannot opt out, the PISP can
provide merchants with one service connecting them to multiple banks instead of the
merchant having to enter partnership with each and every one of those banks.

![Figure 2.1. Comparison of payment; card scheme vs PISP.](image-url)
2.3.3 Account Information Service Provider

An AISP is a service that aggregates account and transaction data from one or several accounts held by one or several ASPSPs. The AISP can for example take this data to provide the customer with an overview of its financial situation and spending habits. The selling point for many these services (Money dashboard, Tink etc.) is to give the customer the information and education to improve its financial well-being. However what is important to note is that these services provide the customer a new interface that might not be “owned” by the bank. This interface can connect to many banks limiting the control or ownership of the customer, since it will be easier to move funds from one bank to another. Traditionally, the customer utilized different interfaces when interacting with different banks, depicted as the multiple interaction in figure 2.2. However, with PSD2, it will no longer be the case. Instead, it enables the possibility to utilize a single interaction with one AISP as the interface to interact with several banks, as shown in the right side of figure 2.2. Note that figure 2.2 is adopted from Accenture (2015).

Single interaction will enable customers to perform their day-to-day banking business through the AISP, like for example paying bills and manage savings. Considering the fact that the AISP can be connected to several banks, this implies that it will be easier for the customer to benchmark the banks against each other and for example deposit savings at whatever bank that offers best terms and interests. Thereby, this will not only affect deposits, the major source banks have for funding (ABU, 2014), but it will also make it a lot easier for the customer to switch from one bank to another (Wikander, 2017). The loss of interface will naturally reduce potential selling opportunities since the possibility to engage with the customer will be lost (PWC, 2015).

The following table summarizes the distinct service providers discussed:
2.4 Payments Overview

Traditionally, banks have been in the center of the payments landscape with the main responsibility of providing customers with paying instruments (such as credit cards, cheques) and the back-end processing of payments (Riksbanken, 2013). European banks have generally had a high responsibility over the financial infrastructure in the different member states, this includes both non-card payment processing (such as the Swedish Bankgiro) and card-schemes, like VISA-Europe which is owned by its member banks (Deloitte, 2015). By operating these large expensive processing systems in collaboration the banks can lower the cost per payment and, thus, benefit from economies of scale (Riksbanken, 2013).

The services that are directly linked to the back-end systems are used to initiate the payments, for instance, A2A payments. These payment products have been a way of communicating with the customer but also an important revenue stream for cross-selling products, such as loans and credit cards (Deloitte, 2015), thus, these complementary offerings have been able to enhance the value for the customers. At the same time the European payment market is large, revenues from payment services are generated mainly by fees. A report by Deloitte (2015) states that the revenue European banks generated from payments accounted for a total of €128 billion in 2015 where interest accounted for 41%, transaction fees 35% and product related fees (e.g. credit card fees) 21% of the total revenue pool.

The development trend varies from country to country and is largely dependent on the

<table>
<thead>
<tr>
<th>Service provider</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account Servicing Payment Service Provider (ASPSP)</td>
<td>Banks that holds customer accounts, and are obligated to allow TPPs access to those accounts, given the customer’s consent</td>
<td>Bank in EU</td>
</tr>
<tr>
<td>Payment Initiation Service Provider (PISP)</td>
<td>Able to initiate payments from a customer’s payment, given consumer consent</td>
<td>Sofort, Trustly</td>
</tr>
<tr>
<td>Account Information Service Provider (AISP)</td>
<td>Aggregates a customer’s financial data from that customer’s accounts in different EU banks</td>
<td>Tink</td>
</tr>
</tbody>
</table>

Table 2.1. Table of service providers
market need of payment services and accessibility to financial infrastructure. According to Visa Europe (2016), 86 percent of people in Sweden have used their smart-phones to make a payment. This number will likely rise as people become more comfortable making payments with their devices. According to a Eurosmart report (2014), Visa Europe anticipates more than 79 million people in the European Union will use mobile devices to make payments by 2017. And by 2020, more than 50 percent of payment will be made by mobile devices. Furthermore, it is observed that the mobile banking activity is increasing across all age groups and that 41 percent regularly check their balance online or via a banking app (Visa Europe, 2016). Despite the increased adoption from different customer segments, according to Riksbanken (2013) networks effect and large investment are characteristics of the payment market that suppress innovation and the development of new services. They are among the reasons why the European payment market is fragmented and largely domestic, limiting the likelihood for a payment service to penetrate the market at a European level.

Furthermore, the Swedish Riksbank report (2013) describes the payment industry’s development with two phases. Initially, the payment industry will move towards a higher degree of fragmentation with a high level of supply of payments services from different actors. Where no single actor becomes large enough to control the development. In the succeeding phase, the market concentration is expected to increase. The competition from the initial phase favours actors that are able to convey large amounts of payments and whose payment services have wide acceptance. Less competitive payment services become irrelevant and the industry move towards a higher concentration.

### 2.5 Defining Payments

Across Europe, the fundamental way to pay is, in most countries, cash, debit/credit-card, transaction and cheque. For instance, 80% of transactions in Sweden are made with cards (Sverigesradio, 2015). An increase usage of online and card payments are on a pan European scale minimizing the usage of cash and cheques (Riksbanken, 2013).

Whether or not a credit card or an online transfer is used to initiate a payment, there are generally three types of fundamental ways of performing a transactions depending on the number of parties involved in the process, as seen in figure 2.3. On a general level it is possible to divide the payment into three groups: no intermediary, an intermediary or several intermediaries (Riksbanken, 2013).

Figure 2.3 gives a high level description of different types of payments and it is evident that, the more players involved the more complicated it gets. However, what is important to note is that what is not shown in the figure is all the supporting services that help facilitate transactions, this include payment terminals for card readings, online services for payments etc. Connecting this to the recent trends on the payment market discussed above it is evident that those types of services aims for the interaction between the customer and its bank. The back-end systems, such as the clearing organizations or the
2.5. DEFINING PAYMENTS

![Figure 2.3. Defining payments: using the number of parties involved in the process.](image)

Settlement systems are not subject to any threat from these types of services. There are developments of technologies that holds the potential of in the future also replace those processing systems like for example block-chain, which although rising in popularity it is not considered an immediate threat yet, with little usage on a global scale (Segendorf, 2014), and therefore lies outside the scope of this thesis. Focusing on the interfaces between customer-merchant, customer-bank and merchant-bank, one card payment is a good way of exemplifying what interfaces and actors that are involved on a more depth level as shown below.

To actually understand what a payment is, it is important to realize that it is not solely about transferring money between different actors. In a report, Arvidsson (2016) describes a simple payment process with an established agreement between a payer and payee or the case with “one intermediary” as depicted in 2.3 as follow:

1. Agreement in which buyer and seller agree on a transaction (including what service to use)
2. Verification of the payer’s solvency and/or creditworthiness
3. Identification of
   a) actual payer and payee and
   b) their respective account
4. Delivery of the product/service
5. Transfer of money from buyer to seller, excluding variable costs
   a) Types of transfers:
      i. Prepaid; occurs before the delivery process (4)
      ii. Real time (point-of-sale); delivery occurs at the same time as the transfer
      iii. Postpaid; occurs after process 4

The three processes that mainly concern payment services used by consumers and companies are number 2, 3 and 5 - verification, identification and transfer. These three processes take place in a certain context that is dependent on the remaining processes, where, for instance, a card payment is seen as an acceptance of the transaction in the agreement process (Arvidsson, 2016). With the introduction of new channels, such as the Internet and mobile phones, the dynamics of the payments have changed. A payment process in now dependent on whether the payment occur at a brick-and-mortar or online where the payer only interact with the vendor’s system. It is also dependent on the type of transfer as described under process 5: Prepaid occurs when the payer, for instance, charges a sum onto an account (like a wallet payment), real time as the traditional way of using cash or Swish, while postpaid agreements can be in the form of a card payment or installment plan (Arvidsson, 2016). In essence, the payment process is now disconnected in place and time, resulting in a changing order of the processes.

2.6 Payment System and its Key Actors

The payment system consists of different actors that have their own functions in order for the payment system to work. Therefore, as long the system works as intended it is hard to distinguish the different layers and its functions. The analysis of this study is inspired by Arvidsson’s (2016) layered description on the Swedish payment system. Arvidsson (2016) distinguishes three layers that correspond to the payment system. The layers are summarized as follow:

<table>
<thead>
<tr>
<th>Layer</th>
<th>Description</th>
<th>Example</th>
</tr>
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<tbody>
<tr>
<td>3</td>
<td>Consist of different services and applications, including standardization and security</td>
<td>Card, mobile payment services</td>
</tr>
<tr>
<td>2</td>
<td>Infrastructure that allow secure and efficient payments</td>
<td>Bankgirot, card schemes</td>
</tr>
<tr>
<td>1</td>
<td>System for process management and settlement</td>
<td>RIX, Bankgirot, BIR</td>
</tr>
</tbody>
</table>

Table 2.2. Layers in the payment system. Adopted from (Arvidsson, 2016)
2.6. PAYMENT SYSTEM AND ITS KEY ACTORS

2.6.1 The Consumer and Merchant

The key actors when it comes to payments are the payee and payer. In most cases these are the consumers and merchants. Primarily, the merchants are the ones who are actively paying for the payment services (Arvidsson, 2017), of course this cost is in turn added upon their services and ultimately ends up being paid by the customers. Therefore, the demand on payment services differs between merchants and customers.

Naturally, in order to receive a payment a merchant needs to have payment services that are preferred by their customers. However, to accept all types of payments require a lot of administration and investments. A report on the merchant view on payment services published by Insight Intelligence (2014) found that card payments (45%) and invoicing (35%) were the most preferred payment solutions. The findings further suggest that the choice of a service made by the surveyed merchants dependent on three critical aspects. First, that it was suitable for their type of business (49%). Second, that it felt secure (48%). Third, that it facilitated administration (35%). Whereas, only 17% chose the payment services based on costs.

Looking at the customers on the other hand, they have other sets of priorities compared to merchants: speed, simplicity and interoperability among others (Arvidsson, 2017). Another survey by insight intelligence measures the use of different payment services performed in 2016. It shows that 95% use a card at least once a week, 35% used cash once a week. When comparing this study to another insight intelligence study performed two years earlier in 2014 the usage of the third most popular payment method, A2A transfer had dropped from 18% in 2014 to 7% in 2016. Where other type of mobile payment services had gone from 5% in 2014 to 16% in 2016. The statistics insinuate that there is a growing acceptance for mobile payments, while account to account transfer using the internet bank is on a steady decline.

2.6.2 Schemes

Briefly explained, in a card transaction, either debit or credit, the bank that issued the card to the customer is called the issuer, the bank that processes the transaction on behalf of the merchant is called the acquirer (Schmalensee et al., 2002). If the issuer and acquirer are two separate banks the issuer receives a fee from the acquirer called the interchange fee (Wright, 2003). The interchange fee is determined by the card scheme, usually VISA or Mastercard, this fee is ultimately passed on through to the end customer via the merchant who has to adjust prices in order to cover the transaction fee (Oliver Wyman, 2016).

In practice the end-customer initiates the payment to the link by using a payment terminal, operated by companies called acquiring services. A few years ago there was a common trend among banks to sell their acquiring business (Breakit, 2017). This sparked a trend among private equity firms and venture capitalist that began buying acquiring services, consolidating them to generate volume, achieve economies of scale and lower
costs. Like for example Swedish Bambora that is a consolidation of ePay, Eurol ine, DK Online, MPS, Samport and Key Corp (Breakit, 2017).

### 2.6.3 Bankgirot

Alongside card transactions and the card schemes processing card payments there are A2A based transactions - including; credit transfers, direct debit payments, supplier payments, account deposits, salaries, tax payments - Bankgirot is the Swedish central processor for these type of payments (Sveriges Riksbank, 2015). Bankgirot is not a stand alone service, just a processor and it’s necessary to use complementary product in order to use Bankgirot. This can for example be the bank’s online interface or a stand alone service that is able to create files which contains instructions for batch payments that later can be uploaded to Bankgirot. (Bankgiro, n.d).

During recent years there have been a trend of moving away from the card infrastructure and instead base the transactions on A2A transfer, for example the Swedish payment company Trustly. In essence these services circumvent the link between merchant and banks, instead it build directly upon the inter-bank infrastructure, for example be the Swedish bankgiro or the British Vocalink. The idea of basing consumer-merchant transactions on the intra banking infrastructure instead of the card schemes (Visa or MasterCard) pose a major threat against the lucrative card issuing business. Responses from the card schemes are already showing like the MasterCard attempt of buying Vocalink (Taylor-Kroll, 2016).

### 2.6.4 Banks and the Swedish Central Bank’s Payment Processor RIX

Whether or not a payment is made as an account transfer or a card payment a bank has to be part of the process. This is because Banks are connected to the central bank payment processor, which in Sweden is called RIX. In RIX the banks have accounts, it’s possible to say that it’s on the RIX account that funds are stored. The customer bank account only mirrors what part of the funds in the RIX account that belongs to this customer. So in comparison with the other payments actors described in the previous section, funds can be deposited in the bank accounts while the other services only sends transaction request to these banks accounts. In practice these means that the bank receives information about a transaction through a system such as bankgirot or a card scheme. The banks then forwards this message to RIX, which settles the transaction between the banks through a process called real-time gross settlement (RTGS) (Sveriges Riksbank, 2015).
Chapter 3

Literature Review and Theoretical Framework

This chapter contains the literature applied throughout the paper. The main areas brought up are network effects, path dependence and multi-sided platforms. In addition, this study will look at the payments industry from a systems perspective, based on the concepts of socio-technical systems and multi-level perspective (MLP) on transition in order to understand the dynamics in the payments industry.

3.1 Networks Externalities or Effects

Networks have been a part of our social, business, and technological environment for centuries (Economides, 1993). In the literature network effects and network externalities have been used interchangeably. According to Takanori (2007) and Boundless (2016) network externality or network effect is evident when the value of a service is dependent on the number of actors, and as the number of actors consuming the product increases the benefit for existing consumers will increase. This positive network effect between the number of users and benefit is evident in online social networks. Online social networks with the highest number of users will appear to be more appealing than competing services because there are more people to connect to. Similarly, in payment services, such as card networks, the same dynamics are present - there is no point accepting card payments if no one has a card to pay with. Liebowitz & Margolis (1994) divides the total value the customers receive into two different components: synchronization value and autarky value. The former one is that has been discussed so far (the additional value derived from being able to interact with other users of the product). The latter one is the value generated by the service with no other users.
3.2 Complementary, Compatibility, Coordination and Standards

Another typical feature of a network is the provision of substitutes made of complements (Economides, 1996). To clarify, in the literature of economics complementary goods or services are used in conjunction with another good or service. When the complementary good is combined with another good or service both benefit from added value. For instance, computers are less useful without monitors attached or not having software installed and airline companies will not be able to sell tickets without using a reservation system (Shy, 2001). Whereas in the payments industry, many new services are considered substitutes to the traditional way of paying with cash and cards. Studies show that the growth for new electronic payment services are increasing while cash and card usage is decreasing among end-customers (Riksbanken, 2013), and end-customers consider mobile payments to be useful if it is able to replace plastic cards (Dahlberg & Mallat, 2002). Further, to realize the benefits from complementary goods and services, they are required to adhere to specific technical compatible standards (Economides, 1996). For instance, a CD album cannot be played if it does not have the same specification as a CD player. Software must work given a specific operating system. Meaning that complementary products require the same standard. This creates the coordination challenge between firms, where they need to agree on the standards, which often end up in price fixing (Shy, 2001).

3.3 Path Dependence

A direct consequence of the self-reinforcing nature of networks is that history matters. Once a product has become established as an industry standard, and once a customer or a user has invested time or money in understanding and learning the particular system or becoming comfortable with the technical practices, they are less likely to adopt another process even if it proves to be a superior choice (Barnes et al, 2004). Therefore, firms tend to stick to established technologies as long as possible (Arthur, 1988), as shifting to a new technological path would destroy the previous investment. Customers become path dependent and locked-in, for instance, in the payments system, the competing card networks Visa and Mastercard use the same network infrastructure (Economides, 2007), but the cards are not compatible. Meaning that a payment can only be completed on one network. The cards themselves are issued by banks, and the autarky value for credit cards and its users can be increased through special offerings including bonuses, cash back or free balance transfer. This requires agreement between the issuer and payee.

3.4 Multi-sided Platforms

Multi-sided platforms (MSP) have been utilized in a variety of different contexts, ranging from shopping malls, computer operating systems to payments system. Accord-
3.4. MULTI-SIDED PLATFORMS

According to Hagiu & Wright (2015) MSPs are defined by two fundamental characteristics: i) “They enable direct interactions between two or more distinct sides” and ii) “Each side is affiliated with the platform”. They have enabled customers to gain access to independent providers and the participants benefit from interacting with each other (Hagiu, 2009). For instance, the MSPs based payments services coupled with the concept of network externalities have shown to be true for clearing, ATM networks, card payments etc (Arvidsson, 2016). However, all industries alike, Rochet & Tirole (2003) states that the challenge for a platform owner is to generate growth on both sides of the market. To generate growth on both sides for markets that exert network externalities, the most straightforward and commonly used solution is to discount one side (Parker & Van Alstyne, 2005; Rochet & Tirole 2003), thus, profit can be gained from the other side.

Although the utilization of MSPs are found in different industries, the application varies from one to another. There is, however, a fundamental unity in how they are composed that allow platforms to be analyzed on a more general level. Baldwin and Woodard (2008) states that a platform consists of a number of modular components that can be varied and reused. This notion of a common level of architecture for all types of platforms are based on the following three modular components: i) the complements, ii) the core components and iii) the interfaces. In general, the second and third modular component are part of the platform and more difficult to replace than the first component. Further, due to the statement that a platform is modular and can change over time, two important strategic challenges have to be addressed for a platform owner:

1. When should the platform owner encourage outsiders to develop complements?
2. Which components of the overall system needs to be contained?

For the first strategic challenge, Baldwin and Woodard (2008) argues that if the consumer demand is homogeneous “the complement” module has low variation in design. This limit the incentives of complementary components that are produced by outside parties. Due to this market preference it will be more evident which types of modules will gain most market shares. In contrast, if the consumer demand is heterogeneous it becomes more attractive to experiment and have a diverse approach, because it is more difficult to determine what designs will succeed. For example, a platform owner can increase the spread and growth of a platform by allowing external parties to fill the market “gaps” that are perceived to not be filled by the platform, presumed that the platform owner don’t expropriate the value the external parties create. Important to note, this dominating strategy should be avoided. In general it has a tendency to create an unhealthy ecosystem (Iansiti & Levien, 2004). In other words there need to be a balance of how much the platform owner can capture from the third parties without it hindering external investments in the platform. Baldwin and Clark (2000) states that access to capital when networks externalities are present can create the conditions where the platform systems outgrows it competitors. Although, external parties can create the inno-
CHAPTER 3. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

vation, fill the market cap and increase investments and accelerate growth, the platform owner must ask what the complementors can do that the owner cannot.

For the second strategic challenge; in platforms the interface are the system linking the core components to the complementary components often through standards increasing interoperability, which means to what degree the system is capable of working with other systems (Guibourg, 2001). System components are not stable over time, they are not static but evolve and change. Considering that platforms exists of; core components, complementary components and the interface in between these. It is, in contrary to common belief, not the core components that are the most stable parts of the platform, but the interface. And should remain in control of the platform owner (Baldwin and Woodard 2008). Complementary components, are in many cases the most unstable part of the platform, being interchangeable they are in many platform the component with most competitors. However, in some platforms the incumbents are sheltered by high switching costs and high reliability of networks effects (Eisenmann et al., 2010).

3.5 Payments Industry - A socio-technical perspective

3.5.1 Motivation

To understand the development the payments industry can be seen as a business ecosystem where a set of interconnected and interdependent organizations or actors interact with each other (Pfeffer & Salancik, 1979). According to Peltoniemi (2006) these actors base their success on both competition and cooperation with each other in a dynamic structure that evolves and develops over time. In order to understand the dynamics in the payments industry between the actors, this study will adopt a systems approach based on Geels (2004) model for socio-technical systems (ST-Systems), see figure 3.1. In the literature, industrial dynamics in ST-systems have conservative factors that both preserve and change the existing system and its properties. These conservative factors include cultural, political, science, technological (Geel, 2004), technical- and business ideas (Arvidsson, 2016). A conservative factor that is preserving or changing is based on incremental- and radical innovations (Geels, 2004. Schumpeter, 1934), that either make the system more effective by exploiting the current properties in the system or exploring new fundamental change through radical innovations (Tidd & Bessant, 2013) respectively. The choice of the theoretical approach, Geels model, is justified by the common characteristics that it shares with the payments industry. A report by Arvidsson (2016) argues that the payment services and payment system include regulatory laws and state supervision roles, technical regimes in the form of financial infrastructures such as systems for retail payments, card payments and clearing systems, a market regime in terms of agreements between the different actors in the payments value chain, socio-cultural regime related to the general end-customers’ perception of different payment instruments, and a scientific regime relates to the development within the industry such as studies of consumers technical adoption of different payments services.
3.5. PAYMENTS INDUSTRY - A SOCIO-TECHNICAL PERSPECTIVE

3.5.2 Socio-technical Systems

ST-systems are the outcome of the activities of social groups and Geels (2004) defines them as follow:

“a somewhat abstract, functional sense as the linkage, between elements necessary to fulfill societal functions (e.g. transport, communication, nutrition). ”

To fulfill societal functions in modern societies, technology is a crucial element. Therefore, it is necessary to distinguish the production, distribution or diffusion and use of technologies into sub-functions. Further, to fulfill these sub-functions, the necessary elements are characterized as resource. Thus, ST-systems consist of artifacts, knowledge, capital, labour, cultural meaning, and so on (Geels 2004). It is also assumed that changes in ST-system is not only dependent on organizations and regulations, but individuals, interests and disciplines work together and compete with each other and other groups (Geels, 2004).

Socio-technical Regime

The central part of the model for ST-systems is based on the concept, socio-technical regime, because it accounts for the stability of existing ST-systems and are seen as the
rules of the system (Geels & Kemp, 2007) and it explains how new technology are accepted by the society based on its technical characteristics and how society and actors perceive and see the technology (Arvidsson, 2016). In ST-systems where a strong socio-technological regime or infrastructure has been established, the development tend to be difficult to change and innovation become incremental rather than radical (Arvidsson, 2016. Geels, 2004). According to Riksbanken (2013), this slowdown in development of payments system is limiting innovation dynamics, which is dependent on high investment cost of financial infrastructure, economy of scale and scope together with network effects. These factors are important sources of path dependency (Geels, 2004), this interdependence is a barrier for radical innovations and accounts for stability (Geels & Kemp, 2007). Thus, the dominance of established system or certain technologies and designs can make established companies to prioritize a certain way of thinking and doing (Geels & Kemp, 2007) and focus on large and obvious market instead of pursuing the smaller ones (Christensen et al, 2015). In addition, ST-systems are also stabilized because people have adapted their lifestyles to them, new regulations are formed and infrastructures are set up (Geels & Kemp, 2007).

Landscape and Niches

The stabilization in ST-systems is affected by the development on the other two levels: socio-technical landscape and niche innovations. The landscape level is referred to the exogenous environment that is beyond the direct influence of actors including aspects such as economic growth, broad political coalitions, cultural and normative values, environmental problems and resource scarcities (Geels & Kemp, 2007). This level is stable and changes slowly and it is difficult to influence, for instance, technologies that affect all of the society. However, the political landscape is more dynamic (Geels & Kemp, 2007), in this case it is evidently from PSD2. The other level, Niches, acts as “incubation rooms” for new innovations where they can have resources provided by public subsidies or private strategic investments (Geels & Kemp, 2007), meaning that innovations within these niches tend to be more radical (Arvidsson, 2016) rather than incremental.

Given the three different levels in mind, the concept is further developed to understand how the interaction between the different levels give rise to changes in the ST-systems.

3.5.3 Change Processes in Socio-technical systems

The main point of MLP is that system innovations arise from the interplay between processes at the different levels in different phases. Since the three levels in 3.1 reinforce each other, it is therefore hard to define the cause or driver behind transitions (Geels & Kemp, 2007). However, Geels & Kemp, (2007) identified the following three change processes: reproduction, transformation and transition.

In the reproduction process there is only dynamics in one level out of the three levels, the socio-technical regime. According to Geels & Kemp (2007) existing rules are reproduced by the incumbents actors. This is seen as the normal state of a regime characterized by
stability as described earlier, meaning that there are still incremental innovations leading to performance improvements.

While in the transformation process, there are interacting dynamics between the regime and landscape level. The landscape level creates pressure in the regime level in the form of negotiations, power struggles and shifting coalitions of actors. This forces incumbent actors in the regime to change vision, goals, incentive structures, regulations and perception of opportunities. Geels & Kemp (2007) argue that the survival of incumbent actors are not threatened and they are the ones still in control to redirect the development of the existing system. Since, despite the entrance of new actors, they do not develop competing technologies that will replace the existing system. However, a new system will still arise from the old one after several adjustments in the new direction.

Last, the transition process entails dynamics interacting between the landscape, regime and niche levels. And compared to the other two change processes it moves from one ST-system to another. Similar to the transformation process, there is pressure from the landscape level and the regime actors start to adjust but are not able to solve the problems. This creates a window of opportunity for new innovations developed in niches with their network of social groups. Once the transition process is over, a new period of dynamic stability sets in where the reproduction process start over again.
Chapter 4

Method

In this chapter the method will be explained. The research process design is presented along with how data was collected and then analyzed and the effects of reliability, validity and generalizability of the study.

4.1 Designing the Research Process

The purpose is to investigate what key capabilities are necessary for a traditional bank in the future payment landscape where all actors have access to the same account information. However, since the new regulation has yet to enter into force, previous research is limited. Also, given the complex nature of the phenomenon under study. This study, therefore, incorporates an abductive research approach, which allows combinations and alterations between the literature and empirical observations (Blomkvist & Hallin, 2015). Thus, this was a highly suitable approach because it helped to align and shape the research questions towards the end-goal.

The phenomenon must be reflected by the data collection in the research design (Blomkvist & Hallin, 2015). Therefore, in the beginning of the research process, time was devoted on the literature study to understand the phenomenon. To speed up this process a pre-study was conducted. It consisted of semi-structured interviews with industry experts regarding PSD2 and affected actors in one way or another. Also, by attending a PSD2 seminar arranged by Fond & Bank enhanced the understanding of PSD2 and how different financial institutes view this new legislation. The analysis on the early findings were further discussed with different stakeholders at the case company. Thus, it helped to structure the interviews at the case company.

With an abductive approach the process was iterative between the literature review, data collection and analysis of the data, which is illustrated in figure 4.1. The different components of the research process will be discussed in more depth in the following sections.
4.2. DATA COLLECTION

4.2 Data Collection

There are many different actors involved in the payment landscape. And with regulations and consumer behaviors that influence the dynamics of its development. Therefore, to achieve a higher degree of triangulation the collection of data came from a combination of sources (Collis & Hussey, 2014), literature, semi-structured interviews, observations, and published journals and articles. Resulting in a more holistic view and understanding of payments and PSD2.

For this study the collection of primary data came from the semi-structured interview while secondary data was gathered from published journals and articles. The ambition was to collect data from actors participating in the payment system including merchants, banks, TPPs and end-users. With regards to the scope of this study and interviewing potential competitors to the bank, primary data was only gathered from merchants and the bank. While for secondary data, literature and statistics were used as information source for TPPs and end-users. In addition, the observations outside the case company were important to gain further insights to PSD2 and actors general standpoint in the matter. However, despite the fact that observations as a source of data has complications with bias. It was a valuable complement to the study, fueling with more discussions.

4.2.1 Literature Review

Payment and PSD2, was the natural starting point of the literature review. In order to understand how PSD2 affects the payment system it was necessary to have a fundamental understanding of both. PSD2 being a current topic and the most accessible information comes in the form of consultancy reports while academic literature still remains scarce, provides both opportunities and challenges. Using consultancy reports is positive in the sense that it contributes with accessible information on the most important aspects of PSD2 for banks while providing insights on current strategic trends. However, one need to keep in mind that these reports are biased toward the suggested solutions since the aim is to sell that service. More reliable secondary data was instead collected from publications on PSD2 put forth by Swedish Central Bank, Swedish financial authorities, the European Banking Authority and the European commission.
Overall, the primary source for relevant literature was the KTH library catalog and database search engine PRIMO, providing peer reviewed articles increasing source reliability. In addition to PRIMO publications from Swedish Central Bank, Swedish financial authorities, the European Banking Authority and the European commission, was used. To complement above the search engine Google scholar was utilized to access scientific journals, reports and books - number of citations was utilized as the key parameter for evaluation.


In addition to academic literature, papers regarding financial regulations together with technical standards for PSD2 and annual reports from banks and payment players was reviewed. Reviewing these documents contributed to understand the payment industry on a more deeper level. And worked as a complement to the interviews with the effort to further increase triangulation which minimizes biases (Collis & Hussey, 2014). Annual reports was in first hand used to acquire financial data, since the presentation of such data is regulated for publicly traded companies and Banks (16 kap §4 Lag om värdepappersmarknaden (2007:528)), other presented information on the other hand might be biased since it's published by the organizations themselves, and such information was therefore used in moderation.

4.2.2 Interviews

Semi-structured interviews can provide rich qualitative data (Blomkvist & Hallin, 2015). At the same time, it allows the interviewee to be more thorough and flexible in their answers by giving better and personal insights (Collis & Hussey, 2014), since the interviewer can ask probing questions. Although semi-structured interviews are able to provide rich data. The main disadvantage is that a semi-structured interview is unique and cannot easily be compared with another due to the variation in shape, context and form (Collis & Hussey, 2014). However, a common denominator for all types of interviews is to meet ethical requirements. Hence, all interviewees were informed about the purpose of the study prior to the interview and permission had to be granted in order to record the answers. This is in line with the Swedish research council’s ethical requirements (Gustafsson et al 2006),

In search for interviews the applied sampling method was non-random. For the pre-study, the interviewees were chosen due to their positions and knowledge. It consisted of industry experts including PSD2 and merchant perspective, see table 4.1. For the round of interviews at the case company, a list of potential desirable roles or knowledge
4.3. RELIABILITY, VALIDITY AND GENERALIZABILITY

from involved stakeholders was sent to the supervisors. In response, the case company
provided representatives to fulfill the list. Given the time constraints this was the only
viable sampling option.

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Role</th>
<th>Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business development, payments</td>
<td>2/3 - 2017</td>
<td>1h 30 min.</td>
</tr>
<tr>
<td>2</td>
<td>Developer new payment solutions</td>
<td>1/3 - 2017</td>
<td>1h.</td>
</tr>
<tr>
<td>3</td>
<td>Head of digitization and innovation</td>
<td>3/3 - 2017</td>
<td>1h.</td>
</tr>
<tr>
<td>4</td>
<td>Developer new payment solutions</td>
<td>28/2 - 2017</td>
<td>1h 30min.</td>
</tr>
<tr>
<td>5</td>
<td>Senior legal advisor, payments and clearing</td>
<td>10/2 - 2017</td>
<td>1h.</td>
</tr>
<tr>
<td>6</td>
<td>Global product owner, payments</td>
<td>8/3 - 2017</td>
<td>1h.</td>
</tr>
<tr>
<td>7</td>
<td>Business policy expert, payments</td>
<td>17/2 - 2017</td>
<td>1h.</td>
</tr>
<tr>
<td>8</td>
<td>PhD, Business development</td>
<td>27/3 - 2017</td>
<td>1h.</td>
</tr>
</tbody>
</table>

Table 4.1. Table of semi-structured interviews

4.3 Reliability, Validity and Generalizability

4.3.1 Reliability

This study has mainly had a qualitative approach. However, a qualitative approach relies
both on the author’s own observations during the empirical data collection (both during
interviews and observations) and the analysis of the findings (Collis & Hussey, 2013).
Therefore, this study tends to have a rather low reliability, since the replicability is rather
low as it is to a large extend dependent on the authors. Furthermore, replicating semi-
structured interviews or discussions are impossible since humans tend to not replicate
the answer despite having to answer the same question (Madill et al, 2010). For this
particular reason, studies that are mainly based on interviews tend to be relative low in
reliability (Collis & Hussey, 2013). However, this flexibility is deemed important to gather
data related to the study.

According to Blomkvist & Hallin (2015) ensuring reliability requires agreement between
the observers, impartial interpretation and mutual respect when collecting and inter-
preting the data. Therefore, prior to the interviews, approval to record the interview
was established. Thereafter, to accurately capture the answers provided by the interview-
ees the interviews were recorded, transcribed and analyzed. To ensure high reliability
a structured interpretation of the empirical material was used. This structured interpre-
tation approach consisted of identifying and categorizing of critical themes and patterns
from the transcripts. Mainly the categories was developed with inspiration from the the-

25
oretical framework but the authors reserved the flexibility of for capturing new themes as the analysis progressed.

4.3.2 Validity

The validity of a study entails that the subject is studied in accordance to the research question (Blomkvist & Hallin, 2015). To answer the research question it is a necessity that the sources of information and data are reliable and valid (Collis & Hussey, 2013). Therefore, the literature review is based on multiple data sources ranging from academic reports, academic journals and books, as well as reports and articles published by recognizable associations. This approach ensured validity because it enabled the results to be triangulated. To clarify, limiting the study to too few sources increases the risk of lowering validity, since there might arise problems of credibility for certain sources (Hansson, 2007). In addition, to verify the chosen sources, cultivating a critical mindset is deemed to have enhanced the validity of the research. However, despite triangulation of results and a critical mindset there is no guarantee that all the sources are completely free from being biased, since there is likely the possibility that some sources have been influenced by a supporting company or government, or some other hidden agenda.

In terms of the interviews, Collis and Hussey (2013) states that the answers provided by the respondents will be more correlated to the purpose of the study if the purpose is declared to them before interviews, since it does not only increase the reliability but also the validity. Therefore, the purpose of the interview was always sent to the interviewees in advance. To mitigate the risk of heavy bias, no preparations were provided in form of sending the interview template in advance unless the respondent asked for one.

4.3.3 Generalizability

Given that the thesis is a case study for a certain organization, the results have a low generalizability (Blomkvist & Hallin, 2015), however, in terms of the company's problem and the purpose of the project the methodology is sufficient, and therefore appropriate, in terms of applicability of results. A holistic view of the payment industry The interviews were conducted with representatives with different roles, which enabled different perspective of the payment industry. The non-random sampling approach further reduced generalizability.
Chapter 5

Result and Empirics

In this chapter the findings from the interviews are presented. It is divided up into 3 segments in total; The payment development, ongoing dilemma and the merchants view on payments

5.1 The Payment Development

5.1.1 Intensified Competition

In general, the amount people are willing to pay for banking services is decreasing (Interviewee 1, 2017), and the existence of services utilizing overlay indicates that banks have failed at meeting the customers need, they are finding areas that banks are not thinking about (Interviewee 2, 2017).

According to interviewee 2 (2017), there is a chance that there will be an excess of specialized services. These services will allow the customer to compare different services to find services that are most suitable or tailored to specific needs and preferences. In contrast, there might not be enough room for hundreds of FinTechs coexisting in the market. It might begin with a wave of new entrants viciously competing followed by a wave of consolidation (Interviewee 4, 2017). Interviewee 5 (2017) frankly stated that today there are two PISPs in Europe, Sofort and Trustly and another 16-17 AISPs. And it is impossible to know if there will be floods of hundreds of TPPs entering the market. This goes to show that one can only speculate around the future development of the European payment market, what actors will be dominating and how it will develop.

Previously, banks have simply got rid of competition by simply acquiring it. For example, incumbent banks acquired a lot of niche banks that emerged in Sweden during the mid-90s. However, this time the development is in a sense more global (Interviewee 5, 2017). It is important to consider this development from a global perspective, not just Europe and PSD2 (Interviewee 2, 2017). The reality banks are facing is likely zero gains on payments and free-riding on each others infrastructure (Interviewee 1, 2017).
Interviewee 5 (2017) states that from a global perspective it becomes more clear that other forces than the FinTech movement affect the development. The interviewee argues that in many developing countries there is a genuine distrust against banks and the customers trust their telecom companies more. For example, in Africa the mobile payment market is enormous and the mistrust towards banks have led to an infrastructure beside the banks, in which many services are built upon the card infrastructure (Interviewee 5, 2017).

5.1.2 Implications

The banks are starting to lose the user interface towards the customer. Whether a customer stops to enter the offices or prefers to use overlay services to connect to the bank means that instances to make more business with that customer is lost. To clarify, traditionally, the common customer interactions or the customer channels took place at the offices, on the phone, in front of the computer and to some extent at the ATM. Also, banks used to want a customer inside the door to sell them more products (Interviewee 1, 2017). Moreover, interviewee 1 further argues that it is important to consider the customer relation context. If the customer are utilizing the digital bank to perform a transaction, they want to perform a transaction not receive retirement advice. The interaction at the point of sale, Point of Sale (POS) is lost for a traditional bank, large technological companies or other multinational corporations will dominate that segment. Interviewee 6 emphasize that although the interface is lost, the bank still holds the account and the information stored upon it.

Differentiate

Banks needs to find a way to differentiate from more agile FinTechs and the large technological companies. Interviewee 3 (2017) stated that there is no possibility of becoming best in the POS segment and that it is more important to find what banks have that the others do not have. Because, new services are initially trying to gain customers by offering a simple service and as the customer become more comfortable with the service they successively offer more products like mortgages and bonds (Interviewee 4, 2017).

Trust will be an important differentiating factor, unlike Google and Facebook a bank cannot sell information about the customer. Beyond PSD2, the open banking trend will mean that everything will be for sale, but it will be difficult for the banks to participate (Interviewee 4, 2017). In other words, if a bank start to sell information about their customers the trust level is likely to decrease. Furthermore, it is not cheap to build up a large recognizable and trusted brand like Bank A (Interviewee 1, 2017). Having a good digital service or an easy way to receive payments will be a necessity not a unique selling point (USP) (Interviewee 3, 2017).
5.1. THE PAYMENT DEVELOPMENT

Realize and Utilize Data

Interviewee 3 (2017) argues that banks have been bad at realizing the value data can create. For instance, based on given information one interviewee did not initially realize that majority of the customers used the digital meetings to conduct basic payments e.g. pay bills. While, only minority engage in active activities such as investments. Interviewee 3 (2017) also expressed that package has sown to be more and more important. This is in line with the argument from Ghose (2017), who argue that in Europe it is not centered around an economic inclusion or circumventing a mistrust towards banks, but rather to package user interface.

Bank A needs to become better at utilizing data. The data is stored in many different places and Bank A is still stuck in legacy systems from the 1970s. This is not Bank A specific, all traditional banks face the same challenge. The value of data, or rather the value data can create has not been realized and banks need to look at data in a new fashion (Interviewee 2, 2017).

5.1.3 Card Infrastructure

Interviews show that payments, once a profitable part of the banking business is facing an uncertain future. According to interviewee 1 (2017) well-established non-banks (Facebook, Apple, Samsung etc.) fueled by venture capital are aiming for the global market competing aggressively on price. The physical credit card will move into these companies user experience (Interviewee 1, 2017), where the card as a piece of plastic will disappear (Interviewee 2, 2017). For customers it does not matter who issued the card, the important thing is that it works (Interviewee 1, 2017). However, as long as the payment is based on the card infrastructure the bank will still profit from the transaction. The interchange fee is capped, however, that was only on the consumers’ side, on the companies card side there is still free price setting (Interviewee 2, 2017). On the other hand, if the transaction is no longer based on the card infrastructure the bank will be missing out. However, this is not a problem if the payment or information goes through the bank (Interviewee 3, 2017). Consequently, direct debit will become a zero business (Interviewee 1, 2017).

There are some technical difficulties before direct debit will replace cards, card schemes are adding value that is hard to replace with existing alternatives (Interviewee 1, 2017). The scheme has developed solid customer protection in the form of refund rights and robust processes for settling liability claims between the issuer and the acquirer. The banks might in many cases have fallen short of communicating the customer protection (Interviewee 2, 2017). Albeit the strong customer protection the cards have been lagging behind in customer experience. The increase in e-commerce has led to the development of specialized payment solutions that offer frictionless payments, like Klarna. Card payments have been lagging behind in this development, there was an attempt with the service masterpass, but they forgot to take the merchant into consideration so it didn’t stick (Interviewee 2, 2017). With the increasing amount of connected devices payments
CHAPTER 5. RESULT AND EMPIRICS

will become more integrated in our everyday life (Interviewee 1, 2017), it is not confined to payments with the smartphone, but, for example, it can be with the card integrated in a car when paying for gas at the gas station, the cars pays by itself and there is no need to get out and swipe the card (Interviewee 2, 2017)

In essence payments will become hygiene for a bank, if the customers want to use overlay, to pay with their Samsung or using apple pay, the bank must provide it (Interviewee 3, 2017). Banks should give up on the traditional shopping experience, since the banks have the cards and if the customers prefer to use iPhone or Samsung to pay, they will do that. However, customers using their preferred service while someone else makes the user interface does not necessarily mean a problem (Interviewee 1, 2017).

5.2 Ongoing Dilemma

For legislators disruption is risk, if they have a well functioning system its contradictory to add disturbances and uncertainty to that system (Ghose, 2017). There have been a massive lobbying from venture capitals portraying FinTechs as an export, and Stockholm is 2nd to London in Europe when it comes to the size of the FinTech sector (Interviewee 4, 2017). The TPPs are very efficient lobbyists (Interviewee 2, 2017) and there is a high risk that TPPs will continue with overlay (Interviewee 2, 2017; Interviewee 4, 2017) despite the RTS stating that if a dedicated user interface exists the TPPs should use that interface (Article 27 PSD2).

The banks are the ones that have to adapt to the new proposed RTS, meanwhile TPPs have not shown any intention or willingness to adapt whatsoever. They have their business models and they do not want to change them (Interviewee 5, 2017). PSD2 only provides access to payments and payment accounts, but banks have noticed that the TPPS are moving into more and more segments. So, why are legislators not forbidding overlay? (Interviewee 4, 2017). There were two economists from the PSD2 negotiation team against European council and the European commission in october the EBA received a disposition letter from these two which was basically a blue copy written by Sofort and Trustly (Interviewee 5, 2017).

5.3 Merchants View on Payments

There are several aspect influencing the merchant view on payment. The size of the merchant, the cost of the service and perhaps the most important how it suits their business.

According to interviewee 7, small and medium enterprises (SME) are generally more profitable for the acquiring services than the larger enterprises. This often has to do with larger companies having more leverage in the bargaining because of their high transaction volume compared to the SMEs. It is in any case always the merchant that pays for the service, but in the end the price is passed along to the end customer (interviewee
5.3. MERCHANTS VIEW ON PAYMENTS

3, 2017). In some cases there can also be a great deal of politics involved, many larger companies have close ties to the acquiring service, it can for example be mutual board members or direct ownership in the form of equity (interviewee 7, 2017).

Although SMEs are the most profitable customer for the acquiring services, and thus they generally have a higher price, the most important factor influencing the merchants decision is that the payment service suits the merchant customers (interviewee 7, 2017). Speed is something that naturally follows this, in a high transaction intensive environment, like a supermarket or a pay toll station, a slow payment method would never be accepted.

Considering new types of payments solutions, there are some in bedded factors that are limiting the adoption of new types of services for both big and small merchants. Smaller merchants in comparison to larger once, do not actively focus on what payment system they use, as long as it works and they can accept payment from their customers. At the same time its not practical to invest in to many payment products, since it increases costs, requires installing and employee training (interviewee 2, 2017).

Larger merchant on the other hand are actively working with the payment systems to reduce check out time and increase conversion rate, in practice they have the resources in comparison with the smaller merchant to accept multiple payment services but then again the incitement for doing so is low. They do not want to introduce unnecessary risk into their systems, they have a lot of investment in infrastructure and they are focusing on keeping the existing systems running smoothly (interviewee 7, 2017).
Chapter 6

Analysis

In this chapter the analysis of the empiric is presented. Geel’s model in combination with the multi-sided platform theory is used to structure the analysis, focus is on layer three of the payment system.

6.1 Connecting The Payment System to Layers and MSP

Based on the three layers in the payment system described by Arvidsson (2016) as observed in table 2.2 in section 2.6. The first payment layer including RIX matches the landscape level in Geel’s model, because it is stable and changes slowly and it is difficult to influence. The second payment layer is viewed, from a bank’s perspective, as the bank accounts. In terms of MSP theory the linkage or interface in a platform is the most stable part of the system. Last, the third payment layer is the actual payment landscape and it corresponds to the niche level in Geel’s model and is characterized by complementary services from different actors that can be attached to a bank account.

The bank account connects a customer to the financial infrastructure (layer 1), and complementary components (layer 3) need to connect to a bank account in order to function. In other words, the bank account is the linkage between the core and complementary components. It is held by the bank and the core is only accessible through a bank (Interviewee 6, 2017).

A TPP or any other service that do not hold any funds are solely transferring information or messages on who should receive the money, the real transfer of money happens in RIX (Interviewee 6, 2017). Hence, the distinction between RIX and bank accounts is necessary, because according to interviewee 6 (2017) some believe that it is possible to change a customer’s bank account without changing liquidity, therefore, it is usually unclear what a payment is. However, focus will not be on layer 1 since RIX is not affected by PSD2 (Interviewee 6, 2017). This is aligned with the MSP theory where the core components are more difficult to replace. Instead, the analysis mainly concerns the most unstable part of a platform, layer 3, where the XS2A rule is key. The three layers are
6.2. LAYER 3

depicted in the figure below:

![Diagram of Layer 1, Layer 2, and Layer 3]

**Figure 6.1.** Schematic overview of the payment system and its layers.

### 6.2 Layer 3

PISPs and card based transactions are essentially competing against each other. This relationship is illustrated in the third layer in 6.1.

“There are two PISPs in Europe, Sofort and Trustly, and other 16-17 AISPs, will we see hundreds, or thousands of TPPs enter the market in 2017?”

(Interviewee 5, 2017)

The quote above illustrates that it is only possible to speculate about the future, but the fact that there only is around 17 AISPs and two major PISPs in Europe right now gives an indicator of the future development. As mentioned, PSD2 is regulating already existing services, it follows technology development not the other way around (Moses, 2011). In other words it is common that regulations are lagging behind the technological development. However, despite the regulation lagging behind there have not been an influx of TPPs flooding the market. PSD2 will actually increase the barrier for new actors as they have to comply and follow other formalia when they enter the payments industry.

Given the popularity and the rapid growth of some of the TPP services, several interviewees stated that there is no doubt that the TPPs are filling a market demand previously overseen by the bank. Therefore, it would be naive by any bank to not consider TPPs as a
 CHAPTER 6. ANALYSIS

threat. However, it is important to make a clear distinction between the threat from the well-established new market entrants, the existing TPPs and the legislation in itself.

The relative small numbers of TPPs present at the European market could be explained by what is considered to be the threat. If established TPPs are the threat, not the fact that PSD2 is entering into force. Then the theories behind the literature in 3.1 serve to explain this. It includes that TPPs are dependent on network effects since it plays an important role in value creation. It further emphasis on the need of generating growth on both sides of a platform, for example it is not possible to have payees and no one accepting their payments and vice versa (Rochet & Tirole, 2003). Another consequence of the network is the self reinforcing nature of it, where the service users' have invested time and money learning and implementing the service. For example, online merchants implementing Trustly as a payment option or consumers setting up an account with Tink. The particular service as an industry standard becomes more established and the users will become less likely to change (Barnes et al, 2004).

Additional pressure comes from the well-established new market entrants that exert network effects and have successfully locked-in their users. The well-established entrant payment services with POS services include Apple Pay, Google Wallet, Samsung wallet, Adyeen, Bambora, paypal and so on. These services differs from the established PISPs (Trustly and Sofort) because they utilize the card infrastructure instead of the overlay technology. Interviewee 1 emphasized the price dumping from companies fueled by venture capital where the focus is to exit after a profitable investment. Also, several interviewees are concerned that this additional pressure from POS services will be a threat. Despite the fact that the card infrastructure is capped in terms of interchange fee, there is still a lucrative business for the bank. However, one interviewee mentioned that the bank has the card, and if it will be digitized and people prefer to use their iPhone or Samsung to initiate payments, then they would most likely not be able to compete with that.

Furthermore, section 5.3 from the empirical findings described that neither large or small companies are generally open to change when it comes to payment systems, but for different reasons. And as a result there is an in bedded inertia in the market for new payment services to be established. This inertia is aligned with the concept around path dependency discussed in chapter 3.3. PSD2 could in theory introduce payment alternatives that lowers cost for the merchant. The interviewee emphasized that cost is not the merchants’ biggest concern, which is in align with the statistics presented in chapter 2.6.1, on top of that prices and cards have gone down with the capped interchange fee. The important factors for merchants are a functioning service and that everyone uses it. The self-reinforcing nature observed in networks described in chapter 3.1 and 3.2 serves to explain these priorities.
6.3 Encouraging Development

Given that PSD2 does not affect the first layer in figure 6.1 and the high pressure in layer 3 the two change processes, transformation and transition presented in section 3.5.3 serve to clarify the ongoing development. In the transformation process Geels Kemp (2007) argue that the survival of incumbent actors are not threatened and they are still able to redirect the development, since the high pressure coming from the other actors, as described in layer 3, is not based on competing technologies that will replace the existing system. At the same time, the transition process described by Geels Kemp (2007) states that the regime actors, in this case the banks, are not able to adjust and not able to solve the problem by themselves, for instance, the concerns raised in section 5.1.2. Thus, a window of opportunity is created for new innovations developed in niches. Christensen’s disruption theory - that incumbents underperforms in a disruptive innovation context (Christensen et al, 2015), strengthens this notion of opportunity from niches.

A long term strategy needs to take into account that any platform, evolves over time (Baldwin and Woodard, 2008). A Bank, owning the platform needs to understand what and when to encourage outside development and when system components should be obtained. As discussed in 3.4, the platform owner should encourage outside development when the customer demand is heterogeneous leading to high variation for complementary components (Eisenmann et al., 2010). Evidently, there is a heterogeneous composition of major actors with varying driving forces, ranging from, defending the market and trying to lower the cost, to establish new revenue streams, and winning niches to related segments of payments. This is in line with the Swedish Riksbank’s view of the payment development, initially characterized by a high level of supply of payments services from different actors. This shows that the customer demand is still heterogeneous and it is difficult to predict what services will succeed.

The consequence of allowing or even enabling outside development at the point of sale because its under too much competition would be that it would generally harder for the bank to sell the customer complementary products. Exactly what is lost and what appropriate responses however, differs between if the POS is lost to a PISP or a service based on the card network.

6.3.1 A2A Dominant

In a scenario where the user interface is lost to a PISP, the payment would be A2A based which is less profitable than an card based transaction were the bank profits from the interchange fee. The bank could however still benefit from complementary services such as providing credit for sales financing etc. But if the bank do not have any influence in the PISP through equity, the bank might find itself in a tough negotiation spot, the PISP can leverage different banks against each other for the best deal, or it could even be a system where the banks actively compete against each other in a bidding system,
similar to what Google does with ads. No matter the set up, the bank will have limited influence and limited profits in a scenario where A2A are the major payment method at the point of sale.

There are setbacks with both the PISP and other A2A based services. For example, the time of performing a transaction, according to Interviewee 7 (2017), A2A such as SWISH and PISPs are way too slow for everyday purchases in the supermarket or when commuting. Another example is the already discussed underdeveloped liability processes compared to the one existing in card scheme. The PISPs are providing value first and foremost to the merchant, not the end customer. As discussed in chapter 2, a merchant receives one service that allows it to receive a payment from multiple banks. The end-customer on the other hand has to expose his or her whole financial status when the PISP screen scrapes their personal information at their online-bank, it also lacks the same insurance cover that the card networks has. Conclusively, it is just another method for the customer to receive a payment.

6.3.2 Card Dominant

Another scenario, if the card based transactions prevails as the dominant design, whether it is in its digital or physical form. There are reason to believe this is a likely scenario, the cards schemes enjoy the benefit of processing large numbers of transactions resulting in economies of scale. The transactions in itself are fast and suitable in most day to day purchases. Technological services introduced by companies such as iZettle, Klarna, Dibs etc are making it easier than ever to accept transaction online and at bricks and mortar store. Besides the aforementioned arguments, cards further have well-established routines both for liability processing transactions, and clearing transactions between the banks (Interviewee 2, 2017). As observed, many of the large technological companies are currently investing on the cards, Apple pay, Samsung pay and Google wallet are all based on the card schemes. Even if the bank’s customer would prefer to incorporate their physical card to a digital card into their smartphone. The bank is still part of the transaction, because they gain profit from interchange fee, card fees and through provision of credit to its customers.
Chapter 7

Discussion

This chapter begins by presenting the discussions of the main findings and answering the research questions. Followed is a discussion on the applied research with regards to ethics, sustainability and the robustness of the study.

7.1 Discussion of Main Findings

The purpose was to investigate what key capabilities were necessary for a traditional retail bank in the future payment landscape, where all actors have access to the same account information. Two research questions were proposed in order to achieve the purpose of the study, namely:

RQ1: How does PSD2 affect the payment landscape?

RQ2: How can a traditional bank respond to these effects?

To thoroughly answer research question one an extensive literature study was necessary. First and foremost it is not possible to investigate the affects on the payment system without understanding the payment system in itself. To understand how the system evolves over time, Geel’s framework was applied, but it also provided more structure of the analysis of the empirical data. Further, in this context MSP theory was applied in order to find potential responses for the bank.

From the literature and analysis it is clear that PSD2 concerns layer 2, where the account owner, the bank, must provide account information to the TPP given the account holder’s consent. PSD2 will regulate the small amount of existing technology or TPPs present on the European market. With PSD2, information on the consumers bank account(s) will be able to go back and forth between layer 2 and layer 3. However, PSD2’s effect on the payment landscape is limited. The existing TPPs is simply distinguished into the AISP and PISP roles in PSD2 terms. Therefore, in retrospect, the initial assumption in RQ1 that PSD2 was going to change the payment landscape was not true. How-
ever, it is true that the payment landscape is changing due to other phenomenon (open banking). Nevertheless, there is a preeminent development in the payment landscape, layer 3, when it comes to real time or POS transactions. The payment landscape is under heavy competition in terms of time and place where a retail transaction is completed. With TPPs offering alternative real time transactions and large technological companies offering services for the consumer to integrate their physical cards.

Based on the increased competition at POS from research question one, an accurate response would be to face the increased competition and not PSD2 in itself. Therefore the answer to research question two was based on responding to the increased competition through encouraging outside development. In line with the theory of platform architecture outside development should be encouraged in a scenario where there is a high level of complementary product competing for the same space. This encouragement can take the form in either a more active or more passive approach. Where a passive approach is to not actively compete by, for example, innovating in-house owned competitive service. It does not imply that a bank should discard having a satisfying payment service. Instead, the payment service is viewed as a hygiene factor not a USP. In other words, it is a necessity that the bank is able to provide their customers with effective payment services and not something the bank uses as a main competitive tool towards other market players. An active role on the other hand is to take it one step further and facilitate the outside development by for example launching a platform directly helping the outside developer to run it service. Whether an active or passive approach is applied it should be suited to the two major scenarios identified in the analysis; account to account and card based transactions.

7.1.1 Responding to an A2A Based Scenario

A strategic approach in an account to account dominant scenario, would be to create a platform for TPPs and become the platform owner. This platform architecture design for banks is similar to the “app-store”. It entails that the bank should be open with their payments and accounts. Then they mitigate the risk of becoming a pipeline in the payment ecosystem, since it allows other firms to develop on top of their platform. This architecture design and reasoning is in line with the payment industry’s two phase development. In the first phase, there will be a higher degree of fragmentation with a high level of supply of payment services from different actors with no actor large enough to control the development. In the second phase, actors that are able to convey large amounts of payments and are widely accepted and the industry move towards a higher concentration. Hence, it is not possible to predict whom to engage a partnership with. Thus, the “app store” architecture increases the likelihood for the platform owner, the bank, to capture the firms that convey large amounts of payments and have a wide acceptance. Consequently, the flow of transactions and information will go through the platform owner’s bank accounts. On the contrary, most customer are not aware of their personal financial information being abused. Companies give the customers relevant information based on long and complex terms of services, but customers are not able to comprehend it.
7.1. DISCUSSION OF MAIN FINDINGS

This is often because terms of service are deliberately being difficult to comprehend by companies to hide their real goals and intentions. Would the customers still use the services if they would actually understand this? Albeit the customers understanding, the trend of FinTech holds a great risk. A lot of startup companies are likely to fail and since they focus on added value and not security or data protection, financial data is likely to end up at unexpected places. Misuse of customer information or failed data protection among FinTechs utilizing the platform can reflect back negatively on the bank owning it.

Probably the most crucial risk with the platform strategy is competition. To create, develop and maintain a platform will be expensive. It will further require a great deal of effort to on-board TPPs to the platform, for example via an extensive sales process. Considering the relative low numbers of TPPs on the market, there is a low likelihood that all European banks will be able to achieve a high number of services on their platform. A cross industry example is the smartphone industry, where there are essentially two dominant platform for app development, the apple and android store. This is in a market with huge amount of apps which can be created by any developer. In the financial sector there are naturally fewer apps due to a higher degree of regulation and complexity. So for a platform to work, a bank must make sure to bring the few existing services onto its platform. because the TPPs want to address a large user base as possible they will naturally turn to the biggest platform. Only the dominant platform will benefit from economies of scale, network effects, and the self reinforcing nature of the platform itself. To summarize, there is a opportunity to achieve high transaction number by owning a platform, but it will require that the platform becomes dominant on a European level.

7.1.2 Responding to a Card Based Scenario

As mentioned, there are many argument supporting that cards would remain the dominant way of paying. Instinctively, in a card dominant scenario the response should revolve around issuing cards. It is certainly a less active and less expensive role compared to creating, developing and maintaining a platform, however, there are still many similarities between the two. Card schemes still provides opportunities to mediate credit, just like the platform, but in addition, it further adds the revenue stream from interchange fees. Moreover, this response is also, just as the platform strategy, in line with the MSP theory. It states that if complementary components are under a lot of competition, outside encouragement should be encouraged. Indeed, to issue cards is a less facilitating approach to encouragement than owning a platform, but it is still an encouragement deciding that the customers are free to use other services developed by other companies. Aside from the aforementioned similarities, there are also some clear differences between the two strategies. To issue cards is routine for most banks, it involves little risk as the schemes has clear liability processes and it is possible for customer to use the card in any service that accepts cards. Meaning that any affiliation with the bank and the service provider is limited.
There are certainly some critique against this approach that is necessary to address. Giving up the point of sale limits the possibility of selling complementary products. But as presented in the empiric, if a customer wants to pay, they want to pay, not receive retirement advice or buy insurance. So perhaps the loss of interface is not that threatening, the bank will still earn revenue from the transaction and collect generated data.

Many aspect of this response are as stated routine for the banks today. However, this does not mean that a bank should passively observe the changing landscape. If a bank trust the card scheme to prevail, there must be an active approach to on-boarding customer that the bank can issue cards to. One approach is to make the customer offering more attractive, for example, to become better at utilizing data and use that information in combination with a personal approach to provide the customer with an experience that is more difficult for an online payment service to provide. Established Swedish banks can further use their established brand and reputations to their advantages. Essentially what it really comes down to, is constructing unique selling points for the customer that are based on the strength of a bank, and not an online payment service with the ultimate purpose of issuing cards.

### 7.2 Discussions of Ethics

Considering the ethical aspect of conducting this study there were several areas that needed careful consideration and discussions. This included Banks A's request of remaining anonymous, our responsibility towards interviews partaking in the study and the use of collected data.

Bank A requested that data collected from their sources, including the interviews representing bank A, should be handled as confidential material. To honor this request the pseudonym Bank A was used in all written material. When conducting interviews outside the Bank, permission to disclose that the study was for bank A was always granted beforehand. The reason as to why it was necessary to disclose to outside interviews that the study was conducted in close relationship with bank A was to make sure that they understood the purpose of the study. Not only to acquire more rich and accurate answers/responses, but also to give them a chance to avoid information they did not want to directly disclose to Bank A.

Considering the relative small nation that Sweden is with a limited number of traditional banks where each have a different publicly known focus. It was challenging to not disclose information that could be traced back to Bank A. Therefore, certain strategic suggestions that could be beneficial based on bank A's strengths were left out. This is beneficial from an academic point of view since the results will be more generalizable. More general suggestions, however, is less beneficial from Bank A's point of view since they are not tailored made.

Further ethical aspect on data collection revolved both around interviews partaking and
7.3. DISCUSSIONS OF SUSTAINABILITY

Data collected from public speeches during the seminars that was attended during the work on this thesis. For the interviews a strict process to avoid any scientific misconduct was applied. First, the interviewees were presented with the purpose of the thesis, anonymity was guaranteed to make sure they could share personal opinions and reflections freely. Specifically, for Bank A employees a non-disclosure agreement was signed and shown for the interviews upon request.

Some information disclosed in this thesis was gathered from public speakers at some of the seminars attended during the work of this thesis. These speakers have not given any written consent to partake in this study. But with regards to this information being stated at public venues it was determined that this was already public knowledge that the speakers stand for.

Finally, to not include any interviews that had conflict of interests with Bank A, such as competitors was avoided. It would however been beneficial to receive for example a PISP or AISP view on the subject of PSD2, but considering the balance between what is contributing findings to the thesis and what is considered industry espionage, it was deemed too uncertain and therefore avoided.

7.3 Discussions of Sustainability

From a social point of view, PSD2's ambition is to increase consumer benefit through competition. As suggested, the bank should encourage certain complementary components in the payment platform to be developed by outside parties while focusing on retaining the interface connecting these complementary components to the financial infrastructure, for example issuing credit cards. This benefits the customers that enjoy a higher freedom of choice, with extremely consumer centered services. However, considering the intensive lobbying efforts that has surrounded PSD2, it requires a careful scrutiny on the intention that has affected the shaping of PSD2. The empiric in this thesis illustrates this notion; the lobbying has primarily come from the established PISP and AISP services. Therefore it is necessary to highlight that during the development of PSD2 the intention might not have been consumer focused, but rather to gain access to financial information the banks have had an exclusive rights to for centuries. Acquiring this information from the unaware customer is ethically debatable but from a social perspective it is certainly a violence of both trust and privacy.

7.4 Discussions of Robustness

Payments are in general a field where there is no shortcoming of academic reports and articles. Although the plethora of theoretical material, which can be used to draw inspiration from it comes with the setback of requiring a substantial screening process, cherry picking suitable material for this study. Despite the extensive literature review conducted for this thesis there is always the possibility that important material, con-
cepts and other information has been overseen. In order to minimize this risk, both the supervisor for this study, Niklas Arvidsson with 20 years experience researching about payment systems, among other areas, was consulted early on to get guidance on choosing suitable material. Further, another external PHD was also consulted regarding the theoretical framework of the study.

Continuing looking at the research approach applied in this thesis on a higher level, a qualitative method was used. In contrary to a quantitative approach where the results are more easy to reproduce the qualitative method consist of empirical data that is difficult to reproduce. Thus, limiting the reliability of the study. Although all interviews were recorded, naturally with consent from the interviewer, and then transcribed word by word, a replication of the interviews would most certainly not result in the same answer. This combined with the approach applied in the analysis and results which are very much based on the author’s understanding and reflection on the gathered data, further impacted the reliability negatively.

With regards to the generalizability of the study it was primarily affected by how the sampling was conducted. The ambition with the interviews was to get a comprehensive picture of payments, gathering empirics from a regulatory, merchant and internal bank perspective. As described in the method chapter the end-customer was left out due to time constraint of this thesis and that there already are a lot of statistically accurate reports from the end-customer perspective. However, the majority of the interviews were internal interviews at Bank A. These where provided by Bank A after a request of different roles from the authors. This non-random sampling approach negatively affects the generalizability of the study. To achieve higher generalizability it would have been beneficial to interview bank employees from several different banks, but with regards to conflict of interest of interviewing competing banks with each other, as discussed in the ethics section of this chapter, this was avoided.

Another important topic of discussion is the applied methods impact on validity. In order to achieve a higher degree of validity there was an effort to triangulate the results, having multiple sources pointing at the same direction, both literature and empirics. The fact that a majority of the interviews was from the same bank might have negatively affected the validity, because it might not be possible to triangulate the answers in between these interview subject. Because they work in the same bank there is quite a big chance they have a shared belief in certain subject since they are exposed to the same internal information. This shared belief, which was very much present in the attended seminaries, can further have been fueled by the consultancy reports, as discussed in the analysis and method chapter. There exists a shared consensus among the consultancy, probably depending on the fact that they are authored with the intention to sell certain solutions beneficial for the consultancy agency. However there were a lot of statements in the interviews that went against the common idea of PSD2 witnessed in the consultancy reports and at the attended seminaries. These statements were however backed up by a lot of literature and discussed in the analysis section of this thesis.
Chapter 8

Conclusion and Recommendation

This chapter outlines the conclusions and recommendations that are a result of this thesis. It ends by suggesting possible research areas for future work.

8.1 Conclusions

The purpose of this thesis was to investigate key capabilities necessary for a traditional retail bank in the future payment landscape where all actors have access to the same account information. After conducting a thorough literature review focusing on multi-sided platforms, the payment system, and Geel’s model for socio-technical systems, it was possible to analyze the empirical material collected from the semi-structured interviews with both bank A employees and outside payment and PSD2 experts. In the analysis, it was identified that the ongoing changes in the payment landscape that was investigated in this report corresponded to the niche innovation level of the Geel’s model and the complementary components level of the multi-sided platform. Identifying the connection between empirics and theory while further triangulating between both Geel’s model and multi-sided platforms made it possible to base any strategic suggestions regarding key capabilities on academia.

So in conclusion, there is much evidence supporting, as presented in chapters 5-7, that cards will be the dominant payment system ahead. Therefore, the core capabilities that should be highlighted in a bank is the ability to incrementally innovate the card offering. An expensive platform solution together with any attempt at trying to actively competing for the point of sale should be avoided. Emphasizes should be put on on-boarding customers. This should be done by building on core capabilities that are based on the strength of a traditional retail bank and exploit the weaknesses of the cross border online payment service. This means that a bank cannot base competitive advantages on capabilities such as providing the best user experience for a payment app, the large technological companies will likely win this race. Instead, the focus should be on capabilities the online services lacks, this can be local presence, strong brand name or through efficiently combining the digital and in person customer meeting etc. So bottom line it is
the ability for incremental innovation of the card offering and realizing strength and use those to differentiate.

With the insights that PSD2 is not the main threat, the directive will still come into action and a bank should realize some of the benefit that the regulation brings. Therefore, a traditional bank should take advantage of what PSD2 is regulating, thus able to have services that correspond to an AISP and a PISP. If the bank operates as a combination between AISP and PISP the bank can facilitate the transaction between banks for its customers. It will further provide customer information the bank do not have access to today. Given customer consent, it can provide the bank with information about a customers activity in other banks. This information will make it easier to target certain customers with incentives to move all funds to the bank. The transaction could be initiated by the bank operating as a PISP. In other words, when a customer enters their online bank, they will receive an aggregated view of all their accounts funds from different banks, and with one click to allocate them to one bank account.

8.2 Recommendations

8.2.1 Bank

Given presented material in this thesis the recommendation on any applied strategy is to not solely revolve around PSD2 in order to achieve some degree of sustainability. The global trend in payments is bigger than PSD2, and a strategy needs to see the development from a global perspective.

Following the presented discussion and conclusion that it is highly likely card issuing will prevail as the dominate design ahead. Further, there is high level of uncertainty associated with competition and risks when it comes to a traditional bank with the aim to create a platform. Therefore, it is recommended that the bank should focus and invest on issuing cards. This is deemed to be a less risky approach to the observed development. To further stretch this argumentation, the competition for at POS with some of the worlds largest technological companies are considered an undesirable position for a traditional bank. Primarily since a bank operates on a much different business model than the private equity and venture capital firms supporting the global large technological companies. While the banks’ focus is to provide a steady stream of annual returns, the private equity and venture capital companies can take losses for years just to take market shares. While recommending that a strategy should not be based on PSD2 rather on issuing cards. It is also, as stated above, beneficial to utilize the benefit that PSD2 will bring for a bank by aggregating and compiling customer information from multiple banks and facilitate transaction between customer accounts held in different banks. These necessary key abilities will provide banks with new insights when it comes to customer offerings.
8.2. RECOMMENDATIONS

8.2.2 Future Work

From the presented findings in this thesis, there are several potential future research areas that lies outside the scope of this study. Considering that PSD2 is a consumer driven directive, this study have had the main focus on the consumer merchant payment interaction. To obtain a more holistic insight it would be valuable to investigate the business to business payment interaction. Perhaps looking at the trends present in the consumer market and see how that could develop into the business to business sector or if there are any other parallels. Another interesting potential area of research this thesis left open is what could affect the other layers in the payment system, for example if bitcoin holds the potential to threat the bank account, that this thesis deemed to be one of the more stable parts of the system. Finally, considering that this thesis revolves around a future perspective, how the payment will likely develop, it would be valuable to asses the findings in this thesis with a study conducted after the implementation of PSD2 that in retrospect asses how the market development turned out.
Chapter 9

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