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Safe online payments for EVRYone: The EU's effects on Nordic consumers through EVRY Fraud Prevention

The possible threats and opportunities to Nordic consumers due to PSD2: A qualitative case study of EVRY Fraud Prevention.

Master's thesis in European Studies
Supervisor: Pieter de Wilde
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Figures and tables

Abbreviations

B2C	Business to Consumer
CSC	Common and Secure open standards of Communication
DESI	Digital Economy and Society Index
EBA	European Banking Authority
ECB	European Central Bank
EEA	European Economic Area
EMV	Europay, Mastercard and Visa
EU	European Union
FP	Fraud Prevention
NGO	Non-Governmental Organisation
PSD1	Payment Services Directive
PSD2	Revised Payment Services Directive
RTS	Regulatory Technical Standards
SCA	Strong Customer Authentication
SEPA	Single Euro Payments Area
TAM	Technology Acceptance Model
TPP	Third Party Provider

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1. Introduction

Did you know that the European consumers spent 189[1] *billion* euros on online purchasing in 2016 (PostNord, n.a., pp. 4-5)? The Nordic consumers' share was 12.2 billion euros, with each purchaser spending on average 600 euros. Also, as many as 3 out of 4 Nordic consumers purchased online in 2016, and the number is increasing every year (Eurostat, 2017). But if you try to remember the last time you purchased online, how much time did you spend on evaluating the security of the website? Maybe you looked closely at what was written in fine print, or maybe you trusted a friend's recommendation. Or maybe you found an offer that was simply too good to miss out on. We approach online security differently. While some are not comfortable with purchasing if there is no two-factor authentication[2], most of us are interested in efficient and easy payment solutions without any fuss.

The Nordic consumers are among the most digitalised in the world, with a substantial number purchasing online, and using online banking services (European Commission, 2016a, 2017a, 2017b, 2017c, 2017d). Our society is becoming more digitalised every year, and the developments does not seem to slow down anytime soon. However, when we purchase online, we leave behind sensitive information and risk exposing ourselves to being defrauded. In 2015, 15 *million* consumers in the European Union (EU), purchasing online experienced fraud[3]. (Eurostat, 2015a, p. 5) Further, more than a quarter of consumers purchasing online experienced security related problems[4] in 2015 (Eurostat, 2016, p. 1). This has led to an increased concern about online security.

Security is also an issue for Nordic consumers, with about 1 in 4[5] not purchasing goods or services online due to security concerns (Eurostat, 2010, 2015b). However, even though consumers are concerned about security, they keep exhibiting risky behaviour with their sensitive information (Aite Group, 2016, p. 25). We leave our smartphones unlocked, we throw away documents with sensitive information and use unsecure connections for online banking and internet purchases. These behaviours significantly increase the risk of fraud. What the Nordic consumers might not realise, is that while the defrauded money might be refunded, the

[1] Estimates
[2] Security measure to ensure the identification of the purchaser. Will be elaborated in chapter 4.
[3] Online fraud includes data breaches on e-commerce websites, stolen cards and phishing attacks. See section 5.1. for further explanation.
[4] Including viruses that affect the device, abuse of personal information, children accessing inappropriate websites and financial loss (Eurostat, 2016)
[5] Of people who have used the internet within the last 12 months of the survey (Eurostat, 2016)

defrauded money is used for serious, organised crime. Human and drug trafficking, and terrorism are known for being funded by online fraud.

The fact that 15 million EU consumers are victims of online fraud, that consumers avoid purchasing online due to security concerns, means that online security is a topic that needs to be addressed. By introducing the Revised Payment Services Directive (PSD2), the EU intends to "make it easier and safer to use internet payment services [and] better protect consumers against fraud, abuse and payment problems, [as well as] strengthen consumer rights" (European Commission, n.a.-c). The revision of the first Payment Services Directive was approved in 2015 and is set to become applicable from 2018 (Directive 2015/2366/EU, 2015). PSD2 is expected to have a significant impact on the payment security of consumers. It is also set to affect the actors in the payment sector, and EVRY Fraud Prevention (FP) is one of these actors. EVRY FP offer fraud prevention services to the Nordic payment sector[6], and is a back-end security system aiming to protect Nordic consumers from being defrauded online. Being placed between consumers and the payment sector, mainly banks at the moment, gives EVRY FP a unique perspective on the changes PSD2 is set to bring about, and how this may affect Nordic consumers.

1.1. Topic and research question

This study sets out to shed light on what threats and opportunities PSD2 could lead to for Nordic consumers, through how EVRY FP is affected. The research question for this thesis is;

What threats and opportunities may arise for Nordic consumers due to the changes to EVRY Fraud Prevention, brought about by PSD2?

In addition to one of the sections focusing on the main research question, to contribute asked the research question, the following sub-questions will be answered as well;

- *From the perspective of EVRY FP, how do Nordic consumers approach security when purchasing online?*
- *Is EVRY Card likely to successfully implement PSD2?*

The first sub-question will give the necessary insight into the Nordic consumers EVRY FP serve, whom EVRY FP and the EU needs to include in their approach towards safer online

[6] EVRY FP offers services in other countries as well, but this thesis will focus on the Nordic market.

payments. The second question is crucial for the main research question, as it is a major threat to Nordic consumers is if PSD2 fails to be successfully implemented[7].

This study is a result of a wish to find out more about what happens between the adoption of legislation at the EU level and the implementation deadline. To do so, I am conducting a case study of EVRY Fraud Prevention. I use interviews to gain their perspective on the influx of PSD2, and what threats and opportunities it could lead to. EVRY FP needs to comply with the requirements from PSD2, and as this thesis will show, other actors could have an impact on the outcome for EVRY FP. How EVRY FP approach the changes from PSD2, and the implementation of it, affect the Nordic consumers they serve. I have chosen PSD2 and secure payments as the topic because it is of vital importance for us as consumers. Further, PSD2 is set to have substantial impact on the banking sector and is a legislation that is the source of tension all over Europe. Another reason for me choosing to study PSD2, is because it was a wish from my supervisor at EVRY FP to know more about how this legislation will affect consumers it is set to protect. The outcome is impossible to know yet as this is an ongoing process, but it is nevertheless possible to identify some possible threats and opportunities. No matter what possible threats and opportunities EVRY FP identify, the most serious threat to the safety of the payments of Nordic consumers, is if the legislation fail to be successfully implemented and harmonised. Hence, it is important to establish whether EVRY Card[8] is likely to do so.

For the purpose of this thesis, I have defined threats as threats to the safety of Nordic consumers' payments, as well as threats to EVRY FP and their ability to prevent fraud. For example, not having proper authentication measures in place for the payment process, is a threat to the safety of consumers. Not receiving enough information about the transaction is a threat for EVRY FP and their ability to analyse and detect fraud. The threat to EVRY FP is also a threat to the safety of Nordic consumers, as poor fraud prevention services will lead to higher fraud risks. As for the opportunities, I have defined it as safer payment processes. Proper authentication measures are an opportunity for consumers, because the risk of being defrauded is decreased by it. Quality fraud prevention is another opportunity, as it reduces fraud for Nordic consumers.

[7] For this study, I define successful implementation as implementing the requirements correctly and on time.
[8] EVRY Card is responsible for compliance with PSD2, and is therefore the entity referred to here. The perspective of EVRY Card is therefore the perspective of EVRY FP in this thesis. I use the term EVRY Card for clarity over where the data is from.

1.2. Previous research

We know from the introduction why this research topic is important to know more about and why it is a study that is worth conducting. This section on previous research aim to show why this study is relevant. By presenting some of the previous studies conducted, I intend to show that this project will contribute to new insight by filling gaps in the research. First, I will present previous research on PSD2, before continuing to Europeanisation and Implementation. I intend to contribute to the field by conducting a study focusing both on the effect legislation has on consumers through actors involved. Further, shedding light on how an actor prepare for, an reflect of the implementation process.

1.2.1. Revised Payment Services Directive

Regarding PSD2, there are some studies published, looking at the possible changes in the banking market, and how the security measures might affect consumers. Donnelly (2016), offers an evaluation of the implications of PSD2 for payments in the digital market, by analysing the changes from Payment Services Directive (PSD1) to PSD2. The research concludes that while PSD2 will improve the quality of payment services in the EU, there are still some issues remaining that needs to be dealt with. Kasiyanto (2016) offers insight on the security issues of innovate payment services with the regulatory framework of the EU. Kasiyanto's focus is on mobile payments and bitcoin, which this study does not focus on. There does not seem to be any extensive research conducted on the impact on other actors in the payment sector than banks, which is where this study will offer insight. Further, the studies I have evaluated seems to focus on either the banking sector or consumers, and not looking specifically how the changes brought about by legislation affects consumers, through the actors, as this study does.

The low number of studies of PSD2 is not surprising though, as the Directive was adopted in 2015 and is not to be fully implemented until 2018. That does not mean, however, that no one has voiced their opinions, concerns and analyses of PSD2 and how it will affect the different sectors. Many of the actors affected by PSD2 has published white papers[9] and position papers both before and after PSD2 was adopted (Deutsche Bank, n.a.; Equens SE, Nets, & VocaLink, 2015; Visa Europe, 2015) . The documents published present the positions, concerns and opinions, aimed towards its customers and the EU. Some, such as Equens SE et al. (2015), propose changes to objectives of the then proposed legislation. Others make recommendations

[9] Policy document, often in form of a report, summarising a government, organisation or business' plans, strategy or perceptive on policy.

for the actors in the sector (Accenture, 2015). The White Paper published by EVRY, set out to be a contribution to how the payment service sector can look beyond the challenge of comply to PSD2 and use the opportunity to evolve (n.a.-b, p. 6). This is just a small number of the position papers on PSD2, some with a more informational perspective, while others take more political point of views. Though these papers are not academic research, they still contribute to the aim of showing the relevance of this study. It shows that PSD2 is a topic than many are concerned about, and providing an academic perspective on its impact will be a useful contribution.

1.2.2. The perceived security of consumers

The perceived security of consumers is a research field that has increased in line with the technological developments. Consumer behaviour has become a more important research field as online purchasing has grown (Dennis, Merrilees, Jayawardhena, & Tiu Wright, 2009, p. 1122). Researchers have developed several models to understand consumer behaviour, looking at different variables that consumers use to evaluate the security of an e-vendor when purchasing online (Dennis et al., 2009). What these factors are, will be revisited in Chapter 2. Most studies focus on the affect perceived security has on the vendors, who loses out of profits when consumers choose not to purchase online due to security concerns (Flavián & Guinalíu, 2006; Hartono, Holsapple, Kim, Na, & Simpson, 2014; Roghanizad & Neufeld, 2015). This study will contribute to this by offering the perspective of an actor with in-depth knowledge of the behaviour of Nordic consumers.

Hartono, Holsapple, Kim, Na and Simpson (2014) argues that previous literature on perceived security is inconsistent between the conceptualisation of security and the operationalisation of the measures of perceived security, thus ignoring the multidimensionality. They contribute to this gap by identifying and validating three dimensions of perceived security, and developing and validating a second-order construct model of perceived security. The limitations of cross-sectional data however, is that they only provide small snapshots of the impact, and makes it difficult to generalise. They recommend longitudinal data for future studies. This study will also be a snapshot of the possible impact, and will not have a longitudinal perspective. A second study when the legislation is implemented would contribute to this.

The previous research show that consumers are diverse, and studies such as Roghanizad and Neufeld (2015) collecting data from one group, cannot be generalised to apply to all groups. Hartono et al. (2014) collected data from three different organisations, providing more width to

the analysis, but only providing snapshots of reality as data was not collected over time. This study will use the perspective of EVRY FP on the consumers, which consist of experience from consumers from over 70 banks, covering many types of consumers.

Further, the data is based on the level of internet purchases when the studies are conducted. Online purchasing is a sector that has experienced a massive increase in a short period of time, and some of the studies are challenges to draw from as the results are based on dated facts (Flavián & Guinalíu, 2006; Salisbury, Pearson, Pearson, & Miller, 2001). The groundwork, laying out models for analysis however, can still be used today. As the perspective EVRY FP has on the consumer's approach to security is based on many years of experience, the perspective offered from this study will be insight to the perception of consumers from a longitudinal perspective.

1.2.3. Europeanisation

Europeanisation is a research field that has seen an increasing amount of attention since the end of the 1990s, according to Featherstone (2003, p. 5). The recent research on Europeanisation has revived previous debates on European integration, policy-making and European governance (Lenschow, 2006, p. 56). When researchers first started to pay attention to the European Community, the focus was on economic and political integration. The dynamics of policy-making in the EU has also been the centre of attention. The concept of Europeanisation is not used much by other sciences, and (Featherstone, 2003, p. 3). The growing number of studies on the concept, analysing the implementation of EU legislation "on the ground" has contributed to the understanding on how the legislation affects its Member States, a topic that remains understudied (Pollack, 2010, p. 37). This study will focus on how European policy lead to changes within private actors. It will be a contribution to widening the application of the concept of Europeanisation, as well as contribute to closing the gap on research "on the ground," by looking at a firm and consumers.

Featherstone (2003, p. 3) argues that Research on Europeanisation and implementation of EU law are two fields that in several ways overlap each other, it is difficult to study the one without studying the other. Many of the studies done on the subject in numerous ways deal with both. Studies of Europeanisation of institutions and policies examines the way domestic institutions and policies adapt due to the integration process (Sverdrup, 2004, p. 24). This is why this study, in addition to looking at EVRY FP from a Europeanisation perspective, will use implementation theory.

1.2.4. Implementation

Implementation in the EU is a larger research field than PSD2, which is not surprising, as the field is broader and encompasses a much larger pool of potential studies. According to Sverdrup (2007, p. 198), there have been many studies conducted on implementation in the EU, both qualitative and quantitative. Previously, implementation research were mostly concerned with arguing whether the process was top-down or bottom-up, and the field was mostly dominated by the case-study approach, urging a more quantitative approach (O'Toole, 2000). Larger studies have since been conducted, and there has been a move from only looking at Europeanisation from a qualitative perspective to conducting quantitative studies as well (Sverdrup, 2004). This study will not contribute to the field with a quantitative approach, but instead the "on the ground" approach as mentioned previously. Studying implementation has been regarded as challenging due to the complexity of the field, with many variables involved in each study. Some of the key issues for the literature on implementation is the attention to performance when evaluating implementation; attention to the other factors involved and the role of ambiguity; and the quality of the research design.

O'Toole (2000, p. 264) argues that until the 1980s, there was paid little attention to implementation. From not being a subject at all, implementation became a popular subject for studies in all shapes and sizes for a while. After a down-period, the research field again resurfaced in the 1990s. Sverdrup (2007, p. 209) argues that there has been progress in the research field, and there is more knowledge about the performance levels and the workings of implementation of EU law than before. There is a lot of literature on the impact of legislation on national institutions and governmental bodies, but less on the outcomes and success of the aims of the legislation. Sverdrup encourages more studies on implementation performance and implementation success, as well as studies to understand the reach and scope of different mechanisms, using quality research designs. As PSD2 is not to be implemented yet, this study is not able to have this focus, but it is a topic that should be studied in some years' time.

Bursens (2002) argues that when EU institutions and scholars noticed that there was an issue with implementation gap, research refocused to this area to analyse what factors cause implementation failure. By looking at the possible hinders to the implementation process of PSD2, this study aims to contribute to this research approach as well. As PSD2 will not be implemented yet, there are limitations to the contributions to research on outcomes and performance. Nevertheless, this study contributes by offering in-depth knowledge of what happens between the adoption at EU level, and the outcome at Member State level.

1.3. Structure

This thesis is divided into nine chapters. In Chapter 2, I will elaborate on the theoretical framework used for this thesis. I use theory on the perceived security of consumers to show the varieties of perceptions consumers have when purchasing online, which will be applied in Chapter 6 to show how the perspective of EVRY FP on this fits in with the research findings. The concept of Europeanisation is set up against the approach to implementation of EVRY Card, to highlight that the level of Europeanisation is expected to be high, and thus PSD2 is more likely to be successfully implemented. Implementation theory will demonstrate that the implementation approach of EVRY Card means that they are likely to successfully implement PSD2.

Chapter 3 presents the research design and methods used to conduct the study. I use mixed qualitative methods, including inductive and deductive approach. For the data collection, document analysis, participant observation and interviews are used to answer the research question. The data from the interviews are analysed using a qualitative content analysis approach.

Chapter 4 presents PSD2 and the information necessary to understand the following chapters. It also includes a short introduction to the background for revising the legislation. As the study does not have room for including all objectives of PSD2, only the objectives I have chosen to focus on will be presented; open banking with Third Party Providers (TPPs), the Regulatory Technical Standards (RTS), and Strong Customer Authentication (SCA).

Chapter 5 elaborates on what online fraud is and presents the case for this study, EVRY FP. How EVRY FP prevent fraud is then elaborated. There are several types of fraud schemes, but as most online payments still are card based, most techniques aim towards card information of consumers. EVRY FP is a fraud prevention services aiming largely towards the Nordic market, and by monitoring card transactions, they analyse whether the purchase is genuine or not.

Chapter 6 sheds light on how Nordic consumers approach security, from the perspective of EVRY FP. The Chapter identifies consumers' lack of focus on security, and their priority on efficient payment processes over security measures. I then return to the theory to show where the perspective of EVRY FP differs and coincides with previous research. This is used as the base for the remaining chapters, arguing that PSD2 and EVRY FP needs to be able to protect all consumer types.

Chapter 7 presents the findings from EVRY FP on the possible threats and opportunities that follows PSD2. After presenting the findings, I shed light on what this means for the threats

and opportunities of Nordic consumers and thereby contribute to answer the research question. The perspective of EVRY FP on open banking, RTS and SCA is the focus for this chapter. The findings show that external factors from open banking and the security requirements could be possible threats, while the opportunities is the ability of EVRY FP to exploit the opportunity and develop better fraud prevention services.

Chapter 8 aim to show that EVRY Card, as the entity responsible for compliance, is likely to successfully implement PSD2. Europeanisation is used to show that the level of Europeanisation of EVRY Card is likely to be high, contributing to the sub-question of this chapter. Next, implementation theory is used to show that how EVRY Card prepare for the implementation means that they are likely to succeed, but that other actors could affect the outcome.

Chapter 9 will conclude the study and present the answer to the research question. Open banking and the security requirements, with focus on SCA, represent possible threats to Nordic consumers. The opportunities are the ability of EVRY FP to exploit the changes to the market to improve their services, and their preparations for new fraud schemes that will arise in the wake of PSD2. Further, failure to implement is the most severe threat, but EVRY Card is likely to succeed. However, other actors may not, which can affect the outcome and the safety of the payments Nordic consumers execute. Reducing the possible threats from other actors is important to ensure Nordic consumers' safety.

2. Theoretical framework

As the introduction of this study stated, the aim of this thesis is to shed light on how consumers are affected by the impact PSD2 will have on EVRY FP. To be able to do so, it is important to have a fundamental theoretical framework that the findings can be measured against, and to help guide this research. To answer the main research question, as well as the sub-questions, it is necessary to identify the concepts I am using to set the findings up against. This is to demonstrate that the findings are not based on my analysis alone, but also facts and findings from previous research on the topic. This is important for the validity of the study. For the three theories and concepts I use for this thesis, I will elaborate on the relevant sections for this research, and how I intend to use it in my research. The first concept I will explain, is consumers' perception of security, before I elaborate on Europeanisation and implementation theory, and how I intend to use them for the thesis.

2.1. Consumers' perception of security

By introducing PSD2, the EU intends to ensure make safer payments for consumers. This is an important objective, and one that affects EVRY FP, whose service is based on ensuring that payments are secure. EVRY FP has as all actors, a perspective on consumers' approach to security. That is why the data collection will include findings on this perspective. To do so, it is important to know more about research's perspective on consumer perception of security. The concept of consumers' perceived security will be used as a basis for the data collection, as well as to show how the findings coincide, or differs from the research.

Since the arrival of e-commerce, goods and services have become easy accessible, and faster and cheaper than entering a store to buy something. This has contributed to the immense popularity of online purchasing (Hartono et al., 2014, p. 11). With e-commerce growing, so has the concerns about security. Surveys show that consumers' main reason for choosing not to purchase online, is due to security (Eurostat, 2015b; Hartono et al., 2014, p. 11). In addition, the constant media attention on the topic has lowered consumer confidence in online security even more (Flavián & Guinalíu, 2006, p. 601). This has become an obstacle for the actors involved in e-commerce, and is why the concept of perceived security has become a key factor in the decision-making process in the business to consumer (B2C) e-commerce (Hartono et al., 2014, p. 11). This also means that tackling the perceived security should be a main concern not only for the firms involved in e-commerce, but also of the EU.

As the increasing e-commerce has led to increased concerns about security when purchasing online, it is interesting to look at what consumers see as security. Salisbury et al.

(2001, p. 166) defines perceived internet security as the extent to which the consumer believes that the internet page is secure for transmitting sensitive information. Flavián and Guinalíu (2006, p. 604) defines perceived security as consumers' subjective probability of whether their personal information is safe, and not viewed, stored or manipulated beyond their consent. An important point to make, is that perceived security is a *multidimensional* concept, with many underlying dimensions determining whether consumers choose to purchase online or not (Hartono et al., 2014, p. 11).

The concept of perceived security is also linked to the Technology Acceptance Model (TAM), which is an information systems theory, aiming to predict how users respond to new technology (Hartono et al., 2014, p. 12; Salisbury et al., 2001, p. 165). TAM suggests that the user attitude towards the technology in question and the consequences they believe using it will have, has an influence on the intent to use it. More factors identified by Hartono et al. (2014, p. 17) are perceived confidentiality, perceived availability and perceived non-repudiation. An important aspect to include, is that the dimensions and factors are many, and different studies have applied them differently, on various groups of consumers. Some of them are highlighted here to show the complexity behind the decisions of consumers.

How consumers evaluate security when purchasing online, and the action that follows this evaluation, affects the actors involved in the payment sector. This includes e-commerce. Roghanizad and Neufeld (2015, p. 489), like Hartono et al. (2014), points to the importance of e-vendors knowing how consumers evaluate the trustworthiness and security of the website. They also suggest that e-vendors should focus more on improving the actual security rather that improving consumers' perceived security. Salisbury et al. (2001) states that when consumers have increased levels of perceived internet security, the intent to purchase online is higher. The study also suggests that the security factor is more important for consumers than usefulness and ease of use. Consumers will purchase online if they feel that their information is kept safe, regardless of the objective security of the e-vendor. It is therefore in the interest of all actors involved to ensure that consumers' perceived security does not prevent them from performing the purchase.

One study suggests that many online shoppers base their decision to purchase on first-impressions, and that they do not analyse the e-vendor for possible security risks (McKnight and Chervany, 1996, as cited in Roghanizad & Neufeld, 2015, p. 491). Roghanizad and Neufeld (2015, p. 496) argues that while prior research on consumer trust and online purchasing, has assumed that consumers use rational and deliberative processes to assess whether to trust the site or not, their result show that when consumers are faced with risk and ambiguity, they use

intuitive processes instead. That consumers spend little time evaluating the perceived security, and trust intuitive processes instead of rational evaluation, indicates that despite consumers being concerned with security, they might not know what it entails. First impressions and subjective opinions of design, as well as past experiences, seem to be their focus. This coincides with other studies indicating that the "common-sense", might not be that common, with emotional factors dominating (Dennis et al., 2009, p. 1131).

As we have seen, consumers approach security differently. Growing e-commerce has resulted in growing security concerns, which again has become an issue for B2C as it prevents consumers from purchasing. Further, perceived security is linked to perceived trust, perceived usefulness, perceived availability, ease of use, and several other factors. Common for them is the concept of *perceived* - it is consumers' perception of security. Consumers express that they are concerned about security, but the limited timed they spend on assessment, and the use of intuition instead of rational factors, speak a different story. This theoretical background will be used to prepare the data collection from EVRY FP on their perspective on consumers' approach to security. I expect findings elaborating on the difference between what consumers are concerned about, security, and their actions.

2.2. Europeanisation

In the introduction, previous research on Europeanisation was presented. This section will take a closer look at some of the concepts that has been developed from the research, as well as a model used to show the development of and level of Europeanisation. The model will be applied to EVRY Card[10] in Chapter 8.

Europeanisation is an attempt to understand European integration, and is according to Caporaso (2007, p. 27), required to gain comprehensive understanding of the process. Europeanisation is argued to be a term, a concept and a theory, with many explanations tied to its name. It is a "process of structural change, variously affecting actors and institutions, ideas and interests" (Featherstone, 2003, p. 3). Europeanisation today is mostly associated with pressure from the EU leading to domestic adaption (Featherstone, 2003, p. 7). No matter the approach or perspective on Europeanisation, it can be useful as a gateway to understand changes to politics and society. Vink and Graziano (2007, p. 3) argues that the concept, despite being contested as to its usefulness, is used by scholars to assess the effectiveness of policies from the European level and how the policies affects national policies. (Lenschow, 2006, p. 57), further

[10] EVRY Card is responsible for compliance with PSD2, and is therefore the entity referred to here. The perspective of EVRY Card is therefore the perspective of EVRY FP in this thesis. I use the term EVRY Card for clarity of where the data comes from.

points to the integration processes in EEA. He argues that it is interesting to observe the level of Europeanisation in these countries, despite that they remain EU-sceptical, and actively has chosen to remain on the outside of the Union. As we will learn more about in Chapter 5, EVRY FP is a firm based both inside and outside of the EU, and it is therefore an interesting case to apply the concept to.

"Countries have responded to the pressures of Europeanization at different times to differing degrees with different results" (Schmidt, 2002, p. 895). It is impossible to make any easy generalisation about the impact of Europeanisation on the Member States as there are many differences and factors and variables both at EU and national level. The level of rigorousness of the EU is one of them. If the EU leave it up to the Member States to implement legislation to the degree they see fit, there is no doubt that the level of Europeanisation will vary greatly. If the EU on the other hand, presents rules that are to be completely harmonised across all Member States with strict deadlines, the situation should be different. PSD2 and its detailed requirements that are to be fully harmonised, indicates that the pressure for Europeanisation should be much high.

In Chapter 8, I will apply a three-step model by Caporaso (2007, pp. 27-31), to EVRY Card's perspective on PSD2 and the implementation process, with the aim to show whether it is likely that there will be a high or low level of Europeanisation. The first step of the model is European integration; the laws and regulations made by the different institutions at EU level. The second step is the degree of fit or misfit at the domestic level, while the third step is the mediating factors. This will contribute to the assessment of whether it is likely that EVRY FP will success in the implementation of PSD2. The next step is to present the theory on implementation, and how it will be applied to the study.

2.3. Implementation

This section will present the concept of implementation, which will be used to measure the findings in Chapter 8. The aim of presenting research in implementation theory is to apply it to the implementation process of PSD2, using the perspective of EVRY Card to assess whether it is likely that EVRY Card will successfully implement PSD2. This is because failure to comply with the PSD2 is perhaps the most serious threat to the security of Nordic consumers. There are many different concepts and models to evaluate and analyse implementation processes. I will use research of Sverdrup (2007), Knill (2006) and Bursens (2002) for this study. This section will start by explaining the EU approach to implementation, before elaborating on the concept of implementation.

The EU notion of implementation, is that EU law should be treated and implemented the same way as national law, EU law is not any less important than national law (Sverdrup, 2007, pp. 200-204). Historically however, the power of the EU to enforce European integration has been limited, but an increased focus on ensuring improved implementation seeks to change this. One instrument for instance, has been to give the EU level capacities to enforce sanctions towards Member States failing to comply. In May 2015, the European Commission (2015a) presented their Better Regulation Agenda, which covers the entire policy cycle, aiming to increase openness and transparency in the decision-making process. This to improve the quality of EU law with better impact assessments and more review of existing laws. In line with the Agenda, implementation plans are also introduced (European Commission, 2016d). Although the implementation is the responsibility of the Member States, support from the Commission with implementation plans for certain regulations and directives, will help ensuring correct transposition within the deadline.

> "The term 'implementation' refers to the transposition[11] of European norms into domestic legislation, as well as to the adherence to, and enforcement of such legislation so that it forms part of the political, legal and social environment" (Sverdrup, 2004, p. 24).

The term aims to explain the effect of, and fulfilment of measures Sverdrup (2007, pp. 197-199). European integration influences the Member States mostly through legal rules, and the implementation is therefore crucial for the EU to succeed in its objectives. Implementation by one actor, is often dependent on compliance by other actors, which means that if some actors fail to implement fully or properly, this is likely to affect other actors, with a failure to implement becoming more likely for them as well (Sverdrup, 2007, p. 199). Knill (2006, p. 361) points to three levels of adaption pressure which influences the level of success; low, moderate and high institutional adaption pressure. This pressure can be compared to Schmidt's (2002) model of measuring Europeanisation; the level of pressure is determined by the level of fit or unfit with the domestic policies. How this fits for this study will be revisited in chapter 8.

A rationalistic approach to implementation literature assumes that it is likely that implementation will take place because the Member States will benefit from the rules imposed (Sverdrup, 2007, p. 204). What Member States see as benefits will vary depending on their strategies, policies and needs. What they pursue will therefore differ, depending on their national preferences. This also applies to the institution level, where some might choose to await reactions from other actors, while others exploit the opportunity to achieve aims that

[11] All the measures necessary to incorporate European legislation into national law (Bursens, 2002, p. 175)

would not be possible without EU leverage. However, wanting to comply does not mean that they will succeed. Lack of ability or capability have an impact even if the Member States aim to comply. If we combine these two assumptions, it means that actors act from a *bounded* rationality perspective (Sverdrup, 2007, p. 205). The aim to implement, but are bound by their resources. The aspect of a rationalistic approach to implementation will be assessed in Chapter 8, by applying the approach to the reflections of EVRY Card to argue that they intend to implement and have the resources to succeed.

Bursens (2002, p. 180) argues that most national actors affected by EU policies want to transpose the policy correctly and on time. However, in some cases, institutional obstacles prevent them from doing so. These obstacles may be structural or cultural, depending on the history of the institutions or they can become empowering factors, shaping the actors' strategies and policy outcomes. The approaches to both structural or cultural obstacles point to institutions as a variable explaining the non-compliance. The aspect presented by Bursens will be applied especially in terms of EVRY Card's intention to implement correctly and on time, as well as the new actors and what seems to be their intention to comply.

2.3.1. Implementation in the Nordic countries

We have now seen that there are many ways to approach implementation studies. It is therefore relevant to present implementation statistics from the Nordic countries. These numbers do not tell us what the issues are, or what factors and hinders the countries has faced, or avoided. It nevertheless gives an indication of the implementation success of the Nordic countries. Implementation of EU law and policies in Member States has become a growing concern for the decision-making institutions of the EU, because a substantive implementation gap has been discovered (Bursens, 2002, p. 173). A Directive is legally binding for the Member States, but it only sets the final level of integration. The Member States have to achieve the goals themselves, with strategies and methods set out by national authorities (Bursens, 2002, p. 179). He further points to a number of implementation issues, originating from the European level. These are divided into content-related and governance related factors. The governance issues are related to the Commission being the transposition monitor and the challenges this leads to, regarding communication and response time. The content related issues are related to the content being either too detailed or not detailed enough for example. As Chapter 8 will show, uncertainties about the content of RTS is one of the factors that might become an implementation issue.

The numbers on transposition deficits from the end of 2015, shows that the numbers for Single Market Directives, continued to remain at 0.7 percent for the EU, under the 1 percent target (European Commission, 2015d).

As table 1 shows, the Nordic countries, except Iceland, are under the EU average and well under the EU target. It is important to note, however, that there is a time lag from the adoption in the EU and until the legislation is added to the EEA agreement, which means that the law that applies to the EU might differ from the EEA because it takes longer to adopt and then implement (European Commission, 2016d).

Country	Transposition deficit
Sweden	0,4
Finland	0,5
Denmark	0,3
Norway	0
Iceland	1.8

Table 2.1- Transposition deficit in the Nordic countries in 2015, in percentage. (European Commission, 2015d, 2016a, 2016b)

The theoretical background on implementation in the EU, shows that there are several ways for actors to approach implementation, and that the choice of approach depends on interests and priorities. In addition, there are several ways to analyse and shed light on implementation processes, depending on whether the policy is bottom-up or top-down. The theoretical framework and data on previous implementations of EU legislation, will be applied to EVRY Card's perspective on the implementation of PSD2. This to argue that EVRY Card, as an actor based in the Nordic countries, with the intent to, and preparations for the implementation, is likely to successfully implement PSD2.

3. Research design and method

The aim of this chapter is to present the research design and method, to elaborate on how I conduct and present the research and findings. I have used qualitative mixed methods for this study, using case study as the foundation. The main source of data used for this thesis, are the interviews, in addition to document analysis and participial observation. The research design I have chosen is the case study method, chosen based on a wish to gain in-depth knowledge about how the EU affect payment security of Nordic consumers, through an actor affected by the EU. The aim of the study is not to say anything about how all consumers are affected in all aspects of PSD2, but rather to offer insight to what threats and opportunities that arise for Nordic consumers, as a consequence of PSD2. That is why I have chosen to conduct a case study. Section 3.1. will present the case study method, and the chosen case, before 3.2 will present the data selection and collection.

3.1. Case study of EVRY Fraud Prevention

In order to understand how to approach the case study method, I will elaborate on what it is, why I chose this method, as well as possible weaknesses of this approach. This research project is carefully planned out to ensure that I reach sufficient level of insight to be order to present my findings. Therefore, I have put substantial time and effort into the methods section, to contribute to the case study research with a well-planned and conducted research project.

According to Yin (2014, p. 2), case studies are preferred when studying question where the researcher has little control over behavioural events, and the focus of the study is contemporary rather than historical. Further, Gerring (2007, p. 211) argues that a case is a phenomenon that is spatially and temporally limited, and observed at either a single point in time or over a period of time(2007, p. 211). Yin defines the case study as an empirical enquiry investigating the case, the phenomenon as Gerring (2014, p. 16) calls it, “in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident”(2014, p. 16). The case study, either of an individual, a group, an organisation or event, rely on the existence of a link between the micro and macro level in social behaviour (Gerring, 2007, p. 1). Further, Gerring argues that in some instances, it is more helpful with in-depth knowledge about an individual example rather than a larger sample of examples. A deeper understanding is reached this way than a multiple case study will offer. As the aim of this thesis is to gain in-depth knowledge about the effects of PSD2, an individual example works best, which is what I have chosen.

Yin (2014), Maoz (2002, as cited by Gerring, 2007) and Gerring (2007) points to some factors that are important to take into consideration when writing this thesis. The factors are, preparing properly and addressing the possible strengths, but maybe more importantly, weaknesses of the research and research design, will only strengthen my thesis. Further, there are both challenges and critiques to the use of the method, which is important to enclose. According to Yin (2014, p. 72), many social scientists believe that case study research can be mastered easily with minimum preparation, and that any shortcomings in conducting the study are not significant, whereas the reality is quite the contrary (2014, p. 72). Further, there is a lack of documentation of the approach to data collection, data management, and data analysis and implication when conducting case study research, according to Maoz (2002, as cited by Gerring, 2007, p. 6). Clearly, there are a number of concerns that needs to be taken into consideration when planning and executing the research. A case study is challenging to do, and being completely objective towards a study you are spending considerable amount of time conducting, is impossible. My perspective on how the reality is, and my interpretation of the data will to some degree affect the result. By being aware of the possible weaknesses of case studies, I aim to avoid them by presenting how I approach data collection and analysis, which will be presented in section 3.2.

The case I have chosen for this study, is a business actor affected by the adoption of PSD2; EVRY Fraud Prevention. My aim is to use the perspective of the informants from EVRY FP to say something about how they experience the changes brought about by PSD2, and what threats and opportunities to Nordic consumers it could lead to. A single case study unlike a multiple case study, gives the opportunity to go into depth on the case and topic, and analyse on a level that would not be possible if studying several cases (Gerring, 2007). However, for the study to be a case of something broader than itself, the case, at least in some respects, it needs to be representative of a larger population (Gerring, 2007, p. 145). Going into depth on EVRY FP means that it is difficult to transfer findings to other research projects. The aim of this study has been to say something about how the informants experience the process towards PSD2 and the implementation process. The findings will still point to some factors that needs to be accounted for by the payment sector, as well as some challenges of the implementation processes of EU legislation. In this matter, it could give insight to the approach EU legislation, regardless of policy area. Another important point, and which, in my opinion, makes the study even more interesting, is that it is being written while the process of PSD2 is ongoing, and the outcome still unknown.

There are several reasons for why I have chosen a fraud prevention service as a case study. First, by offering fraud prevention services to the banking sector, being a back-end security for both the banks and consumers, place EVRY FP holds a unique position in the sector. Further, EVRY FP provides their services in both EU and EEA countries[12], with a particular focus on the Nordic countries who are among the most digitally advanced countries in the world. This means that the study can offer insight on how a technologically advanced firm approaches PSD2 in technologically advanced countries. By using Europeanisation and implementation theory, I will show that the implementation is likely to succeed, which would mean safer payments for Nordic consumers. Thus, by showing that EVRY FP is likely to successfully implement the legislation, I show that the payments should be safer for consumers in the Nordic countries. Thirdly, EVRY FP has a unique advantage as they are one of the only firms in the Nordic countries offering outsourcing of fraud prevention services, with 70 customers across several countries, which gives insight and overview of the sector and consumers in a way that banks are not able to.

3.1.1. Inductive approach

I have two different qualitative approaches to the case study throughout the thesis; inductive and deductive approach. For Chapters 6 and 7, I am using an inductive approach, where I aim to identify explanations or knowledge about the topics. An inductive approach seeks to reach a theoretical answer from the research, and not the other way around as with deductive research (Ryen, 2002, p. 146) . Further, a study using an inductive approach, move from the specific to the general (Elo & Kyngäs, 2008, p. 109). Relating this the study, the thesis move from the specifics of PSD2 and EVRY FP and to consumers and their threats and opportunities. Also, is there is little knowledge about this phenomenon, an inductive approach is recommended. For Chapter 6 on how EVRY FP experience Nordic consumers' approach to security, I first did some research on consumers, to be able to prepare the interview questions. After completing the interview, I go more into depth on the research on consumers' perceived security, to find out whether the perspective of EVRY FP coincided or differed. For Chapter 7, I aim to shed light on how EVRY FP experience PSD2, and what threats and opportunities that emerge as a result. To be able to do so, research on PSD2 is necessary, to identify the objectives that is relevant to ask questions about, to limit the focus as the Directive cover a vast amount. The objectives I find most relevant are open banking, the RTS and SCA. These are chosen because my research on stakeholders' priorities seem to highlight these objectives as important for the

[12] Out of the Nordic countries, EVRY FP provide services in Norway, Sweden, Denmark and Finland

payment sector. After completing the interview, I use different documents to shed light on other actors' priorities. The questions I ask and why, in addition to the documents used, will be explained more closely in section 3.2. on data selection and collection.

3.1.2. Deductive approach

Chapter 8 on the implementation of PSD2 has a deductive approach. A deductive approach is useful when the study is based on previous knowledge and the purpose is theory testing (Elo & Kyngäs, 2008, p. 109). Further, it is a useful approach when going from the general to the specific, from implementation to the implementation of PSD2, as seen by EVRY Card. I have chosen a single disconfirmatory, also called a most-likely crucial case study. The crucial case study method is said to be one of the most controversial ones, introduced by Eckstein (Gerring, 2007, p. 115). Gerring describes a case as crucial "when it is most, or least, likely to fulfil a theoretical prediction" (2007, p. 115). Since its introduction, the crucial-case method has come to be recognised as one of the standards in the case study method. The crucial case study is deductive, and is therefore used only for Chapter 8, as the rest of the thesis has an inductive approach. Chapter 8 will show that EVRY Card's[13] implementation success is a most-likely case. This will be returned to in Chapter 8. The next step is to explain the data selection and collection. The Chapter use document analysis to develop the sub-question of whether EVRY Card is likely to implement successfully, before data from the interviews will be used to confirm my assumption based in theory. For example, data from the Nordic countries show that the countries overall do well with implementation processes, and as EVRY Card is located in the Nordic countries, this strengthen the probability of a successful implementation. The next section will look at how the data was selected and collected.

3.2. Data selection and collection

By choosing one case for the thesis, I have the opportunity to go into depth on the case and topic, and use several data sources. I use both written and oral sources. Interviews are used to gain information about EVRY FP, and their perspective on Nordic consumers, objectives of PSD2, and the implementation of it. The written sources are used both for the inductive and deductive approach. How I approach the documents are more closely explained in section 3.2.1. For instance, for the perceived security of consumers, the perspective of EVRY FP was applied to research on the topic to show similarities and differences between the research and EVRY

[13] EVRY Card is responsible for the implementation of PSD2, and will therefore be referred to when dealing with implementation, for clarity about where the data comes from. What applies for EVRY Card in the matter, applies to EVRY FP as well.

FP. The next section will first present document analysis and the documents I am using for the study, before elaborating about participant observation and why I use it. The last three sections concentrate on the elite interviews, how I approach them, execute the interviews, and analyse the findings.

3.2.1. Document analysis

Archival data and secondary analysis are very useful sources to study what has happened in the past and therefore cannot be researched through other methods (Bernard & Ryan, 2010, pp. 20-21). It is also useful to find statistics and findings from other studies, but it is important to note that the studies might have a different angle than your study. Further, court proceedings, meeting reports or major surveys are useful to reanalyse, but it is these are data collected for a certain purpose. The answers therefore may vary from what you need for your study. Consequently, lack of representativeness, in addition to lack of authenticity and measurement errors, are problems associated with archival data and secondary analysis. Sverdrup (2007, p. 209) points to an important limitation of data used when studying implementation, which is the importance of unbiased data sets. Most data relied on, are generated by European institutions, and even though the data is useful, it is not created for the same purpose as the study being conducted. For instance, the data on infringement cases are based on the cases that are detected by the European Commission, which means that undetected or ignored cases will not be a part of that data, and it will therefore not show the whole picture. This would be a bigger issue if this study's main focus was implementation, but as it does not have room for data collection of the size required, EU generated data will be the main focus. Further, as this study has a qualitative focus and therefore emphasizes the findings from EVRY FP and Card, I do not consider this to be a significant issue.

Relevant written sources for this study are legal documents, such as the Directive, Consultation Paper, Discussion Papers and draft documents. The Discussion Paper and the Final Report on the draft of the RTS, published by the European Banking Authority (EBA), are two of the documents used in the thesis. The White Paper by EVRY on PSD2, is also useful as it gives insight about their position and concerns of PSD2. These documents are mainly used in Chapter 7 on PSD2's effect on EVRY FP, and Chapter 8 on the implementation process of PSD2. I draw on documents especially for Chapter 8, to understand the aims of the EU and EBA, and approaches to PSD2. Data from the Commission on the transposition of EU legislation are used to have information on the Nordic countries' ability to implement correctly.

Data from Eurostat and Digital Economy and Society Index (DESI), are used for information about the European and Nordic consumers' online purchasing behaviour.

3.2.2. Participant observation

Participant observation has in the later years become a common feature of qualitative research within a range of research fields (DeWalt & DeWalt, 2011, p. ix). It is a method where the researcher take part in the activities and interactions, and use this information for the research. Participant observation brings several advantages to the research, according to DeWalt and DeWalt (2011, p. 10). It enhances the data collected, and the interpretation of the data. I will not go into depth about how to approach the method, it is mainly addressed here to disclose that parts of the information presented in the thesis, is a result of participant observation through having a part-time position at EVRY FP.

For this thesis, participant observation is not used categorically or to any depth, but is an approach for me to present the information I have from the experience from having a position at the Fraud Prevention department. Working with fraud prevention, which is the topic of this study, means that I have some insight and knowledge about EVRY FP and the topic, knowledge that I would not have had otherwise. Some of this information is incorporated into the thesis, mainly when I have find the need to elaborate about for example the fraud prevention process, in order for the readers understand it properly. I have had the position at EVRY FP since before the work on this study began, and it is how I have the opportunity to conduct this research project. Having knowledge about EVRY FP and fraud prevention when planning the research question and design makes approaching the study easier, and it is likely that I would not have embarked on such a complex topic without any previous knowledge. In addition, by being able to write the thesis in cooperation with EVRY FP, I receive assistance every step of the way, from the development of the research question to the interview guide and confirmation of findings for validation.

The relationship with EVRY FP could possible affect the study. One the one hand, it could help me understand the perspective of the informants, while it also could mean that I overlook nuances that I would have recognised as an outsider. For example, it means that the interviews might be conducted in a different way than if I was an outsider, because I already know how the analysis team work. Other possible consequences of being an "insider" at EVRY FP, is presented in the next section.

3.2.3. Interviews

The main bulk of the data collection is elite interviews with key persons at EVRY FP and Card[14]. How I conduct the elite interviews will be elaborated on further down. Much of the data is the knowledge and experience of the informants at EVRY FP and EVRY Card, and can therefore not be found in any documents (Yin, 2014, p. 120). The elite can be defined in several ways; they may be persons holding positions of certain importance, and the choice of whom to interview may be due to their reputation or position (Moyser, 2011, p. 2). Hochschild (2009, p. 124) on the other hand, argues that the elite does not necessary mean someone of a certain importance, but rather that they are chosen for the interviews because of a reason, such as a position, rather than being chosen at random. A third perspective is offered by Berry (2002, p. 679), who claims that there is too little focus on elite interviews and how it differs from other interviews when conducting case studies. This affects both the validity and reliability of the study, as the interviews may not give the answers it should or the way they should. Studying elites is common, and there are several data collection methods that can be used, whether it is speeches, presentations, working notes or the most commonly used interviews, according to Moyser (2011, p. 2). The value of elite interviews depends on the research project, sometimes their value is just to gain access to other data sources. In some cases, it is relevant to have elite interviews as the as the principle means of data, as is the case for this study. Elite interviewing is a method giving researchers of politics the opportunity to generate data that is unique, and investigate the complexities of policy and politics (Dexter 1970, as cited by Beamer, 2002, p. 86). Its success is depending on the research design and preparation by the researcher. As I have limited previous experience with academic interviews, preparation and rehearsing were important to limit any affect this could have on the data collection.

It is important to note that as an employee at EVRY FP, the challenge of gaining access to the informants is not an issue, but not having an "outsider" perspective could affect how I approach the study. The number of informants for the data collection is not extensive, as the focus is not on making a statistical selection, but rather strategic choices to be sure that the interviews will provide as much relevant information as possible. This means that the depth of the interviews is more important than the number of informants, according to Ryen (2002, p. 85), there are a limited number of people at EVRY FP with the insight and experience needed for my study, and the number of informants therefore reflect this. The informants are chosen in cooperation with my supervisor at EVRY FP, Charlotte Norwich, based on her input on who

[14] EVRY FP and EVRY Card are both departments at EVRY. As EVRY Card is responsible for the implementation of PSD2, the data collection has included both. The data from EVRY Card applies to EVRY FP as well.

would be relevant to talk to about PSD2. She is contacting the possible informants on my behalf, as she has greater pull with them than me. They are chosen on basis of the draft interview questions, with my EVRY FP supervisor assessing who would be able to answer the questions. The informants are given information about the aim of the thesis beforehand, as well as draft questions, to be able to prepare for the interview. The focus for the interviews, as well as draft questions, are also discussed and worked out in cooperation with my supervisor, to make sure that the focus for the different interviews will give as much information as possible. The advantage of choosing the informants with help from an employee in a leader position at EVRY FP, is the inside knowledge about who has the useful competences. I need to consider though, that by not being as familiar with the conduction of this thesis and the thoughts and ideas I have myself, my supervisor might choose informants from a different perspective than me. Even though my supervisor has been involved in the process since the start, she does not have the same perspective as me, and her considerations therefore most likely differs from mine. However, I trust that she is able to make a better selection than I would. They were able to answer all of my questions as expected, and had extended knowledge about the market surrounding the questions as well. Also, without the help from my supervisor I probably would not have been aware of the need to interview someone at EVRY Card to gain information about the implementation process.

The three informants are all employees at EVRY, one at EVRY Card, and two at the subsection Fraud Prevention. This is worked out in cooperation with my EVRY supervisor after going over my initial draft for interview questions. As no one could answer all the questions I intended to use, the interviews are divided into two overall topics[15]. As the informant from EVRY Card is responsible for compliance, it is relevant to ask the informant questions regarding compliance with PSD2, experience with other requirements, as well as possible implementation challenges. The following topics are covered in the interview questions;

- The implementation process and the approach of EVRY Card
- EVRY Card as a firm in the Nordic market
- Threats and opportunities from the changes PSD2 introduces.

Relating this back to the theory, to be able to find out possible mediating factors for the implementation at EVRY Card, as elaborated on in Chapter 2 on implementation literature,

[15] The interview questions can be read in full in the appendix.

questions regarding the implementation process is necessary. To assess the level of pressure to Europeanise, I ask questions regarding the awareness of the PSD2 requirements, whether EVRY Card see the implementation as challenging or not. As the data from the Nordic countries indicate that they are good at successfully implementing legislation, the informant is asked questions regarding how they prepare for the implementation of PSD2. In addition, concerns about the Directive, as well as their experience with previous compliance requirements. The informant at EVRY Card is interesting to interview because of the experience with previous compliance requirements, as well as an overarching perspective on the requirements from other actors.

The informants from EVRY FP has in-depth knowledge about the fraud situation in the Nordic countries, consumer behaviour, and the development of new business approaches. The informants were therefore asked questions on the following topics;

- Fraud and fraud development, as well as fraud prevention services
- The approach to PSD2, and whether they see the objectives as threats or opportunities.
- Nordic consumers' approach to security when purchasing online.

The interview focus on the consumer perspective regarding different possibilities and threats they face through how EVRY FP face the changes. As the findings from this interview have a more inductive approach, I do not ask questions to confirm specific information. The interview is based on open-ended questions, with an aim to gain as much information as possible about the different research topics I am interested in. The informants are asked questions regarding how they relate to PSD2, what threats and opportunities it could lead to, and what new fraud prevention business it can lead to, as well as the possible implications of the new security requirements. Further, they are asked questions about consumers, their behaviour online, and the digital position of the Nordic countries and the affect this has on EVRY FP.

Even though the main focus of the study is EVRY FP, interviewing employee at EVRY Card is necessary as they have the overall perspective and responsibility for compliance with requirements from both the EU and other actors. As EVRY FP is a department underlying EVRY Card, what Card does is useful also for this case. For the remainder of the thesis, both EVRY FP and EVRY Card will be referred to. EVRY Card will be used mostly regarding implementation, while the perspective of EVRY FP will be the main source for the other chapters.

3.2.4. Execution

The interviews were conducted on 16. March and 27. March 2017. To minimize the use of EVRY resources, I conducted two in-depth, group interviews, one of them over Skype, as the participants were in two different countries. There is no doubt that the best interviews are conducted in person, and some insight might have been lost as it is more challenging to know when to push or move on when you cannot read their expressions and body language. The second interview was conducted at the EVRY Fraud Prevention offices in Mo i Rana. To be able to focus fully on what was said during the interview, and avoid missing valuable information, I used a recorder for both interviews. All informants were asked about this in advance, and no one objected. As some of the questions I ask can result in answers of a business sensitive matter, the informants were informed that all sensitive data will be in an appendix exempt from public for three years. No sensitive data came forward, and an appendix is therefore not necessary. It is important however, to consider the fact that there is a possibility that the informants held back information because of either the recorder or worries about sensitive information. I did not get the impression that any information was held back, but this is impossible to know for certain.

There was supposed to be another informant from EVRY Card, but due to miscommunication, it turned out that one of the informants where participating only as an observant. I do not think I lost much valuable information due to this, as the other informant is a key person on the questions I asked. It nevertheless should be noted. In addition, one of the informants is also my supervisor at EVRY FP, which means that we have discussed the topic several times before the interview, and she is familiar with the aim of the study. I should consider that she chose to give answers that she thought would be beneficial to me, and that this could mean that something she did not know would be useful was left out. There is no way of knowing this for certain. I asked no questions that seemed to make anyone uncomfortable or unwilling to answer. There is no reason that the informants would exclude any information that would be relevant for the questions I asked. Especially considering that the thesis is written in cooperation with EVRY FP, and therefore a topic that they are interested in sharing their knowledge on, as well as learn more about. The informants in some instances, touched upon topics that later questions were to ask about. I therefore skipped those questions where this happened. In retrospect, I could have asked the question anyway, as there might have been some information the informants did not think to enclose the first time they mentioned the topic.

3.2.5. Interview Analysis

The interviews were processed shortly afterwards to avoid losing information, using the program Nvivo to transcribe and find themes. I have chosen to keep the language close to how it was spoken, in order not to risk losing what the informants choose to put pressure on. As one of the informants were Swedish, the interview first needed to be translated to Norwegian during the transcribing, before the relevant parts were translated to English. Some of the conversational ways of speaking could have been lost due to this, as the focus while transcribing was mainly on correct translation. The informants have been given numbers between 1 and 4[16] and are thereby anonymised. There is however, a limit to how anonymised they can be, as there are a limited number of people able to answer the questions. But by not informing who says what in the interviews, they are as anonymised as possible. EVRY FP has read through the transcripts, as well as the paragraphs were quotes from the interviews are used, to see if they recognised what they said for validation, in addition to evaluating any possible sensitive information that needed to be exempt from the public.

For the analysis of the interviews, I have used a qualitative content analysis process, which is a method to analyse written or verbal communication (Elo & Kyngäs, 2008, p. 108). This study analyses verbal communication, by analysing the interviews conducted with informants from EVRY Card and EVRY FP. It is a practical way of reaching new insight and knowledge of the topic. The first step of the analysis, is to organise all the data. This is done using open coding, where the transcriptions are read several times while adding categories to the content, as many necessary (Elo & Kyngäs, 2008, pp. 109-110). The transcriptions, as well as my interview notes were read several times to look for patterns or topics that stood out, for example topics that were repeated by the informants. After completing this step, I had 33 identified categories, including implementation, business development, threats and opportunities of PSD2 and consumers. The next step was to group the identified categories to reduce the number of categories and starting to see the data in a bigger context. I reduced the original 33 categories down to six; consumers, fraud prevention, future, implementation, other actors and security[17]. After this, I wrote up notes about each of the categories, writing descriptions about each of the categories. It can be defined as thee process between coding and the first draft of the analysis (Bernard & Ryan, 2010, p. 273). These six categories were used for the three overall topics of this thesis; consumers, threats and opportunities from PSD2, and

[16] Only 1,3 and 4 are referred to in the thesis, as informant 2 was only an observant. However, as the transcript include all 4, I have kept the labels.
[17] The six categories, with its subcategories, can be seen in the appendix.

the implementation. The process of writing notes about the categories continues as many times as necessary, I returned to the categories several times to extract as much data from them as possible. The last step is to use the data when presenting the findings, both in the inductive and deductive sections, in Chapters 6-8. The next chapter will present the Directive this thesis studies the consequences of, PSD2.

4. PSD2 - Revised Payment Services Directive

Before presenting the findings form the data collection, there are several pieces of information that is necessary to elaborate on, to make sure that the study is comprehensible. The first topic that needs an explanation, is the basis for this research, PSD2. I will start by shortly explaining the first version of this Directive. Next, I will elaborate on main changes that PSD2 includes. This will give the basis to understand the legal aspect of this thesis, and the changes that will be discussed.

4.1. PSD1 – Payment Services Directive

The first Payment Services Directive was part of the aim of the European Commission to create an «efficient and integrated market for payment services in the EU, and was adopted in 2009 (European Commission, n.a.-c). The integrated market, a single payment area, aimed to open up for easier and more secure cross-border payments at the same price as domestic payments, while also ensuring consumers the same rules across the EU and EEA. The first common rules on payments was introduced with this legislation (European Commission, n.a.-b). PSD1 laid down rules regarding all electronic and non-cash payments, such as mobile and online payments (European Commission, n.a.-c). According to Mercado-Kierkegaard (2007, pp. 177-178), the primary aim of PSD1 was to simplify existing legislation, improve the legal clarity, as well as to reach a balance between consumer protection and market liberalisation though amending the scope of the legislation. The Directive failed to be harmonised across all Member States, and the payment sector in the EU therefore remained fragmented, with the aims of PSD1 not being reached. It also meant that consumers faced different rights, security and service across the Union. The Commission began to take steps to address the faults of PSD1 already shortly after its introduction, resulting in a Green Paper in 2011, leading up to PSD2 (2016, p. 828).

The review of the legal framework on payment services and the analysis of the impact of PSD1, as well as the Commission Green Paper showed that the development of payment services in Europe had led to challenges from a regulatory perspective (Directive 2015/2366/EU, 2015, p. 36). Card, internet and mobile payments remained fragmented in the Member States and with some new payment services not falling within PSD1, legal uncertainty emerged, as well as potential security risks and lack of consumer protection. This meant that there was a necessity for a revision of the legislation.

4.2. PSD2 – Revised Payment Services Directive

Directive 2015/2366/EU[18] was adopted 25 November 2015, came into force in 12. January 2016 and must be implemented by 13 January 2018 (European Commission, n.a.-a). In their press release in October 2015, the European Commission (2015b) stated that "[t]he new rules will protect consumers better when they make payments, promote the development and use of innovative online and mobile payments and make European payment services safer". The Commission specified that the Directive will give better consumer protection, more innovation and better security for payment services. PSD2 is a part of the Single Euro Payments Area[19] (SEPA), and is an instrument to for it to succeed (European Central Bank, 2013, pp. 4-15).

PSD2 consists of six titles and one annex; Title I describes the subject, scope and definitions; Title II involves the authorisation and regulatory framework for the payment service providers; Title III includes the transparency and information requirements; Title IV addresses the rights and obligations to the provision and the use of payment services, Finally, title VI gives the final provisions and sets a date for a review by 13 January 2021 (Directive 2015/2366/EU, 2015). The Member States are responsible for enforcing the Directive through appropriate authorities appointed by the Member States themselves (Directive 2015/2366/EU, 2015 art. 100(1)). Further, PSD2 is to be fully harmonised across the Member States, although some exceptions are permitted due to special conditions (Directive 2015/2366/EU, 2015 art. 102).

The Directive sets out rules for several different areas concerning electronic payments. It takes into account the emerging new payment methods, and facilitates innovation of payment services (European Commission, 2016c). By introducing strict security requirements, transparency and improved rights and obligations of both users and the payment service providers, the Directive seeks to improve the existing rules on electronic payments. Further, the Directive opens up to new services and providers, by giving access to information about the payment account to account information services[20] and payment initiation services[21]. These are

[18] Full title: Directive 2015/2366/EU, of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC.

[19] SEPA is a EU project started in 2002 when the European Payments Council was created by the banking industry. The idea behind SEPA is to create an area where consumers, companies and other actors can make transactions and receive payments in euro under the same conditions, rights and obligations to advance European integration (European Central Bank, 2013, pp. 4-15).

[20] Collects information about an account to provide information to the consumer about its spending patterns and financial situation for example (European Commission, 2015c)

[21] Initiate payments from an account by creating a software bridge between the account and vendor, filling in the necessary information, and inform the vendor when payment is completed (European Commission, 2015c)

called Third Party Providers[22] (TPP). In addition, consumer rights are enhanced by introducing several objectives on the matter. The technical rules are to be provided by EBA (2017), as 4.2.2. will elaborate on.

PSD2 is substantial and there is not room in this study incorporate all of the changes the Directive consists of. The focus of this thesis will be on the parts of the Directive that I have assessed to be relevant for EVRY FP and seen as the most important objectives by the stakeholders who have published positioning papers. The objectives that will be focused on is therefore the introduction of open banking with third party providers, and the security aspects of the RTS, which will provide rules on SCA.

4.2.1. Open banking – Third Party Providers (TPP)

TPPs, payment service providers gaining access to payment accounts, is one of the main changes of PSD2, and will change the banking market drastically (European Commission, 2015c). This means that for a consumer to be able to purchase goods or services, all that is necessary is a bank account. The transaction itself can be initiated out by an actor of the consumer's choice, including a TPP. The consumer might have an account at their local bank, while Google, Facebook or another TPP carries out the transactions when paying bills or buying online.

> "Customers will be allowed to initiate payments at their financial institution via authorised TPPs, to whom financial institutions will be obliged to open their account interfaces. This represents a major change for operators within the payments industry, and one needing to be properly understood." (Deutsche Bank, n.a., p. 5)

As the Deutsche bank states, an important factor here is that the banks will be obligated to open up the account for the TPP to initiate the payment. The new TTPs then become payment initiation services, by connecting a link between the consumer and the e-vendor, via the bank account of the consumer, ruling out the need for a credit or card to purchase online (European Commission, 2015c). This is a task that up until now has only been allowed for the banks to do. This is why open banking will lead to major changes in the payment sector, the banks will no longer have the same monopoly of payment as they have enjoyed until now. The Commission states that all payment service providers, which includes banks, payment institutions and TPPs, "need to prove that they have certain security measures in place ensuring safe and secure payments" (2015c). Further, the operational and security risks must be assessed once a year.

[22] TPP includes both Payment Initiation Services (PIS) and Account Information Services (AIS), but this thesis will focus only on PIS.

4.2.2. Regulatory Technical Standards (RTS)

The RTS intends to set out the detailed rules on several of the objectives of the Directive. EBA, in close cooperation with the European Central Bank (ECB), was assigned with the responsibility of developing the draft by 13. January 2017. (European Banking Authority, 2017). The final draft has been submitted and we are now awaiting the Commission to adopt the rules[23]. The draft RTS specify the requirements for SCA, the exemptions of SCA, the requirements on confidentiality and integrity of consumers' personalised security credentials, as well as requirements for Common and Secure open standards of Communication (CSC), between the actors involved, including the account holders, the banks, and the new actors, TPPs. (European Banking Authority, 2017, p. 3). These objectives are very technical and the study will not go into any depth on them, except from SCA.

After the Discussion Paper, as well as a Consultation Paper, the EBA received many responses from stakeholders, presenting their views and requests for the final draft (European Banking Authority, 2017). EBA informed that during the assessment of responses, it was necessary to make trade-offs between the objectives of PSD2, that at times were competing. Enhancing the security and consumer security at the same time as promoting competition and facilitating innovation is a challenge, as the more detailed the framework is, the more challenging it will be for innovation. As the RTS has not been adopted by the Commission yet, this thesis will not go into the requirements in detail, but focus more on the perspectives of EVRY FP on the overall topics of RTS and SCA. The topic will be revisited in hapter 7, but what this shows is that there are many opinions about RTS and how it should pan out.

4.2.3. Strong Customer Authentication (SCA)

Article 97 of PSD2 presents the authentication requirements, stating in what instances it is necessary to apply strong customer authentication, and when it is not (Directive 2015/2366/EU, 2015). PSD2 sets out much stricter rules and demands that SCA is used in more instances than it is today. What authentication is, is defined in Article 4 (29) of PSD2, where authentication is stated to be the procedure where Payment Service Providers, the banks, verify the identity of the Payment Service User, the consumer, or the validity of the payment instrument used. To state it in a bit simpler way, "[s]trong customer authentication [is] the authentication requirements for electronic payments and the protection of PSUs'[24] financial data are strengthened, requiring 2-factor authentication" (Deutsche Bank, n.a., p. 9). Paragraph 30 of

[23] RTS is set to be adopted in the spring of 2017, and there is therefore a chance that it will be adopted some time while this study is being written.
[24] Payment Service User, the consumer (Deutsche Bank, n.a.).

Article 4, defines SCA as an authentication based on at least two of the following three elements; knowledge, something only the user knows; possession, something the user possesses; and inherence, something the user is (Directive 2015/2366/EU, 2015). These are independent from each other, and must be designed in such a way to protect the confidentiality of the data in question. The requirement of SCA being applied in more instances than previously, is one of the objectives that has engaged many actors in the process, as we will see in Chapter 7. Some exemptions have been proposed by EBA, dependent on the e-vendor fulfilling requirements that include fraud prevention analysis such as the one EVRY FP provide (European Banking Authority, 2017, pp. 24-25). In addition, the fraud rate of the payment instrument being lower than a certain amount set by EBA. As the requirements from RTS is still to be adopted by the Commission while this thesis is being written, and therefore could be amended, the thesis will not go into detail on the proposal.

This chapter has provided the necessary introduction to the objectives of PSD2 that will be discussed in Chapter 7. As the content of the objectives will not be discussed in detail, but more the overall changes, challenges and opportunities they bring, I chose not to go into depth about them here, as it is quite technical and not necessary to be able to discuss the topics. The next step is to explain what internet fraud is, more about EVRY FP and the service they provide. This to understand more about the security that PSD2 and EVRY FP intends to provide.

5. Fraud, EVRY Fraud Prevention and the service they provide

An important objective of PSD2, is to ensure more secure payments for consumers. That is why it is necessary to have some knowledge about what fraud is, and how it has developed in the later years. Most payments conducted are card based, either by registering a debit or credit card on an app, or using card information and personal information to pay for goods or services on a website (Aite Group, 2016, p. 9). In addition, to be able to follow the thesis, it is important to have knowledge about the case, EVRY FP, and the service they provide. This chapter will first present what internet fraud is and how it has developed, before elaborating shortly on EVRY FP, before explaining the service they provide, to understand how they protect consumers.

5.1. Internet fraud

Fraud has existed ever since consumers could open a bank account. With the new digital era, a vast of information is available for fraudsters, often easy accessible (Aite Group, 2016, p. 7). Card fraud includes unauthorised transactions on the main types of payment cards, which are debit, credit or prepaid cards. Card fraud comes in several different shapes and sizes; data breaches on e-commerce websites, stolen cards, phishing attacks[25] or combinations of these. There is no doubt that how we pay for goods and services is changing, with the introduction of the mobile wallet[26] where cards no longer are necessary. However, globally, it will take some time before this is the main type of payment instrument and cards will therefore continue to dominate consumer payments, regional variations. The use of EMV[27] also varies. The Aite group report on global consumer card fraud presents statistics and analysis from 20 different countries worldwide (2016). Of the Nordic countries, Sweden is represented, and the number of respondents who experienced fraud in the last five years was respectively 12 percent in 2012, 10 percent in 2014 and up to 14 percent in 2016. In comparison, the other European countries included reported numbers varying from the level in Sweden and up to around 30 percent in the UK. In other countries such as Mexico or the United States, the numbers are significantly higher. The difference in experiences card fraud is partly due to the extensive and effective implementation of EMV in most European countries. Further, results from the Aite study indicates that the amount of Card Not Present[28] (CNP) fraud, is increasing as the introduction of EMV continues, because it is making Card Present fraud more challenging. In addition,

[25] Obtaining sensitive information by disguising as trustworthy online communication.
[26] A payment instrument allowing consumers to pay via their smartphones by storing card numbers on the application used.
[27] Europay, MasterCard and Visa, the founders of EMV. Also known as chip cards. Payment cards with EMV is considered to be safer than cards with only a magnetic stripe (Aite Group, 2016).
[28] When the card is not present for the transaction. For example, internet transactions.

application fraud, or identity theft, is increasing in some countries, following the EMV implementation.

According to EVRY FP, fraud has become much more complex in the last few years (Informant 4, 2017). One approach to fraud is data break-ins, where the payment information stored at the e-vendor is stolen. Major data break-ins to gain access to sensitive information has been a tactic of fraudsters for years. However, how this information is used has changed. It is no longer about making a copied card to purchase something at a store, their aim is on a much bigger scale. By using weaknesses in online infrastructure, fraudsters create fake payment terminals or transaction strings to receive the payment information of the cardholder. Consumers think they have paid for their goods, while in reality they have just given the information to fraudsters. In addition, the fraudsters used to have to enter the card information by hand, but software doing this for them means that they can carry out 200 fraudulent transaction within minutes, on one card alone.

In addition to the fraudster techniques changing, ID theft is increasing (Informant 4, 2017). With ID theft, it is not just card or card information being lost, it is the whole identity, which makes it possible for fraudsters to get their hands on authentication mechanisms or devises, mobile bank profiles, in addition to debit- or credit cards. “Fraud contributes to the financing of more serious crime, such as drug trafficking, weapons trafficking. We know that card fraud is used to finance human trafficking” (Informant 4, 2017). Even though some fraud can be economically tolerated, it is in the interest of evryone to prevent fraud. Consumers are refunded of their loss, but the money is used in organised crime all over the world (Økokrim, 2017a).

5.2. EVRY Fraud Prevention

EVRY offers services within a range of sectors; insurance, health, government services, and financial services (Informant 3, 2017). EVRY Financial Services offers a complete service portfolio for the banks; from interface, and support their internal processes, to their customers, consumers. Card is placed under Financial Services. Fraud Prevention Services, is a subsection of EVRY Card, with a horizontal service covering these area, by monitoring transactions and actions.

The Fraud Prevention department started with card monitoring in 1997, and is a significant actor in the sector (Informant 3, 2017). EVRY FP has a customer base of about 70 banks. This gives them an overview of the market that the banks are not able to themselves and more in-depth knowledge about consumer actions and fraud development. This means that

EVRY FP is able to detect fraud faster than banks. There are many other actors offering monitoring software, but EVRY FP is one of the few who in addition has an analysis team. This means that banks can outsource this service instead of using resources on in-house monitoring.

5.3. Fraud Prevention

"What we work with is really to make sure that money don't end up in the work hands, […] in the end" (Informant 3, 2017). The fraud prevention services EVRY FP offers use software to analyse the transactions. Rules are set up in this software, which flags potential fraudulent transactions. The transactions are analysed by the analysis team. The aim is to analyse and evaluate the transactions in real-time or close to real-time. Banks initiate transactions, which are sent from payment terminals and international networks. When these reach the bank, a request is sent about a transaction to the bank, where a copy is sent to the monitoring software at EVRY FP (Informant 4, 2017). The amount of information varies, depending on how much information the banks are willing to give. For example, one can see that a consumer has purchased at the airline SAS, when the purchase was made, the amount and whether it was online or not. It does not however say anything about where the consumer is going, or whether the ticket is purchased in their name. The analysis team at EVRY FP gives advice back to the bank about whether the transaction should be approved or rejected, giving information about whether the transaction is suspect or not. The bank decides whether or not to follow this advice, but their systems are set up so that the advice is automatically followed. If the advice from EVRY FP is that the transaction should be rejected, it will be. If there is no indication of fraud, transactions are approved or rejected based on available funds. When a rejection advice is sent, the cardholder, is contacted to ask whether the transaction was made by the cardholder or not. EVRY FP does not know the identity or any sensitive information about the cardholder until there is need to contact them. Some banks prefer to contact the cardholders themselves, and the cases are in those cases sent over to them for follow-up.

In 2015, 1,4 billion transactions from 12 million bank accounts were analysed by the fraud prevention department, with 60,000 fraud cases being detected (EVRY Financial Services, n.a.). In the EU the same year, 3 percent of consumers experienced problems with fraud when purchasing online (Eurostat, 2015a). Another point that EVRY FP states, it that while the number of digital transactions in the Nordic countries are very high, the banks' amount of financial loss from fraud is not especially high compared to the transaction numbers (Informant 4, 2017).

6. Consumers' approach to security online

PSD2 is a legal framework that has the European consumers at its core. The EU intends to provide a legal framework that increase the safety of online payments, and reduce fraud (European Commission, 2015c). Consumers and secure payments are two objectives that EVRY FP work with by providing fraud prevention services to payment providers in the Nordic market such as banks. As I mentioned in the introduction, my aim is to offer insight on what threats and opportunities may arise for Nordic consumers, due to the changes to EVRY FP as a result of PSD2. To do so, it is important to know more about Nordic consumers. EVRY FP protect Nordic consumers from online fraud every day, by monitoring transactions and analysing whether the transaction was initiated by the cardholder or not. How they perceive consumers, will affect how they develop their services, and how they approach PSD2. The chapter will start by retracing some of the previous research on the perceived security of consumers, before presenting the findings on the consumer perspective of EVRY FP. I will argue that this is foundation of how EVRY FP approach the changes brought about by PSD2.

To identify the consumer perspective of EVRY FP, the following question will be answered in this chapter;

From the perspective of EVRY FP, how do Nordic consumers approach security when purchasing online?

To retrace our steps before we continue with the study, we learned from the introduction that the security related to online purchasing is an issue. Millions of consumers are defrauded every year, at the same time as consumers also leave devices with sensitive information unlocked, and do not keep important documents safe from possible fraudsters (Aite Group, 2016; Eurostat, 2015a). As we saw in Chapter 2, the theoretical framework identify some of the underlying factors when consumers evaluate the security of an e-vendor. It also shows that although consumers are concerned with security when purchasing online, their *perceived* security is not always focusing on the right factors, or using the right approach to assessing the security. The introduction states that Nordic consumers are among the most digitalised in the world, with 3 out of 4 purchasing online in 2016 (European Commission, 2016a, 2017a, 2017b, 2017c, 2017d). However, in 2015, 1 in 4 Nordic consumers refrained from purchasing online due to security concerns (Eurostat, 2010, 2015b). In short, security is an issue. Let us continue by presenting the consumer perspective of EVRY FP.

The analysis team at EVRY FP analyse card transactions to determine whether the cardholder[29] perform the transaction themselves or not. They see on a day to day basis the actions of Nordic consumers, both the risky behaviour, and those making rational choices for themselves. By this, one can therefore argue that EVRY FP has a unique perspective on Nordic consumers, as consumers they are in contact with, are those who have either been defrauded or suspected of being so. One of their experiences is that Nordic consumers cannot be treated as a homogenous group. Instead, they need different levels of support. One of the informants from EVRY FP states that; "we know that one would like to expect all sorts of things from the end customers, but people are different" (Informant 4, 2017). For example, when traveling, some consumers are aware of the regional block and only remove this block when they are travelling, to protect themselves in case the card is copied abroad. Other consumers keep their cards open at all times because it is easier for them than having to remember to remove the block before going abroad. This coincides with the findings we saw from the literature, that consumers weigh the security variables differently. Accordingly, EVRY FP recognise that Nordic consumers are diverse and have different needs.

6.1. Efficient payments versus secure payments

If we go more into depth on consumers, it is clear that although consumers are different, there is more to the perspective of EVRY FP than that. The informants stated that consumers prioritise effective payment processes, that cumbersome, although safer, payment processes[30] are a nuisance for them. "[…] The end customers want something that is safe and secure, but they don't necessarily want a lot of work and fuss and cumbersome processes to make a payment […]" (Informant 4, 2017). This tells us two things; first, that consumers, as the literature states as well, are concerned with security; second, a perspective that the literature did not identify, is that consumers seem to prioritise efficient payments more than security measures. This is an interesting addition to the understanding of consumers. It could be that consumers are aware of the possible consequences of not having proper security measures in place, that they simply choose to take the risk. However, as consumers state that they are concerned with security, it could mean that they are not aware of the fraud risk and the importance of security measures. Keeping this in mind, we will continue by presenting the findings on the level of naivety that Nordic consumers display.

[29] It is important to note that it is an entity being analysed, not persons in terms of names and identifying information, as according to the General Data Protection Regulation (Regulation (EU) 2016/679).
[30] Two-factor authentication, where for example a personal password in combination with an electronic identification device such as BankID (European Commission, 2015c).

"[…] There is a lot of naivety out there, and we often fall, Norwegians and people from the Nordic countries, often fall for easy marketing tricks, we are not critical enough of the vendors" (Informant 4, 2017). This adds another viewpoint to the perspective of EVRY FP, Nordic consumers are seen as naive in addition to being more concerned with efficient payment processes than security measures. One of the informant said that even though there is a lot of focus in the media about security and the need to be careful with our personal information, consumers keep being defrauded (Informant 3, 2017). They seem to be too naive about the possible consequences of purchasing online

> "The consumer rights are strong in the Nordic countries and especially in Norway, and at the same time we are full of trust, we tend to trust things. And what we see is that quite a few customers are tricked online. And the extent of it, it does not seem to get any less cases where customers are tricked to purchase on web pages they absolutely should not purchase at, because they don't even get what they paid for" (Informant 4, 2017).

This contribute to the perception of Nordic consumers being naive, their actions does not seem to reflect the warnings on the importance of security focus when purchasing online (Bjerkan, 2016; Gregersen, 2011; Økokrim, 2017b). And further, that consumers are easily tricked, combined with consumer rights being strong in the Nordic countries, contributes to the notion of the naivety of Nordic consumers. It could seem as though Nordic consumers believe or expect the online vendors to be trustworthy, and if they are not, that the consumer rights will protect them.

6.2. A jungle of information

EVRY FP also address the issue of information, in terms of the information consumers uncritically give up when for example downloading apps to our smartphones. "[…] We have little overview of what the information we send out digitally is used for. […] We don't know who is using what information about us for what, because we've just accepted it" (Informant 4, 2017). The other informant from EVRY FP also address this, that we as consumers often just press "accept all," when downloading an application to the smartphone for example (Informant 3, 2017). Further, consumers do not check feedbacks, the experience of the application or anything else that could indicate the safety of the application or e-vendor. Access to all the information stored on the smartphone is given up without a second thought. This is an interesting perspective, especially when linking it to the data stating that the Nordic countries are among the most digitalised countries in the world. Considering the level of digitalisation, one should be able to expect a certain level of experience and knowledge that Nordic consumers do not exhibit.

In the introduction, the risky behaviour of consumers is mentioned (Aite Group, 2016). Today, our smartphones contain vast amounts of information about us, from where we are geographically due to map applications, to card information we have to add just to be able to download an application. This means that in terms of information, our smartphones are very valuable and should be protected as such. The data nevertheless shows that some of the highest percentage of risky behaviour, is for consumers leaving their smartphones unlocked and unattended (Aite Group, 2016). In addition to suggesting a knowledge gap, this also contributes to an indication of the technological advancement maybe moving too fast for consumers to be able to keep up. Not being completely informed about where the information we give up online end up, combined with lack of knowledge about the potential fraud consequences, means that people are making ill-informed choices with their sensitive information. Investigating the degree of a knowledge gap among Nordic consumers is not the aim of this study, but it is an important possible underlying factor of the actions of consumers.

6.3. Consumers are not careful enough online

Before concluding on the EVRY FP perspective on consumers' approach to security, I want to recap some of the theoretical framework in light of these findings. In Chapter 2, perceived security was identified being the factors consumers use when evaluating the level of perceived security. It is to what extent one trusts that the sensitive information that is transmitted online, is kept safe and private (Flavián & Guinalíu, 2006, p. 604; Salisbury et al., 2001, p. 166). The theory chapter and statistics claims that security has become an important issue for consumers, and that it is the main reason for choosing not to purchase online (Eurostat, 2015b; Hartono et al., 2014, p. 11). The theory chapter also states that consumers use more intuitive processes to evaluate the safety, and that most never even read the privacy statements before agreeing to a purchase (Roghanizad & Neufeld, 2015, p. 496). This is somewhat different from the findings from this study. EVRY FP also indicates that consumers are concerned with security, but their experience is that they are more concerned with the payment process' efficiency (Interviews, 2017). Regarding the evaluation process of consumers, EVRY FP does not address this specifically, but their naivety, that consumers are easily tricked and uncritical of security risks online, indicates that the perspective of EVRY FP coincide with the findings of Roghanizad and Neufeld (2015).

We have now seen the different aspects of consumers' approach to security, from the perspective of EVRY FP. Let us therefore return to the sub-question to be answered in this

chapter; *From the perspective of EVRY FP, how do Nordic consumers approach security when purchasing online?*

The short, and vague answer is; differently. As the informants from EVRY FP stated at the beginning of the chapter; Nordic consumers are different, with different views on what security is. However, the answer that we include for this study, is the perspective of EVRY FP; that consumers are *naive*, they are not careful enough with their information online. Nordic consumers are easily tricked by online offers, and are unaware of what information they give up, and where it goes. Whether consumers engage in risky behaviour, avoid purchasing online all together, or evaluate the security of each purchase individually, EVRY FP take consumers' approach to security into account. This way, they are able to protect all types of consumers. Going forward with this study, we will keep in mind that the naivety of consumers is an underlying factor when EVRY FP approach the changes brought about by PSD2. Also, it is an interesting factor that what I have defined as an opportunity for this thesis, is a nuance for consumers. Further, as consumers are not able to protect themselves from fraud, measures need to be in place that does this for them. PSD2 is a legislation set out to protect consumers, and in order for EVRY FP to to do so, they have to be able to protect also the naive consumers. We will now proceed to the next chapter, to see how the changes to EVRY FP due to PSD2 affects the threats and opportunities of Nordic consumers.

7. PSD2's effects on Nordic consumers through EVRY FP

This chapter aims to shed light on how PSD2, through EVRY FP, affects the threats and possibilities of Nordic consumers. The approach this chapter takes, is that what affects EVRY FP, will also affect Nordic consumers. As mentioned in Chapter 4, this study does not have the capacity to discuss all the objectives of PSD2. By evaluating what the stakeholders seem to highlight as important and relevant objectives, I have chosen a few areas to focus on; Open banking, RTS and SCA. As explained in Chapter 4, and as this Chapter will display, these objectives are expected to lead to substantial changes in the payment sector. To present the findings from the data collection, we will return to the research question of this thesis;

What threats and opportunities may arise for Nordic consumers due to the changes to EVRY Fraud Prevention, brought about by PSD2?

In order to answer the research question, the chapter will first present the findings on the perspective of EVRY FP on open banking, RTS and SCA, before discussing the level of threat and opportunity the objectives could lead to. When discussing the objectives, the possible threats and opportunities for Nordic consumers will be presented. As presented in the introduction and Chapter 4, PSD2 will lead to a changing banking sector, market access for new actors, and more secure payments for consumers. It also means changes for fraud prevention services, as they are placed somewhere between the banking sector and Nordic consumers, trying to prevent consumers from being defrauded, while Nordic banks are their customers. PSD2 will have a substantial impact on EVRY FP, and identifying their approach to PSD2, and what the possible threats and opportunities are, will contribute to shed light on how EU legislation affects the relevant actors. By discussing how these changes can affect Nordic consumers, we will gain even more insight into the possible outcome of PSD2.

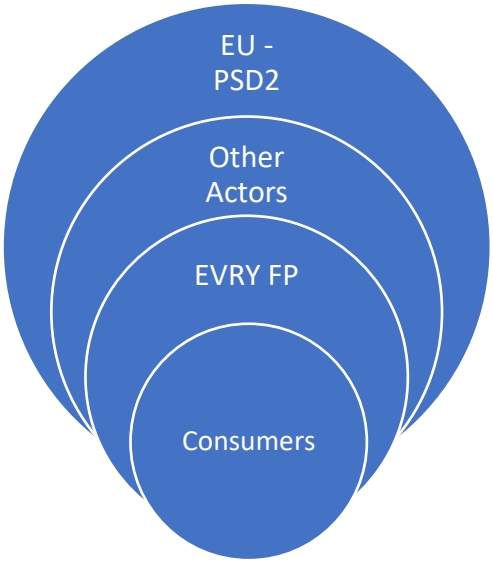

Figure 7.1- The relationship between the actors in the payment sector and consumers. Based on the findings from Chapter 7.

7.1. Open banking, a new payment sector

We know from Chapter 4 on PSD2 and the objectives the Directive introduces, that open banking is set to change the sector with the introduction of TPPs being able to initiate payments. This is a topic that has been the target for many opinions before PSD2 was adopted by the Commission. To retrace our steps, this study aim to find out how EVRY FP's opportunities and threats are affected by the changes PSD2 bring about, and how the changes affects Nordic consumers. With open banking, and what I have called a new payment sector, there are especially two variables that affect EVRY FP; how the banking sector is affected and how they position themselves; and the arrival of the TPPs. PSD2, with its detailed security requirements, will affect the actors involved in ways that cannot be identified yet. How the Directive affects EVRY FP depends on several factors. We will start by presenting the findings from EVRY FP about the banking sector, and discuss whether it is a possible threat or possibility. Following that, the new TPP's will be discussed, before the security requirements of RTS and SCA.

7.1.1. The banking sector's approach to PSD2.

The banking sector is, as stated previously, facing substantial changes due to PSD2. One of the major changes, is the introduction of TPP's who can initiate transactions, a task that up until now has been for banks only. This means that the way they do business, and the services they provide, is set to change no matter how the banking sector approach PSD2. The informants indicated several times that how the Nordic banking sector approaches the changes is of great importance for the threats and opportunities of EVRY FP (Interviews, 2017). Increased competition will lead to loss of market shares for the primary customers[31], which can affect the services EVRY FP provide. What this could potentially mean for EVRY FP, is the loss of customers and market shares. One of the informants stated that the edge they have in the market, and what makes them especially equipped to detect and prevent fraud, is due to the large portfolio, which gives more insight into fraud trends and consumer behaviour (Informant 4, 2017). If EVRY FP lose banking customers and these are not replaced by new actors, the market edge and knowledge will also decrease. This could possibly lead to a decrease of the quality of the fraud prevention services, and thereby an increasing fraud risk for consumers affected. This indicates that the future position and standing of the banking sector is a possible threat for the services EVRY FP provides. This is a possible threat to Nordic consumers EVRY FP serve, as EVRY FP depends on a large portfolio to ensure insight and knowledge to deliver high level

[31] The primary customers of EVRY FP are the banks.

fraud prevention services. Hence, how the Nordic banking sector approach PSD2 and open banking is essential for EVRY FP.

EVRY overall has also engaged themselves in how the banking sector approaches the Directive, by actively trying to make sure that the banks take the necessary steps to be prepared. A White Paper published by EVRY, states that the banking sector needs to make sure that they are not passive in the process of preparing for PSD2 (n.a.-b, p. 16). As PSD2 will be challenging for the banking sector, many of them seem to be holding off instead of preparing for the new competition and taking advantage of the situation. Sitting on the fence for too long can lead to the banking sector being left behind, while other actors take over the payment market. EVRY FP also reflect around this; "It is also partly depending on how the banks, and those who are our primary customers today, handle the implementation of PSD2" (Informant 4, 2017). The worst-case scenario is banks become only account holders in the future. EVRY points to fact that PSD2 will mean significant economic challenges for today's banking sector, as the costs of complying to the new security requirements and opening accounts will be high (n.a.-b). They also expect that the banking sector will lose profit to the new payment services, or Payment Initiation Service Providers, by 9 percent within 2020. Even though the changes will cost, and there are expected market share losses, the cost of not preparing will be much higher.

The informants believe that the Nordic banking market is well on their way to prepare payment solutions to meet the new competition. One example of this is the number of Norwegian banks involved with the mobile payment applications Vipps, or the Danish Mobilepay. 106 Norwegian banks joined forces with Vipps at the beginning of 2017, as a direct result of PSD2, and the increased competition opening the bank market will lead to (Nilsen & Nysveen, 2017). One of the informant speculated further and said that;

> "I would not be surprised if we saw another merge, so that we end up with one […], because as I see it, the only solution to withstand [the competition] is if they stand together. Because you have Google, just imagine who they are up against, they're nothing, like a small, small fish in the ocean" (Informant 3, 2017).

This effort combined with the Nordic banks being renowned and considered solid brands in the market, is a safety for EVRY FP (Informant 4, 2017). Further, EVRY Card, who are responsible for compliance of PSD2, are actively assisting the banking sector in the implementation process, and thus do what they can to limit the possible threats this objective entails (Informant 1, 2017). Although PSD2 is initiating changes in the banking market, EVRY FP do not seem to be too concerned about the Nordic banking market, as they are clearly starting to position themselves for the new competition.

Threats related to the banking sector and their approach to PSD2, thus has the potential to make an impact on EVRY FP if they fall behind the developments and changes in the market. However, as the sector is preparing for the new competition, this possible threat might not become reality. For Nordic consumers, the positioning of the banks means that EVRY FP is more likely to keep their customer base, and can offer the same quality of fraud prevention services. The final outcome of the new payment sector is not possible to predict, but recent activity strongly indicate that the banks are doing what they can to keep their position in the sector.

7.1.2. Third Party Providers

The second objective related to open banking, and which will cause some of the most substantial changes in the banking sector, is the introduction of TTPs as a result of open banking. As you remember, the banking sector will be obligated to open their account interfaces to TTPs, who are not account providers, allowing them access to consumers' accounts. The aim of this from the EU level, is to open up for more competition and more innovation in the payment market, which is to benefit consumers by giving them more payment service options. (European Commission, 2015c). This is an objective that also the informants from EVRY FP address, but as an objective leading to possible threats, both for EVRY FP and Nordic consumers.

TPPs accessing the account information of consumers to initiate payments, is a security concern for EVRY FP (Informant 3, 2017). With the TTPs being allowed into the market, there is a greater risk of sensitive information being spread. "We talk to several so called "fintechs[32]" […] and we see that when we meet them they haven't had a lot of focus on… they haven't done their homework on compliance" (Informant 3, 2017). If the new actors, are not prepared for the security requirements, the security of consumers' payments is threatened. The informant at EVRY Card also expressed concerns about this. The Swedish financial supervisory authority, Finansinspektionen, is worried because they do not have the resources to monitor all the actors in this process. If the national authorities are not able to ensure that the new actors comply with the security requirements, this could potentially become a security issue for consumers when paying online. To prevent this threat from becoming reality, an increased focus on security needs to be ensured. TTPs' lack of focus on security requirements is not the only concern of EVRY FP.

[32] Financial technology. Can refer to a start-up business or technology firms offering financial services (PwCFinTech, 2016).

> "We have more and more applications where we store account details on in the future. Whether it's cards, accounts or blockchain[33] payment mechanisms, we'll have more applications storing and initiating payments, either from a mobile phone or the 'internet of things[34]'" (Informant 4, 2017).

With the influx of TTPs, new payment instruments will probably be developed, which is another area of concern for EVRY FP. New payment instruments means plenty of opportunities for fraud. With the arrival of 'internet of things', where the fridge can start ordering and initiating payments on its own, even more applications and programs will have card or account details stored (Informant 4, 2017). "[…] The card information might initially be stored securely, but malware that can force a unit to initiate a payment without the consumer knowing about it, might be a potential future threat" (Informant 4, 2017). The increasing number of gadgets and applications containing sensitive information adds to the concerns of EVRY FP, worrying that consumers no longer will have any control over where the information goes, what it is used for, and the possible risks. It is difficult to predict, but "in five years' time, there might be a jungle of different payment service providers" (Informant 3, 2017). Especially if the stores and e-vendors accept various payment providers. This leaves consumers open to fraud, as it becomes difficult for them to keep control over what information they have provided where. The influx of TPPs along with new payment instruments, will without a doubt lead to new types of fraud, because fraudsters know how to exploit new opportunities (Informant 4, 2017). In addition, if the TPPs are not complying with the security requirements, and the national authorities are not able to follow up, this could lead to a potential goldmine for fraudsters, and the opposite for consumers.

The possible threats due to the amount of sensitive information being easy available to fraudsters, also relates to a third aspect, possible lack of transaction information needed to detect fraud. There is no doubt that opening the banking market will lead to new types of fraud (Informant 3, 2017). As explained previously, transaction information is used to analyse and determine whether a transaction is fraudulent or not. What the informants from EVRY FP are worried about, is the possibility of new actors not being willing to provide enough information to be able to do so. It does not matter if the future payment methods are based on cards, accounts or blockchain, the analysis process depends on access to information. "It's not enough with just an amount, a time and a vendor name" to be able to assess whether the transaction is genuine

[33] A payment method, with a network of computers where all members have a copy of a public transaction history, or ledger. All can see the history, but no one can change it. The ledger consists of a chain of blocks, where each block contains transaction history within a given time (EVRY, n.a.-a).
[34] Connecting devices over the internet, to communicate with us and each other (Kobie, 2015).

or not (Informant 3, 2017). This concern could have a substantial impact both on the ability of EVRY FP to prevent fraud. It would also have an impact on Nordic consumers possibly left with payments processes without a properly functioning back-end system.

EVRY FP is developing a new fraud prevention approach that depends on information even more than before. The approach is holistic and payment channel independent, where the profile of the consumer[35] is analysed, and not just the card used for the purchase (Informant 4, 2017). EVRY FP have over a longer period time seen that if they had more information about the consumer, they would be able to detect more fraud and at a much earlier point. This development is not a direct result of PSD2, but the opportunities possible to reach from this development is nevertheless depending on the outcome of PSD2. This approach however, is not possible to succeed with if EVRY FP does not receive the information needed for the analysis. The impression from the informants, is that this is a factor that could have a substantial impact on the ability to provide quality services with the new actors on the market.

The possible threats open banking, with the banking sector and TPPs, brings about for Nordic consumers relate to the level of security not being efficient enough. The consequences could be severe for consumers. An open market without the security requirements being complied with properly, combined with fraud prevention services that are not provided with enough information to prevent fraud, would without doubt lead to more fraud and identity theft. How these possible threats pan out are depends on how the banks position themselves to keep their market share, and how the new actors deal with the security requirements.

However, the influx of new actors into the payment sector, is also an opportunity for EVRY FP. As one of the informants said; "if you put it bluntly, once it is about moving money here or there… It must be some form of monitoring of this" (Informant 3, 2017). No matter how the market changes, and what the future customer base of EVRY FP will be, as long as consumers pay and purchase online, the need of monitoring is there. Further, nothing suggests that there will be any less fraud with PSD2 (Informant 4, 2017). This is why EVRY FP try to predict the future of fraud to be prepared to act when new fraud schemes are developed.

Another point to be made from the findings, is that while possibilities and opportunities are difficult to predict, the threats are easier to detect. EVRY FP knows that without access to information, delivering fraud prevention services will be challenging. They also know that if the new actors are not prepared for the security requirements, and national authorities are not able to follow up closely enough, this will lead to security risks for consumers. The same goes

[35] Anonymously, according to the General Data Protection Regulation (Regulation (EU) 2016/679).

for the concerns about the banking sector. If the banks are not able to position themselves for the increased competition, new actors will take advantage of their weakness.

And, as stated previously, with new payment schemes comes new fraud schemes, and this is also one of the reasons why PSD2 is an opportunity for EVRY FP. Even though EVRY FP has a social responsibility to hinder fraud to prevent it from financing organised crime, fraud means business for EVRY FP. With the Directive laying down detailed rules about security, both in terms of monitoring and security, all stakeholders need to comply with these requirements. EVRY FP, being an actor with good reputation, offering a service few others in the Nordic countries do, will therefore most likely face new business opportunities as a result of the PSD2.

Open banking thus leads to both threats and opportunities for EVRY FP. The threats are largely concerned with security and the possible lack thereof, which is a substantial threat for all Nordic consumers who purchase online every year. One opportunity is the ability of EVRY FP to take advantage of the changes in the market, to exploit the fraud prevention opportunities from new fraud schemes. Another opportunity is the ability of EVRY FP to be prepared for new fraud schemes. Further, if EVRY FP does not exploit the opportunity for new fraud prevention approaches, the fraud for consumers EVRY FP serve, will increase. The next step is to look at the RTS and perspective of EVRY FP on the possible threats and opportunities as a result.

7.2. Security requirements – RTS and SCA

As chapter 4 explained, the RTS is drafted by the EBA, and is expected to be adopted shortly. The RTS will include the rules on SCA, which will be the main focus of this section. The RTS will be more closely looked at in Chapter 8, but the informants did express some concerns on RTS that are relevant findings to present here. The informants talked about the RTS and how the rules will change how the payment sector and e-vendors approach online security (Informant 3, 2017). Further, "[a]ll compliance requirements of today are based in today's threats, and a more open landscape may lead to new fraud schemes arising, that we haven't seen or accounted for […]" (Informant 4, 2017). The rules the actors have to comply with today, have less level of detail and more room for interpretation, and it is therefore natural that the actors express insecurities about RTS. The negative impact for the market depends in part on the level of detail in the RTS, about which there are uncertainties. EBA argues that the objective of ensuring a high level of security for consumers, suggests that the RTS should be detailed and technical when it comes to authentication (2017, p. 6). The objective of user-friendliness however, indicates that RTS should be less strict about authentication. Opposing objectives

such as these, contributes to the uncertainties about what to expect from the final RTS. This could also explain why EVRY Card is awaiting the final RTS to be adopted, before starting implementing the requirements. It is difficult to prepare when it is unclear what exactly to prepare for. One of the uncertainties, regarding SCA will be presented next.

SCA is as mentioned, a topic of much debate. The informants also addressed this topic. They talked about risk-based approach, arguing that if SCA with two-factor authentication becomes the main rule to follow, avoiding SCA whenever possible, could become the approach of e-vendors (Informant 3, 2017). Another solution that might emerge from the stricter SCA requirements, is that payment services might move more towards mobile payment applications such as Vipps. A third is having consumers identify themselves with two-factor authentication the first time they purchase from the e-vendor, but not having to the next time, as long as information can verify that the purchase is genuine[36] (Informant 4, 2017). The informants also mention the possibility of e-vendors located within the EU/EEA area today, moving elsewhere to avoid the requirements of SCA. As EBA set out to have few exceptions, it remains to be seen whether the predictions of relocations will happen. If e-vendors are able to avoid SCA, this means that consumers will face variation in security level, with the consequence being higher fraud risk. Further, if we return to the findings in Chapter 6, we know that consumers are likely to choose more effective payments than secure payments. It is challenging to ensure safe payments for consumers if SCA is not the norm for all e-vendors.

For most e-vendors today, two-factor authentication is already in place, due to requirements from other actors (Informant 4, 2017). Some e-vendors choose not to comply with the requirements, and instead take the economic loss from fraud. Airline companies do this for example. "Many choose to take the risk themselves because they see that with two-factor authentication they lose out on sales" (Informant 4, 2017). The vendors lose out on sales because consumers are interested in "one-click shopping". They want an effective and easy payment process. This is why invoice providers such as Klarna[37] have become popular, making this possible, but securely. This relates to Chapter 6, which concluded that consumers are naive and not careful enough when they purchase online, they prioritise effective payments over security measures. That e-vendors would rather take the economic loss from fraud than provide safe payment processes, is also a threat for consumers. This is problematic when it is what consumers are interested in. EVRY FP take the naivety of consumers into account in what they

[36] The goods are sent to the same address, the same IP-address is used or other information which tells that this is the account or cardholder making the purchase (Informant 4, 2017).
[37] Swedish business specialising in invoice and payment processing on behalf of its clients (Klarna, n.a.).

do, and it is a concern that the e-vendors choose economic gains over the security of payment processes. Even though Nordic consumers want efficient payment processes, avoiding SCA is a threat to the security of the purchases consumers make. If SCA becomes the main standard for most e-vendors, they would know what to expect, even if it takes longer time to complete the payment. This is another argument to why it is important with strict SCA rules with few exemptions.

The informants from EVRY FP are not the only ones concerned with the stricter SCA requirements. Many of the respondents to the Discussion Paper from EBA were seeking exemptions from SCA (European Banking Authority, 2017). Visa Europe for instance, published a White Paper proposing another way to go about it (2015). The EBA however, argues that as SCA will be the standard procedure, there will be few exemptions, and these needs to be well argued and not lead to more risk (2015). EBA further states that any exemption leading to the majority of payments being conducted without SCA, goes against PSD2s objective of enhanced security. They state that it does no longer count as an exemption when it becomes the main rule not to have SCA. Although the e-vendors are interested in avoiding SCA, EBA intends to keep the exemptions limited. However, EBA does propose to allow exemptions for low risk transactions if a Transaction Risk Analysis (TRA) is in place. TRA includes the analysis EVRY FP provides, in addition to fraud rate for the payment instrument needs to be lower than a certain rate, depending on the transaction amount. This way, there will still be security measures in place even without SCA, for the few exemptions that is likely to be allowed. This will ensure safer and more predictable payments for consumers. As the RTS is still under scrutiny at the EU level, and the proposal could be amended, we do not know the outcome of this yet.

What SCA will mean for consumers, is safer payment processes. What it means for EVRY FP, is a reliable indication of the payment being genuine, making the analysis process easier. If the stakeholders manage to get exemptions from SCA, consumers might enjoy more efficient payment processes, but they will also face less secure payments, with increased risk of fraud as a consequence. The outcome of this objective, according to the findings, will not have any significant direct impact on the threats and opportunities of EVRY FP. How SCA is applied will however, have a significant impact on consumers. The awaited RTS is a topic of concerns for EVRY FP and other actors, as there are uncertainties about what they will include, and what level of detail it is likely to have. However, it can be assumed that the more detailed the rules are, the safer the payments are likely to be for consumers.

7.3. Threats and opportunities brought about by PSD2

"For us I think, I can say that it is an opportunity as long as we're innovative, and we are" (Informant 4, 2017).

The previous sections presented the findings on Nordic consumers' possible threats and opportunities, due to the changes to EVRY FP as a result of PSD2. Before concluding this chapter, we will return to the sub-question; *What threats and opportunities may arise for consumers due to the changes to EVRY Fraud Prevention, brought about by PSD2?*

What the findings shows, is that possible threats to Nordic consumers through EVRY FP, is related to other actors' approach to PSD2. In section 7.1., we learned that open banking is set to change the payment sector. If the Nordic banking sector is not able to take advantage of the changes from PSD2, to be innovative and restate their position as a value to the payment sector and consumers, they will lose market shares. And if the banking sector loses out to new actors, EVRY FP stand to risk losing their customer portfolio. If EVRY FP does not have any customers to offer their services to, they are not able to be a back-end security system for Nordic consumers, possibly leaving them vulnerable for fraud. However, Nordic banks are positioning themselves against the new competition. This means that the possible threat from open banking and the response of the Nordic banking sector might not become reality.

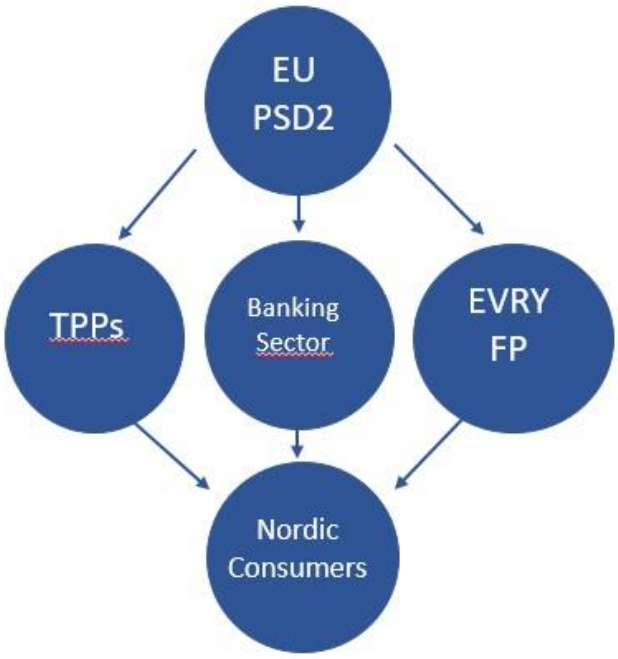

Figure 7.2 - How PSD2 affects Nordic consumers through the actors involved. Based on the conclusion of Chapter 7.

The second possible threat the Chapter presented is the TPPs. The TPPs must also comply with the security requirements. The experience of the EVRY FP informants, is that new actors are not prepared for the requirements, which could possibly leave consumers unprotected. The concerns increase further when combining this with concerns national authorities about the ability to monitor the compliance of new actors. What the outcome of this possible threat will be is unknown, but the new actors need to be monitored closely to ensure the safety of consumer payments. The last factor is the security requirements of RTS, which there are uncertainties about as the content is unknown. The outcome from this remains to be

seen. The requirements of SCA will have consequences for the payment security. SCA is important to ensure safe payments for consumers, and few exemptions and strict rules contribute to do so.

The opportunities for EVRY FP to offer better fraud prevention, is their ability to exploit the changes in the market due to PSD2. Second, their capability to be innovative and prepared for new fraud schemes to be able to withstand large market changes. With the influx of open banking, there are two different opportunities for EVRY FP; a banking sector which need to change and be innovative to survive the new competition; and the new actors, who also need to meet the safety requirements on monitor their transactions. Here, EVRY FP has the opportunity both to be innovate and introduce new approaches to fraud prevention to the changing banking sector, but also an opportunity to expand their portfolio to include new payment services. The biggest threat to Nordic consumers however, is if the Nordic actors fail to implement the Directive properly. The next chapter will look at whether EVRY FP is likely to successfully implement the PSD2.

8. The implementation process' effect on the success of PSD2

So far, this study has shown that there are several threats and opportunities for Nordic consumers through EVRY FP as a result of PSD2. In addition, that outer factors, the banking sector and TPPs, will have an impact on the outcome. Further, we know that Nordic consumers are not careful enough when purchasing online, and tend to be naive in their approach to security. I have also mentioned that for the objectives of PSD2 to be reached, a successful implementation of the Directive is vital. Implementation failure is the most severe possible threat to the security of consumers. Therefore, this chapter will look more closely at the implementation process of PSD2, to argue that EVRY Card is likely to successfully implement PSD2. As mentioned before, but nevertheless important to mention again; EVRY Card is responsible for compliance with PSD2, for EVRY FP as well. This means that when EVRY Card's approach to PSD2 is discussed, this means approach of EVRY FP as well. Returning to the aim of this chapter, order to display that EVRY Card is likely to successfully implement PSD2, the following question will be answered;

Is EVRY Card likely to successfully implement PSD2?

Section 8.1. will first pick up Europeanisation, using a three-step model by Caporaso (2007), to argue that the level of Europeanisation of EVRY Card will be high. This means that there is a higher probability of PSD2 being successfully implemented by EVRY Card. Section 8.2. will look at implementation, presenting the findings about EVRY Card's approach to the implementation of PSD2. The focus is on how EVRY Card prepare for implementation, as well as concerns about the process and the other actors involved. It is also important to look at the possible threats that can lead to delay or failure of implementation, as the opportunities and aims of the Directive will not be possible to achieve if PSD2 is not implemented properly.

8.1. EVRY Card, a case of Europeanisation

The theory chapter, introduces Europeanisation as a concept that can contribute to explain the processes of implementing legislation at Member State level. In this section, Europeanisation will be used to shed light on some of the aspects of the implementation and the role Europeanisation plays in the outcome. The argument is that EVRY Card will experience a high level of Europeanisation, and thus be more likely to successfully implement PSD2. I will use a model by Caporaso (2007) to present this argument.

Caporaso (2007, pp. 27-28), presents a three-step model to show what role Europeanisation plays in European integration. The steps lead to pressure to adjust, pressure that is affected by factors on the national level, and these factors then influence the final outcome. The first step of the model is European integration; the laws and regulations made by the different institutions at EU level, for the Member States to implement. The scope of integration has both widened, in number of Member States, and deepened in terms of policy, since its beginning. PSD2 is the latest link in a series of directives and regulations to complete the single market and reach its potential, and therefore an example of economic integration. This step has been almost completed as the Commission has adopted the legislation. What remains however, is the Commission adopting RTS. EVRY Card is aware of the arrival of PSD2, as well as the level of harmonisation that is expected (Informant 1, 2017). As the study does not focus on how the legislation came about, we will proceed to the next step.

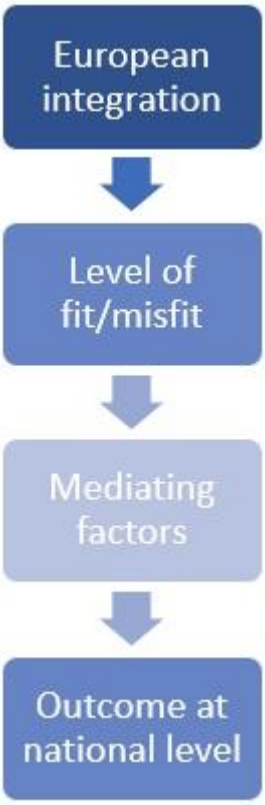

Figure 8.1.- Caporaso's three-step model of Europeanisation. (2007, pp. 27-31)

The second step is the degree of fit or misfit at the domestic level (Caporaso, 2007, p. 29). Member States and affected actors may react to EU demands in a number of ways. While some Member States download the legislation and requirements from Brussels almost automatically, others interpret the legislation in favour of their own policies when implementing. Others again, change the necessary structures to fulfil the requirements from the EU. The response from EVRY Card, is that they intend to implement the Directive fully and correctly, using the resources necessary (Informant 1, 2017). This means that they will evaluate what they need to do, and change the structures necessary in order to comply, no matter the level of fit or misfit between PSD2 and today's measures. How much pressure there is to comply, depends on the degree of fit, or misfit, between EUs aims and the domestic level. If there is a good fit, little change or resources are necessary to adapt at domestic level, and there is thus little pressure for change.

If we apply the level of fit or unfit to the payment sector there is no doubt that the actors are expected to have to change quite a bit to comply with PSD2, as it introduces structural changes to the market. Exactly how much actors needs to change also depend on the requirements they have complied with previously. For the banks, the concept of open banking will lead to potential substantial changes in their services, meaning that there is a level of misfit,

and pressure to comply. The banking sector is preparing for the changes and is consequently obliging to the pressure. EVRY Card express more concerns about the TPPs and whether they will comply with the requirements (Informant 1, 2017). Linking the case of fit/misfit to the two-factor authentication being introduced, one of the informants said that this is already the case for most of the Norwegian e-vendors (Informant 4, 2017). This is due to requirements from Visa and MasterCard, stating that if two-factor authentication is not used, the store must carry the loss due to fraud. Hence, EVRY Card takes this into account already, and this part of PSD2 should be a good fit. These are only a few examples contributing to the total level of fit or misfit. As PSD2 introduces substantial changes to the payment market, a certain level of misfit is expected, and therefore also the pressure for complying with the legislation. What this also shows is that with EVRY Card intending to comply, they are aware of the legislation and what it means. Hence, they are concerned with what goes on at the European level, an indication of EVRY Card being Europeanised.

To continue, the third step is the mediating factors (Caporaso, 2007, pp. 30-31). Mediating factors are a number of variables standing between the decision at EU level and the Member States. Almost all domestic structural conditions that affects the impact of European integration is a mediating factor. Factors are for example formal and informal institutions, and veto points or veto groups. In cases where there are actors, whether on government level or business actors, who rejects or refuse EU legislation, the probability of a successful implementation, is lower. An example of business actors working against legislation, is the number of actors interested in exemptions from SCA, or less strict rules on the matter (European Banking Authority, 2017). The EBA has however, stated an intention to keep the rules strict and number of exemptions low, which means that this mediating factor might not become a problem. Another example is the banking sector being passive when PSD2 was first introduced. EVRY published a White Paper urging the sector to take advantage of the opportunities instead of risking losing market shares, and that way actively trying to reduce the mediating factors threatening EVRY's services (n.a.-b). However, it is important to note that the idea of mediating factors is difficult to grasp and difficult to use to conclude anything certain, as there are many factors involved (Caporaso, 2007, pp. 32-33). This was only two examples of mediating factors that could influence the level of Europeanisation for EVRY Card, as their success is dependent on others as well. How many factors there are, and the outcome of these, remains to be seen during the implementation process, but EVRY Card is aware of the surroundings around them, and thus will do what they can to limit these factors.

In addition to the three step-model, it is relevant to look at Schmidt's argument as to why actors are affected by Europeanisation. Previous cases of European integration have shown that for implementation in the financial sector, financial vulnerability has been a key factor for the adaption to EU policy (Schmidt, 2002, pp. 898-899). This because the actors, such as the banking sector, were worried that they would be left behind if they did not adapt to EU rules, regardless of their standing about the legislation itself. Further, the changes in the financial services sector, has in several cases been facilitated by rapidly changing technology, which was attractive due to the potentials for high profit. An example is from the integration of telecommunication into EU policy, where concern regarding firms' global competitiveness had more impact on the implementation success than EU coerciveness (Schmidt, 2002, p. 906). This is also similar to the changes in the European financial service markets due to PSD2. The White Paper published by EVRY, urging the banking sector to take advantage of the opportunities and not risk the financial vulnerability of not being ahead of the changes, is an example of focusing on the benefits rather than the need to comply simply because it is a requirement of the EU. If the banking sector see what financial opportunities PSD2 could provide, as well as the financial risk of not complying to the requirements, there is no reason why the sector would not successfully implement the legislation. This also relates to Sverdrup's (2007) rationalistic approach, the banking sector will implement properly as long as they see, and prioritise the possible benefits from complying.

This section has only offered a snapshot of the factors involved between adopting legislation at EU level and the outcome at the domestic level. For the case of PSD2, the level of detail is high. The level of fit or misfit varies, but as the Directive introduces several new objectives, such as open banking for example, a certain level of misfit for the actors involved is expected. The third step, mediating factors, show that there are many factors that influences level of Europeanisation of EVRY Card. What this also shows, is that the level of Europeanisation in the process of implementing PSD2, is more dependent on external factors than EVRY Card's approach. EVRY Card is prepared for the changes of PSD2, but its implementation success depends on others. Still, based on this analysis, the level of Europeanisation of EVRY Card is expected to be high, and therefore increase the probability of EVRY Card successfully implementing the Directive. As this alone is not enough to answer the research question of this chapter, we will continue to the implementation of EU Directives,

before presenting the findings from EVRY Card[38] to argue that successful implementation is likely.

8.2. The implementation approach of EVRY Card

We learned in the previous section that the level of Europeanisation of EVRY Card is expected to be high, but external factors could have an impact on it. Although the expected level of Europeanisation contributes to the probability of implementation success, it is not enough to draw any conclusion for this chapter. That is why the next step is to identify the reflections of EVRY Card as they prepare for the implementation. The chapter will first present the findings from EVRY Card, before shedding light on their concerns for this process. The last section will apply the theoretical framework to EVRY Card. This will answer the sub-question for this section; *Is EVRY Card likely to successfully implement PSD2?*

EVRY Card has extensive experience with implementation, and has developed a of set procedures to implement correctly and on time (Informant 1, 2017). Through this experience, they also know how to balance different requirements[39]. "I usually talk about compliance tsunamis […], we've been hit by these tsunamis in the later years, so we know what it means to deal with this, we have a specific process" (Informant 1, 2017). The specific process EVRY Card has in place includes a compliance team with legal personnel, who looks at how the legislation will affect them legally. It also includes product owners who focus on what possible changes needs to be made to comply with the requirements. This process consists of an analysis phase where the implications, cost and resource is analysed, in addition to planning how to meet the deadline. PSD2 is approached as a project, where the implications are analysed, including what benefits the legislation can lead to. After this phase is completed, the work with implementation and compliance begins. Simultaneously with this process, EVRY Card communicates with customers and authorities. "We often have customers [banks], asking how to implement this […]. There is a lot of dialogue, and communication is a big part of implementing this" (Informant 1, 2017). With their experience and processes and strategies in place, EVRY Card seems to be an experienced department, prepared for the changes brought by PSD2.

EVRY Card approach the implementation in the different Nordic countries quite similarly, and their experience is that there are few differences between the countries (Informant 1, 2017). The informant stated that in some cases it might be easy to think that what works for

[38] Some data from EVRY FP will also be used here.

[39] Other compliance requirements come from PISP, ISPERA, GDPR, PCI DSS, requirements from Visa/MasterCard, as well as different national requirements such as consumer rights (Informant 1, 2017).

the Swedish market, will work for the Norwegian market as well, without considering the nuance differences. The overall approach EVRY Card has when it comes to the national differences, is that they offer the same service regardless of what country. The rules implemented are therefore implemented equally, or as close to it as possible (Informant 3, 2017). Further, even though Norway is an EEA-country and not a Member State, the informant expressed that they are not concerned that this will have any implication for the implementation, as Norway are competent at implementing EU requirements (Informant 1, 2017). The transposition statistics from Chapter 4 confirms this. Further, the implementation statistics of the Nordic countries suggest that they are capable of, and able to implement the changes brought about from PSD2. The low percentage of transposition deficits is an indication that the Nordic countries overall, succeed in their implementation processes, which is an important factor for EVRY Card when preparing for the implementation of PSD2.

As we have seen, EVRY Card is an actor that intends to implement the Directive correctly. From Sverdrup's (2007, pp. 204-205) bounded rationalistic approach, this means that they implement PSD2 because they will benefit from doing so. Intent does not mean that an actor will be able to implement. As EVRY Card has a strategy in place, and aim to implement at a strict level, it is likely that they will use the resources necessary to succeed. Hence the implementation process of PSD2 does not seem to be problematic in terms of whether or not they should comply. They intend to comply with the requirements and will use the necessary resources to do so. They are now awaiting the final RTS being adopted before starting the implementation process (Informant 1, 2017). Assessing from this, EVRY Card is prepared to use the resources necessary, in addition to aiding Nordic actors. They do so because they benefit from it, but also due to the possible vulnerabilities of not complying. In the next section, we will look at how EVRY Card experience the other actors' implementation process.

8.3. Other actors

Even though there is an implementation strategy in place for EVRY Card, there are several concerns regarding the other actors affected by PSD2. Sverdrup (Sverdrup, 2007, p. 199), states that the success or failure by one actor to implement legislation, is likely to affect other actors as well. As PSD2 intends to harmonise security across the EU, the Member States succeeding in implementing the legislation, is of importance. This means that the implementation success of the Nordic countries will affect the threats and opportunities of Nordic consumers. This is also why it is important to look at the concerns EVRY Card has for the other actors in the payment sector.

The concerns of the informant from EVRY Card, regarding the implementation success, lies more with the other actors and whether they are able to implement correctly, than the implementation success of EVRY Card (Interviews, 2017). The informant stated that one of the concerns is the account access of TPPs, and how to ensure that these providers comply with the security requirements. When a new TPP gain access to consumers' accounts, it must comply with the security requirements of PSD2. In the opinion of one of the informants, TPPs' are not prepared to do so (Informant 3, 2017). The national authorities are responsible for monitoring the actors, to ensure that they comply with PSD2. Concerns have been expressed by one of the informants regarding how the national authorities are to monitor that all vendors comply with the requirements. The Swedish financial supervisory authority[40], told the informant from EVRY Card that "they don't know how to be able to follow up, they cannot monitor every business, […] this they know. So it is definitely a challenge" (Informant 1, 2017). It is not unlikely that other national authorities have the same concerns. This can also be related to the concern of one of the informants at EVRY FP, who said that their experience with new actors such as FinTechs, is that they have not "done their homework" on compliance. If the new actors are not able to comply with the different requirements, and national authorities are not able to monitor them closely enough, successful implementation of PSD2 could become challenging for the TPPs. This indicates that the TPPs, although they might have the intention to comply with the security requirements, does not have the resources, knowledge or ability to do so. If this is the case, they are bounded rationalists who does not succeed (Sverdrup, 2007, pp. 204-205).

As for the banking sector, if they intend to exploit the financial opportunities PSD2 could provide, and realise the financial risk of not complying to the requirements, the sector should successfully implement the PSD2. This also relates to Sverdrup's (2007) rationalistic approach, the banking sector will implement properly as long as they see, and prioritise the possible benefits from complying.

Concerns about other actors in the payment sector regarding implementation must be taken seriously, also at EU level. According to Knill (2006, p. 352), due to the few resources available to ensure successful implementation of EU legislation, many perspectives argue that the EU have a systematic implementation problem. The Commission (2015a), through the Better Regulation Agenda, will continue to strengthen its response and use the instruments available to ensure that these the implementation rate improves. The content of the EU Directive becomes an issue when it comes to clarity and consistency, or the degree of technicality, as well

[40] Finansinspektionen

as the requirement for consistency across the Member States (Bursens, 2002, p. 180). For the case of PSD2, uncertainties have been expressed especially related to the content where they have to await RTS in order to know the detailed rules. The fact that the EU aims to spend more resources on ensuring successful implementations, should mean that they will take a more active role in the process of implementing PSD2. Thus, they should be able to contribute preventing the threat to consumers that is implementation failure.

8.4. EVRY Card is likely to successfully implement PSD2

This chapter has shown that implementation is complex and involves many stakeholders, levels and mediating factors. At the EU level, legislation is developed and adopted, before the responsibility of implementing the legislation is transferred to the Member States. At the national level, both public and private actors have to comply with the rules that are set, within a certain time frame. As previously mentioned, a successful implementation of PSD2 is vital to be able to reach the aims of PSD2. For consumers to be able to perform secure and efficient payments in a technological age that is developing fast, they must be able to expect the same rights and security no matter what country they choose to purchase in or from.

Section 8.1. on Europeanisation presented EVRY Card as an institution that is expected to reach a high level of Europeanisation. This means that they are aware of the changes at EU level, and intend to comply with the requirements because it is in their interest to do so. This increases the chance of them successfully implementing PSD2. Further, the findings from EVRY Card shows that the overall impression is that they are not concerned about whether they will succeed with the implementation process or not. They intend to use the resources necessary to comply, because that is to their benefit. EVRY Card is currently awaiting RTS to be adopted by the Commission before starting the work on implementing this within its 18 months' time frame. There are some nuance differences in the Nordic countries that they need to be aware of, but their aim is to have the same service in all countries they have business, and EVRY Card will therefore aim towards a strict level of implementation. There is therefore little indication that they will not successfully implement PSD2.

The focus of concern of EVRY Card, is more on other actors, and whether they are able to successfully implement the legislation. They are especially concerned with the security requirements and the fact that the new actors does not seem prepared to comply with them. In addition, there are concerns over whether national authorities will have the capacity to detect the actors that are unable to comply. EVRY Card is assisting their customers in the implementation process in addition to focusing on their own implementation process. As this

Directive is not to be finished implemented for quite some time, it is not possible to know about its success yet. What we can say, is that there are many, and complex factors that can have an impact on this outcome, and this chapter only offered a small introduction to these factors. However, from the findings of this study, it is likely that EVRY Card will successfully implement PSD2.

9. Conclusion

The aim of conducting this study has been to shed light on the possible threats and opportunities that could arise for Nordic consumers due to PSD2 effects on EVRY FP. To do this, I have answered the following research question; *What threats and opportunities may arise for Nordic consumers due to the changes to EVRY Fraud Prevention, brought about by PSD2?*

For EVRY FP to be able to protect all types of consumers in the wake of PSD2, they depend on the ability to provide high quality fraud prevention services. Nordic consumers are naive in their approach to online purchasing. Whether this is due to ignorance or lack of knowledge is unclear, but nevertheless needs to be taken into account by all actors in the payment sector. With Nordic consumers unable to protect themselves, they need legislation and fraud prevention measures that able to protect them of fraud regardless of their actions. PSD2 is set to ensure safer payment processes for consumers. Its ability to do so depends on how actors approach the legislation, and the legislation being completely implemented.

Threats and opportunities for consumers through EVRY FP

Open banking is set to drastically change the banking sector, with the introduction of open banking. How well the Nordic banking sector position themselves in the wake of PSD2 is a possible threat to Nordic consumers. If the banking sector is not able to position themselves against the new competition, and take advantage of the opportunity to be innovative and ahead of the changes, they could lose market shares. This is a threat for consumers as EVRY FP will lose customers as a result, possibly leading to poorer protection against fraud. As the Nordic banking sector is preparing for the changes by gathering and becoming a larger entity, this threat might not become a reality. To continue, the introduction of TPPs represent two possible threats to Nordic consumers, as they do not seem to be prepared for the security requirements they will have to comply with. In addition, EVRY FP is uncertain about whether the TPPs will be willing to provide the information necessary to be able to detect fraud. These two threats will both lead to insecure payments.

The awaited RTS, with the requirements for SCA to be included, represents the fourth and fifth possible threat to Nordic consumers. The uncertainties tied to the content of the final RTS when it is adopted by the Commission, is of concern for EVRY FP. There are concerns from other actors well, who are awaiting the adoption before starting the implementation, including EVRY Card. What threat might appear from RTS depends on the level of detail, and how much leverage room there will be for actors to implement as they see fit. The fifth threat, SCA, is a threat for consumers if actors are able to achieve exemptions for several objectives.

Nordic consumers will experience safer payment processes if SCA becomes the norm, and many exemptions goes against the objective of PSD2 to increase consumer safety. As can be seen, the threats depend on the other actors in the Nordic market, their approach to PSD2 affects consumers as well as EVRY FP.

The opportunities for the security of Nordic consumers, are the abilities of EVRY FP to exploit the movements in the market as a result of the PSD2. In addition, being able to prevent more fraud than before through developing new approaches due to PSD2. Being innovative and assertive in the process could lead to increased business and higher quality fraud prevention, which is an opportunity for the consumer as well. No matter the outcome of PSD2, as long as there is fraud, there is need for the back-end fraud prevention services that EVRY FP provides.

EVRY Card is likely to successfully implement PSD2.

The level of Europeanisation of EVRY Card is expected to be high. This contributes to the argument that they will successfully implement PSD2. Further, EVRY Card is not concerned about whether they will implement the Directive properly and on time. They intend to use the resources necessary to ensure the proper level of compliance for them to be able to offer the same service across the Nordic borders. EVRY Card is more concerned with the other actors, and their ability to successfully implement the legislation. they, as EVRY FP, are concerned with the ability of TPPs to comply with the security requirements, and that failure to comply will go undetected. Failure to implement is a serious threat to Nordic consumers, but EVRY Card being likely to successfully implement PSD2, means that this threat probably will not become reality. However, this threat is also related to the implementation of other actors in the payment sector, which there are concerns about. The implementation of PSD2 is not to be completed until 2018, which means that we do not know the outcome yet. However, EVRY Card is likely to successfully implement PSD2.

The EU's effects on Nordic consumers through EVRY Fraud Prevention

Drawing from the findings, EVRY FP has the prerequisites for succeeding in the wake of PSD2. They are doing what they can to be prepared for the future of the payment sector. What this study has shown, is that was presents as the biggest threats at this moment in time, are the external factors; the banking sector and the new third party providers, and how the approach PSD2 and implementation. These threats are threats to services EVRY FP provide, and significant threats to the security Nordic consumers. What it also is, is a major threat for what this Directive set out to ensure, safer payment processes. By this, one can argue that even though the EU want safer payments, the process to reaching this, is not unproblematic. The other actors

in the Nordic payment sector could have substantial impact on consumers, this is the threat that the findings keep returning to. Further, with Nordic consumers act naively, prioritising efficient payment over the safety of their sensitive information, someone needs to be there to protect them from fraud. What remain crystal clear, is that the need for a back-end security system protecting consumers no matter how they approach security, will not diminish. Further, the uncertainties relating to the implementation and content, shows that the EU should take an active role in the process to ensure full harmonisation in order to reach the aims of PSD2.

It is difficult to know if this analysis can be applied to other policy areas. How actors approach legislation and prepare for implementation varies from sector to sector, as well as the pressure to comply. In addition, PSD2 is expected to have a bigger impact on the payment sector than any other legislation, changing banking as we know it. Nevertheless, this study can contribute by saying something about the perspectives of one of the actors affected by EU legislation, as they prepare for the implementation and changes to the market. This study also contributes to the understanding of how an actor is affected by other actors, and the effect they can have on the outcome of changes due to legislation. This study offers a snapshot of the how actors affected by EU legislation perceive the market they are in, and the effects of other actors.

This study has been conducted in collaboration with EVRY Fraud Prevention, with contributions from EVRY Card as well. My aim has not been for this to result in any specific advice for EVRY FP. It has been to offer insight to the possible threats and opportunities of EVRY FP and consumers. This research does not include all objectives of PSD2, that is too big of a reach for this thesis. Further, this thesis is written while the implementation process is still under way, and I cannot predict the future. By offering insight into the possible changes in threats and opportunities of Nordic consumers, through EVRY FP, while the process is still ongoing, leaves time to act upon it.

Evaluation and future research

It is challenging to study a topic while the process of implementation is ongoing. It means that new information of publications relevant to include in the study could be undetected by me as I have to stop collecting data at some point. This applies especially to the RTS, which is expected to be adopted at any moment. Further, the final draft of RTS was not published before after I started the work, and after the interview guides were developed. This has affected how I approached this section, as I had little knowledge about the content of the final draft. Further, PSD2 being an ongoing process, also means that there is substantial interest on the topic, making the task of narrowing the topic challenging. Implementation, and especially

Europeanisation, was initially not intended to be given so much focus, and this could be reflected in the data collection. More data to apply to the three-step model would have been beneficial. However, the findings on the likeliness of EVRY Card to successfully implement is strong without detailed information about the implementation process of EVRY Card. As for possible future research, identifying the outcomes of the threats and opportunities identified here, after the implementation is completed, would be very interesting.

References

Accenture. (2015). *Welcoming a new phase of Everyday Payments in Europe*. Retrieved from https://goo.gl/UoePvW

Aite Group. (2016). *2016 Global Consumer Card Fraud: Where Card Fraud is Coming From*. Retrieved from https://www.aciworldwide.com/-/media/files/collateral/trends/2016-global-consumer-card-fraud-where-card-fraud-is-coming-from.pdf

Beamer, G. (2002). Elite Interviews and State Politics Research. *State Politics & Policy Quarterly, 2*(1), 86-96. doi:10.1177/153244000200200106

Bernard, H. R., & Ryan, G. W. (2010). *Analyzing qualitative data : systematic approaches*. Los Angeles: Sage.

Berry, J. M. (2002). Validity and reliability issues in elite interviewing. *Political Science & Politics, 35*(04), 679-682.

Bjerkan, L. (2016). I sommer har utspekulerte svindlere herjet med norske bedrifter som aldri før [This summer, deceitful scammers have robbed Norwegian companies like never before]. Retrieved from http://www.aftenposten.no/okonomi/I-sommer-har-utspekulerte-svindlere-herjet-med-norske-bedrifter-som-aldri-for-601428b.html on 21. April 2017

Bursens, P. (2002). Why Denmark and Belgium Have Different Implementation Records: On Transposition Laggards and Leaders in the EU. *Scandinavian Political Studies, 25*(2), 173-195. doi:10.1111/1467-9477.00068

Caporaso, J. (2007). The Three Worlds of Regional Integration Theory. In M. P. Vink & P. Graziano (Eds.), *Europeanization: New Research Agendas*. Hampshire, UK: Palgrave Macmillan.

Dennis, C., Merrilees, B., Jayawardhena, C., & Tiu Wright, L. (2009). E-consumer behaviour. *European Journal of Marketing, 43*(9/10), 1121-1139.

Deutsche Bank. (n.a.). *Payment Services Directive 2*. Retrieved from http://cib.db.com/docs_new/White_Paper_Payments_Services_Directive_2.pdf

DeWalt, K., & DeWalt, B. (2011). *Participant Observation: a Guide for Fieldworkers* (2nd ed.). Plymouth, UK: AltaMira Press.

Directive 2015/2366/EU. (2015). Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC. *Official Journal of the European Union, 58*.

Donnelly, M. (2016). Payments in the digital market: Evaluating the contribution of Payment Services Directive II. *Computer Law and Security Review, 32*(6), 827-839. doi:http://dx.doi.org/10.1016/j.clsr.2016.07.003

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing, 62*(1), 107-115. doi:10.1111/j.1365-2648.2007.04569.x

Equens SE, Nets, & VocaLink. (2015). *White Paper on CAPS for PSD2*. Retrieved from https://www.caps-services.com/documents/CAPS_PSD2_White_Paper_August_201528-20333.pdf

European Banking Authority. (2015). *Discussion Paper on Draft Regulatory Technical Standards on strong customer authentication and secure communication under the revised Payment Services Directive (PSD2)*. Retrieved from https://www.eba.europa.eu/documents/10180/1303936/EBA-DP-2015-03+%28RTS+on+SCA+and+CSC+under+PSD2%29.pdf

European Banking Authority. (2017). *Final Report: Draft Regulatory Technical Standards on Strong Customer Authentication and secure communication under Article 98 of Directive 2015/2366 (PSD2)*. Retrieved from https://www.eba.europa.eu/documents/10180/1761863/Final+draft+RTS+on+SCA+and+CSC+under+PSD2+%28EBA-RTS-2017-02%29.pdf

European Central Bank. (2013). *The Single Euro Payments Area (SEPA)*. Frankfurt.

European Commission. (2015a). Better Regulation Agenda: Enhancing transparency and scrutiny for better EU law-making [Press release]. Retrieved from http://europa.eu/rapid/press-release_IP-15-4988_en.htm

European Commission. (2015b). European Parliament adopts European Commission propsal to create safer and more innovative European payments [Press release]. Retrieved from http://europa.eu/rapid/press-release_IP-15-5792_en.htm?locale=en

European Commission. (2015c). Payment Services Directive: frequently asked questions. Retrieved from http://europa.eu/rapid/press-release_MEMO-15-5793_en.htm?locale=en on 28. February 2017

European Commission. (2015d). *Single Market Scoreboard: Transposition*. Brussels

European Commission. (2016a). Iceland: Performance per Member State. *Single Market Scoreboard.* Retrieved from http://ec.europa.eu/internal_market/scoreboard/performance_by_member_state/iceland/index_en.htm#maincontentSec1 on 7. April 2017

European Commission. (2016b). Norway: Performance per Member State. Retrieved from http://ec.europa.eu/internal_market/scoreboard/performance_by_member_state/norway/index_en.htm#maincontentSec1 on 7. April 2017

European Commission. (2016c). Payment Services in the EU - Summary. Retrieved from http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=URISERV:l33226&from=EN&isLegissum=true on 03. February 2017

European Commission. (2016d). *Report from the Commission: Monitoring the application of European Union law. 2015 Annual Report*. Brussels: COM

European Commission. (2017a). *Digital Economy and Society Index 2017 - Denmark*. Retrieved from https://ec.europa.eu/digital-single-market/en/scoreboard/denmark

European Commission. (2017b). *Digital Economy and Society Index 2017 - Finland*. Retrieved from https://ec.europa.eu/digital-single-market/en/scoreboard/finland

European Commission. (2017c). *Digital Economy and Society Index 2017 - Norway*. Retrieved from https://ec.europa.eu/digital-single-market/node/66889

European Commission. (2017d). *Digital Economy and Society Index 2017 - Sweden*. Retrieved from https://ec.europa.eu/digital-single-market/en/scoreboard/sweden

European Commission. (n.a.-a). Law Details. Retrieved from https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366/law-details_en on 08. February 2017

European Commission. (n.a.-b). Law details. Retrieved from https://ec.europa.eu/info/law/payment-services-psd-1-directive-2007-64-ec/law-details_en on 04. February 2017

European Commission. (n.a.-c). Payment services. Retrieved from https://ec.europa.eu/info/business-economy-euro/banking-and-finance/consumer-finance-and-payments/payment-services/payment-services_en on 31. January 2017

Eurostat. (2010). *Activities via internet not done because of security concerns*. Retrieved from: http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

Eurostat. (2015a). 1 out of 2 persons in the EU purchased online in 2015. Retrieved from http://ec.europa.eu/eurostat/documents/2995521/7103356/4-11122015-AP-EN.pdf/276b6a7c-69a6-45ce-b6bf-488e975a8f5d on 07. March 2017

Eurostat. (2015b). *Activities via internet not done because of security concerns*. Retrieved from: goo.gl/Xjfi8t

Eurostat. (2016). 1 out of 4 internet users in the EU experienced security related problems in 2015. Retrieved from http://ec.europa.eu/eurostat/documents/2995521/7151118/4-08022016-AP-EN.pdf/902a4c42-eec6-48ca-97c3-c32d8a6131ef on 7. March 2017

Eurostat. (2017). *About two thirds of internet users in the EU shopped online in 2016*. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/E-commerce_statistics_for_individuals

EVRY. (n.a.-a). Banktjenester via blockchain [Banking services via blockchain]. Retrieved from https://www.evry.com/no/media/artikler/banktjenester-via-blockchain/ on 13. May 2017

EVRY. (n.a.-b). *PSD2 - Strategic Opportunities Beyond Compliance*. Retrieved from https://www.evry.com/globalassets/bransjer/financial-services/bank2020/wp_psd2/psd2_whitepaper.pdf

EVRY Financial Services. (n.a.). Introduction to EVRY and Financial Services - Presentation: EVRY Financial Services.

Featherstone, K. (2003). Introduction: In the name of Europe. In K. Featherstone & C. Radaelli (Eds.), *The Politics of Europeanization*. Oxford: Oxford University Press.

Flavián, C., & Guinalíu, M. (2006). Consumer trust, perceived security and privacy policy: Three basic elements of loyalty to a web site. *Industrial Management & Data Systems, 106*(5), 601-620. doi:doi:10.1108/02635570610666403

Gerring, J. (2007). *Case study research: Principles and practices*. New York: Cambridge University Press.

Gregersen, R. (2011). Ble forsøkt lurt av datasvindlere [Was tried tricked by computer fraudsters]. Retrieved from https://www.nrk.no/ho/ble-forsokt-lurt-av-datasvindlere-1.7745609 on 21. April 2017

Hartono, E., Holsapple, C. W., Kim, K.-Y., Na, K.-S., & Simpson, J. T. (2014). Measuring perceived security in B2C electronic commerce website usage: A respecification and validation. *Decision Support Systems, 62*, 11-21. doi:http://dx.doi.org/10.1016/j.dss.2014.02.006

Hochschild, J. L. (2009). Conducting Intensive Interviews and Elite Interviews. *Workshop on Interdisciplinary Standards for Systematic Qualitative Research.* edited by Michele Lamont and Patricia White. Retrieved from http://www.nsf.gov/sbe/ses/soc/ISSQR_workshop_rpt.pdf on 23. February 2017

Informant 1. (2017, 16. March 2017) *Interview 1 - EVRY Card/Interviewer: T. Melfjord*. NVivo.

Informant 3. (2017, 27. March 2017) *Interview 2 - EVRY FP/Interviewer: T. Melfjord*. NVivo.

Informant 4. (2017, 27. March 2017) *Interview 2 - EVRY FP/Interviewer: T. Melfjord*. NVivo.

Interviews. (2017) *EVRY FP and EVRY Card/Interviewer: T. Melfjord*. NVivo.

Kasiyanto, S. (2016). Security Issues of New Innovative Payments and Their Regulatory Challenges. In G. Gimigliano (Ed.), *Bitcoin and Mobile Payments : Constructing a European Union Framework* (pp. 145-179). London: Palgrave Macmillan UK.

Klarna. (n.a.). Om oss [About us]. Retrieved from https://www.klarna.com/no/om-oss on 07. May 2017

Knill, C. (2006). Implementation. In J. Richardson (Ed.), *European Union: Power and policy-making* (3rd ed.). Abingdon: Routledge.

Kobie, N. (2015, 6. May 2015). What is the internet of things? *The Guardian*. Retrieved from https://www.theguardian.com/technology/2015/may/06/what-is-the-internet-of-things-google on 13. May 2017

Lenschow, A. (2006). Europeanisation of Public Policy. In J. Richardson (Ed.), *European Union: Power and policy-making* (3rd ed. ed.). New York: Routledge.

Mercado-Kierkegaard, S. (2007). Harmonising the regulatory regime for cross border payment services. *Computer Law and Security Review, 23*(2), 123-208. doi:http://dx.doi.org/10.1016/j.clsr.2006.11.003

Moyser, G. (2011). Elite Interviewing In V. Jupp (Ed.), The SAGE Dictionary of Social Research Methods (pp. 85-86). Retrieved from http://methods.sagepub.com/reference/the-sage-dictionary-of-social-research-methods. doi:10.4135/9780857020116

Nilsen, A., & Nysveen, E. (2017). Det er slutt på at bank konkurrerer mot bank [The end of banks competing against banks]. Retrieved from http://e24.no/boers-og-finans/bank/norske-banker-staalsetter-seg-for-gigantenes-inntog-det-er-slutt-paa-at-bank-konkurrerer-mot-bank/23923573 on 25. April 2017

O'Toole, L. J. (2000). Research on policy implementation: Assessment and prospects. *Journal of Public Administration Research and Theory: J-PART, 10*(2), 263-288.

Pollack, M. (2010). Theorizing EU Policy-Making. In H. Wallace, M. Pollack, & A. Young (Eds.), *Policy-Making in the European Union* (6th ed.). Hampshire: Oxford University Press.

PostNord. (n.a.). *E-commerce in Europe 2016*. Retrieved from http://www.postnord.com/globalassets/global/english/document/publications/2016/e-commerce-in-europe-2016.pdf

PwCFinTech. (2016). What is FinTech? Retrieved from https://www.pwc.com/us/en/financial-services/publications/viewpoints/assets/pwc-fsi-what-is-fintech.pdf on 13 May 2017

Roghanizad, M. M., & Neufeld, D. J. (2015). Intuition, risk, and the formation of online trust. *Computers in Human Behavior, 50*, 489-498. doi:10.1016/j.chb.2015.04.025

Ryen, A. (2002). *Det kvalitative intervjuet: fra vitenskapsteori til feltarbeid [The qualitative interview]*. Bergen: Fagbokforlaget.

Salisbury, W. D., Pearson, R. A., Pearson, A. W., & Miller, D. W. (2001). Perceived security and World Wide Web purchase intention. *Industrial Management & Data Systems, 101*(4), 165-177.

Schmidt, V. A. (2002). Europeanization and the mechanics of economic policy adjustment. *Journal of European Public Policy, 9*(6), 894-912. doi:10.1080/1350176022000046418

Sverdrup, U. (2004). Compliance and conflict management in the European Union: Nordic exceptionalism. *Scandinavian Political Studies, 27*(1), 23-43.

Sverdrup, U. (2007). Implementation. In P. Graziano & M. P. Vink (Eds.), *Europeanization: New Research Agendas* (pp. 197-212). Hampshire, UK: Palgrave Macmillan.

Vink, M. P., & Graziano, P. (2007). Challenges of a New Research Agenda. In M. P. Vink & P. Graziano (Eds.), *Europeanization: New Research Agendas*. Hampshire, UK: Palgrave Macmillan.

Visa Europe. (2015). *The Regulatory requirements for Strong Customer Authentication (SCA) of online payments: Why a nuanced and segmented risk-based approach is required*. Retrieved from https://vision.visaeurope.com/media/images/sca%20position%20paper-93-39812.pdf

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). California, U.S.: Sage publications.

Økokrim. (2017a). Bedrageri [Fraud]. Retrieved from http://www.okokrim.no/bedragerier on 24. April 2017

Økokrim. (2017b). Ikke la deg svindle [Don't be defrauded]. Retrieved from http://www.okokrim.no/okokrim-raad on 21. April 2017

Appendix

1. Interview guide EVRY Fraud Prevention

Background information

- What role do you have at EVRY Fraud Prevention?
- EVRY FP is in a landscape with many different actors, can you tell more about this landscape and the different actors, as well as the role EVRY FP has in this landscape?

EVRY FP and PSD2

About PSD2: Directive from the EU about payment services in the EU. Approved in November 2015, is to be implemented by January 2018. Introduces a range of new rules and guidelines, the most important might be that they open up for third parties to do tasks that only the banks are allowed to today. In addition, the rules for liability has been changed, and the rules for security and authentication will be stricter. The latter belongs to the announced RTS which there are uncertainties about.

- How does EVRY FP relate to PSD2 and its introduction? Do you see it as a threat or an opportunity?
- How does EVRY FP work to prevention fraud? And how has it developed with the technological and regulatory developments?
- How has fraud developed in the time you have worked with it? How has fraud changes changed with the technological and regulatory development?
- The Nordic countries are at the top of digital development in the world, how does this show in the fraud picture?
- PSD2 will among other things lead to increased requirements about authentication for online purchases, with two-factor authentication. Could you reflect a bit around what changes increased security requirements could lead to, both negative and positive changes?
- Perceived security is important for the consumers when they purchase online. What reflections do you have about this from a FP perspective? Do the consumers focus on the right things when they decide whether to purchase or not, depending on the perceived security of the website? (the appearance of the website, rumours, their own experiences are among the factors they focus on).

- PSD2 will lead to constraints when it comes to how the payment sector perform their services, by opening for third party providers among other things. What threats do you think this could lead to fraud wise, and what opportunities for EVRY FP?
- Opening up for third party providers also means that new actors will enter the market, who also will have a need to prevent fraud, not matter if they are a big or small actor. What are your opinions on this? As a result, this will also change the banks role, what will this mean for you?
- What new business opportunities are EVRY FP working towards? And are these commitments as a result of any requirements (either from banks, EU etc), or something else?
- A number of consumers have risky behaviour online. They leave their phones unlocked, use public internet for online banking and to not take precautions when purchasing online for example. Can the future fraud prevention service take this into account, and make sure that the consumers' risky behaviour is not a factor?

Implementation of PSD2

- How does EVRY FP relate to the implementation of PSD2? How will EVRY FP be affected?
- What do you think is the biggest threat, and the biggest opportunity for fraud prevention, from PSD2, and in the implementation process?

2. Interview guide EVRY Card

- What role do you have at EVRY? What role do you have in the process involving PSD2?
- How does EVRY Card work with PSD2 now, how do you organise the implementation?
- How is this work affected by EVRY Card being present in several countries?
    - Do you have different approached, different expectations or challenges?
- What role would you say that EVRY Card has approach in the implementation process, are you in front of or awaiting the process? Why?
- Can you reflect on EVRY Card as a firm in a Nordic market, and thereby an actor inside and outside of the EU? How do you notice this?
- One of the bigger changes PSD2 introduces is the Third Party Access. What changes could this lead to for you?
    - Is it a threat or a possibility?
- PSD2 will lead to changes and requirements for you – what previous experience does EVRY Card have?
- One of the challenges from PSD1, is that it was implemented differently across the EU. Did you take notice of this?
    - And how?
- Do you have anything else do add?

3. Categories from interview analysis with subcategories

Consumers	Fraud prevention	Future
• Interests • Risky behaviour	• Opportunities • Threats • Development	• New business • Payment future • New actors • Uncertainties

Implementation	Other actors	Security
• Experience • Nordic countries • Process	• Relationship with banks • PSD2 and banking sector • Other countries	• Fraud • Requirements • Third Party Access