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# Who will you trust to do your banking, in an era of Fintech fever?

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Master thesis, Strategy and Management

## NORWEGIAN SCHOOL OF ECONOMICS

This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

## Abstract

Disruptive technology is exponentially taking more place in our everyday lives and opens a tremendous number of opportunities. The FinTech industry is by far dispensed from this. The technological development combined with the arrival of new regulations has led to a new shift in the financial market. Certain aspect of B2C banking which traditionally was reserved banks, has now become a service that any firm can enter, with the restrains of certain aspects. In a context where perceived risk is increasing, and the amount of financial service providers are growing, we are curious to study role of brand trust and trust in the adoption of a new Fintech service and the capability to transfer trust from a brand to a service.

The study is characterized by a deductive approach. Firstly, we state pertinent secondary data that serves as our basis for the elaboration of our hypotheses. To test the hypotheses, we first conducted a pre-study to map levels of trust in various companies. For the main study we gathered three different groups, with 150 respondents in each. Every group where to test the same FinTech service but delivered by three different brands. After the experiment we asked the respondents questions concerning, trust, perceived risk and other identified antecedents.

The main findings suggest that the importance of a brand towards trust in a FinTech service is limited. Ability seems to be the least transferable trusting dimension from a brand. Meanwhile, Integrity appears to have the most transferable characteristics. Adverse from brand trust, we discover the crucial role of initial trust in a FinTech service towards adoption. Adverse to our results of transferability, we discover that cognitive trust appears to be the primary dimensions towards adoption, while affective trust are secondary dimensions. Meanwhile, we discover that all the trusting dimensions are interrelated. Lastly the analysis reveals the crucial barrier of perceived Privacy risk towards adoption.

**Keywords**: FinTech, Adoption, Trust, Trustworthiness, Perceived risk, Brand extension, Transfer of trust

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Being attentive to consumer behavior, digital transformations, opportunities, and implications, together with two years of experience as a financial advisory in Handelsbanken, I was not hesitating to pursue this thesis study in relation to my field of interest and experience. Writing my master thesis alone in my  $2^{nd}$  semester of my master's degree made me apprehensive to my own capabilities and resources. I would like to express my dearest gratitude to my supervisor Helge Thorbjørnsen, who believed in my capacity and skills from the first moment.

Being a devoted team worker, it has been challenging to trust my own judgement and proficiency. However, considering my preference of teamwork, this master thesis has been the ultimate opportunity to develop and prove my independence and capabilities to produce work of high-quality on my own. I believe this will be advantageous for my future as a team member, independent worker, or leader.

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## 1. Introduction

### 1.1 Background

Bill Gates stated that "Banking is necessary, but banks are not" (Bill Gates, 1994, as cited in Jung et al., 2018). At the time, few people understood or believed in his saying. Living in the 2020s' we are at the beginning of the 4th Industrial Revolution, characterized by emerging technology and digitization as one of the main drivers (Schwab, 2017). Today, technology is incorporated in our everyday life and is recognized as an engine of economic growth. Emerging technology gives birth to unnoticed and imaginary capabilities in various leading industries (Gomber et al., 2018). The financial industry will not be spared from these disruptive changes. The term "FinTech" is an umbrella term for inventive financial services, enabled by technology. It englobes innovations related to the improvement of processes and delivery in the financial sector (Mention, 2019). Alt et al., (2018) defined "FinTech" as a combination of the specific domain "Finance" and technology. In 2016, PWC (Price Waterhouse Coopers) identified FinTech as one of the top ten competitive technology driven influencers for 2020. Globally the number of Fintech startups went from being 12 211 in 2019, 21 375 in 2020, and 26 045 by February 2021. By this we qualify the world to be victim of FinTech fever.

In the wake of tremendous technological disruptions, together with changed regulations and market interruptions, one can question whether there are any limits to what type of brand or actor that the industry has space for.

The customer adoption of FinTech services leads us to the core of this study. Factors such as privacy, misinformation and disruptive technology are contributing to shaping the context of the customers' behavior and desires. These components embody the greatest hopes, in parallel with feeding our deepest fears. According to Rachel Botsman (2017), we're in the dawning of the third and biggest trust revolution of humanity. Gillath et al., (2021) mentions trust as one of the primary obstacles standing away from the adoption of AI (Artificial Intelligence). Li et al., (2008), acknowledges this factor as an essential predictor of technology usage in general. Many authors, talks about the importance to overcome the perception of risk and uncertainty in order to create trust (E.g., McKnight et al., 2002;

Pavlou & Gefen, 2004). The World Economic Forum has also been stating the undermining of trust in a world where the technological pace of development has never been faster.

In a context, where various enterprises, in all type of sectors and sizes are extending their product offering into the FinTech arena, one can wonder, whether some enterprises or brands will have advantages towards the customer adoption, despite having competitors offering the exact same service. It is also possible to imagine that the service has potentially been developed from the same third-party service developers. If two or more brands are offering identical FinTech services, which brand will manage to overcome the perceived risk of complex technology and gain the trust of the customers? And if the brand is to gain the trust of the customer, to what extent will this be decisive for the Attitude and the Intentional behavior of the potential client. How important are trusting beliefs? How is it achieved? And can we expect customers willingness to trust a brand, to transfer over to a new FinTech service? If this is the case, what are the antecedents facilitating the transfer of trust?

#### These questions lead us to the research questions of this study:

<u>**RO:**</u> What is the role of brand and brand trust in the Intention to adopt a new FinTech service?

To what extent are the dimensions of trust transferable from a brand to a service?

### 1.2 Purpose and motivation

There has been identified a gap in the trust literature in relation to new technologies and initial trust formation (Mazey, 2018). Despite the tremendous opportunities that FinTech bring, research has been mainly focused on legal and technical aspects, and not on the customer focus (Ji, 2017), Hiscock (2001) also defines trust, as the main ingredient to achieve a great connection between the consumer and the brand. At the start of the third biggest trust revolution (Botsman, 2017), the purpose of this paper is to identify what trust and trustworthiness is, it's dimensions and antecedents, and measuring its role in a situation of potential adoption. We will investigate the role of trust in an established brand, and its capabilities to transfer over to a new FinTech service. The objective of the study is to provide insight for managers and CEO's eager to take part of the FinTech fever. The study will reveal what dimensions of brand trust that can be leveraged or must be acquired for a potential service extension, what dimensions of risk that need to be mitigated, and what other antecedents that are crucial to take into consideration when considering entering the Financial Technological market.

### 1.3 Structure of the thesis

The study is divided into 11 different chapters, including the introduction chapter, references and appendix. Chapter 2 plunges into an extensive literature review, that examines the trust phenomenon from the perspective of Interpersonal trust, brand trust and trust in technology itself. The review will further revise the operation of a brand extension and the transfer of trust from a brand to a new service. Further important dimensions of perceived risk will be analyzed considering its close interconnection with trust. We will finish the review by explaining the role of Intention and Attitude related to the adoption of a new FinTech service.

Chapter 3 accounts for the elaboration of hypotheses, based on chapter 2, with the aim of developing testable assumptions that can answer our research question. Chapter 4 concerns our qualitative pre-study, with the aim of gaining knowledge into the Norwegian FinTech market in order to design an optimal mock-up for our experiment. Our research question concerning the transferability of trust from a brand to a FinTech service, make it necessary to conduct several pre-studies. Firstly, we have to analyze initial brand trust through a

quantitative study. This would serve as a foundation for choosing what brands to use in the main experiment, but also to compare the level of brand trust, with the level of trust in the FinTech service. This part is alluded in chapter 5. The 6<sup>th</sup> chapter concerns the second prestudy. This is a qualitative exploratory study, with the aim of mapping today's FinTech market in Norway, by getting suggestions for potential FinTech services to be used in the main experiment. Chapter 7 is dedicated to the data analysis of the experiment.

We will finish the study by the discussion of our findings in chapter 8, before we conclude on our research question in chapter 9. Chapter 10 and 11, serves respectively as a reference and appendix list.

### 2. Theory

### 2.1 Trust

#### 2.1.1 Interpersonal trust

It is not yet fully resolved why customers adopt FinTech services (Boratynska, 2019). Nevertheless, trust has been found to have a decisive role on the customer experience towards FinTech services (Barbu et al., 2021). It is considered a crucial element in many economic activities (Fukuyama 1995; Luhmann 2018) and especially in commercial transactions conducted through the internet (Reichheld & Schefter, 2000). This is because web interfaces can make it challenging for consumers to judge whether the actor is trustworthy or not, in comparison to traditional face-to-face interactions (Reichheld & Schefter, 2000). Due to the characteristics of open banking and new technology enabled in financial services, it is critical to understand what Trust really is, how it is defined, and what it consists of.

Trust can be defined into several different categories. When studying trust in consumerbrand relationships, researchers often look at interpersonal trust (McKnight et al., 2011; Ramaseshan & Stein, 2014). Interpersonal trust conveys a relationship between two humans: a consumer, and a vendor. Several studies use the human relationship metaphor when studying trust between a brand and a consumer (Ramaseshan & Stein, 2014).

According to Chen and Dhillion (2003), there is no universally accepted definition of trust. However, several authors that have been trying to define it. It has been said that Trust is developed under some specific conditions: risk and interdependence (Chen & Dhillion, 2003) and there seems to be an agreement among academics that the "willingness to take risks" is one of the few common characteristics (Johnson-George & Swap, 1982). The combination of Luhmann and Rousseau's and colleagues' perspective of Trust, also forms a robust definition "Trust deals with the belief that the trusted party will fulfill its commitments" (Luhmann, 1979) "...despite the trusting party's dependence and vulnerability" (Rousseau et al, 1998). This thesis will be based on Mayer, Davis and Schoorman's definition of trust (1995).

"The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the Ability to monitor or control the other party" -Mayer et al., (1995)

The definition indicates that one person needs to be exposed to the possibility of being attacked or harmed, either physically or emotionally (Oxford English Dictionary [OED], 2021), and implies that the person being willing to be vulnerable must be in a situation of risk, endangered or unsafe. This definition conveys two distinctive components of the trust construct: a cognitive aspect, and a behavioral aspect. The cognitive aspect mirrors the trusting beliefs of the construct, and the behavioral aspect reflects trusting Intentions towards the trustee (E.g., McKnight, Cummings, & Chervany, 1998; Yousafzai, Pallister, & Foxall, 2005). Both trusting beliefs and Intentional behavioral must be presented for trust to exist (Schlosser, White, & Lloyd, 2006). Trusting beliefs convey the traits that one party possesses. These are the traits that makes the consumer willing to trust the vendor. If the vendor makes itself trustworthy, then there is a big chance that the consumer will have trust towards the other party. Most studies define trust as trusting beliefs in the trustees (Benbasat & Komiak, 2004).

Some academics suggests that trusting beliefs can be measured by one single dimension, such as "Reliability" (E.g., Selnes, 1998). Without regards to this, most of the literature define trusting beliefs as a multi-dimensional concept (Butler, 1991; Chen & Dhillion, 2003), yet there are many different opinions as to what dimensions the are the most important for the construct to exists (Dietz & Hartog, 2006). Butler and Cantrell (1984) suggests the following dimensions: Integrity, consistency, loyalty, and openness. Later, Butler (1991) suggests: Competence, Integrity, consistency, discreteness, fairness, promise, fulfillment, loyalty, availability, openness, receptibility and overall trustworthiness. It has also been argued, that in the field of electronic banking, the most essential dimensions are availability, compatibility, and performance. (Sarin, Sego & Chanvarasuth, 2003). Regardless of all the different characteristics that have been suggested, there seems to be three characteristics that appear often to explain the essentials of Trust: Ability, Benevolence and Integrity (Mayer et al,. 1995). Authors have later been making vigorous arguments as to which predictability or reliability should be included in the model. However, in this paper we have chosen to focus on Mayer et al,.' Proposed Model of Trust.

#### Mayer et al., (1995) Proposed Model of Trust

The Model elaborated by Mayer and colleagues consists of two different actors: The trusting actor (The trustor), and the actor that needs to be trusted (The trustee) (Driscoll, 1978). When the model was developed, the authors thought of the main reasons as to which a Trustor would trust a Trustee: Through Benevolence, Ability, and Integrity. Each dimension may vary independently due to their nature as being interrelated, but separable. Trust can also change over time, it can be deteriorated, redeveloped, or improved (Chen & Dhillion, 2003).

#### Ability

Ability signifies the quality or state of being able to effectuate (Merriam-Webster, 2021). Several authors have been using the word "Competence" instead of "Ability" (e.g., Butler, 1991; Butler & Cantrell, 1984). In this situation where we try to examine the importance of different trust dimensions among FinTech companies it is suitable to mention Chen and Dhillon's (2003) definition of Ability: "A company's Ability to fulfill its promises communicated to consumers". This requirement is domain specific (Zand, 1972) meaning that the concerned FinTech company is not required to have a particular competence in something outside of their value proposition. In the explanation of the model itself, Mayer et al, (1995) designates the term to describe "a group of skills, competencies and characteristics that enable a party to have an influence within some specific domain". This could imply that in order to gain Trust from the perspective of "Ability", it is crucial that the technological FinTech service in question carry a sufficient number of resources to be able to deliver financial services of high quality and in a good way in line with their promised offer. Being able to adapt to the customer's need and desires would therefore be a contributive factor to gain trust from the Trust-dimension in question. Flavian and Guinaliu (2006b) insisted that competence was particularly central for e-vendors, as consumers often have lack of brand knowledge concerning internet vendors.

#### Benevolence

Benevolence has been described in various ways in the literature. Some suggests that it reflects a personal degree of kindness towards the other party, and a genuine concern for their welfare (Dietz & Hartog, 2006). Others have a more organizational aspect of the concept, saying that Benevolence reflects the probability that a company hold consumers' interest ahead of its own (Chen & Dhillion, 2003). In the Proposed Model of Trust, Mayer et al., (1995) describes the term as a perception of a positive orientation of the Trustee towards

the Trustor. It can also be argued that being benevolent implies that the actor desires genuine satisfaction for the customer, by solving the client's needs, protecting sensitive personal information. It would also signify a genuine interest in the client or users' short term and long term. The secondary effects of the service should also be in the interest of the service provider. It is also important that all kinds of prejudice that one may have been non-existent towards the client. These arguments are inspired by Aldas-Manzano et al., (2011) questionnaire from the study on internet banking loyalty. In the perspective of this study, this would require the FinTech provider to put the interest and needs of the clients or users before their own. This might explain the reason why several FinTech companies have moved into charitable giving. The FinTech company; Revolut enables users to round up their card payments and donate it to charity. They can also set up recurring donations in the app. In 2017 the online Payment firm Paypal reported having raised \$100 million for charity. Every year the Norwegian Business School, BI publishes a customer satisfaction list for varied sectors. The internet bank; Sbanken has been at the top of the list for almost 20 years. Their strategy has been to offer transparency, competitive interests' rates, low costs, and smart solutions for their customers (Sbanken, 2020). The second most satisfied customers are from Handelsbanken. Their business model is completely opposite from Sbanken. Their main goal is to build customer relations by being physically present in the local environment and to decentralise important decisions (Handelsbanken, 2021). Both banks can be considered benevolent, as they seem to genuinely care about their customers, however their implementation of Benevolence is done differently. We can wonder whether the Benevolence of a local relationship bank or a national internet bank is more transferable than another.

#### Integrity

Integrity is an important trust factor (Lieberman, 1981). The trusting actor (the trustor) needs to believe that the FinTech provider (The trustee) support a set of principles that the trustor finds acceptable (Mayer et al., 1995). This implies that the FinTech provider fulfils the commitments it assumes and offer sincere and honest information characterized by frankness and clarity. It would also require the service provider to act in line with rules and regulations related to the sector (Doney & Cannon, 1997; Flavian & Guinaliu, 2006b). Compared to Benevolence, which concerns the relationship between the trustor and the trustee, Integrity is more about the character of the trustee itself.

McKnight and Chervany (2001) discusses the relationship between Integrity and Benevolence in situations where the consumer (the trustor) has little or no experience with the object in question. If this is the case users may have a hard time distinguishing Benevolence from Integrity. "Some or all of these trusting beliefs will probably merge together into one construct when the trustor knows little about the trustee, but as parties get to know each other, the trustor will be able to differentiate among the trusting beliefs more discretely. The two most likely to merge are Integrity and Benevolence, since they both imply that the trustee will do the trustor good instead of harm" (McKnight & Chervany, 2001, p.50). This can be linked up to previous research (E.g., Mollering, 2002; McAllister, 1995) that has chosen to divide the trust dimensions into two categories; cognition-based trust (Ability) and affect-based trust (Benevolence and Integrity).

# Linking Ability, Benevolence, and Integrity to cognitive- and affective-based trust

McAllister (1995) along with Johnson and Grayson (2005) divides interpersonal trust into two parts: cognitive-based trust and affective-based trust, supported by Punyatoya (2019), saying that "Trust is a mix of feeling and rational thinking". Other researchers such as Erdem and Ozen (2003) and Schaubroeck et al. (2011) supports the division of trust into cognitive and affective trust dimensions. A recent study about self-service technology in banking considered cognitive dimensions of trust as competence, regrouped the Ability dimensions of trust into cognitive-based trust, and Integrity and Benevolence into affectivebased trust. By this, Ability refers to the rational aspect of trust, and Integrity and Benevolence refers to the subjective aspect based on the strengths of the relationship between the trustor and the trustee (Dimitriadis & Kyrezis, 2010). Morrow et al., (2004) defines cognitive trust as "the good reasons" to trust the trustee, while the affective trust is related to "the emotional bonds" that exist between the trustee and the trustor. Regrouping Integrity and Benevolence into the same category is in line with McKnight and Chervany (2001), arguing that when the potential customer has little experience with the object of trust, Integrity and Benevolence might not be able to distinguish Integrity with Benevolence.

In this study, the aim is to figure out the role of trust in the adoption of a new FinTech service. It is therefore relevant to study what dimension of trust which will be the most relevant in this context. Morrow et al., (2004) finds out that cognitive trust has a positive effect on financial performance, while affective trust to have a positive effect on non-

financial indicators of performance. In a study about trust in online financial services, Pi, Liao and Chen (2012), discovered that both affective and cognitive trust are significant factors towards Intention to adopt online financial services, compared to affective trust. However, the study reveals that cognitive trust has by far a more extensive effect on affective trust. It also affirmed that cognitive trust has a significant effect on affective trust. This indicates that for a company to achieve a perceived level of affective trust, it will also need cognitive trust. Bilisbekov et al., (2021) studied the role of cognitive and affective based advertisement within the banking sector. The study indicated that cognitive trust had a significant effect towards commitment to adopt the banking service, whether as affective trust did not have a significant relationship towards Intention. Nevertheless, both cognitive and affective trust had a positive relationship towards Attitude. Some studies, however, report a weak significant effect between affective trust and Intention to use, (E.g., Casalo et al, 2007; Erkmen & Hancer, 2015). Xu, Centfetelli and Aquino (2016), supports the same argument in relation to a buyer-seller context. Their arguments assert that the act of purchasing entails a cost and the abandon of a resource. In such a context the potential client will pay more attention to the performance-related dimensions of the product rather than non-performance dimensions such as Benevolence and Integrity. It can be assumed that clients using financial self-service technologies are more outcome-oriented than affectiveoriented.

#### 2.1.2 Brand trust

Brand trust is shaped through the brand image and awareness of the company (Esch et al., 2006). Other studies have also discovered that brand image has a significant effect on brand trust (Alhaddad, 2015). Brand trust is important as consumers tend to make better use of trusted brands (Xie & Peng, 2011). Brand trust is defined as "the willingness of the average consumer to rely on the Ability of the brand to perform its stated function" (Morgan & Hunt, 1994, p. 23). This is in line with the general definition of trusting beliefs mentioned by Mayer et al., (1995). Brand trust is crucial, as it will affect a user's belief about the trustee's Ability, Benevolence, and Integrity (Powell, 1996). To get a good understanding of what brand trust is, we will first define the "brand" terminology. Further we will go deeper into Keller's' concept of brand customer-equity (1993) by discussing brand image and brand awareness.

#### Keller's' theory of Brand Knowledge

A Brand is defined through it's "name, term, sign, symbol or design, or a combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of competitors" (Kotler, 1991; p.442). Having a strong brand is important for the company to achieve a competitive advantage. The evaluation of a brand often starts by evaluating the customer-equity of a brand. From earlier studies Keller (1993) made a framework identifying two different antecedents of brand-knowledge: brand awareness and brand image. To get a greater understanding of brand-knowledge, we will go deeper into the notion of brand image, and brand awareness.

#### Brand image and brand awareness

Brand image has been recognized as an essential concept in marketing (E.g., Gardner & Levy, 1955), and in various studies brand knowledge has been closely related with brand image (E.g. Alba Hutchinson & Lynch 1991). Brand image is created through a variety of brand related associations, together with consumer beliefs (Keller, 1993) and has for a long time been used as a way of identifying a company (Sung & Kim, 2010), or distinguishing brands from other companies (Kotler, 1991). The related brand associations could be factors such as name, reputation, design, and symbol as mentioned by Kotler (1991). The reputation of the brand is formed thanks to second-hand knowledge, and is particularly important when there is no, or little knowledge about the service provided. Companies with high reputation and credibility will more easily be able to gain trust in a new service (Siau & Wang, 2018). This matches Doney and Cannon (1997)'s statements, saying that the reputation of a company shows how honest a company is, and how much they care for their customers. Siau and Wang made a research model, where they claimed that trust in the Technology and in the brand provider itself, would lead to trust in artificial technology services. We can therefore assume that if a company is honest and manage to fulfill their value proposition, the chances are high that the customers will have a positive Attitude towards the brand. It also tells us that the brand can have an important role in terms of creating trust in a new FinTech service.

Brand awareness is about the customers facility to recognize or remember a specific brand and relate it to a certain category of products (Romaniuk, Wight & Faulkner, 2017; Keller 1993). It says something about the strength of the brand, and it is proven that consumers discriminate the brand based on what the person has seen or heard previously. Brand awareness is important, as studies have shown that consumers prefer to buy well established and familiar brands (Pae et al., 2002). If start-ups or other less familiar brands wants to compete against powerful brands, they might struggle due to their lack of brand awareness.

#### 2.1.3 Trust in new technology, the role of initial trust

As mentioned by Hoyer et al., (2020), customers will undergo radically new experiences related to the development of emerging technology. Several of the new technologies are often powered by Artificial Intelligence (AI). IBM (2021a) defines this concept as a technology that "leverages computers and machines to mimic the problem-solving and decision-making capabilities of the human mind".

Robots can effectuate complex tasks, in an often-better manner than men. Nevertheless, humans are having trouble trusting them (Longoni & Morewedge, 2019). According to a study effected by Gillath et al,. (2021), lack of trust is one of the main barriers towards the possibility of taking full advantage of complex AI technology. This is in line with several studies that describes trust as the primary predictor of technology usage (Li et al., 2008). Several studies have been done where the trustee has been a technological device (E.g., Corritoire et al., 2003; Wang & Benbasat, 2005). According to McKnight (2005), classical trust-theories and literature are still valid in in these cases. This is because the aspect of trust still reflects the willingness of the trustor to be vulnerable towards the trustee (McKnight, 2005).

However, studies have been showing that there are some differences towards how trust is created when the trustee offers a new technological device. Older trust theories suggests that trust is initially low and reflects the result of an accumulated function that develops over time and through experience with the trustee (E.g., Holmes, 1991; Lewicki & Bunker, 1995). In 1998, McKnight criticized these theories and called it a paradox, as he found initial trust to be surprisingly high. Later the concept of initial trust has been frequently used, and especially in the cases of novel technology (McKnight et al., 2002; Wang & Benbasat, 2005). Through research it has been discovered that the determinants of continued adoption, compared to initial adoption in technology adoption are quite different (E.g., Chin & Marcolin, 2001; Karahanna et al., 1999). This study will go deeper into initial trust, as we can assume that potential users of the new technology do not have any relationship with the new technology provided.

#### Initial trust in technology

Initial trust does not depend on firsthand knowledge from the other party (McKnight et al., 1998). Initial trust is relevant, as the trustor has not had the possibility to experience the Fintech service proposed in this survey. Due to this, the trustor will need to form his trust based on second-hand information. The antecedents of initial trust are varied (Lewicki et al., 2006). According to McKnight (1998), the antecedents of initial trust are based on the user's disposition to trust another party together with institutional cues. Due to the limitations of this study, will only focus on Dispositional Trust and cognitive categorization. The last antecedent, Institution-based trust will not be further analyzed as we evaluate it as being less relevant for this study. For this reason, we will go deeper into the meaning of dispositional trust and cognitive processes linked to initial trust. Parasuraman and Colby's (2015) Technology Readiness Index (TRI) is relevant to include, as technology related motivators and inhibitors are crucial towards the adoption of technological services.

#### **Dispositional trust**

Several studies indicates that people in general have a varied tendency to be willing to trust others (E.g., Erikson, 1968; Rotter, 1980). In Mayer's (1995) model of trust, he suggests that propensity to trust is a stable factor that will affect the probability of the trustor to trust the trustee (Mayer et al., 1995). Propensity to trust is seen "as a trait that leads to generalized expectations about the trustworthiness of other" (Mayer et al., 1995). The level of propensity varies depending on factors such as personality, culture, and experiences. From our understanding, propensity to trust is closely related to dispositional trust and will be evaluated as the same in this study. Based on these definitions it can be argued that a trustor with a high level of dispositional trust has a more pronounced trusting base in new situations, where no or little information is available. In terms of initial trust, dispositional trust is even more dominant compared to a situation of continued use. (Mullins & Cummings, 1999). This means that people with high dispositional trust are more likely to form positive beliefs towards a system in general (Li et al., 2008).

#### Trust through cognitive categorization

When the trustor lacks information and experience with the trustee, trust will be founded through cognitive familiarity, impressions, cognitive cues, and processes (Li et al., 2008). Gefen (2000) mentions that cognitive familiarity is what mainly defines initial trust. This is in line with McKnight's (1998) framework about initial trust. One of the ways to categorize an unfamiliar trustee, is through reputation, as this can affect the trustors' belief about the

trustee's Ability, Benevolence, and Integrity (Powell, 1996). Reputation is also mentioned by Siau and Wang (2018), saying that it is easier to gain technology trust from organizations with a high reputation, compared to organizations without such a reputation. It was also mentioned as one of the significant factors in Li et al,. (2008) research about technology trust. This is relevant when it comes to the evaluation of brands. If a new instance, belonging to a certain brand gets launched, the former evaluation about the brand can be transferred to the new instance through categorization (Lin et al., 2011).

#### The Technology Readiness Index

When it comes to trust in technology, it is not possible to only talk about dispositional trust as a general trait. Even if some people have a relatively high dispositional trust, they might still feel uncomfortable with using technology. This might have an important effect on the trustors Ability to trust a FinTech service. Parasuraman (2000) states that there is an obvious frustration among several people when dealing with technology-based systems. It cannot be assumed that most people are comfortable with using sophisticated technology. Some recent adopters might not be as "technology savvy" (Parasuraman, 2000). To explain technology usage, they developed the "Technology Readiness Index" (TRI). Technology readiness can be defined as "people's propensity to embrace and use new technologies for accomplishing goals in home life and work" (Parasuraman, 2000). This Index was modified in 2015 to keep relevance considering that some technologies have become "obsolete" its or "commonplace". The index consists of four dimensions that captures individual differences among people. The dimensions are positive and negative related beliefs that has been proven to explain technology usage: (1) Innovativeness; refers to people identifying themselves as technology leaders, and the tendency of being a technology pioneer (2) optimism; a belief that technology helps in achieving more control, flexibility, and efficiency in general, (3) Discomfort; the feeling of lack of control when using technology, (4) Insecurity; being sceptical about the technology its Ability to work properly (Godboe & Johansen, 2012; Parasuraman, & Colby, 2001). It is often used in decision-oriented research, like for examples internet banking (Blut & Wang, 2020). In 2015, Parasuraman and Colby reported that 127 researchers from over 30 countries had been using this index. In this research we assume that the technology readiness index is relevant, as we are going to test what brand the respondents will trust given the same financial mobile service. If someone is negative towards adopting a technological service, it could be due their low technology readiness index, rather than other factors related to the brand or the service

#### 2.1.4 Trust and familiarity to the brand and the technology

"Familiarity is a precondition for trust" according to Luhmann (1979). This notion defines the understanding of current actions of people and objects, whether as trust is defined as the future belief of a certain action or object (Gefen, 2000; Mazey, 2018). The notion of familiarity can be applied to the brand itself, or the technology that the fintech service consists of. To illustrate, brand familiarity can involve awareness about the brand image or their products and services. Familiarity towards the technology involves the understanding and appreciation of how to use most of the features and functions based on prior experience with similar technology (Idemudia & Raisinghani, 2014).

Familiarity is defined as the comprehension of a certain action of people or objects (Gefen, 2000). Familiarity can be shaped through either first-hand knowledge, or second-hand knowledge. The concept is therefore relevant antecedents for both initial and continued trust. McKnight et al,. (1998) does not name familiarity explicitly in his framework about initial trust. On the other hand, it can be asserted that memory, mental and cognitive processes require a degree of familiarity with the trustee based on second-hand knowledge (Gefen, 2000). If the trustor has no familiarity with the vendor, it cannot be aware it's common goals and values. The reputation of a vendor is also dependent of a certain degree of familiarity to the brand. Arguably, since there is no knowledge of the FinTech service itself, the familiarity to the brand, or in the technology becomes even more important. Familiarity was also discussed as an important factor in a recent PhD study about initial trust in emerging technologies (Mazey, 2018). The researcher did also mention Vendor-based trust as an important antecedent for initial trust in line with Li et al., (2008)'s research. It can be argued that trust in the vendor, is partially dependent on the degree of familiarity regarding the vendor. Komiak and Benbasat (2006) found significant results when using familiarity as a construct to investigate the adoption, usage, and acceptance of recommendation agents. Belanche et al., (2019) recognized the importance of familiarity with AI and robot-based systems as a moderating role the adoption of robot-advisors in the FinTech industry. It has also been said that that familiarity has a greater impact on trust if the decision is more important (Luhmann, 2018).

Familiarity has also proven to be an important factor in terms of perceived risk. In familiar situations the trustor might feel less uncertainty, and by consequence perceives the risk as lower. In Gefen's study about e-commerce, he found the relationship between familiarity and

trust to be significant. The influence was made both directly and indirectly. It has also been studied as a control variable between trust and Intention to use (Straub, Boudreau, & Gefen, 2004). The literature about familiarity supports knowledge-based trust theories stating that knowledge will negatively affect the perceived risk and uncertainty, which will have a positive influence regarding trust (Gefen, 2000; Lewicki et al., 2006; McKnight et al., 2011).

### 2.2 Brand extension and the transfer of trust

#### 2.2.1 Classical Brand extensions theories

Brand extensions are popular drivers of growth according to Springen and Miller (1990). It can be defined as "The stretch of the established franchise to a different product class" (Aaker & Keller 1990). According to Berry (2000), a brand's role is essential when we talk about service companies, as brands will have the role as a trust reinforcer of the invisible purchase. Overall, we find extensive research within the field of brand extension. Nevertheless, very little has been alluded to brand trust within this field, except from some indirect linkages (E.g., Keller & Aaker, 1990, McWilliam 1993). In McWilliams' (1993) research suggests that consumers are willing to try out brand extensions if the brand is greatly trusted and regarded.

#### Brand knowledge and Brand affect

Brand-knowledge is a mental representation of brand image and brand awareness; two concepts that have been elicited earlier (Keller, 1993). They both play a moderating role in a brands' product extension. If the potential customer has no knowledge or relationship about the brand, the customer will not be able to find brand specific associations in the extended product (Broniarczyk & Alba, 1994). If the customers have strong beliefs about the brand, then this can also compensate for the knowledge of the product itself (Hem et al., 2000). However, if the brand-knowledge is low, or inexistent, then the brand extension will be evaluated based on the experience with services in the same category (Sheinin, 1998). In this study, this will be in the case of a FinTech service.

Milberg and Lawson (1991) talk about the importance of associations in the assessment of a brand extension. This is linked to the concept of "brand-affect.". This is defined as the

brands' potential to bring out positive and emotional returns as a result of having used the service or product (Morgan & Hunt, 1994). The brand associations are transferred through brand-affect. If the transfer is successful, it is said that the same brand affect will be valid for the brand extension.

#### The notion of Perceived "fit"

Brand-knowledge and brand affect is related to the customers perceived Attitude to the brand, through brand awareness, brand image and brand associations. Nevertheless, knowledge and affective Attitudes towards the brand is not sufficient according to the literature. The concept of high "fit" between the parent product and the new extension plays a crucial role (Aaker & Keller, 1990). This is because a positive affect associated with the brand will only transfer, or not transfer to new extension depending on the "fit". This indicates that if the new product extension is similar to the initial products of the brand, then the consumer doesn't have to process the new product in the same way. In this case, there is a high chance that the brand affect will be transferred to the new brand extension interesting and attempting, which can be in favor for the extension (Mandler, 1982). If there is a severe mismatch, the customer will need to go through a cognitive process that might lead to frustration and have negative consequences on the brand (Mandler, 1982).

#### 2.2.2 Going beyond traditional extension models

Aaker and Keller (1990) have acknowledged the importance of perceived brand competence in the situation of a brand extension. If a brand chose to extend beyond their perceived competence, this could harm their brand severely. Nevertheless, it is important to point that even brands with high perceived competence can still fail (Kalvin, 2008). As mentioned in the paragraphs earlier, research emphasized the importance of perceived fit and similarity of the existing product and the brand extension. If consumers manage to recognise this, the transfer will be done more smoothly. However, one can ask themselves why brands such as Harley Davidson managed with a great success to launch footwear, from originally selling motorcycles. Or how Hard Rock café has had a huge success selling t-shirts. Five years after Uber launched, they extended from offering taxi services, to food delivery. In 2017 the car brand Ferrari, famous for high-speed luxury cars, opened the fastest roller coaster in the world. Google launched their search engine in 1998. Six years later they launched web-based e-mail. Today Google are one of the world most powerful companies offering products such dynamic map reading, news, calendar, storage, document editing, online conference calls, music streaming, computers and desktops, payment services etc. Apple is also one of the worlds' most powerful brands. The company launched their first computers in the 70s. Later they launched an online book reading service, music streaming through iPod, Apple TV, the first smartphone ever (iPhone), The first touchpads, airpods, smartwatches, credit card (Apple Card, 2019), Apple pay with their digital wallet and mobile payment system etc. The same arguments can be applied for the Chinese company Xiaomi that sells smartphones, watches, TV's, electrical scooters, health care, shoes, clothing, luggage, vacuum cleaners, and air purifiers (Xiaomi, 2021). To a certain extent, it appears that Google, Apple, and Xiaomi have no limits to its brand extension.

We can therefore wonder what factors that has made companies like Harley Davidson, Hard Rock café, Google, Apple and Xiaomi able to extend their value proposition to such an extent. According to a study done by Cooney (Retrieved from Wang & Liu, 2020), this can be explained by the consistencies of the brand and the brand extension.

In 2010 Schneider and Stern decided to study competence development through two different dimensions: *Operational* and *Conceptual Competence* (Schneider & Stern, 2010). Operational competence highlights skills that are used to solve familiar tasks and are related to functionals or application skills among employees. The conceptual dimension is more abstract and non-figurative. This dimension is about the capability to build connection between different concepts, to solve new problems. This dimension is less bound to a specific product characteristics or attributes. Based on these arguments Wang and Liu (2020), they predicted that brands with high perceived Operational Competence would have favorable evaluations in terms of near brand extensions, whether as brands with Conceptual Competence will enable brands to effectuate further brand extensions (Kapferer, 1992). Through their experiment, their hypothesis was supported.

### 2.3 Perceived risk

#### 2.3.1 The linkage between the notion of Trust and Perceived risk

Previous studies have confirmed that there is a close relationship between trust and risk. Botsman (2017) acknowledge them as brother and sisters. Some scholars suggests that risk is a necessary element for someone to need trust (Deutch, 1958). If there is no perception of risk, then actions could have been taken completely without the need of trust (Yousafzai et al., 2003). Other authors have also been acknowledging the importance of risk, to understand trust (Coleman, 1994; Giffin, 1967). In contempt that there is a link between the notions, there is still no consensus on its relationship (Aldas-Manzano et al., 2009), other except that trust only exists in uncertain and risky environments (E.g Grabner-Kräuter & Kaluscha, 2003). To get a greater understanding of the relationship between Risk and Trust it will therefore be necessary to elaborate further into the notion of Perceived Risk.

#### 2.3.2 What is perceived risk?

Perceived Risk can be defined in several ways. Bauer (1967) defined it as "The combination of uncertainty plus seriousness of outcome involved". This is in line with the suggestion that Perceived risk entails two aspects, (1) The possible outcome of a loss, and (2) the likelihood of the unfavourable outcome. Often there is no defined answer of how bad the possible outcome will be interpreted. The chance of the negative outcome cannot always be calculated either. Therefore, perceived risk can be characterized as a subjective expectation of loss (Stone & Gronhaug, 1993).

The decision to use an online service transaction includes a personal assessment of the risks involved (Featherman et al., 2010). Former studies indicates that more consumers tend to affiliate e-services with higher risks (Van Noort et al., 2008), and perceived risk is a key factor in consumers Attitude towards the use of e-services (E.g., Pavlou 2003, Thakur & Srivastava, 2015). Nevertheless, it is important to mention that some studies have also failed to show a link between perceived risk and acceptance of e-services (E.g., Chaudhuri et al., 2010). In a study effectuated by Skard, Nysveen and Thorbjørnsen (2016), it was stated that more studies are needed to understand the role of risk in consumer acceptance of e-services. Mazey (2018) argues that the lack of first-hand knowledge in emerging technologies will leave perceived risk and uncertainty at a high level (Mazey, 2018).

In Skard et al., (2016)'s study, they identified five dimensions of perceives risk, that they found relevant for the e-commerce setting: Performance, Time, Psychological, Privacy and Security. These were inspired by Featherman and Pavlou's (2003) seven facets of perceived risk including the financial, social risk and overall risk.

In this study we have decided to focus on three dimensions: (1) Financial, (2) Privacy, (3) and Security perceived risk. This is similar to Slade, Dwivedi and Piercy (2015), that associated perceived FinTech risks into four dimensions: operational, financial, security and privacy. We find the financial dimension of perceived risk relevant, as the research aims to test a FinTech service where great parts of the user's personal financial situation is at stake. Perceived privacy risk is included as this is considered being a key challenge in the modern digital era, as individuals must choose between being vulnerable towards the financial service, or non-adoption of certain emerging technologies (Mills, 2015). We are also including security, since perceived privacy and security risk has been proven to be among the biggest issues for financial institutions (Farzianpour et al., 2014).

#### Perceived financial risk

Perceived financial risk was not discussed in Skard et al., (2016)'s study, as they did not find this dimension relevant to e-commerce. Nevertheless, we can argue that the financial aspect of perceived risk, is highly relevant for this study about financial service providers. This is about the recurring potential for financial loss due to fraud (Featherman & Pavlou, 2003). However, based on Featherman and Pavlou's we can argue that the financial facet of perceived risk, involves the chances of losing money in general when using the FinTech service in question. This can include the perceived financial loss by e.g., signing up to the service or effectuate online transactions.

#### Perceived privacy risk

When it comes to the privacy perspective of perceived risk, this is related to unwanted disclosure of private information. This is either related to usage of the information without permission, or knowledge (Featherman & Pavlou, 2003: Thakur & Srivastava, 2015). The worst case of privacy loss is when a criminal manages steal another's identity in order to effectuate fraudulent transactions (Featherman & Pavlou, 2003). Since financial online services require transmission and storage of personal information, this may increase the consumers concerns regarding threats to privacy of their personal information. This risk might be of such an importance, that it can offset all of the other convenient factors such as

time and financial savings (Featherman et al,. 2010). Other studies also confirm that the perceived risk of privacy is a significant factor towards the Attitude of the service (Skard et al,. 2016). The last couple of years several studies have been done showing that the protection of personal data is important. Nevertheless, consumers rarely try to protect the data actively, referred to as the "privacy paradox" (Gerber et al., 2018). In 2019 the financial corporation "Capital One", suffered a severe data breach, where roughly 80 000 bank account numbers, names, credit scores and self-reported income got leaked (Capitalone, 2019). Other financial companies such as Sberbank, Fiserv and JPMorgan have also been victims of privacy data leaks. This gives reason as to why perceived privacy risk has a negative effect of trusting beliefs towards a service, or a provider.

#### Perceived security risk

This is about the aspect that ensures "the Integrity, confidentiality, authentication and nonrecognition of transactions" (Flavián & Guinalíu, 2006). When it comes to online banking it has been proven that internet security and privacy are among the biggest challenges that financial institutions are facing (Aladwani, 2001; Miyazaki and Fernandez, 2001). Other studies have also found significant predictors related to security risk and Attitude towards the e-service (Skard et al, 2016). According to Jürjens (2017) security threats towards mobile applications have increased massively and is a huge challenge for users and innovators. A cyber-attack can cause a huge damage and could affect the trust of these services (Kranz et al., 2013).

## 2.4 Intention and Attitude

Fishbein and Ajzen developed the vastly used Theory of Reasoned Action in 1975. Their framework has been used in diverse studies related to trust. (E.g., Gefen, 2002; Mayer et al., 1995; McKnight et al., 2002). The framework mentions that Intention and behavior is influenced by Attitude towards the behavior and subjective norms. In our study we choose to focus on Attitude, and not subjective norms, as this is consistent with former research on information systems and several studies effectuated with the Technology Adoption model (TAM). Attitude is known as a determinant of behavioral Intention . It has been described as a trustor's positive or negative evaluation of trust-related behaviors. Some researchers have chosen to exclude Attitude from their research as the relationship between trusting beliefs and Intention to use are sufficiently close. (E.g., Mayer et al., 1995; McKnight et al., 1998).

### 2.5 Conclusion from the literature review

Having asserted the importance of trust in both commercial, financial, and technological settings, we have understood the vitality of discerning the role of trust. Trust can be defined differently as there is no universal definition. Nevertheless, Mayer et al., (1995)'s definition seems to be widely accepted. For a trustor to be willing to be vulnerable towards another party, it is crucial for the trustee to convey its Ability, Benevolence, and Integrity towards the trustor. We can ask ourselves whether a competent firm has a greater chance of succeeding a brand extension in the FinTech industry, or whether the role of genuinely caring about its customer, or sharing the same values are more determining for trust transfer.

Brand trust is shaped through various antecedents of brand equity. Keller (1993) emphasizes the role of brand knowledge through brand image and brand awareness, created through beliefs and associations with the brand. Initial trust is also applicable when researching the role of trust in a FinTech service, considering the lack of first-hand experience with the service. With the lack of user experience, the trustor will try to define the service's trustworthiness through cognitive processes, based on familiar and relevant incidents. Dispositional trust and the TRI-index are main drivers that can contribute to trusting beliefs in a new FinTech service. Lastly, we have been looking at the relationship between trust and familiarity. Globally, it seems like this factor is critical whether it concerns familiarity to the service itself, the technology, or the brand in question. Lastly familiarity is a risk reducer, that makes it easier to trust the trustee.

There are many factors that needs to be considered before engaging in a new FinTech service. Classical theories mention the importance of brand affect, perceived "fit" with the already existing offerings, and high perceived quality. Nevertheless, recent research suggest that the type of perceived competence is prominent. In cases where the perceived competence is seen as operational, a brand extension would only be favorable if the extension requires similar operational competences. If the competence is evaluated as conceptual, the brand is considered less bound to product characteristics.

Without risk, there is no need for trust. With a lower perceived risk, it is easier to believe that the trustee is trustworthy. All these factors grouped together will have a negative impact on Attitude and Intention to use.

# 3. Hypotheses and research model

# 3.1 Elaboration of hypotheses

**Research question:** 

What is the role of brand and brand trust in the Intention to adopt a new FinTech service?

To what extent are the dimensions of trust transferable from a brand to a service?

To answer the research question, we have elaborated some hypotheses based on the former literature review in part 2. The hypotheses are divided into five main parts. A summary of the hypotheses can be found in part 7.3.

- 1. Brand Trust can be transferred from a brand to a FinTech service
- 2. Brand Trust will have a positive direct impact on the adoption of a FinTech service
- 3. Trusting beliefs will have a positive mediating influence on the adoption of a new FinTech service, some dimensions will be more prominent than others
- 4. Perceived "fit", Perceived Conceptual Competence and Perceived Operational Competence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service. These variables also correlates with trusting beliefs
- 5. Perceived risk will have a negative mediating effect on the willingness to adopt a new FinTech service
- 6. Knowledge and Dispositional trust will have a positive moderating effect on overall trusting beliefs

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Table 1: Summary of the overall hypotheses

#### 1. Brand Trust can be transferred from a brand to Trust in a FinTech service

This literature review outline the crucial role of a brand, through brand related associations such as reputation, image and awareness (Kotler, 1991 & Keller, 1993). Siau and Wang (2018) argues that brands with a high reputation and credibility will have a bigger chance of gaining trust in a new service. Lin et al., (2011) mentions that the transfer of trust from a Brand to a service can happen through categorization. Zhang (2018) discovers a positive significant effect on Brand Trust towards Initial trust in online banking service. This can imply that the role of a brand through brand image and brand awareness might have a crucial role towards initial trust in a service. For this reason, this hypothesizes that Brand trust will have a positive effect on Overall Trust, Ability, Integrity and Benevolence in a FinTech service.

# H1.1: Brand Trust will have a positive mediating effect on a) Overall Trust b) Ability-, c) Integrity- and d) Benevolence in a FinTech service

An essential part of the research question is to find out whether Brand Trust is transferable from a Brand to a FinTech service. It appears that Ability is a domain specific trust dimension (Zand, 1972). This implies that the transfer of resources and competence might be challenging for brands with an initial operation that is far from the FinTech domain, nevertheless it might transfer with ease if the Brand's initial value offering is within the FinTech industry. None of the Brands selected from the main-study have their main operation within the FinTech industry. For this reason, we can hypothesize that the Ability dimension of trust will be transferable from a brand to a FinTech service, but only to a limited extent. From the literature review, we learned that the transfer of brand trust happens mainly through brand-affect (Milberg & Lawson, 1991). This seems logic in a situation where the brand extension differs from the parent product. Regardless of the gap between the parent brand and the brand extension, we can assume that the brand specific associations, such as image, beliefs and values stay the same. Since the affective dimensions of trust is less domain specific, but brand related, we assume that Integrity and Benevolence are transferable to a greater extent, then Ability.

# H1.2: The dimensions of trust in a brand a) Ability, b) Integrity and c) Benevolence are transferable to trust in a new FinTech service. Ability will be less transferable compared to Integrity and Benevolence

# 2. Brand Trust will have a positive direct impact on the adoption of a FinTech service

The literature disclose Brand Trust to play a critical role towards the willingness to try a new service or product (McWilliams, 1993), as well as the actual usage of the trusted brand (Xin & Peng, 2011). Pae et al., (2002) finds a positive significant effect of Brand familiarity towards Attitude. Other researchers such as Pi, Liao and Chen (2012) and Bilisbekov et al., (2021) discovers an important relationship between trust and the willingness to adopt. For this reason, we hypothesize that the trust in a Brand will have a positive direct influence on the Intention and Attitude to adopt.

# *H2.1:* Brand Trust will have a positive direct influence on the a) Intention and b) Attitude to adopt a new FinTech service

# 3. Trusting beliefs will have a positive mediating influence on the adoption of a new FinTech service, some dimensions will be more prominent than others

Trust has been proven to be a decisive element towards the willingness to adopt within the financial sector (E.g., Chen & Dhillon, 2003) and in e-commerce settings (McKnight & Chervany, 2001). As mentioned in the literature review, several researchers have designated trust as a positive mediator towards adoption (E.g Mayer et al.,1995).

Several authors define *Ability* as a positive mediator towards Intention and Attitude. Flavian and Guinaliu (2006b) mention this dimension as being notably important in e-commerce settings concerning the often lack of brand knowledge. Studies also still find significant effects between Benevolence and adoption of a new FinTech service. (E.g., Bilisbekov et al., 2021). In the literature review, we found Benevolence to be a subjective and more affective form of trust. It has therefore been proven to be more eminent in non-financial situations. However, studies still find significant effects between Benevolence and adoption of a new FinTech service. (E.g., Bilisbekov et al., 2021).In line with Benevolence, Integrity is also classified as an affective trust dimension and is therefore hypothesized to share many of the same characteristics as the Benevolence dimension. For this reason, we hypothesize that the dimensions of trusting beliefs: Ability, Benevolence and Integrity will have a positive mediating effect towards the Intention, and Attitude to adopt.

# **H3.1:** a) Overall trusting beliefs b) Ability, c) Integrity and d) Benevolence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service

Ability is characterized as a cognitive rational dimension of trust (McKnight & Chervany, 2001). Taken into account that our FinTech service aims to optimize the user's financial situation through the possible abandon of resources, we can argue that the final goal is outcome oriented. In line with Xu, Centfetelli and Aquino (2016), we therefore believe that *Ability* will be the most important trust dimension in the adoption of a new FinTech service.

# H3.2 a). Ability will be the most important trust-mediator towards Intention and Attitude

Pi et al., (2012) mention that cognitive trust has a significant effect on affective trust. This indicates that a FinTech service or Brand with a high level of Affective trust, is likely to have a high level of cognitive trust also. For this reason, we can assume that companies with a high perceived level of Benevolence will be highly correlated with a high perceived level of Ability.

H3.2 b). A brand with a high level of affective trust is correlated with a high level of cognitive trust

#### 4. Perceived "fit", Perceived Conceptual Competence and Perceived Operational Competence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service. These variables also correlates with trusting beliefs

In the literature review we mentioned Keller's (1993) theory concerning the importance of perceived "fit" between the parent products and the brand extension towards the acceptance and adoption of a product. Likewise, we study Schneider and Stern's (2010) theory about Operational- and Conceptual Competence. A recent study from Wang and Liu (2020) hypothesized that high perceived Operational Competence and Conceptual Competence would have a positive effect on a brand extension. Kapferer (1992) mentions that brands with high Conceptual Competence will succeed with a brand extension that is even further from their original value offering. In our case, we choose to hypothesize that Perceived "fit", Conceptual Competence and Operational Competence will have a positive mediating effect towards the adoption of a new FinTech service.

# H4.1 a) Perceived "fit", b) Perceived Conceptual Competence and c) Perceived Operational Competence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service

Previously, we learned from Aaker and Keller (1990) that perceived "fit", is highly related to affective positive beliefs associated with a brand. If the level of perceived "fit" is considered low, it will by challenging to obtain a higher level of trust, In particular affective beliefs. We can also hypothesize that Operational Competence is highly related with Ability, considering that they are both related to cognitive aspects of trust. Conceptual Competence is more abstract and less domain specific. For these reasons we can assume that Perceived "fit" and Conceptual Competence is highly related with the affective trust dimensions: Integrity and Benevolence. For this reason, it is relevant to study the relationship between Perceived "fit", Perceived Conceptual Competence and Operational Competence, together with trusting beliefs. We therefore hypothesize that there is a positive correlation between the mentioned variables.

**H4.2:** There is a positive correlation between a) Perceived "fit", b) Perceived Conceptual- and c) Operational Competence and the dimensions of trusting beliefs

# 5. Perceived risk will have a negative mediating effect on the willingness to adopt a new FinTech service

In our literature review we have mentioned the three dimensions, security, financial and perceived privacy risk as the most relevant risk dimensions for this study. We learn that Featherman and Pavlou (2003) perceives the financial risk to have a significant effect on financial services, due to the possible chance of loosing money. Featherman and Pavlou, and Skard et al., (2016) also mention perceived privacy risk is as having a significant effect towards the Attitude of a service. According to some studies (Eg., Aladwani, 2001; Miyazaki and Fernandez, 2001), security and privacy risk are one of the biggest challenges for financial institutions. It is challenging to assume what dimensions that will be the most prominent. Nevertheless, there is an agreement that all off the mentioned risk facets will have a negative effect towards the Attitude and Intention to adopt a new FinTech service. For this reason we hypothesize that a) Financial risk, b) Privacy risk and c) Security risk will have a negative mediating effect on trust, regarding the adoption of a new FinTech service.

# H5.1: Perceived risk will have a negative mediating effect on trust, regarding the adoption of a new FinTech service, regarding a) Financial risk, b) Privacy risk and c) Security risk

When a new product or service gets launched, it is impossible to be certain about its aspects, without having tried it. Several authors have investigated the negative correlation between perceived risk and trusting beliefs. Authors such as McKnight et al., (2002), Pavlou and Gefen (2004) mentions the concern about overcoming perception of risk and uncertainty, in order to obtain trust in an object. For this reason, we hypothesize that there will be a negative correlation between a high level of perceived risk and the level of trusting beliefs.

H5.2: There is a negative correlation between a high level of perceived risk and the level of trusting beliefs

# 6. Knowledge and Dispositional trust will have a positive moderating effect on overall trusting beliefs

From the literature, we have acknowledged the role of initial trust (McKnight et al., 1998), familiarity (Luhmann, 2018; Gefen, 2000), and brand knowledge (Keller, 1993) towards Attitude and Intention to adopt a new FinTech service. The common thread with these elements, is that they all require knowledge about the instance in question. This is in line with the concepts of familiarity, that states to be valid concerning familiarity to human actions, or any kind of object. Brand literature states that trust is created through brand knowledge (Brand image and brand awareness). By assembling these factors, we can argue that trusting beliefs in technology and trusting beliefs in a brand are both relying on familiarity. As this study is going to test a FinTech service, we can also assume that familiarity in financial services has a moderating role for trust in the Fintech service. In our research model, we will relate to all of these moderators when talking about knowledge or familiarity. Figure 1 is an illustration of this reasoning. We have decided to measure financial- and brand- knowledge based on regular familiarity measures. The technology knowledge will be measured through the TRI index (The Technology Readiness Index).

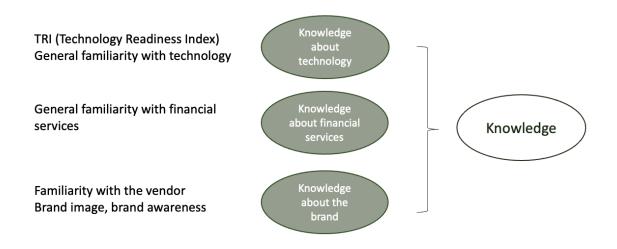


Figure 1: Knowledge/familiarity constructs

*Dispositional trust* is a human trait acknowledged to play a moderating role towards trust and behavioral Intention (E.g., Mayer et al., 1995; McKnight et al., 1998; Li et al., 2008). The concept has been commonly used as a moderator for both initial, continued, and general trust. Based on arguments we therefore hypothesize that these variables will have a positive moderating effect towards the trust in a FinTech service.

H6.1: a) Dispositional trust and Knowledge [b) Brand Familiarity, c) Financial Familiarity and d) Technological Familiarity] will have an overall positive moderating effect on trusting beliefs towards the adoption of a new FinTech service

# 3.2 The research model

The research model in Figure.2, depicts our hypotheses based on different relationships towards the constructs. Knowledge and Dispositional trust are illustrated as moderators. Perceived -fit, -competence, and -risk are represented as mediators, together with trusting beliefs. Attitude and Intention to adopt are portrayed as dependent variables.

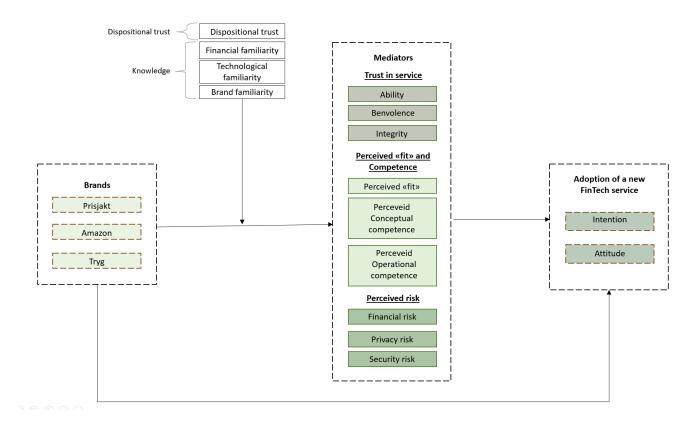


Figure 2: The research model

# 4. A qualitative pre-study, to gain insight in the Norwegian FinTech industry

# 4.1 Purpose of the qualitative pre-study

In the beginning of this research project, we decided to conduct a qualitative study through semi-structured interviews, often referred to as "qualitative research interviews" (Saunders et al., 2019). We found an exploratory study relevant, as it aims to clarify the understanding of an issue, phenomenon, or a problem (Saunders et al., 2019, p.187). The purpose of the exploratory study was to gain insight and understanding in the FinTech industry today's context. The main goal was to use this information as inspiration for the content of the research project, but mainly to use as inspiration when designing the FinTech mock-up for the main experiment. For this reason, we wanted to gain insight into their thoughts concerning the thriving FinTech products and actors of the future. We were aware that the flexibility of the study could make us compelled to change the anticipated content of the study according to the findings. We evaluated this as being a strength, as it could potentially help us to narrow the research.

# 4.2 Research design and strategy

This pre-study will have an inductive approach considering that our goal is to develop a richer theoretical perspective on open banking, and FinTech in the B2C market in Norway. We can qualify this exploratory design as a type of case study, considering its in-depth inquiry into a topic or phenomenon (Yin, 2018). Due to the exploratory nature of this pre-study, we found semi-structured interviews the most relevant. This made the informant able to explain opinions and phenomena in depth. It also made us able to elaborate on potential new findings. Considering the informants different backgrounds not all the questions were equally relevant for everyone. We believe this strategy helped us on the right track to define our inquiry more precisely.

## 4.3 Data sampling

To attain an in-depth understanding of thriving and striving financial products and technologies in Norway we wanted to talk with leading experts with varied experience within the Norwegian FinTech environment. We managed to find consultants, employees from financial incumbents' independent professional and founders of varied FinTech start-ups with experience from companies such as Knowit, Evry, Monner AS, Cicero Consulting, Tink, Kredd, Signicat, Deloitte, DNB and Schibsted. In total we interviewed seven people. As we did not register these interviews at NSD (Norsk samfunnsvitenskapelig datatjeneste AS), we will not be able to expose personal information that can be used to identify the interviewee.

## 4.4 Data collection

The interviews were conducted through a non-standardized, one-to-one internet-mediated interviews through Zoom, due to the COVID-19 pandemic. We also found this more convenient, as most of the participants were situated in another city then us. The planned duration was 40 minutes. This was adapted depending on the informant. When interviewing we were two interviewers for every interview. One person was in charge of leading the interview, and the other one took track of time, recordings, and asked follow-up questions if necessary. In the beginning of the interview, we asked for permission to audio record. Further we described our project briefly before we started asking questions. Because of the exploratory nature, it was natural to have quite unstructured interviews. The questions were linked to opinions and facts related to existing and potential financial products and services we might see in the future. The interview consisted mostly of open-ended questions as this encourages the informant to provide extensive and developed answers (Saunders et al., 2019). When necessary, we used probing questions to further explore certain topics. During the entire process it was always the informant that spoke most of the time.

# 4.5 Evaluation of method

Lincoln and Guba (1985) argue that qualitative studies should be evaluated differently from quantitative measures. Instead of only discussing validity and reliability, they mention four different aspects that should be evaluated when conducting qualitative studies: (1) credibility (construct validity), (2) transferability (external validity), (3) confirmability (objectivity) and (4) reliability. Due to the nature of this pre-study, the aspects will be mentioned briefly without going into depth.

## 4.5.1 Credibility (Construct validity)

The classical definition of validity tries to examine whether the study actually measures, what it is intended to. Construct validity aims to evaluate the relationship between the constructs that are measured, and the data collected. For qualitative studies it is impossible to measure validity statistically. This questions qualitative studies' capability to be qualified as valid (Johannessen, 2011). Nevertheless, Pervin (1984) argues that validity in qualitative studies concerns the extent to which our observations mirror the phenomenon that we are interested in. Johannessen et al., (2011) mention various criteria to evaluate construct validity. This study will only mention the most relevant for its purpose. To ensure construct validity, we made sure that none of the questions were asked with a leading tone or nonverbal behavior. If this was to occur, there was always a possibility for the other interviewer to rephrase the question. If something was unclear, clarifying questions were provided. Nevertheless, it is impossible to achieve completely neutral research in qualitative studies (Tjora, 2012). To avoid participation bias, we were transparent about the topic of the interview and the time it would take when asking them to participate. We assume that our topic about open banking and Norwegian FinTech products and services is not a sensitive subject that could make respondents hesitant to reveal their opinion. The analysis was made by the entire team (4 people) through a digital software called "Miro". We created a table with the different questions and answers from the interviewees. This method made it easy to gain an overview and compare the different answers and opinions. Since we worked as a team, we strived to reduce researcher bias as we all had to agree on the analysis and the understanding of the findings. Overall, we can conclude that through our research approach and methodology we strived to maintain construct validity, to the possible extent of a qualitative study.

External validity is about transferability and ensuring consistency during the research project (Saunders et al., 2019, p.214). Due to the lack of statistically representative data, it can be challenging to generalize the results over to a bigger population (Johannessen et al., 2011). Nevertheless, we can evaluate the studies external validity according to its ability to transfer the insight to similar studies, instead of its capability to generalize its findings. Transferability can be evaluated based on the studies capability to reveal terms, descriptions and interpretations that can be used in other settings (Johannessen et al., 2011). Our study reveals personal thought and opinions concerning trust to the Norwegian FinTech actors, thoughts about the arrival of PSD2 (Payment Service Directive 2), Norwegian's opinion concerning mortgages and the business models of the future in the financial sector. The findings cannot be defined as representative, and we cannot draw any general valid conclusions. Nevertheless, they provide insight and increased comprehension about the FinTech industry in Norway in 2021. This qualitative study is being used as a foundation for three different master studies, which proves its capability to be transferred to similar studies. The informants got the opportunity to decide on the time slot of the interview. By this, we assume that the informants were able to organize themselves in a way that would avoid external noise that could have an influence on the results. As already mentioned, our topic about open banking and Norwegian FinTech products and services is not assumed to be a sensitive subject that could make respondents hesitant to reveal their opinion. For the same reason, we also presume that factors such as the time of the day are little relevant as threats to this study. By this we judge the study to be transferable, but not generalizable.

## 4.5.3 Confirmability (objectivity)

In a qualitative study it is critical to establish a research method that ensures neutrality. The findings must represent the results of the research, and not the results of the researcher's subjective opinion (Johannessen et al., 2011). During the interview we strived to ask open questions that were not leading. To make sure that our interpretation of the data was not pigmented, we tried to ask confirmatory questions when necessary. The interviews were recorded and analyzed by everyone in the team. We therefore judge the confirmability of the study to be of high quality.

### 4.5.4 Reliability

While reliability is considered a critical aspect of quantitative research, it is considered of little relevant for qualitative studies (Johannessen et al., 2011). The exploratory design of the semi-structured interviews made it difficult to collect structured data. Despite our effort to avoid leading conversations, it is considered almost impossible to have a conversation that is not loaded, or context related. This is not, because the data is wrong, but because informants can sometimes allocate more focus on one aspect, according to another depending on the context. All researchers have different experiences and point of views. It will therefore be difficult to interpret the results in the exact same manner. To obtain reliable results it is important to track as much in terms of documentation, data and potential changes to the research process. Most of the research approach has been well documented in the earlier paragraphs. Considering this being a pre-study, we will not go further into depth about the documentation.

## 4.6 Data analysis

This pre-study was effectuated by the help of three other colleagues working on another similar project. I have made the choice only to present relevant findings for this project. Considering that these interviews are not the central focus of our research, we have decided not to transcribe the interviews, but to only present the main findings. We believe this is in line with the main goal of a qualitative study, -To create an understanding and enlighten a certain phenomenon (Thagaard, 2018). In the following text there will be a summary of the main findings from the interviews.

#### **Question 1: Thoughts about trust to Norwegian FinTech actors**

An informant asserted that trust is a part of the core business in the financial industry, as this is what makes people want to place their money. From the interviews we got the impression that most Norwegians trust the financial institutions in Norway. This is unique with Norway, and not necessarily the case in other countries. This gives banks a competitive advantage in Norway. An informant pinpointed those traditional banks, do not have a competitive advantage, but a step ahead. This position could quickly change once consumers gets familiar with performant FinTech products. An example of such a success is PayPal, an operating online payment system that started in 1998, and has one of the largest corporate revenues in the U.S. today. Another informant mentioned that the Norwegian banks have a

high level of trust among the elderly population, whether as younger people are less loyal. Younger people understand the strict regulations imposed for FinTech actors by *Finanstilsynet*. Therefore, they understand that FinTech companies are as safe as traditional incumbents. One informant mentioned that we can trust traditional incumbents to have the ability to take care of your money, however, this doesn't mean that they will be the most performant player in developing products and services that are best for the consumers.

# Question 2: What are the thriving and striving FinTech products today and for the future?

#### Thoughts concerning PSD2, and the arrival of PISP and AISP

The arrival of The European regulation; PSD2 (Payment Service Directive 2) gave life to the possibility of PISP (Payment Initiation Service Provider) and AISP (Account Information Service Provider). AISP enables licensed businesses to get access to a bank account and use this to provide various services. PISP enables licensed businesses to initiate payments on behalf of a customer from their bank account. According to most of the informants, the PSD2 regulation represents marginal changes in the financial market today. Since the arrival of the new directive in 2019, the changes in consumer behavior have not been prominent. Nevertheless, some informants see the potential in the new directive, but has not seen any actor willing to take this step. Most informants seemed little enthusiastic and did not understand the consumer incentive in using different niche payment systems or applications when you could use the same everywhere. Overall, we got the impression that the PSD2 regulation did not offer extraordinary attractive services today but might have the potential to do it in the future with the parallel growth of sophisticated technology.

#### Mortgages

We got a global understanding that being able to effectuate savings or payments from third party actors was not a revolutionary for the clients. On the other side, many of the informants emphasized the importance of mortgages in Norway. From the interviews we understood that if we wanted to create a financial product that Norwegians care about, it would have to concern their mortgage. One informant said that mortgage offering was "the secret to success in the market". If a financial service could always guarantee the best credit terms, we would probably see a lot of interest. Another informant mentioned his enthusiasm for a potential product like Renteradar, that could potentially move mortgages automatically according to where the customer can get the best terms.

#### Question 3: How does the business model of the future look like?

All the informants had a general agreement that most of the future financial companies, would be technological businesses. Almost all the informants specify the role of platform companies in the future. We can expect to see more seamless API (Application Programming Interface) integrations across different banks and services. The bank/brand where you choose to have you mortgage will be less important, nevertheless the platform that you choose to use will have a greater importance. The platform company that manages to analyze and use personal information to the greatest extent will have a winning business model in the future. The services will have to be able to analyze savings, expenditures, mortgages and suggest tailored solutions for all users. An informant said enthusiastically that it would be interesting if a saving app such as Spiff could offer the possibility to move money freely between different saving accounts and investments.

# 4.7 Examples of FinTech solution that exists in Norway today?

We chose to make a table that gives an overview over existing FinTech products today mentioned in the interviews.

Name	Characteristics					
Savings						
Spiff (By BN Bank)	Possibility to gather all savings in one app.					
	Create savings goals alone or with others.					
	Possibility to save a monthly sum, or non-recurrent savings.					
Dreams	Possibility to gather all savings in one app.					
	Create savings goals alone or with others.					
	Possibility to save a monthly sum, or non-recurrent savings.					
	Suggests cheaper alternatives and puts the non-spent money on the saving account. E.g., restrain from buying a takeaway coffee, and save 40 NOK.					
Payment						
Vipps (Norwegian	Payment app that can be used among friends, in shops and on the internet.					
bank collaboration)	Gives the possibility to effectuate recurrent payments and pay bills.					
Tjommi	Gathers all receipts and refunds you the difference if the price of the good drops.					

Klarna	Offers easy and seamless payment services					
Coop pay	Gives the possibility for Coop members to pay with their Coop app. Contactless and gives the receipt in the app.					
Mortgages						
Renteradar	Compare your mortgage with other mortgages in the market. Gives you the possibility to ask the other bank for an offer.					
Horde	An app that gives an overview over loans between friends, consumer loans, credit cards, mortgage loans and bank accounts. Gives the possibility to down pay loans and effectuate transactions between various accounts.					
Bulder bank (By Sparebanken Vest)	Mortgage bank with zero fees, and competitive interests' rates. The interest rates adjust automatically to the internal national rate.					
Kredd	Crowdfunding of private loans. Possibility to loan money from private households. The transaction is anonymous. You can also become a lender and get attractive returns.					
Revolut	Bank that offers credit card, currency, and peer-to-peer lending services through an app. Wants to get rid of hidden fees and make banking services more accessible.					

Table 2: Examples of FinTech solutions that exists in Norway

# 4.8 Discussion; how could we design a an attractive FinTech mock-up for our main experiment?

The interviews indicated that trust is important, but young adults are less loyal to their banks compared to elderly people. Today financial incumbents have an advance due to their well-established service and customer base. However, this might not last if they don't manage to keep the pace. Different forms of payment and account aggregation services is not of the customers greatest interest at present. Nevertheless, the informants seem to be greatly positive about a mortgage service that can offer the very best terms and conditions at all times. The provider of the mortgages will become less important, parallel with the gained importance of the platform provider.

More information about the elaboration and explanation of the mock-up can be found in *part* 6.3.

# 5. A quantitative pre-study, to establish the level of trust in different companies

# 5.1 Purpose of a quantitative pre-study

The purpose of this pre-study was to test several diverse brands towards the three established dimensions of trust: Ability, Benevolence, and Integrity. The goal was to compare the different brands and distinguish three brands that scores distinctively high on at least one of the three dimensions, and relatively low or average on the other dimensions. The study is explanatory as it tries to establish causal relationships between different brands and the three dimensions of trust (Saunders et al., 2019). Our research question consists of determining to what extent the dimensions of trust are transferable from a brand to a service. In order to determine this, it is necessary to establish the initial level of trust in the brands that will be selected for the main study.

# 5.2 Research design and strategy

## 5.2.1 Overall design and strategy

The survey was conducted through an online questionnaire by the help of the software, Qualtrics. This enabled gathering of structured and representative data while keeping a good control over the process. According to Saunders et al., (2019), surveys are beneficial when you are interested in explaining a relationship between concepts and variables, with standardized questions related to the respondent's attitude or behavior towards a subject. We therefore judge this strategy to be relevant for our study. In our study we had in total 42 questions: 6 control variables, 9 dependent variables and 27 mediating variables. The survey consisted of 34 independent variables (different brands). The study was divided into two parts, with 17 and 18 brands in each part in order to avoid maturation. By the help of Qualtrics and Excel we managed to randomize the order and the distribution of the different brands. The main purpose of the pre-study was to select brands that possesses different dimensions of trust. Due to this, we only compared the selected brands to the three different dimensions of trust, by excluding the risk dimensions. By only collecting questions concerning Ability, Benevolence, and Integrity we would have had a shorter questionnaire. *Part 5.2.3* will only illustrate the questions that were used in our analysis.

### 5.2.2 Measures and variables in the quantitative pre-study

#### The dependent variables: Ability, Benevolence, and Integrity

Figure 3 illustrates the questions concerning the three dimensions of trust in the survey. As our research population is Norwegian, it appeared logic to make the questions in Norwegian. The questions are inspired by the references illustrated in the table (figure.3) and adapted to our research question. The questions are inspired by published research papers concerning similar subjects. Chen and Dhillon (2003) did their research about the interpretation of the dimensions of consumer trust in e-commerce. Aldas-Manzano et al., (2011) evaluated the role of trust, satisfaction, perceived risk and frequency of use in their study. Featherman et al., (2010) did his research about how to reduce online privacy risk to facilitate e-service adoption. Gefen (2000) is known for his research about the role of familiarity and trust. For every trust dimension we identified about 10 questions. Afterwards we selected the most suitable questions as a team. Before launching the survey, we conducted several tests with the help of friends and family.

#### The independent variables: The different brands

In total we tested 35 different brands. For this study to be reliable it was important to test many different brands to make sure that we would find one brand with a particularly high score on one of each trust-dimension. We started with 50 Norwegian companies classified by BI (The Norwegian Business School, 2020) in a customer satisfaction barometer, and added other top-of-mind companies that could be relevant for our study. Firstly, we took away irrelevant companies and direct competitors that would score relatively similar to each other. Further, we classified all the brands in Excel (high, medium, low) based on the three dimensions of trust. Based on classification and reflection we found our 35 brands. We were four people that participated in this process, together with two supervisors. We believe this was sufficient to find qualified brands for out study. All the 35 brands were putted into excel to randomize the order of the brands. Later we split the list into two groups with 17 and 18 brands. This was to avoid having too many brands per respondent to reduce the risk of maturation.

## 5.2.3 Illustration of the questions in the quantitative pre-study

	Questions in pre-study (In norwegian)	
	5-point likert scale + «kjenner ikke til merket» (1= Helt uenig; 5 = Helt enig), (6 = Kjenner ikke til merket)	
Evne (Ability)		
	Jeg opplever at:	References
	1. Merket klarer å levere det de lover kundene sine	(Chen S. and Dhillon S. 2003)
	<ol><li>Merket har ressursene som kreves for å levere tjenestene sine</li></ol>	(Aldas-Manzano et al., 2011)*
	3. Merket har svært høy kompetanse	(Featherman et al., 2010)
Velvilje		
(Benevolence)		
	Jeg opplever at:	
	<ol> <li>Dette merket har kundenes interesser i fokus</li> <li>Dette merket prøver ikke å utnytte kundene sine</li> </ol>	(Chen C & Dhillion S. 2003) (Gefen et al., 2003)
	<ol> <li>Dette merket bryr seg om ettervirkningene deres tjenester kan ha på kundene sine</li> </ol>	(Aldas-Manzano et al., 2011)*
Integritet (Integrity)		
	Jeg opplever at:	
	<ol> <li>Dette merket forsøker å oppfylle det de lover til kundene sine</li> </ol>	(Aldas-Manzano et al., 2011)*
	<ol> <li>Jeg opplever at dette merket oppgir pålitelig informasjon</li> </ol>	(Aldas-Manzano et al., 2011)*
	<ol> <li>Jeg opplever at dette merket opptrer på en transparent måte</li> </ol>	(Aldas-Manzano et al., 2011)*

\*Questions from Aldas-Manzano et al (2011) are inspired by former research effectuated by the following: (Doney & Cannon, 1997; Flavian & Guinaliu, 2006; Roy et., 2001; Siguaw et al., 1998)

Figure 3: Questions concerning Ability, Benevolence, and Integrity in the pre-study

# 5.3 Data collection

## 5.3.1 Sample for the experiment

To keep the pre-study consistent with the main study, we chose to use the same arguments and calculations as in *part 6.4.1* inspired by Kadam and Bhalerao (2010) and Saunders et al., (2019). In order to have a representative result, the study required 104 responses. In total we managed to get 172 complete responses. Since the survey was divided in two, we only got 86 respondents in every group. According to Saunders et al., (2019) the study should ideally

collect 384 responses. Based on the given arguments we judge the sample size to be debatable. However, given that this is a pre-study, we still chose to accept the sample size. In our main study we are only collecting responses from people over 30, with an average age of 50 (See *part. 6.4.2*). For the pre-study, however we chose to prioritize the number of respondents by asking all people over 18. The average age of the respondents was 29,5 years old. We can therefore criticize this age gap between the pre- and the main-study. However, our target population are Norwegians using financial services, and we can assume that most of the respondents in both of the studies fulfill this criterion. We therefore judge this as acceptable, but with its limits.

### 5.3.2 Data collection and manipulation

A software named "Qualtrics" was used to make and distribute the survey. The respondents were assigned randomly to one of the two surveys containing different brands. In the first phase of our data collection, we sent out on personal requests to family and friends. Considering the length of the survey we always tried to emphasize that we were only looking for the respondent's subjective perception about the different brands. In the beginning our response rate was quite high. In phase two we decided to send out a request to all student at school (3300 mails). Due to the length of the survey and lack of incentives to complete it, our response rate fell to 52%. In the end we managed to get 172 complete responses.

## 5.4 Evaluation of method

The method of this pre-study is similar to the method used in the main study. Considering this being a pre-study, only the most essential criteria for validity and reliability will be mentioned. To avoid repetition and redundance, most definitions and explanations will be referred to from the main study in *part 6.5*. We have chosen to refer to a later part in the study, as we find it more important to evaluate the main study in a detailed manner, rather than the pre-study. The three factors; (1) Measurement validity, (2) Internal validity and (3) External validity will be evaluated in line with the main study.

## 5.4.1 Validity

#### Measurement validity

Within the criteria of measurement validity, we have only evaluated *content validity* and face validity, as this is seen as a minimum requirement (Bannigan & Watson, 2009), and we judge them as being the most relevant for this study.

*Content validity* (See definition in *part 6.5.1*). requires the survey to contain a satisfactory number of items to measure the concept. According to Sekaran and Bougie (2010), the more scale items that measures a concept, the more it will improve the content validity. In this survey, our goal was to measure the willingness to trust various companies. By doing this we had 9 questions in total. We measured the three dimensions of trust; Ability, Benevolence, and Integrity, by asking three questions for each dimension. By this we assume the questionnaire to be valid in terms of content. Nevertheless, content validity can be threatened when it comes to the number of questions in our survey, compared with the questions necessary to conduct our analyses. In terms of the questions concerning the control variables and the risk dimensions, we should have paid more attention to our actual purpose with the pre-study. The content validity seems satisfied in terms of number of items measured. However, it can clearly be criticized as we did not use the entire part of the survey for our analysis.

*Face validity* (See definition in part 6.5.1) As our questions consisted of already established measurements of constructs (See figure 3.), we presume the measurements and scales to be suitable to measure what they were intended to. The biggest threat to face validity is the translation of the already established constructs from English to Norwegian. To mitigate this, our supervisors validated the survey before it got launched. We judge this criterion to be satisfied.

#### Internal validity

Saunders et al., (2019) mentions several potential threats to internal validity (See\_*part 6.5.1*). Among them, we find maturation as the highest threat to our survey. This occurs when respondents experience fatigue. The survey lasted for approximately 20 minutes in average, with many monotonous questions asked about different brands. We can assume that some respondents might have felt tired after completing the survey. In advance, we were not aware that the survey would last for such a long time. When conducting the testing, the survey took

about 10-15 minutes to complete, in which we informed the respondent about. The introduction clearly stated that our objective was to collect subjective opinions about the different brands. Nevertheless, it seemed like some respondents used more time to make up their opinion about certain brands. In terms of instrumentation threats, we kept the same questions all time for all respondents, both for testing and for the main survey. We therefore judge maturation to be a significant threat to our survey.

### External validity (Transferability)

As mentioned in the main study, we often distinguish between two types of validity (1) *population validity* and (2) *ecological* validity (Bracht & Glass, 1968). Since the pre-study was only a survey and not an experiment, we find it most relevant to evaluate the population validity. For more information see *part 6.5.1*. In *part 5.3.1* we discussed the sample size for this study. The sample size is considered acceptable, but whether it mirrors the Norwegian population possessing financial services can be questionable, as 80% of the respondents were between 20 and 29 years old, and 66% of the respondents were men. As mentioned earlier, we preferred having more respondents, rather than making sure that that the age and gender of the respondents were evenly distributed.

### 5.4.2 Reliability

The analysis needs to be reliable to attain solid results. The definition of reliability can be found *in part 6.5.2*. In line with the main study, we will evaluate internal reliability, bias and error.

#### Internal reliability

Cronbach's alpha is the most preferred and used method to evaluate internal reliability. (Sürücü & Maslakçi, 2020). In *part 5.2.3* you will be able to find the questions that were measured. All dimensions were measured by the help of three questions. According to Saunders et al.,(2019), all numbers between 0,7 and 1 are considered reliable. Table 3 illustrates the Cronbach's alpha for all off the questions in the questionnaire related to trust. Both Ability and Integrity have a Cronbach's alpha value above 0,7. Considering that Benevolence is very close to 0,7 (0,69), we also judge these dimensions to be reliable.

	Cronbach's Alpha	N° of items
Ability	0,84	3
Benevolence	0,69	3
Integrity	0,81	3

Table 3: Cronbach's alpha, questions concerning the dimensions of trust

#### Error and bias

*Participant- and research- error* was mitigated in the same way as for the main study. See *part 6.5.2* for more information. In particular for the pre-study, we informed the respondents that were asked privately, that the survey might be a little long, and that it was best to take it on the computer, as the mobile version was less optimized. As a researcher team we decided in common how to distribute the survey to avoid researcher bias. We evaluate the threat of error as being relatively low, but with some limitations. The methods used to avoid *participant- and research- bias\_are similar* to the methods used in the main study. See *part 6.5.2* for more information. This threat is therefore evaluated as being highly mitigated.

# 5.5 Data analysis, selection of brands to the main experiment

In this pre-study we only analyzed the three dimensions of trust, against the different brands. As a first step we graphed a histogram to visually spot the brands that scored high on one dimension, and relatively low on the others. We used a trial-and-error method to find brands that would fit our criteria. Further we verified that the average of the cumulated levels of trust were similar through an F-test. This is important for our main experiment, as it makes it easier to measure transferability. We used a Tukeys multiple comparison test, to check that the brands were similar pairwise. Thirdly we isolated the scores of each trust dimension for every brand. This was to make sure that the brand in question scored significantly higher on one dimension, compared to another. After this we decided to conduct another F-test and Tukeys multiple comparison test to be sure that our results were accurate. The brands we decided to test were the following: Prisjakt, Amazon and Tryg. In the next section we will

conduct pairwise comparison tests for Overall Trust, Ability, Benevolence and Integrity to see if there are significant differences between the trust dimensions and the different brands.

# Pairwise comparison test for overall brands, Ability, Integrity and Benevolence

Brand comparison	Mean (i)	Mean (i)	M <sub>diff</sub> (i-j)	lwr	upr	p-value
Prisjakt – Amazon	3,66	3,78		-0,31	0,54	0,58
Tryg – Amazon	3,82	3,78	0,04	-0,36	0,44	0,84
Tryg – Prisjakt	3,82	3,66	0,16	-0,26	0,58	0,45

Pairwise comparison, Overall trust

Table 4: Pairwise comparison of brands, Overall trust

From table 4 we discover relatively high p-values. This gives us an indication that the difference in Trust within the different brands are not significant and that the mean of the overall trust dimensions across the selected brands seem to be relatively equal.

Pairwise comparison, Ability

Brand comparison	Mean (i)	Mean (j)	M <sub>diff</sub> (i-j)	lwr	upr	p-value
Prisjakt - Amazon				-1,42	-0,41	0,00**
Tryg - Amazon	3,85	4,31	0,46	-0,96	0,04	0,08
Tryg - Prisjakt	3,85	3,40	0,45	-0,05	0,96	0,09

Table 5: Pairwaise comparison of brands, Ability

From table 5 we observe that Amazon scores significantly higher on the Ability dimension compared to the other brands. At the same time, we discover that Tryg has a higher level of Ability compared to Prisjakt. The essential is however, that Amazon has a higher level of Ability compared to the other brands.

Mean	Mean		lwr	upr	p-value
(1)	(1)	(1-])			
3,93	3,43	0,50	0,09	0,92	0,01**
3,42	3,43	-0,01	-0,42	0,40	0,10
3,42	3,93	-0,51	-0,93	-0,10	0,01**
	(i) 3,93 3,42	(i) (j) 3,93 3,43 3,42 3,43	(i)         (j)         (i-j)           3,93         3,43         0,50           3,42         3,43         -0,01	3,93         3,43         0,50         0,09           3,42         3,43         -0,01         -0,42	(i)(j)(i-j) $3,93$ $3,43$ $0,50$ $0,09$ $0,92$ $3,42$ $3,43$ $-0,01$ $-0,42$ $0,40$

Pairwise comparison, Benevolence

Table 6: Pairwaise comparison of brands, Benevolence

From table 6 we observe a significant difference between Tryg and Prisjakt, and Prisjakt and Amazon. By analyzing the table, we adjudge that Prisjakt has a significantly higher level of Benevolence compared to the other brands.

Brand comparison	Mean (i)	Mean (j)	M <sub>diff</sub> (i-j)	lwr	upr	p-value
Prisjakt - Amazon	3,65	3,60	0,05	-0,42	0,53	0,96
Tryg - Amazon	4,19	3,60	0,59	0,12	1,07	0,01**
Tryg - Prisjakt	4,19	3,65	0,54	0,05	1,03	0,03**

Pairwise comparison, Integrity

Table 7: Pairwaise comparison of brands, Integrity

The table below indicates significant results between Tryg and Amazon, and Tryg and Prisjakt. We can conclude that Tryg has a significantly higher level of Integrity compared to the other brands.

#### Summary of results in the pre-study by ranking

- **Prisjakt**, has a significantly higher level of Benevolence
- Amazon, has a significantly higher level of Ability
- Tryg, has a significantly higher level of Integrity

Ranking	Ability	Integrity	Benevolence
1.	Amazon	Tryg	Prisjakt
2.	Tryg	Prisjakt	Amazon
3.	Prisjakt	Amazon	Tryg

Table 8: Pre-study, ranking of trust dimensions according to brand

# 5.6 Conclusion and brief presentation of the selected brands

## 5.6.1 Explenation of choice of brand

As mentioned previously, the goal of the pre-study was to find three brands that scored distinctively high on at least one of the three trust dimensions. All off the three brands selected: *Amazon, Tryg* and *Prisjakt* scored differently on all of the three trusting dimensions. For this reason, we judged these brands to be suitable to use further in our main study.

## 5.6.2 Brief presentation of the selected brands

# amazon

#### Amazon

Amazon is an American multinational company founded in 1994 by Jeff Bezos. It is referred to as "one of the most influential economic and cultural forces in the world" (Kim, 2018). Amazon is defined as a technological, visionary company that aims to disrupt well established industries. Their mission is guided by "customer obsession rather than competitor focus,

passion for invention, commitment to operational excellence and long-term thinking. Customer reviews, 1-Click shopping, personalized recommendations, Prime, Fulfillment by Amazon, AWS, Kindle Direct Publishing, Kindle, Fire tablets, Fire TV, Amazon Echo, and Alexa are some of the products and services pioneered by Amazon" (About amazon, 2021).



#### Prisjakt

Prisjakt was founded in 2002 by Jonas Bonde and Franz Hänel.

Prisjakt offers an information and comparison service online, that helps customers to find the best products to the best prices. Prisjakt is owned by the Norwegian group Schibsted and operates in nine markets. According to Schibsted's annual report in 2020, one of their digital growth strategies is to continue developing leading market platforms such as Prisjakt. Schibsted Media Group's mission is to "empowering people in their daily lives" (Schibsted, 2021).



#### Tryg

Tryg is one of the Nordics largest non-life insurance companies. Tryg offers various insurance products for businesses and private individuals. Tryg has approximately 4 million customers being the largest insurance company in Denmark, the 4<sup>th</sup> largest in Norway, and the 5<sup>th</sup> largest in Sweden. Their mission statement is the following: "*We make it easier to be Tryg*" (Tryg, 2021).

# 6. Methodology, main experiment

## 6.1 Purpose of main experiment

In this experiment, we want to understand the role of trust, and its relationship towards attitude and adoption of a FinTech service, the role of a brand, and lastly, to what extent trust can transfer from a brand to a service. The hypotheses for the study indicate the role and direction for the relationships between all the variables that are being studied. For this reason, we define the purpose of the experiment as explanatory (Saunders et al., 2019).

## 6.2 Research design and strategy

## 6.2.1 Overall design and strategy

The approach of this study is to collect, analyze and test data towards the theory from the literature review. Our strategy consisted of conducting a quantitative analysis through an experiment with the purpose of testing the relationship between dependent and independent variables, mediators and moderators. In this study we are testing the relationship between Brand Trust, Initial Trust and the Intention to adopt a new FinTech service. By conducting an experiment with three different brands, the goal is to study the probability of change in the Intention to adopt a new FinTech service depending on Brand Trust, Trust and other variables. The hypotheses that will be tested can be found in chapter 3. The experiment was accomplished by the help of an internet questionnaire by the software, Qualtrics. Through this collection method, all the respondents answered the same set of questions in a predetermined order (De Vaus, 2013). This is considered a common research method as it is considered an efficient way to collect responses from a large sample (Saunders et al., 2019, p.504). It also enables a great control over the sample selection and the context within the experiment.

#### 6.2.2 Measures and variables in the study

All the variables, except the control variables were measured through a 7-point Likert scale ranging from "1"= "Strongly disagree" to "7"= "Strongly agree". We chose to use Likert-style rating questions, as this is a frequently used measurement scale when wanting to

capture the respondents' opinions towards various subjects (Saunders et al., 2019, p.523). According to Dillman et al., (2014) it is advised to keep the same order of response to avoid misunderstandings. In cases, when this was not possible, we made a "page break" in Qualtrics, to separate the statements from each other. Each dimension in the questionnaire was measured through a minimum of two items to achieve a higher score of validity (Churchill, 1979). For the dependent, independent, and mediating variables we choose to illustrate every question as a single question, whether as the moderating variables were illustrated in a matrix. This choice was made for the respondents to focus mainly on the more important variables. The measures we applied to the experiment are empirically tested from various earlier studies. This is in line with Schrauf and Navarro's (2005) advice.

#### The dependent variables: Intention and Attitude

Our research question consists of finding the role of trust and brand trust in the Intention to adopt a new FinTech service. The main objective is therefore to measure to what extent the respondents are aiming to use the FinTech service. To do this, we decided to measure two dependent variables: *Intention* to adopt new Fintech service, and *Attitude* towards the new FinTech service, as this is closely related to Intention, and has been used in similar studies. An eventual gap between Intention and Attitude, could be interesting to examine for further research. *Intention* to adopt a new FinTech service and *Attitude*, was measured through questions inspired by Li et al., (2008).

#### The independent variables: Brand Trust (Prisjakt, Tryg and Amazon)

The independent variable is the one that is being manipulated to measure its influence on a dependent variable (Saunders et al., 2019). In our study, the questions and the FinTech service are the same, but not the brand provider of the FinTech service. Through the prestudy we came up with three brands that scored particularly high on one dimensions of trust, different from each other. We ended up by choosing the following brands: *Prisjakt*, *Tryg* and *Amazon* (For more information see *part 5.6*). We manipulated the independent variables by changing the logo, and some simple font changes in the mock-up to correspond to the brand's image.

This is relevant as our research questions aims to examine the role of a brand in the Intention to adopt. By manipulating the brand and the brand trust, we can observe whether there are any differences related to this factor. In our first pre-study we measured the level of trust for several different brand's. Through the experiment we can observe whether there is a

difference in trust in the FinTech service according to which brand that delivers the FinTech service. This will contribute to our understanding of transferability of trust from a brand to a service.

### The mediating variables: Perceived "fit", Perceived Operational- and Conceptual competence, Perceived risk: Privacy risk, Financial risk and security risk and Trusting beliefs: Ability, Benevolence and Integrity

A mediating variable is located between the independent and dependent variable and transmits the effects between the independent, the mediating and the dependent variable (Saunders et al., 2019). In other words, the mediators participate in explaining how brands, and brand trust is related to the adoption of a new FinTech service. In our model, we have nine mediating variables that fit into different categories (a) Perceived "fit", (b) Perceived type of competence (Operational or Conceptual), (c) Perceived risk (Privacy risk, Financial risk and Security risk) and (d) Perceived trust (Benevolence, Integrity and Ability). As mediators, we believe that these factors will have an indirect effect on Attitude, Intention to adopt a new FinTech service. Perceived "fit" is referred to as the degree to which a new product is related to the brands' associations and schema (Aaker & Keller, 1990). For our survey we drew inspiration from this and asked the respondents whether they thought the service was fitting for the brand, and whether it appeared logical that the following brand delivered this service. Perceived type of competence was measured according to Wang and Liu's (2020) definition and study of the Conceptual and Operational Competence. The dimensions of trustworthiness towards the service were measured inspired by Hauklien and Hansen (2019)'s master thesis which also investigated trust within the FinTech industry. In their thesis, they referred to Mayer et al., (1995) as source of inspiration. As mentioned earlier, there is no consensus in the relationship between Perceived risk, Trust and behavioral Intention (Aldas-Manzano et al., 2009). Nevertheless, we estimate Perceived risk to have an indirect effect on Trust, Intention and Attitude considering that a close relationship between these factors have been confirmed (E.g., Featherman & Pavlou 2003, Thakur & Srivastava, 2015 and Flavian & Guinaliu, 2006a). The questions on our experiment were mainly inspired by Featherman and Pavlou (2003) and Flavian & Guinaliu (2006a).

#### The moderating variables: knowledge and familiarity

A moderator reflects a variable that will have an impact on the nature of the relationship between the independent and the dependent variable (Saunders et al., 2019). For this study, this implies that our moderators will act upon the relationship between the brand in question and the Intention to adopt, by changing the strength or the direction of the relationship. As mentioned in part 3.1, our moderators are *Dispositional trust* and the other "*Knowledge*" moderators are *Brand Familiarity, Financial knowledge* and *Technological familiarity.* Choosing *Dispositional trust* as a moderator is in line with other studies (E.g., McKnight et al., (1998), Mayer et al., (1995), Li et al., (2008), Gefen, (2000)). The questions in our experiment are mainly inspired by Gefen's research concerning the role of familiarity and trust on e-commerce. The other moderator, *Knowledge* will be measured through several various constructs reflecting familiarity to the brand, the technology and the financial industry. Choosing this as moderator is in line with other studies such as Belanche et al., (2019) that proved a moderating effect between familiarity towards Attitude and Intention.

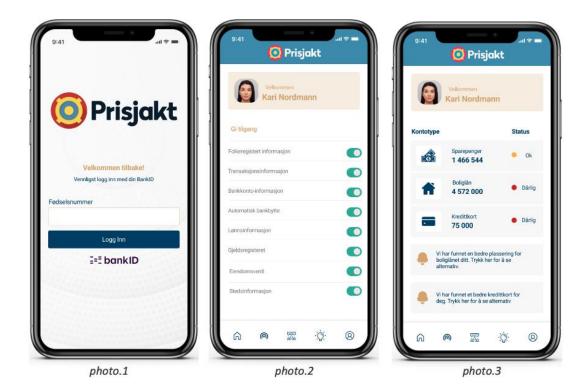
#### The control variables

Control variables can be defined as additional, observable, and measurable variables that need to be kept constant to avoid them influence the independent and dependent variable (Saunders et al., 2019). These variables are not the focus of our study but can still be of interest. Considering that the experiment was executed with the collaboration of other research subjects, we chose to ask for some control variables. Nevertheless, due to the limitation of this study we will not discuss any of them. The study contained 228 males and 198 females, with a relatively even distribution between the age group 30 to 60, and a little lower above. More information about the control variables can be found in *part 6.4.2*.

# 6.3 Elaboration of the design and content for the experiment

### 6.3.1 Elaboration of the FinTech mock-up

From the qualitative interviews we discovered that the new payment directives PSD2, have not yet revolutionized the market, and consumers seem to be little interested in the new proposed services. Because of this we eliminated the option of making a payment FinTech service. From the informants, we discovered that mortgage services and platform solutions seemed intriguing for consumers. Several of the informants suggested a service that could switch your mortgage from bank to another bank automatically depending on where you get the best conditions. The decreased importance of mortgage provider, and increased importance of platform provider made the mock-up service evident. The informants from the qualitative interviews mentioned several interesting FinTech services, mostly Norwegian (See *table 2*). By creating users and examining local and national bank applications, together with modern FinTech services such as Dreams, Spff, Vipps, Tjommi, Renteradar, Horde and Bulder Bank we managed to gain a rich understanding of the main design characteristics and functionalities of these applications. We also attended a webinar about atomization of mortgage grants organized by; Knowit, Dploy, Signicat and Ambita. These are companies working in the heart of FinTech development in Norway. Having finished the qualitative interviews, we created a mind map, where we suggested several potential financial services or functions that could be interesting for our mock-up. It was important to make a service that could be perceived as risky for certain consumers, as our objective for this study is to measure the role of trust and brand trust. Without perceived uncertainty, we were afraid to not be able to capture the focus of our study, the role of trust and brand trust. Having finished the brainstorming process, we briefly made suggestions to possible mock-ups for the FinTech service. When the service was settled, we got a professional to design an adept version of the final solution through the designer software, Figma. In Figure 4 below you will see an example of the mock-up solution for the brand, Prisjakt.



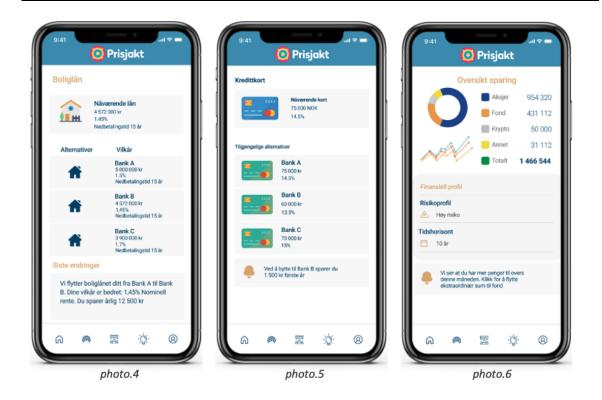


Figure 4: Photos of final mock-up, Prisjakt

## 6.3.2 The final mock-up

The final mock-up off our Fintech service consisted of six slides. The first slide is a log in page (photo.1). From the study of other applications this seemed natural to include. The second slide (photo. 2) indicates the personal information that the user can provide for the service to offer optimal and tailored solutions. This included information from the National Population register (Folkeregisteret), financial transactional information, salary, debt, value of property and location. From the literature review we learned that perceived privacy and security risk is becoming more important, and we therefore found that this service would increase the feeling of insecurity and trigger the need for trust. The third mock-up slide (photo .3) offers an overview of the user's savings, mortgage, and credit card situations. The service rates the present savings, mortgage, and credit card condition and situation from good to bad. In the bottom of the photos, we can see two notifications indicating that the FinTech service has found a mortgage and credit card that offers better conditions. Photo 4, 5 and 6 goes more in detail into the three services in question: mortgage, credit card and savings. The mortgage page (photo.4) displays the present mortgage of the user with relevant

information such as interest and down payment time. On the middle of the page, we can see the FinTech service has found three other relevant alternatives from other banks. The bottom of the page illustrates the last changes done to the mortgage service. In this case the application is moving the mortgage from Bank A to Bank B, as the financial conditions are more advantageous. Yearly the user will save 12500kr by effectuating this change. The credit card service (photo.5) is similar to the mortgage service. The present credit card is indicated on the very top, with alternatives displayed on the middle of the page. At the bottom there is a notification saying that the user would save 1500kr the first year by changing credit card to Bank B. The last slide of the mock-up (photo.6) indicates a graphical illustration of the user's financial placement of savings. In this case, the user has approximately 1,5 million NOK in total savings placed in actions, funds, crypto currency and other. The users have a high-risk profile, with a time horizon of 10 years. At the bottom of the page, there is a notification pin-pointing that the user has more money left this month then normal. By clicking on the notification, the application will automatically take an extraordinary sum from the user account and place it in savings.

## 6.4 Data collection

## 6.4.1 Sample for the experiment

We chose to conduct a quantitative analysis as we wanted a representative sample the Norwegian population (Jacobsen, 2015). Our sample population consists of Norwegian citizens from 30 years old and upwards. We chose not to include people under 30, as we considered that adults over this age are more likely to have a mortgage, credit card and savings. For this reason, we imagined that younger people under 30 would not be able to realistically envisage the possible risk of a misfunctioning to the same extent, whether as people over 30 with in general a more complex financial situation, and a bigger financial loss at stake would be able to consider the service more realistically. It is important to note that this is only a generalization. We chose a probability sampling. This is because we want our deductive approach to have representative answer, where the data can be replicated to later studies. The sample size calculation is inspired by Kadam and Bhalerao (2010).

$$n = \frac{2(Z\alpha + Z_{1-\beta})^2 \sigma^2}{\Delta^2} = \frac{2(1,96 + 1,65)^2 * (1,5)^2}{1^2} \approx 104$$

(Equation nr. 1)

n= respondents per group104
$$\sigma$$
= Estimated standard deviation2,0 $Z\alpha$ = Confidential interval1,96 $\triangle$  = estimated effect size1 $Z_{1-\beta}$ = The strength of the study1,65

Table 9: Calculation of necessary sample size

In our study we are using a 95% confidence interval. This interval is constant throughout the study and indicates that we are willing to accept the null hypothesis if the p-value is higher than 0,05 (p > 0,05).  $Z_{1-\beta}$  represents the power of the study. When wanting a power of 95%, we need a strength of 1.6449. Appendix 1 contains information about the descriptive statistics of our analysis. The standard deviation is set to 2,0. We assume this to be a fair, since we are assuming a relatively homogeneous population, but also with some variation as we are testing adults in all ages. The 7-point Likert-scale naturally gives limitations to the distribution of data.

Our aim is to calculate significant effects. Therefore, we set the effect size to be 1. The calculated results convey a necessary sample size of 104 participants. In our study we decided to use 150 participants in every group. According to this formula our sample size appears to be sufficient. Nevertheless, according to Saunders et al., (2019) all sample sizes with a population higher than 100 000, and a margin error of 5% should have over 384 responses. This is partially respected as the experiment contained 450 unique respondents, but only 150 in every group. Based on these arguments we judge the sample size to be representative, but with certain limitations.

We chose to effectuate a classical experiment by the help of the software "Qualtrics". Qualtrics made it possible to assign the respondents randomly and evenly to the three selected brands. Each group consisted of 150 respondents over 30 years old. The responses were collected by the help of the organization; Norstat, a professional data collection company. By doing this we made sure to collect a representative collection of respondents from Norwegian adults over 30 in all ages. By using the median value of the age intervals, we find an average age of 50 among the respondents. The distribution between gender and age was equally distributed.

Category		n	Tryg	Amazon	Prisjakt
Gender					
	Male	228	77	75	76
	Female	198	65	67	66
Age					
	30-40	126	36	37	53
	41-50	91	36	29	26
	51-60	104	29	35	40
	61-70	64	29	23	12
	71+	41	12	18	11

Table 10: Distribution of respondants according to brand, age and gender

We first asked the respondents concerning some -control and moderating variables. Further, the respondents got assigned to Mock-ups of the potential FinTech service delivered by either Amazon, Prisjakt or Tryg. After the experiment we asked them about their Intention and Attitude towards the service (The independent variables), then we asked them about mediators such as perceived risk and trust towards the service. In our questionnaire we chose to have the control variables and the moderating variables first as we were afraid that general subjective answers, non-related to the experiment could be influenced if we asked the questions in the end. As an example, we asked for the respondent's familiarity about a specific brand. If we had asked this question in the end of the survey, the respondent might consider its familiarity to be lower, as the FinTech mock-up don't correspond to the brands common services and products.

# 6.5 Evaluation of method

## 6.5.1 Validity

Validity refers to the pertinence of the measures used, the exactness of the analysis and the results, and lastly generalizability (Saunders et al., 2019, p.214). Various types of validity are suggested in the literature (Oluwatayo, 2012) and researchers must decide themselves what criteria they find important to analyze. From previous quantitative and experimental studies, we find it relevant to assess the following: (1) Measurement validity, (2) Internal validity and (3) External validity.

#### Measurement validity

Measurement validity is in particular relevant for survey research methods (Fink, 2010). To measure this, we will firstly evaluate the construct validity of the survey. This will be done be evaluating convergent and discriminant validity. Further we will evaluate the translation validity through face- and content validity.

#### **Construct validity**

*Construct validity* is according to Wainer and Braun (1998), the most important validity factor in quantitative research. This validity type concerns to what extent the survey manages to measure the concepts and theoretical constructs that it is alleged to. Construct validity consists of two main subcategories of validity: *convergent validity* and *discriminant validity*. *Convergent validity* test whether the items that should be related to the same construct, are related. Discriminant validity test whether constructs that should be unrelated, are, in fact, unrelated.

*Convergent validity* can be measured through a Pearson correlation. This verifies whether there is a linear relationship between the different variables and is a number between -1 and 1. By conducting a Pearson correlation matrix between all the variables, we found almost all items to significantly correlate with every construct. Two items from the technology familiarity had a very low (r= 0.0,25) non-significant correlation with the other four constructs. We therefore decided to remove these. For the other constructs, every item had a significant, either moderate correlation (r= 0,5-0,69) or high correlation (r= 0,7-0,89). By this we can argue that the data appear to convey a linear relationship. Nevertheless a high correlation might also be a risk towards multicollinearity. In cases where the results appear to suffer from this, it can be beneficial to study the correlating variables individually. The

correlation matrix with all the items will not be displayed considered its complexity and difficulty to read. Appendix 4 contains a correlation matrix with the different constructs, with the items grouped together. From this we see that all the constructs are significantly correlated, some more than others. We can observe an increase in the degree of correlation between the dependent variables and the moderators and mediators.

#### The principal component analysis

A principal component analysis (PCA) examines the validity of the question items in relation to the measured constructs. Due to our assumption of correlated variables, it is suitable to use the "Oblique Rotation" method. The data is suitable for a PCA test if the KMO (The Kaiser-Mayer-Olsen) score is above 0,6, and a Bartlett's score with a significance level below 0,05 (Field, 2013). As illustrated the table 11, our results have a KMO value of 0,922 and its p-value is 0. The required conditions to conduct a PCA analysis, is therefore satisfied.

Kaiser-Me sampling	•		0,92	
Bartlett's Spherity	Test	of	Approx. Chi- Square	12918,93
			df	496
			Sig.	0,00**

Table 11: Kaiser-Mayer-Olkin measure of sampling adequacy (KMO)

In our research model we tried to measure 8 different constructs. Considering that the *knowledge* construct consists of three under categories; *brand-*, *technology-* and *financial familiarity* it is natural to assume that these categories will be separated into three different components in the principal component analysis. Therefore, we conducted an analysis with 10 constructs. The total variance depicted, that 10 components explained 73,2% of the variance in the data. The Eigenvalue of 1, suggests 7 components. These results also managed to catch the main constructs; however, the results were more accurate with 10 constructs.

To make sure that the two items in the technology familiarity construct should be deleted, we conducted one analysis with and without. The CPA analysis illustrated that these items did not group together with the other 4 items in the construct. We therefore kept them removed

from the study. We programmed the analysis to only display the factors loading over 0,30 as these are considered significant with sample sizes that exceeds 100 (Kline, 2002, p, 52-53). Intention, and Attitude are defined as different constructs in our study, while SPSS merged them. As stated in the literature, Attitude and Intention are closely related. Since the two constructs are all dependent variables related to adoption, we find this acceptable. According to the Pearson correlation matrix, these constructs have a high significant correlation (r= 0,877). The correlation does not exceed r= 0,9. By this, the analysis manages to capture a slightly difference between Intention and Attitude indicating that the construct, Perceived risk. In the PCA analysis perceived financial risk separates from perceived -privacy and -security risk. This seems logic, given the assumption that security and privacy are more similar notions then financial risk. When conducting a CPA analysis of 9 components, all off the perceived risk components seemed to regroup. Since our analysis is measuring 10 components, we choose to illustrate the following matrix.

Table 12 conveys the grouping of items into constructs, generated by the PCA analysis. The pattern matrix can also be found in Appendix 3.

Components											
	1	2	3	4	5	6	7	7 8 9			
Dependent variables (Adoption)											
Jeg hadde tatt i bruk denne tjenesten dersom den kom på markedet (Intention)	-,793										
Jeg er villig til å oppgi personlig informasjon til denne tjenesten, slik at den kan finne optimale produkter for meg (Intention)	-,662										
Jeg er positive til denne tjenesten (Attitude)	-,764										
Denne tjenesten er attraktiv (Attitude)	-,722										
Mediators											
Trust											
Denne tjenesten har tilstrekkelig med kompetanse for å finne de beste betingelsene for meg (Ability)		,550									
Denne tjenesten vil over tid tilpasse seg meg og mine finansielle behov (Ability)		,579									

Denne tjenesten oppgir pålitelig informasjon (Integrity)	,689							
Denne tjenesten vil holde løftene den gir meg (Integrity)	,715							
Denne tjenesten sin primærintensjon er å hjelpe meg (Benevolence)	,628							
Denne tjenesten ønsker genuint at jeg skal være fornøyd (Benevolence)	,720							
Risk								
Det er en stor sannsynlighet for at jeg taper penger ved å bruke denne tjenesten. (Financial)		,849						
Ved å bruke denne tjenesten vil jeg bekymre meg for å ha gjort en dårlig investering (Financial)		,800						
Jeg føler meg ikke trygg når jeg oppgir informasjon til denne tjenesten (Security)			,647					
Denne tjenesten vil ikke evne å beskytte mine personopplysninger (Security)			,861					
Denne tjenesten kan ikke garantere sikker flyt av min personlige informasjon (Privacy)			,874					
Tjenesten har ikke ressurser eller kompetanse til å unngå at hackere får tilgang til systemet (Privacy)			,843					
Type of competence								
Jeg ser på dette merket som kreativt (Conceptual)				,678				
Jeg ser på dette merket som fremtidsrettet (Conceptual)				,724				
Jeg ser på dette merket som dyktig (Operational)				,707				
Jeg ser på dette merket som kompetent (Operational)				,604				
Peceived fit								
Denne tjenesten passer til merkevaren (Perceived fit)					,864			
Det er logisk at dette merket leverer denne tjenesten (Perceived fit)					,849			 
Moderators								
Technology knowledge								
Jeg kjenner godt til AI (Kunstig Intelligens)						,589		
Andre folk kommer til meg for å spørre om						,857		
L	J						 l	l

råd angående nye teknologiske produkter						
Blant mine venner er jeg en av de første til å bruke produkter med ny teknologi			,849			
Jeg liker teknologi som tilpasser seg mitt behov			,526			
Brand knowledge						
Hvor godt kjenner du til dette merket?				,974		
Hvor godt kjenner du til produktene til dette merket?				,966		
Financial knowledge						
Jeg har høy kunnskap om finansielle tjenester					1,002	
Jeg har høy kunnskap om digitale finansielle tjenester					,917	
Dispositional trust						
Jeg pleier generelt å stole på andre						,908
Jeg pleier å tenke det beste om folk						,918

#### Table 12: Pattern matrix

*Discriminant validity* ensures that measures that are distinct, are not related. This is relevant, as we want variables to relate more strongly to their own construct, rather than other constructs. To ensure *discriminant validity*, one item should ideally only be related to one factor. In this study we are measuring the discriminant validity based on the Fornell-Larcker criterion (1981). This criterion states that the square root of AVE (Average Variance Extracted) of every latent, needs to be greater than the correlation coefficient. These variables have been calculated in Appendix 6. An illustration of the correlation matrix with the AVE square root can be found in the same appendix (Appendix 6). As illustrated, only perceived financial risk is valid according to these criteria. As can be seen from table 12, the three different trust-dimensions load on the same factor. Ideally, these should make up three distinct factors. For the analyses and hypotheses testing, we still choose to retain these as three separate factors as previous studies have found these to be conceptually and empirically distinct dimensions of trust (E.g., Mayer et al, 1995). These concepts may therefore have different antecedents and consequences even though they load on the same factor in the factor analyses.

By this we can conclude that convergent validity is valid, whether as discriminant validity suffers from somewhat poor results and will potentially limit the study results.

#### **Translation validity**

*Face validity* is a subjective evaluation of whether the measurements and scales are suitable to measure what they are intended to measure (Saunders et al., 2019). This criterion cannot be evaluated statistically but require experts in the field to evaluate the quality of the survey. All of the questions are already established measurements from previous studies (See appendix 7). The weakness of this criteria is its translation from English to Norwegian. We mitigated this, by asking for validation from our supervisors. We also made friends and family test the survey before it got launched. The survey got adjusted according to this. We therefore judge our survey to fulfill this criterion sufficiently.

Content validity is a minimum requirement of acceptance (Bannigan & Watson, 2009). This criterion ensures that only relevant questions, issues, and terms are included, and for irrelevant content to be excluded. This can be assessed by comparing the questions towards the literature. Regarding this study, we made sure to include questions that were relevant for all the measured variables, in line with the research question and our hypotheses. Every factor got measured with at least two items to ensure a greater extent of validity. Nevertheless, due to restrains in resources we chose to effectuate our data collection together with other researchers, studying similar phenomenon's. As consequence not all the questions, and the control variables were equally important for the different studies. All the questions were based on former studies, to ensure the validity of the measurements. We made sure that the mock-up slides of the FinTech service had detailed and relevant text explanation, to make sure that the respondents would understand the service. We used *italics*, **bold**, and underlining tools to enhance important words in the questions. As an example, some questions consisted of the negation "not". In order to understand the question correctly, we made this word more visible to make sure that that the respondent would not misread the question.

#### Internal validity

According to Cook and Campbell (1979), there are many potential threats toward internal validity. Saunders et al., (2019) mentions six threats that are considerable: (1) *Past or recent events*, (2) *testing*, (3) *Instrumentation*, (4) *mortality*, (5) *maturation* and (6) *ambiguity about causal direction*. *Past or recent events*, concerns whether the dependent variables (Attitude

and Intention) are affected by outside factors during the experiment. This threat is more relevant for studies that lasts over time. Our study was estimated to last between 10-15 minutes. We therefore assume that this threat is low for this study. We also consider *testing effect* to be low, as me made friends and family do the pre-test, whether as the real test was effectuated by respondents from Norstat. To avoid instrumentation, we used the same software and experiment through Qualtrics to collect all the data. This makes the comparison of data very feasible. Since the experiment only lasted for 10-15 minutes, we do not consider mortality as a big threat to our study. Maturation can occur when a survey is timeconsuming and respondents experience fatigue. In our experiment we therefore chose to have less important questions, such as the moderators in a matrix format to make the survey quicker, by emphasizing the most important variables. The respondents were informed in advance how long the survey would be, by doing this they could mentally prepare for the time it could take. According to Qualtrics, a survey should not exceed 12 minutes, in order to avoid maturation (Qualtrics, 2021). Thus, we believe that our experiment respected a valid time to avoid significant degrees of this threat. Ambiguity about causal direction, represents a lack of clarity between the cause and the effect. Overall, we judge the internal validity of this experiment to be high quality.

#### External validity (Transferability)

External validity bears upon the possibility to replicate the study to other contexts. This can be challenging for experiments, and several researchers have raised their worry about this (Druckman et al., 2011). In the literature we often distinguish between (1) *population validity* and (2) *ecological validity* (Bracht & Glass, 1968). The first, deals with the generalization of the study, from a sample to a larger group. To achieve *population validity*, it is important that the sample mirrors the population. The study has an even distribution of adults from 30 and upwards. The data is equally distributed between genders and people with various levels of education. As seen in *part 6.4.1*, we only needed 104 observations for n in order for it to represent a valid sample, we had 450 respondents. Since the data collection was executed by a professional company, they ensured that our data would be representative for the population. Overall, we consider population validity to be of a high quality. *Ecological validity* is about the replicability of the study to the real world. For our study, this would mainly raise the concern of our FinTech service, that is tested through an illustrated mock-up. We can argue that seeing images of a solution, might not fully give the right impression of the mobile application for our respondents. We tried to make the mock-

up as real as possible by drawing inspiration from other similar services, as well as having a professional designing the service. The mock-up was putted inside a photo of a mobile phone for the service to appear more real. We also explained the service detailed with text on the side. Together with the explanations and people's general familiarity with mobile applications, we assume that our mock-up managed to give a sufficient valid result, but with its natural limits. Since the respondents completed the experiment where they wanted, we can consider that this environment represented a "real world" environment making the external validity greater. Overall, we judge our experiment valid, but acknowledge the limits of using a mock-up and not a real mobile application.

#### 6.5.2 Reliability of the dataset

#### Reliability

A study is considered reliable, if it is consistent and has the Ability to be replicated to other contexts. Research that proves to be unreliable will also be considered invalid. (Saunders et al., 2019 p. 214). Portney and Watkins (2000) defines reliability as" the extent to which a measurement is consistent and free from error". This definition implies two criteria's, "consistency" is about the Ability to replicate the same results to several occasions, and "free from error", meaning that the values obtained should not differ from the true value (Rothstein, 1985). To evaluate the reliability of this study, we will firstly analyze the consistency of the study and lastly the threats against bias and errors.

Several methods can be applied to measure the reliability of quantitative studies. Nevertheless, according to Sürücü and Maslakçi (2020) it is sufficient to only implement one internal consistency test, instead of also having to implement the test-retest assessment and other alternative forms for studies that use previous developed scales from reliable studies. As this is the case for our study, we will exclusively evaluate for internal reliability, bias and error.

#### Internal reliability

*Internal reliability* is essential when measuring the same constructs through several items, and Cronbachs alpha is considered the most preferred and commonly used method to measure this (Sürücü & Maslakçi, 2020). This test evaluates how closely a set of items are grouped, and ranges from 0 to 1. Results over 0,7 are considered acceptable, and scores over 0,9 are defines as being excellent (George & Mallery, 2003). We obtained a Cronbach's

alpha of 0,834 with all the 32 items in our study as illustrated in table 13. All the constructs measured in the study have a Cronbach's alpha above 0,8, and some over 0,9 indicating excellent results. Overall, we judge the internal consistency of the study to be satisfied.

	Cronbach's Alpha	N° of items
All variables together	0,83	32
Dependent variables		
All dependent variables	0,95	4
Intention	0,90	2
Attitude	0,94	2
Mediators		
Trust	0,93	6
Perceived Risk	0,92	6
Perceived competence	0,94	4
Perceived fit	0,89	2
Moderators		
Dispositional trust	0,81	2
Knowledge	0,83	8

Table 13: Cronbach's alpha, summary

#### Bias and error

A reliable study should ideally be free from measurement errors. According to Carmines and Zeller (1979), measurement error can be divided into two sub-groups: *Systematic bias* and *random error* among the researchers and the participants. In the next paragraphs we will evaluate these factors.

#### Participant- and research- Error

*Participant error* can be induced by factors that makes the respondent answer differently compared to what they truly would in an implicit manner. To mitigate this threat, we made sure to inform the respondents about the time of the study in our introduction, to avoid threats such as fatigue and other disruptions. Since the study was online, it was up to the respondent to decide when and where to take the survey. We can therefore assume that most respondents would choose to take the survey at an ideal time and place. Our experiment was conducted as a survey in which every respondent received the same. As a researcher we did not intervene during the completion of the survey. Nevertheless, we made sure before launching that all the researchers and the supervisors had gone through the survey several times. The interpretation of the data has been done according to statistical measures, by

checking the responses several times. We therefore evaluate *research error* to be relatively low for this study.

#### Participant- and research- Bias

Bias is led by factors that can induce false responses. *Participant bias* can happen if the respondents feel uncomfortable to answer the questions, they might provide another answer then what they truly would. We informed the respondents that every answer was anonymous and could at no time be traced back. The respondent could complete the experiment anywhere. We can therefore assume that the respondents would take the responsibility to answer the survey a place where they feel comfortable to answer what they truly thought. The questions did not contain intimidating topics concerning the respondents either. We therefore evaluate the participant bias to be low. *Researcher bias* is when the researcher interprets the answers wrong. Considering this being a quantitative study, the analysis and interpretation will be based on statistically supported empirical data, and not subjective opinions. By this we assume the threats to reliability to be highly mitigated in our study.

# 6.5.3 Evaluation of ethical aspects for all the studies (pre-studies and main study)

The National Committee for Research Ethics in the social Sciences and Humanity in Norway (NESH) has elaborated guidelines for research regarding Social Sciences, Humanities, Law and Theology (NESH). According to Johannessen et al., (2011) the goal of the guidelines is to mainly preserve three main areas: (1) *The respondents right to autonomy*, (2) *The right to preserve the respondent's private life*, and (3) *The researcher's responsibility to avoid any harm.* (1) *Autonomy* concerns every respondent right to voluntary consent, and to withdraw from the survey without any reason. All the informants from the qualitative pre-study agreed voluntary to participate in the study. In the front page for the quantitative -pre and main study we made it clear that our survey was voluntary. The respondent could retrieve from the study at any given time without any particular reasons. (2) *The right to preserve the respondent's private life* requires transparency in the use of the collected information. For the qualitative pre-study, we informed the respondents that all responses were anonymous, and that the information collected would only be used for this study. Since we did not handle personal information in the study, which will not be saved electronically after the research,

we did not register our qualitative study to NSD (Norsk samfunnsvitenksapelig datatjeneste). The respondents in the quantitative studies are also anonymous, and it is not possible to identify the respondents after the data collection. The data will be deleted when this study is finished. The third criteria; (3) *the responsibility to avoid harm* was mitigated in all the studies, by trying to avoid strains towards the respondents. All the studies were effectuated through a computer. We can assume that this would not have any negative impact that could procure any physical harm. The questions were not considered very sensitive, which also reduces the risk of mental harm. We therefore evaluate the ethical criteria of the studies to be satisfied.

### 7. Analysis

To answer the research question about the role of brand and brand trust in the adoption of a FinTech service, and the transferability of trust from a brand to a service we will mainly use ANOVA, MANOVA and HAYES Process macro analysis.

### 7.1 Analysing the hypotheses through ANOVA/MANOVA and Hayes PROCESS macro analysis

ANOVA can be used to test potential differences in means between three or more groups. In cases where the study has one dependent variable. MANOVA can be used when there is more than one dependent variable. Instead of obtaining a univariate F-value, we will obtain a multivariate F-value for the MANOVA analysis (Ghauri & Grønhaug, 2010). The test analyzes whether the dependent variable(s) is significantly affected by the independent variables. Some of the main assumptions for the test to be valid are the following (Weinberg & Abramowitz, 2008): (1) A normal distribution of observations, (2) Independence of the observations and (3) homogeneity of variance.

#### Normal distribution

The dependent variables should be normally distributed. The Kurtosis measure is suitable to verify this assumption, as it is considered a measure of outliers. Perfectly normal distributed results have a skewness of 0. The values should not exceed the following interval [-1;1] (Field, 2013). Appendix 1 indicates that the Kurtosis values of the variables are between 0,24 and -1,08. However, only one out of 16 variables exceed this critical value. The negative values indicate a left weighted distribution of observations, while the positive values indicate right weighted observations. The central limit theorem, states that all samples greater than 30 are considered acceptable for the normal distribution. We can therefore argue that all results with more than 30 observations will follow a normal distribution.

#### Independence of observation

The ANOVA and MANOVA analysis require independent observations. The data was gathered through the professional company NORSTAT, were we requested unique observations. We assume this requirement to be fulfilled.

#### Homogeneity of variance

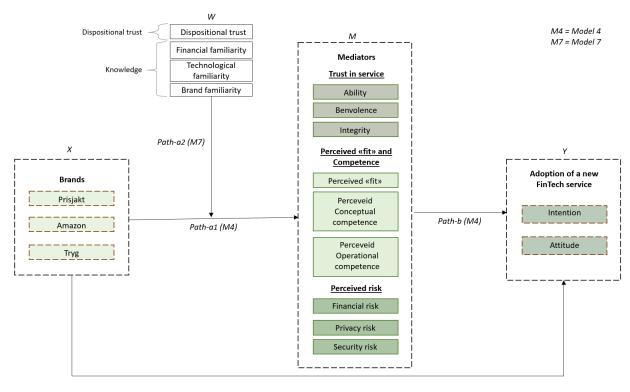
This assumption consider that all the dependent variables have similar levels of variances. A test of homogeneity can be done through the Levene's test in SPSS. For this requirement to be valid, the result must be nonsignificant, meaning that the p-value must be  $\geq 0.05$  in order

for this assumption to be valid.

#### Relevant test in MANOVA and ANOVA

The MANOVA tests generates a Multivariate test table. In this study we will use the Pillai's trace as measurement, as this is the test recommended for general use (Olson, 1976). If the p-value  $\ll 0,05$  we can conclude that the differences between the dependent variables and the fixed effects are significant. A contrast analysis will sometimes be executed in order to test

specific differences in certain parts of the study. This makes us able to study not only if a significant effect exists, but also its importance and direction, by comparing different means.



### 7.1.2 Preparing HAYES PROCESS analysis

Path-c' (M4)

Figure 5: The research model, visual presentation of the PROCESS analysis by Hayes

To answer the hypotheses, we have been conducting several PROCESS Macro analyses by Hayes (2018) in SPSS. This analysis has been widely used in psychological science (Hayes & Scharkow, 2013) as it helps to figure out how certain phenomenon are working. This analysis enables the possibility to measure potential direct or indirect causal relationships between the independent variable X, and the independent variable Y. We find the mediation analysis suitable, as it aims to measure to what extent a variable X on Y depends on a mediator M<sub>i</sub>, or moderator W<sub>i</sub> variable. Figure 5 indicates the research model that has been used for this research project. For all of the hypotheses, with the exception of hypothesis H6, we have been using model 4 of the PROCESS macro analysis. For hypotheses H6 we have been using model 7 to evaluate the results. For every hypothesis there will be an illustration of what relationship (path) and variables in the model that is being analyzed.

### 7.2 Analyzing the hypotheses

#### 1. Brand Trust can be transferred from a brand to a FinTech service

In this section, we will investigate whether trust can be 'transferred' from a brand to a FinTech service. First, we test whether brand trust levels lead to comparable trust levels for the FinTech service for each brand. Hence, for analyzing H1.1 we perform both a MANOVA analysis as well as investigating the paths of the first part of the mediation model (path-a in the PROCESS macro). Second, we will test H1.2 where we also compare level of trusting beliefs in the pretest with the experiment.

## H1.1 Brand trust will overall have a positive effect on a) Overall Trust, b) Ability, c) Integrity and d) Benevolence in a FinTech service

#### H1: MANOVA analysis

To find out whether Brand Trust will have a positive effect on Trust in a FinTech service, and whether Brand Trust is transferable from a Brand to a service, we will first conduct a MANOVA analysis for all of the trusting dimensions and *Overall Trust*. The purpose is to analyze whether there is significant difference in mean levels between *Brand Trust*, and the different dimensions of trust. If we manage to confirm significant difference there is a

greater chance to find a positive effect between *Brand Trust* and Trusting beliefs in a FinTech service.

The dependent variables for this analysis will be the trusting beliefs in a FinTech service: *Integrity, Benevolence, Ability and Overall Trust.* The *Brand Trust* variable will be the independent variable. In appendix 1, we can observe that all off the dependent variables have a kurtosis value in line with what is acceptable in order to assume a normal distribution of the results (Field, 2013). The test of homogeneity based on mean where between 0,07 (Integrity) and 0,69. The two other observations had a value of 0,56 and 0,41. The Box's test of equality had a P-value= 0,04. This value is not significant. However, considering that every group consisted of more than 30 respondents, we can judge the MANOVA analysis to be sufficiently robust against this violation of the covariance (Allen & Bennet, 2018).

#### A MANOVA test

	Value	F-value	P-value	Observed power	
Pillai's Trace	0,042	2,41	0,01**	0,90	
Table 14: MANOVA test results of Brand Trust on Overall Trust					

Table 14: MANOVA test results of Brand Trust on Overall Trust

	Ability	Integrity	Benevolence	Overall Trust
Prisjakt	3,34	3,45	3,20	3,43
Amazon	3,21	3,15	2,74	3,15
Tryg	3,63	3,76	3,34	3,69

Table 15: Mean score of Trust in FinTech service according to Brand

The value of the Pillai's Trace is 0,042 and the F-value= 2,41. Despite of the significant results ( $P=0,01^{**}$ ) we consider this to be noticeably low. In table 15 we observe the means scores of the different trusting beliefs according to the three brands. To analyze the mean scores further we executed a multiple comparison test. The results are displayed in table 16.

Trust dimension		$M_{\text{diff}}$	P-value
Ability			
	Prisjakt-Amazon	0,13	0,69
	Tryg-Amazon	0,42	0,02**
	Tryg-Prisjakt	0,29	0,16
Benevolence			
	Prisjakt-Amazon	0,46	0,04**
	Tryg-Amazon	0,60	0,00**
	Tryg-Prisjakt	0,14	0,54
Integrity			
	Prisjakt-Amazon	0,30	0,13
	Tryg-Amazon	0,61	0,00**
	Tryg-Prisjakt	0,31	0,12
<b>Overall Trust</b>			
	Prisjakt-Amazon	0,28	0,16
	Tryg-Amazon	0,54	0,00**
	Tryg-Prisjakt	0,27	0,18

 Table 16: Multiple comparison test between different brands, according to trusting beliefs

In table 16, we only observe significant differences between Tryg and Amazon for all of the trusting dimensions. We also find a significant difference between Prisjakt and Amazon for *Benevolence*, none of the other relationships have significant results according to this test. These results can look as if the effect of *Brand Trust* does not necessarily have a big impact on the trust in a FinTech service. We see that *Benevolence* is the only trust dimension that has two out of three significant results. The other dependent variables only have one out of three significant variables. Due to the significant MANOVA test combines with weak and unclear results it is relevant to conduct a PROCESS macro analysis to get a greater understanding of the role of Brand Trust on trusting beliefs in a service.

#### H1: PROCESS macro analysis

We have conducted the analysis in SPSS, by the use of model 4. (Independent variable: *Brand Trust*, mediator: *Trust*, and independent variable: *Intention*). As indicated in figure 6 we will analyze *path-a* in the model. This path measures the effect of the brands, towards trusting beliefs. To get a brief overview we will first measure *Overall Trust*, before we go more into detail within the three trusting dimensions: *Ability*, *Benevolence* and *Integrity*.

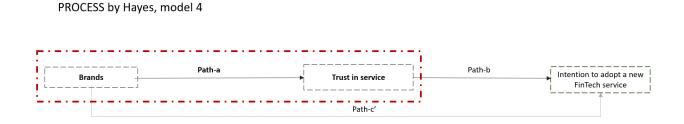


Figure 6: PROCESS analysis, path-a

#### H1.1 a) Brand Trust will have a positive effect on Overall Trust in a FinTech service.

Model summary	$R^2 = 0,07$	F-value= 3,1	P-value= 0,08
	Coeff= b	t-value	P-value
Brand Trust	0,13	1,76	0,08

**Outcome variable: Overall Trust** 

Table 17: path-a, The effect of Brand Trust on Overall Trust

Table 17 illustrates the effect of *Brand Trust*, on trusting beliefs. The model has an explanatory power of 0,07 and is not significant (F= 3,1; p= 0,08). The coefficient of the brand variable is positive b= 0,13 (F= 1,76; p= 0,08) but is not significant either. Due to low explanatory power of the model, and the non-significant results, it appears that overall Brand Trust do not have a significant impact on Trust in a FinTech service. The hypothesis is therefore *not supported*. For this reason, it is interesting to go deeper into every trust dimension to see whether there significant differences between them, or whether the non-significant results are present among all off the dimensions.



$$\widehat{M} = 3,34 - 0,13_{X1} + 0,29_{X2}$$

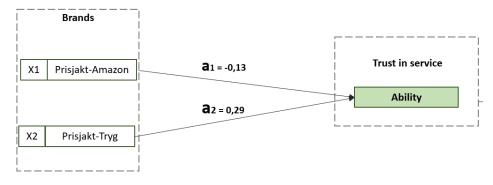


Figure 7: Brand Trust, and it's effect on Ability towards a new FinTech service

-				5				
Mo sun	odel nmary	R <sup>2</sup> =	0,01	F-valu	e= 3,66	P-	value= 0,03*	
		Coe	ff= b	t-value	e	P-'	value	
Pris	sjakt	3,34	Ļ	29,76		0,0	)0**	
X1:	= a1	-0,1	3	-0,82		0,4	41	
X2:	= a2	0,29	)	1,83		0,0	)7	
	Mear Abilit	·	Pris	jakt	Amazon		Tryg	
			3,3	34	3,21		3,63	

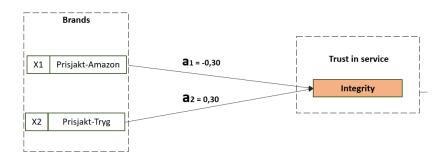
**Outcome variable: Ability** 

Table 18: Model summary of the effects of Brand Trust on Ability, and overview ofmean according to brand

Table 18 reveals that this model has an explanatory power  $R^2 = 0,01$ . This indicates that the model explains about 1% of the variability in the dependent variables. This is considerably weak and limits the credibility of the results. Nevertheless, the overall model is statistically significant (F= 3,66; p= 0,03\*\*). The analysis reveals that there is no statistically significant difference between Prisjakt and Amazon b= -0,13 (t= -0,82; p= 0,41), nor Prisjakt and Tryg b= 0,29 (t= 1,82; p= 0,07). We notice that Tryg has the highest mean (3,63), and Amazon the lowest (3,21). Nevertheless, none of the differences in *Ability* among the brands are

significant. This means that we cannot assume that Brand Trust has a significant impact on Ability in a FinTech service. The hypothesis is therefore not supported. Due to these results, it is relevant to see whether there is a difference between Ability and the other affective trust dimensions.

H1.1 c) Brand Trust will have a positive effect on trust in a FinTech service.



 $\widehat{M} = 3,45 - 030_{X1} + 0,30_{X2}$ 

Figure 8: Brand Trust, and it's effect on Integrity towards a new FinTech service

**Outcome variable: Integrity** 

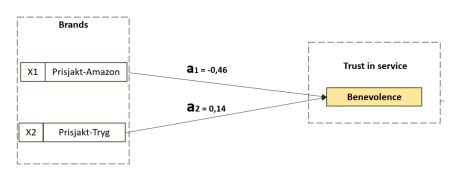
Model summary	$R^2 = 0,03$	F-value= 7,5	P-value= 0,00***
	Coeff= b	t-value	P-value
Prisjakt	3,45	30,81	0,00**
X1= a1	-0,30	-1,92	0,06
X2= a2	0,30	1,96	0,05*

Mean, Integrity	Prisjakt	Amazon	Tryg
	3,45	3,15	3,75

Table 19: Model summary of the effect of Brand Trust on Integrity, and overview of mean according to brand

Table 19 has an explanatory power  $R^2 = 0,03$ . This can be considered as weak and limits the credibility of the results. Nevertheless, the overall model is statistically significant (F=7,5; p= 0,00\*\*). The analysis reveals that there is not a statistically significant difference between Prisjakt and Amazon b= -0,30 (t= -1,92; p= 0,06) when it comes to differences in the level of *Integrity*. Prisjakt and Tryg b= 0,30\* (t= 1,96; p= 0,05\*) have significant differences. We notice that Tryg has the highest mean (3,75), and Amazon the lowest (3,15). We can therefore conclude that *the hypothesis c*) *is partially supported;* Brand Trust will have a positive effect on the beliefs of *Integrity* towards a new FinTech service. Nevertheless, the results must be interpreted with carefulness given the low explanatory power.

#### H1.1 d) Benevolence will have a positive effect on trust in a FinTech service.



 $\widehat{M} = 3,2 - 046,_{X1} + 0,14_{X2}$ 

Figure 9: Brand Trust, and their effect on Benevolence towards a new FinTech service

Outcome	variable:	Benevolence	
Model summary	$R^2 = 0,02$	F-value= 5,40	P-value= 0,01**
	Coeff= b	t-value	P-value
Prisjakt	3,2	23,69	0,00**
Prisjakt X1= a1	3,2 -0,46	23,69 -2,4	0,00** 0,02*

Mean, Benevolence	Prisjakt	Amazon	Tryg
	3,2	2,74	3,34

Table 20: Model summary of the effect of Brand Trust on Integrity, and overview ofmean according to brand

By looking at table 20 we can see that the model with *Benevolence* has an explanatory power  $R^2 = 0,02$ . In line with model a) b) and c) this is also considered as a limit to the credibility of the model. Nonetheless, the model is statistically significant  $p=0,01^{**}$  and the F-value is 5,40. The difference in the level of *Benevolence* between Prisjakt and Amazon seems to be statistically significant with a positive coefficient b=-0,46 (t= -2,4, p= 0,02\*\*). On the other hand, we do not observe a significant difference between Prisjakt and Tryg b=-0,14 (t= 0,73, p= 0,46). Similar to hypothesis b) and c) we can therefore conclude that the *hypothesis d*) *is partially supported*; the type of brand will have a significant positive effect on the beliefs of *Benevolence* towards a new FinTech service. Nevertheless, the results must be interpreted with carefulness given the low explanatory power.

# H1.2: The dimensions of trust in a brand a) Ability, b) Integrity and c) Benevolence are transferable to trust in a new FinTech service. Ability will be less transferable compared to Integrity and Benevolence

The pre-study was conducted with a 5-point Likert scale, whether as the main-study contained a 7-point-Likert scale. For this reason, it was necessary to transform the results from the pre-study in order to be able to compare the two studies. For this reason, we changed the variables of the pre-study accordingly: 7 *point scale* = 1,5 \* 5 *point scale* - 0,5. We kept the value 1, as 1, and the value 5 became 7. This conversion is in accordance with IBM SPSS support (IBM, 2021b). To compare the means scores from Brand Trust to the level of trust in the FinTech service we conducted a t-test. Considering that the majority of the respondents in the pre-study were young adults, we choose to only compare data from the youngest age group on the main-study in order to get the most reliable results.

Brand	Trusting beliefs	Pre-study	Main-study	$M_{\text{diff}}$	T-value	P-value
		(i)	(j)	(i-j)		
Tryg						
	Ability	5,27	3,74	1,53	6,01	0,00**
	Benevolence	4,63	3,76	0,86	3,39	0,00**
	Integrity	5,78	3,81	1,97	9,23	0,00**
	Overall trust	5,23	3,77	1,45	6,36	0,00**
Amazon						
	Ability	5,96	3,27	2,69	11,40	0,00**
	Benevolence	4,64	3,09	1,55	7,16	0,00**
	Integrity	4,89	3,17	1,73	8,11	0,00**
	Overall trust	5,16	3,18	1,99	9,49	0,00**
Prisjakt						
	Ability	4,59	3,39	1,20	4,50	0,00**
	Benevolence	5,40	3,51	1,89	7,98	0,00**
	Integrity	4,97	3,48	1,49	5,05	0,00**
	Overall trust	4,99	3,46	1,53	6,72	0,00**

Table 21: Comparing Brand Trust from trust in the FinTech service

From table 21 we observe that all off the measures have significant results with a p-value of 0,00\*\*. The results reveal a positive difference in the mean score for all off the brands and dimensions. This indicates that all of the brands have lost a significant amount of trust in the FinTech service, compared to the amount if trust they had in the brand from the pre-study. This can imply that the transfer of Trust from a brand to a FinTech service appears to be limited. To get a deeper understanding of the transfer of trust, we will look more thoroughly into every trusting dimension, one by one.

H1.2 a) Brand Ability is transferable to trust in a new FinTech service.

Tryg Prisjakt		sjakt	Amazon				
M <sub>diff</sub> 1,53**	$Rank_{diff}$	M <sub>diff</sub> 1,20**	$Rank_{diff}$	M <sub>diff</sub> 2,69**	Rank <sub>diff</sub>		
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						

Table 22: Transfer of Ability

We observe in table 22 that the difference in the mean score between the pre-study and the main-study are all significantly positive. This conveys a significant loss of Ability from Brand Trust and over to a FinTech service. We also see that all off the brands change their ranking position from the pre-study, compared with the main-study. Amazon goes from having the highest level of trust, into having the lowest compared to the other brands. Tryg

and Prisjakt go one ranking up compared to the pre-study, Nevertheless, it is difficult to draw any conclusion on the difference in mean from the pre- and the main-study. For Tryg, the difference in mean is the second highest, for Amazon it is the highest, and for Prisjakt it is the lowest. Due to the significant results and the change of ranking for every brand we can conclude that the *hypothesis H1.2 a*) concerning the transferability of Ability is not supported.

	Tryg		Pris	sjakt	Amazon					
Ma		Rank <sub>diff</sub>	$M_{\text{diff}}$	Rank <sub>diff</sub>	$M_{\text{diff}}$	Rank <sub>diff</sub>				
1,9	7**	0	1,49**	0	1,73**	0				
	Table 23: Transfer of Integrity									

H1.2 b) Brand Integrity is transferable to trust in a new FinTech service.

In line with hypothesis H1.2 a) we discover that all off the difference between the pre- and the main studies are significantly positive. Table 23 illustrates a significant difference between 1,49 and 1,97. This conveys that the level of *Integrity* in a brand seem to transfer over to a FinTech service with certain limitations. In terms of the ranking positions, we observe in table 23 that none off the brands change their position from the pre-study, compared with the main-study. However, it is challenging to draw any conclusion on the difference in mean from the pre- and the main-study. For Tryg, the difference in mean is the highest, for Amazon it is the lowest, and for Prisjakt it is the second highest score. Considering that all off the ranking positions are the same we can conclude that the *hypothesis H1.2 b*) *is partially supported*.

H1.2 c) Brand Benevolence is transferable to trust in a new FinTech service.

Tı	ryg	Pris	sjakt	Am	azon
$M_{\text{diff}}$	Rank <sub>diff</sub>	$M_{\text{diff}}$	Rank <sub>diff</sub>	$M_{\rm diff}$	Rank <sub>diff</sub>
0,86**	+1	1,89**	0	1,55**	-1
		<b>1 T C</b>	( D	7	

Table 24: Transfer of Benevolene

Table 24 conveys that the difference in the mean scores is all significantly positive between 0,86 and 1,89. We observe in the table that Tryg and Amazon change their ranking position with one spot, from the pre-study, compared with the main-study. Considering that the rankings only change by one position for two of the brands, together with having the lowest difference in mean we conclude the hypothesis H1.2c) to be *partially supported*.

#### **Reflection concerning the transferability of Brand Trust to a FinTech service.**

When analyzing hypothesis, we discover that Brand Trust appear to have a positive effect on Overall Trust, Ability, Benevolence and Integrity in a FinTech service. Through the comparison of means between the different Trust dimensions and Brand, we observe that not even half of the relationships measured are significant. Nevertheless, all off the significant results do always concern the same brand, Amazon in relation to another. Nevertheless, we do not see a significant difference between the different trust dimensions. The results appear to be nonetheless similar. The PROCESS model measuring the effect of Brand Trust on overall Trust is positive, but not significant, meaning that the role of Brand Trust on trust in a FinTech service seems to be limited. When investigating the transfer of Trust by comparing the pre- and the main-study, we realize that all of the brands loose between 0,86 and 2,69 points in their mean score. All off the relationships are significant and indicates a weak capability of trust to transfer. We observe that Ability appears to have weak capabilities of Trust transfer with a gap between 1,20 and 2,69 in mean scores between the two studies. For Ability, all off the brands change their ranking position. When it comes to the Affective trusting beliefs: Integrity and Benevolence we observe that their ranking position compared to the other brands stays constant between the main and the pre-study. This indicates that, despite of a loss in Trust between the brand and the service, the level of perceived *Integrity* stays the same compared to the other brands. We do discover some more fluctuation for the ranking position of *Benevolence*. Nevertheless, they are considerable weaker compared to what we observe with Ability.

Overall, it seems like the role of Brand Trust on trusting beliefs in a FinTech service is positive, but very limited. It also seems like the transfer of Trust from a brand to a FinTech service is restricted. Nevertheless, the affective trusting beliefs are too a greater extent transferable compared to the cognitive belief *Ability*. *Integrity* appears to be the most transferable trusting dimension.

# 7.2.2 Brand Trust will have a positive direct impact on the adoption of a FinTech service

# <u>H2.1:</u> Brand trust will have a positive direct influence on the a) Intention and b) Attitude to adopt a new FinTech service

#### H2: ANOVA analysis

Our research question is about finding the role of Brand and Brand Trust in the Intention to adopt a new FinTech service. It is therefore relevant to analyze whether the Brand Trust has a significant effect on the adoption variables. We will first conduct an ANOVA analysis, together with a multiple comparison test in order to see if we can establish significant differences between Brand Trust and the Intention and Attitude to adopt. Considering that the model contains two dependent variables we would prefer to conduct a MANOVA analysis. Nevertheless, due to violation of the equal variance assumption we chose transform *Intention* and *Attitude* into a new variable called *Adoption*. For this analysis *Adoption* will be the dependent variables, and *Brand Trust* will be the independent variable.

According to the Test of homogeneity, the assumption of equal variance is met. The Kurtosis value confirms the assumption of a normal distribution for Intention and Attitude (See appendix 1). The ANOVA analysis reveals a statistical significance between *Brand Trust* and *Adoption* F(57,32) = 10,68,  $p = 0,00^{**}$ . For this reason, we chose to conduct a multiple comparison test illustrated in table 25.

	Adoption		
Brand Trust	$M_{diff}$	p-value	
Tryg– Prisjakt	0,38	0,11	
Tryg - Amazon	0,87	0,00**	

Table 25: Multiple comparison test on Adoption according to Brand

Table 25 indicates whether the *willingness to adopt* (The level of *Adoption*) is significantly different depending on the brand provider. The results illustrates that there is a non-significant difference between Tryg and Prisjakt ( $M_{diff}=0,38$ ; p=0,11), and a significant difference between Tryg and Amazon ( $M_{diff}=0,87$ ;  $p=0,00^{**}$ ). Due to the significant differences between Tryg and Amazon we choose to proceed with a PROCESS analysis.

#### H2: PROCESS macro analysis

To analyze this hypothesis, we are using the same model as for hypothesis H1.1. However, this time we are analyzing path-c' of the model, and not path-a. We are therefore analyzing the direct effect that *Brand Trust* has on *Intention* and *Attitude* to adopt a new FinTech service. The model has been run one time for every dependent variable: *Intention* and *Attitude*.

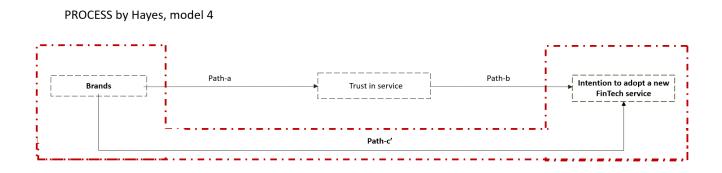


Figure 10: PROCESS analysis, path-c'

							me vari <i>effect o्</i>		on Attit	ude	
Effect	Se	T-value	P-value	LLCI	ULCI	Effect	Se	T-valu	ie P-valu	LLCI	ULCI
0,11	0,07	1,55	0,12	-0,03	0,26	0,01	0,07	0,28	0,78	-0,12	0,15

Table 26: Direct effect of Brand Trust on Intention and Attitude

On the left side of table 26 we observe a positive effect of *Brand Trust* on *Intention* is b = 0,11. [LLCI= -0,03; ULCI; 0,26]. The t-value is 1,55 and the model is not significant (p= 0,12). Thus, it appears that the independent variable *Brand Trust* does not have a significant impact on the *Intention* to adopt a new FinTech service. From the right side of table 26 we see that the direct effect on *Brands* towards *Attitude* is also positive, but very weak b = 0,01 [LLCI= -0,12; ULCI= 0,15]. This indicates a significantly low impact on the independent variable. The t-value is 0,28, and the P-value= 0,78. We can therefore not establish any

significant relationship between *Brand Trust* and *Attitude*. The hypotheses a) and b) are therefore *not supported*.

### 7.2.3 Trusting beliefs will have a positive mediating influence on the adoption of a new FinTech service, some dimensions will be more prominent than others

<u>H3.1:</u> a) Overall trusting beliefs b) Ability, c) Integrity and d) Benevolence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service

#### H3: ANOVA analysis

To answer hypothesis H3.1, we will first conduct a an ANOVA analysis, together with a multiple comparison test in order to see if we can establish significant differences between Trusting beliefs (*Overall Trust, Ability, Integrity and Benevolence*) and the *Intention* and *Attitude* to adopt a new FinTech service. We first tried to conduct a MANOVA analysis, but due to the not met assumption of homogeneous variances, we decided to conduct an ANOVA analysis. In situations where the assumption of equal variance is not met, we will use the Welch test. We also used the Games-Howell test to conduct a multiple comparison test. To make the analysis easier we grouped *Intention* and *Attitude* into one dependent variable, in line with H2 (*See part 7.2.2*). we chose to call this variable for *Adoption*. Further we decided to divide the responses concerning *Overall trust, Ability, Benevolence* and *Integrity* into three different categories. To demonstrate, an example will be made for the *Ability* variable. Those who answered 1-2 were classified as responses with a) "No Ability", 3-4 were classified as b) "Little Ability", and 5-7 were classified as c) "Ability". The Kurtosis value for the trusting beliefs *Ability*(-0,38), *Benevolence*(-0,66) *and Integrity*(-0,24) meets the assumption of a normal distributed dataset.

	F-value/W-value	P-value
Ability	211,43* <sup>w</sup>	0,00**
Integrity	150,49 <sup>*W</sup>	0,00**
Benevolence	91,32	0,00**
Overall Trust	247,71 <sup>*W</sup>	0,0**

Table 27: ANOVA analysis for Ability, Integrity, Benevolence and Overall Trust

Adoption									
	$M_{diff}$	р-	Assumption of equal	Test					
		value	variance						
Ability									
Ability- Little Ability	1,84	0,00**	No	Games-					
				Howell					
Ability- No Ability	3,52	0,00**							
Integrity									
Integrity- Little Integrity	1,78	0,00**	No	Games-					
				Howell					
Integrity- No Integrity	3,24	0,00**							
Benevolence									
Benevolence- Little	1,20	0,00**	Yes	Tukey					
Benevolence									
Benevolence- No Benevolence	2,39	0,00**							
Overall Trust									
Overall Trust- Little Overall	2,19	0,00**	No	Games-					
Trust				Howell					
Overall Trust - No Overall	3,90	0,00**							
Trust									

Table 28: Pairwaise comparison between adoption and trusting beliefs

Table 28 indicates whether the *willingness to adopt* (The level of *Adoption*) is significantly different depending on the level of trusting beliefs. The results illustrates that there are significant differences for *Overall Trust*, but also for *Integrity*, *Ability*, and *Benevolence separately*. The results draw in the direction towards a significant effect between the level of Trust in a FinTech service, and the willingness to adopt. We discover that respondents having "No" trust in the service, compared to respondents having Trust in the service have a difference in their mean score between 3,24 and 3,90. Considering that the likert scale varies

from 1-7, this can be assumed to be a big gap. Due to the significant differences between all off the variables we choose to proceed with a PROCESS analysis.

#### H3: PROCESS analysis

To answer the following hypotheses concerning the mediating effect on trusting beliefs towards the *Intention* and *Attitude* to adopt a new FinTech service, we have conducted a PROCESS macro analysis by Hayes (2018) twice; one with *Attitude* as the dependent variable, and the other with *Intention*. We continue the analysis by studying path-b in model 4. An illustration of the analysis can be shown in figure 11. For hypothesis H3.1a) we use run the model with *Overall Trust* as the mediating variable. For hypothesis H3 b),c) and d) we use *Ability, Benevolence* and *Integrity* as mediating variables.

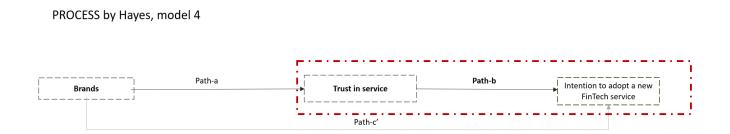


Figure 11: PROCESS analysis, path-b

### <u>H3.1</u>a) Overall trusting beliefs will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service

Intention				Attitude			
Model summary	$R^2 = 0,47$	F-value= 199,63	P-value= 0,00**	Model summary	$R^2 = 0,53$	F-value= 251,92	P-value = 0,00**
	Coeff= b	t-value	P-value		Coeff= b	t-value	P-value
Brand	0,11	1,55	0,12	Brand	0,02	0,28	0,78
Trust-Mean	0,89	19,72	0,00**	Trust-Mean	0,96	22,34	0,00**

Table 29: Model summary of the mediating effect of trust on Intention and Attitude

From table 29, starting to analyze the model with *Intention* as the dependent variable, we observe an explanatory power of  $R^2 = 0,47$  (F= 199,62; p = 0,00\*\*), and for the model with *Attitude* we observe  $R^2 = 0,53$  (F = 251,92; P-value= 0,00\*\*). This indicates that the models capture about 50% of the variation for the dependent variables. From the previous hypothesis we observed that the direct effect of *Brand Trust* on *Intention* and *Attitude* is limited. Nevertheless, when analyzing the effect of *Overall Trust* towards the adoption of a new FinTech service, we observe that the coefficients are relatively high with significant results. For the analysis with *Intention* as the independent variable we find a high positive coefficient b= 0,89 (t= 19,82; p= 0,00\*\*). For *Attitude* b= 0,96 (t= 22,34; p= 0,00\*\*) we also observe a very strong coefficient. Due to the strong coefficients and the significant results, we can clearly state that overall trusting beliefs have an important role towards the adoption of a new FinTech service. The *hypotheses a*) *is therefore supported*.

### <u>H3.1</u> b) Ability, c) Integrity and d) Benevolence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service.

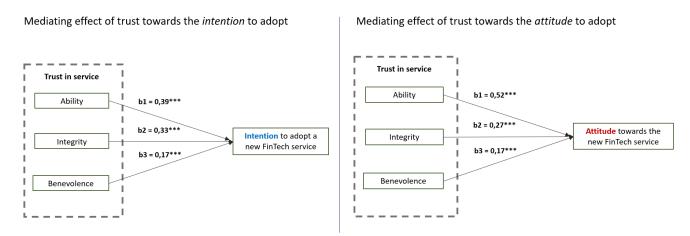


Figure 12: The mediating effect on Ability, Integrity and Benevolence towards the Attitude and Intention to adopt a new FinTech service

Intention				Attitude			
Model summary	R <sup>2</sup> = 0,49	F-value= 84,6	P-value= 0,00**	Model summary	$R^2 = 0,73$	F-value= 124,77	P-value= 0,00**
	Coeff= b	t-value	P-value		Coeff= b	t-value	P-value
Ability	0,39	5,24	0,00**	Ability	0,52	7,36	0,00**
Integrity	0,33	4,12	0,00**	Integrity	0,27	3,53	0,01**
Benevolence	0,17	3,51	0,00**	Benevolence	0,17	3,77	0,00**

 Table 30: Model summary of the mediating effect of brands on Integrity, and overview of mean according to brand

By looking at table 30 for the *Intention* variable we observe that the coefficient of determination is  $R^2 = 0,49$ . This indicates that almost 50% of the variability in the data can be explained by this model. The model is significant with a p-value=  $0,00^{**}$ . The F-value is 84,6. For *Attitude* we observe that the coefficient of determination is  $R^2 = 0,73$  with an F-value of 124,77. The analysis with *Attitude* as the dependent variable is therefore of higher quality. For both the dependent variables *Intention* and *Attitude*, we observe that all of the mediating coefficients are positive and significant. It therefore appears that the three trusting dimensions; *Ability*, *Integrity* and *Benevolence* have a positive mediating effect on the *Intention* to adopt a new FinTech service. However, it seems like the trusting beliefs have a stronger mediating effect on *Attitude* rather than *Intention*. *Hypothesis H3.1 b*), *c*) and *d*) is therefore supported.

#### H3.2: Ranking and correlation between the different trusting beliefs

### H3.2 a) Ability will be the most important trust-mediator towards Intention and Attitude

We have seen from the hypothesis H3.1 that trusting beliefs have a positive mediating impact towards the adoption of a new FinTech service. This hypothesis H3.2 hypothesize that *Ability* will be the most important Trust mediator.

As illustrated in table 21, *Ability* has a positive mediating effect towards *Intention* and *Attitude*. The coefficient b = 0,39 (t= 5,24, p= 0,00\*\*) for the dependent variable Intention,

and the coefficient for *Attitude* is b = 0,52 (t= 7,36, p= 0,00\*\*). This indicates a significant positive mediating effect between *Ability* and the adoption variables. Ability seems to have the highest mediating coefficient compared to the other trusting dimensions *Benevolence* and *Integrity*. This is valid for both of the dependent adoption variables. *The hypothesis is therefore supported*.

### H3.2 b) A brand with a high level of affective trust is correlated with a high level of cognitive trust

According to figure 13 we can observe that Tryg is the company with the highest level of *Ability, Integrity* and *Benevolence*. Prisjakt scores second best and Amazon scores the lowest for all of the dimensions of trust. Table 31 is an extract from the Pearson correlation matrix in appendix 4. We notice that *Ability* is significantly correlated with *Integrity*  $(0,82^{**})$  and *Benevolence*  $(0,59^{**})$ . *Benevolence* and *Integrity* are also significantly correlated  $(0,67^{**})$ . By this we can judge this *hypothesis to be supported* as the company with the highest level of cognitive trust, also has the highest level of affective trust and vice versa. We can therefore judge this *hypothesis to be supported*.

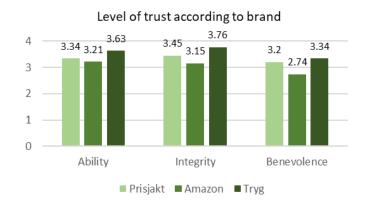


Figure 13: Level of trust according to brand

	Ability	Integrity	Benevolence
Ability	1		
Integrity	0,82**	1	
Benevolence	0,59**	0,67**	1

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 31: Extract from the Pearson correlation matrix in Appendix 4

### 7.2.4 Perceived "fit", Perceived Conceptual Competence and Perceived Operational Competence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service. These variables also correlates with trusting beliefs.

H4.1a) Perceived "fit", b) Perceived Conceptual Competence and c) Perceived Operational Competence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service

#### H4: ANOVA analysis

In line with the previous hypotheses, we conducted a variance analysis in order to see if there are significant differences between the dependent variables (*Intention* and *Attitude*) and the independent variables (*Conceptual Competence, Operational Competence* and *Perceived* "*fit*"). Likewise with hypothesis H3 (*Part 7.2.3*) we did not get valid assumptions in order to conduct a MANOVA analysis. For this reason, we conducted an ANOVA with the possibility to use the Welch test and the Games-Howell test for the variables where the assumptions were not met. We used *Adoption* as the dependent variable in line with *part 7.2.3*. To be consistent we decided to transform the responses concerning *Perceived "fit"*, *Perceived Conceptual Competence* and *Perceived Operational Competence* in the same way as in part 7.2.3. The Kurtosis value for all of the dependent variables meets the assumption of a normal distributed dataset.

	F-value/W-value	P-value
Conceptual Competence	54,55	0,00**
Operational Competence	60,51 <sup>*W</sup>	0,00**
Perceived "fit"	60,79 <sup>*W</sup>	0,00**

 Table 32: ANOVA analysis for Conceptual Comptetence, Operational competence and perceived "fit"

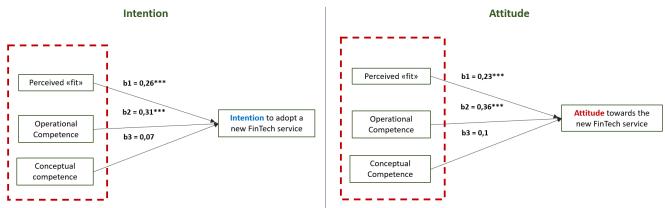
	Ad	option		
	<i>M</i> diff	p- value	Assumption of equal variance	Test
Conceptual Competence				
Conceptual Competence - Little Conceptual	1,05	0,00**	Yes	Tukey
Competence				
Conceptual Competence – No Conceptual	2,10	0,00**		
Competence				
<b>Operational Competence</b>				
Operational Competence - Little Operational	1,14	0,00**	No	Games-
Competence				Howell
Operational Competence – No Operational	2,19	0,00**		
Competence				
Perceived "fit"				
Perceived "fit"- Little Perceived "fit"	0,94	0,00**	No	Games-
				Howell
Perceived "fit"- No Perceived "fit"	2,01	0,00**		

 Table 33: Pairwise comparison test between Conceptual Competence, Operational

 COmpetence, Perceived "fit" and Adoption

From table 33 we discover that all off the results are significant. This indicates that there seems to be a difference between the level of *Perceived "fit"*, *Perceived Conceptual Competence* and *Perceived Operational Competence* and the willingness to adopt a new FinTech service. For this reason, we can proceed with a PROCESS analysis to measure whether these variables will have a positive mediating effect on the *Intention* and *Attitude* to adopt a new FinTech service





*Figure 14: The mediating role of Perceived "fit", Operational Competence and Conceptual Competence towards Intention and Attitude* 

Intention				Attitude			
Model summary	$R^2 = 0,30$	F-value= 38,74	P- value= 0,00**	Model summary	$R^2 = 0,33$	F-value= 43,13	P-value= 0,00**
	Coeff= b	t-value	P-value		Coeff= b	t-value	P-value
Perceived "fit"	0,26	4,28	0,00**	Perceived "fit"	0,23	3,82	0,00**
Conceptual Competence	0,07	0,80	0,42	Conceptual Competence	0,10	1,27	0,21
Operational Competence	0,31	3,84	0,00**	Operational Competence	0,36	4,47	0,00**

 Table 34: Model summary of PROCESS macro analysis, Perceived "fit",

 Operational and Conceptual Competence

The model summary with *Intention* as the dependent variable, conveys an explanatory power of  $R^2 = 0,30$ , F-value= 38,74, and P-value=  $0,00^{**}$ . For *Attitude* as the dependent variable, these numbers are similar;  $R^2 = 0,33$ , F-value= 43,13 and P-value=  $0,00^{**}$ . From table 34 we observe that all off the mediating variables have a positive mediating effect on *Intention* and *Attitude* towards the adoption of a new FinTech service. We observe that *Operational Competence* have the highest positive coefficient for both *Intention* b= 0,31 (t= 3,84, p=  $0,00^{**}$ ) and *Attitude* b= 0,36 (t= 4,47, p=  $0,00^{**}$ ). *Perceived "fit"* have the second highest positive coefficient for *Intention* b= 0,23 (t= 3,83, p=  $0,00^{**}$ ). We observe that the *Conceptual Competence* is not significant for either of the

dependent variables. The results indicates that *Perceived "fit" and Operational Competence* seem to have a positive mediating impact towards adoption. However, the *Conceptual Competence* does not seem to have an important role. The *Operational Competence appears* to be the most important mediator. Hypothesis H4.1 a) and H4.1 c) is therefore *supported*. H4.1 b) is *not supported*.

<u>H4.2</u> There is a positive correlation between a) Perceived "fit", b) Perceived Conceptual- and c) Operational Competence and the dimensions of trusting beliefs

	Ability	Integrity	Benevolence
Perceived "fit"	0,58**	0,56**	0,44**
<b>Conceptual Competence</b>	0,64**	0,61**	0,46**
<b>Operational Competence</b>	0,66**	0,67**	0,49**

\*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

Table 35: Extract from the Pearson correlation matrix in Appendix 4

Table 35 illustrates an extract of the Pearson correlation matrix with the following variables: *Perceived "fit", Conceptual Competence, Operational Competence* and the trusting beliefs *Ability, Integrity and Benevolence. The full correlation table can be found in Appendix 4.* Our hypotheses expects that these variables will have a certain link to each other. As *Perceived Operational Competence* is related to the ability of conducting an activity, it is natural to think that the brands with a high level of *Cognitive trust*, will also have a high level of *Operational Competence*. The same reasoning would also state that affective beliefs such as *Perceived "fit"* and *Perceived Conceptual Competence* are related to affective trusting beliefs, *Integrity* and *Benevolence*. By looking at table 35, it appears that all of the variables are significantly correlated at a 0,01 level. Besides from *Benevolence* we explore that all off the variables have a moderate correlation with each other (r= 0,5-0,69). We can therefore statistically establish a relationship between these variables. Nevertheless, we cannot identify a clear parallel between Cognitive trust and Affective trust. *Operational*  *Competence* seems to be the highest correlated variable towards all the dimensions of trust. *Conceptual Competence* is the second most correlated variable, and *Perceived "fit"* is the least correlated variable. Due to the significant correlation between the variables, we qualify the *hypotheses H4.2a*, *b* and *c*) as being supported.

# 7.2.5 Perceived risk will have a negative mediating effect on the willingness to adopt a FinTech service

<u>H5.1</u>: a) Financial risk, b) Privacy risk and c) Security risk will have a negative mediating effect towards the adoption of a new FinTech service

#### H5: ANOVA analysis

In line with common research practice and the previous hypotheses we start analyzing the hypothesis through a variance analysis. Similar to H3 (*Part 7.2.3*) and H4 (*Part 7.2.4*) we chose to conduct an ANOVA analysis in several times, as we did not obtain valid assumptions to conduct a MANOVA analysis. The dependent variable is *Adoption (See part 7.2.3)* and the independent variables are *Overall risk, Perceived Financial risk, Perceived Privacy risk and Perceived Security risk.* The transformation of the variables was done in the same way as in *part 7.2.3.* The Kurtosis value for all of the variables meets the assumption of a normal distributed dataset.

	F-value	P-value
Financial risk	60,87	0,00**
Privacy risk	101,36	0,00**
Security risk	74,11	0,00**
Overall risk	98,49	0,00**

Table 36: ANOVA analysis with financial risk, privacy risk, security risk andoverall risk

	Adoption		
	$M_{diff}$	p-value	
Perceived Financial risk			
Financial risk - Little Financial risk	-1,34	0,00**	

Financial risk – No Financial risk	-2,71	0,00**
Perceived Privacy risk		
Privacy risk - Little Privacy risk	-1,92	0,00**
Privacy risk – No Privacy risk	-3,33	0,00**
Perceived Security risk		
Security risk – Little Security risk	-1,61	0,00**
Security risk - No Security risk	-2,55	0,00**
Perceived Overall risk		
Overall risk - Little Overall risk	-1,92	0,00**
Overall risk - No Overall risk	-3,33	0,00**

 Table 37: Pairwise comparison test with Financial risk, privacy risk, security risk

 and perceived overall risk

Table 37 illustrates that all off the results are significant. We find a negative relationship between all of the risk dimensions. When comparing respondents having "No" perceived risk, with the respondents that feel a big risk, there is a difference in mean scores between - 2,55 and -3,33. Our results range from 1-7. The difference of the willingness to adopt, does seem to be heavily influenced by the level of perceived risk. The results indicate that it appears to be a significant difference between the level of Perceived risk and the willingness to *Adopt* a new FinTech service. For this reason, we choose to proceed with a PROCESS analysis.

#### H5: PROCESS analysis

For this hypothesis we will use *Financial risk*, *Privacy risk* and *Security risk* as the mediating variables and *Intention* and *Attitude as dependent variables*. The model was run twice; one with *Intention* as the dependent variable, and on with *Attitude* 

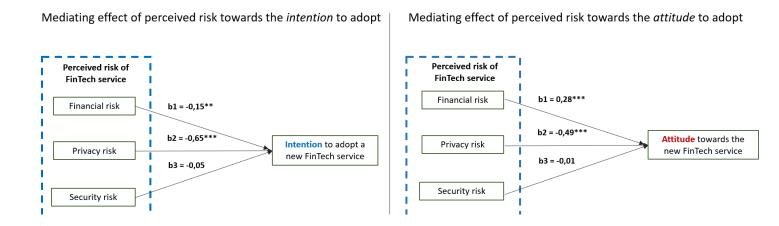


Figure 15: Mediating effects of perceived risk towards the adoption of a FinTech service

Intention				Attitude			
Model summary	R <sup>2</sup> = 0,68	F-value= 77,21	P-value= 0,00**	Model summary	$R^2 = 0,41$	F-value= 61,9	P-value= 0,00**
	Coeff= b	t-value	P-value		Coeff= b	t-value	P-value
Financial risk	-0,15	-2,38	0,00**	Financial risk	-0,28	-4,31	0,00**
Privacy risk	-0,65	-8,32	0,00**	Privacy risk	-0,49	-5,97	0,00**
Security risk	0,05	0,59	0,55	Security risk	-0,01	-0,08	0,93

Table 38: Model summary of the mediating effects of perceived risk on theadoption of a FinTech service

### <u>H5.1</u>: Perceived risk will have a negative mediating effect towards the adoption of a new FinTech service, regarding a) Financial risk, b) Privacy risk and c) Security risk.

From table 38 we discover that the PROCESS macro model with Intention as the dependent variable is significant ( $p=0.00^{**}$ ) and has a coefficient determination  $R^2$  of 0.68. The Fvalue is 77,21. The model with Attitude as the dependent variable is also significant (p=  $0.00^{**}$ ). Nevertheless, it's coefficient determination is a little lower R<sup>2</sup>= 0.41. It's F-value is 61,0. Overall we observe that the Financial risk has a negative significant coefficient for both Intention b= -0.15 (t= -2.38, p=  $0.00^{**}$ ) and Attitude b= -0.28 (t= -4.31, p=  $0.00^{**}$ ). The coefficient is almost double as high for Attitude, compared to Intention. Further we observe that the perceived *Privacy risk* is significant in both of the models (p=0,00\*\*) with a negative coefficient of b = -0.65 (t = -8.32) and Attitude with a coefficient of b = -0.49 (t = -5,97). The perceived *Security risk* appears to be relatively low and is not significant for any of the models. By looking at the correlation between Privacy risk and Security risk (Appendix 4), we observe a correlation of 0,86. This violates the assumption of independent variables. For this reason we can assume a certain multicollinearity between the two variables. By re-running the PROCESS model without the *Privacy risk* we find the *Security* risk to be highly negatively mediating b = -0.46 (t = -8.22, p = 0.00\*\*). The results for Perceived Security risk must therefore be analyzed with regards to this. Thus, perceived Privacy risk must be treated with high importance due to its strong negative mediating effect on adoption. The perceived *Financial risk* is also a factor that has a negative effect on adoption, but less then Privacy. *Hypothesis H5.1 a*), *b*) and *c*) is therefore supported.

## <u>H5.2</u> There is a negative correlation between a high level of Perceived risk and a high level of trusting beliefs

			Benevolen
	Ability	Integrity	ce
Financial risk	-0,58**	-0,58**	-0,49**
Privacy risk	-0,61**	-0,64**	-0,53**
Security risk	-0,69**	-0,62**	-0,52**

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

 Table 39: Extract of Pearson correlation between perceived risk and trusting beliefs

Table 39 illustrates an extract of the Pearson correlation matrix that can be found in Appendix 4. The extract contains the following variables: *Financial risk, Privacy risk, Security risk and* the trusting beliefs *Ability, Integrity and Benevolence*. Our hypotheses expects that these variables will be negatively correlated with each other. The higher the level of trust, the lower the level of perceived risk will be. Through table 39, it appears that all of the variables are significantly correlated at a 0,01 level. For almost all the variables, the correlation can be defined as being moderate (r= 0,5-0,69). We can therefore statistically establish a negative relationship between these variables. We do not see any clear differences between the different dimensions if trust and risk. Due to the negative significant correlation between the variables, we qualify the hypothesis as being *supported*.

# 7.2.6 Knowledge and dispositional trust will have an overall positive moderating effect on trusting beliefs

<u>H6.1:</u> Knowledge and dispositional trust will have an overall positive moderating effect on trusting beliefs towards the adoption of a new FinTech service

#### **H6: PROCESS analysis**

For this hypothesis we will measure the moderating effect of *Dispositional Trust, Brand familiarity, Financial knowledge* and *Technological knowledge* on *Trusting beliefs* through a PROCESS analysis. For reasons of simplicity, we choose to use *Overall Trust* as the dependent variable.

Previous in the analysis we have been using Hayes PROCESS model number 4. The number 4 model does not contain any moderators. For this reason, we have chosen to use model 7 to analyze the hypotheses concerning knowledge and individual traits. In this model, it is only possible to analyze two moderators at a time. For reason of consistency, we decided to only analyze one moderator at a time, by running the model four times in total; one time for each moderator. We used *Overall Trust* as a mediator, and the *Intention* variable as the dependent variable. An illustration of the analysis can be found below (Figure 16). To analyze the hypotheses, only extracts of the results of the PROCESS macro analysis model will be illustrated, according to relevance of the hypothesis

PROCESS by Hayes, model 7

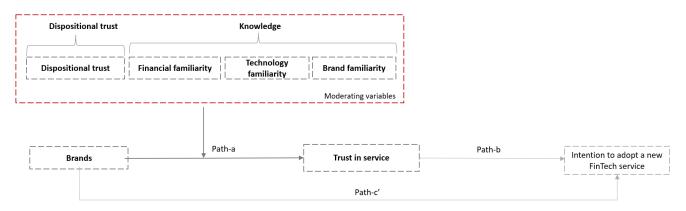


Figure 16: Ilustration of PROCESS macro analysis by Hayes, model 7



PROCESS by Hayes, model 7

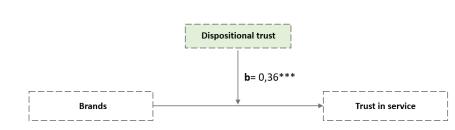


Figure 17: Extract of model 7, moderating role of dispositional trust

Model summary	$R^2 = 0,12$	F-value= 12,67	P-value= 0,00**
	Coeff= b	t-value	P-value
Dispositional trust	0,36	4,25	0,00**

Table 40: Moderating role on dispositional trust

Through table 42, we observe that the overall model has an explanatory power of  $R^2 = 0,12$ , which we can qualify as being relatively low. Nevertheless, the model is significant, p-value= 0,00\*\* and F-value= 12,67. We observe that the coefficient of *Dispositional Trust* b=0,36 is significant and positive. (t= 4,25, p= 0,00\*\*). Regardless of a low explanatory we choose to *accept the hypothesis* concerning the positive moderating effect on trusting beliefs. This implies that people with a higher propensity to trust in general are more likely to trust a new FinTech service. This implies that a trustor with a high propensity to trust in general is likely to enhance the relationship between Brand Trust and Trust.



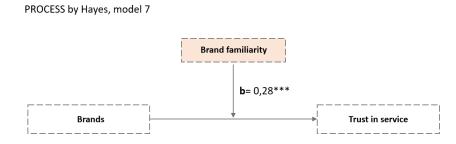


Figure 18: Extract of model 7, moderating role of brand familiarity

Model summary	$R^2 = 0,10$	F-value= 10,15	P-value= 0,00**
	Coeff= b	t-value	P-value
Brand familiarity	0,28	4,75	0,00**

Table 41: Moderating role on brand familiarity

Through table 43, we observe that the overall model has an explanatory power of  $R^2 = 0,10$ . The model is significant (p= 0,00\*\*) with an F-value equal to F= 10,15. The coefficient of *Brand Familiarity* is positive b= 0,26 and significant (t = 4,75: p= 0,00\*\*). The results dictate that *Brand Familiarity* does have a positive moderating effect on trusting beliefs. Nevertheless, the power of the model is considered as weak. *We judge our hypothesis to be supported*. This implies that a trustor with a high familiarity to the brand provider is likely to strengthen the relationship between Brand Trust and Trust.



PROCESS by Hayes, model 7

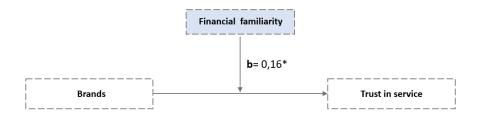


Figure 19: Extract of model 7, moderating role of Financial familiarity

Model summary	R <sup>2</sup> = 0,07	F-value= 6,81	P-value= 0,00**
	Coeff= b	t-value	P-value
Financial familiarity	0,16	2,08	0,04**
<b>T</b> 11 (2)			, ,

Table 42: Moderating role on Financial knowledge

Table 44 reveals that the overall model has an explanatory power of  $R^2 = 0,07$ , classified as being relatively weak. The model is statistically significant (p= 0,00\*\*) with an F-value equal to F= 6,81. The coefficient of *Financial familiarity* is positive b=0,16 and significant (t= 2,08: p= 0,04\*\*). The results therefore reveal that *Financial familiarity* has a positive moderating effect on trust. *The hypothesis is supported*. This entails that the effect of *Financial familiarity* is stronger the higher respondents level of *Financial familiarity*.

# H6.1 d) Technological knowledge will have a positive moderating effect on trusting beliefs

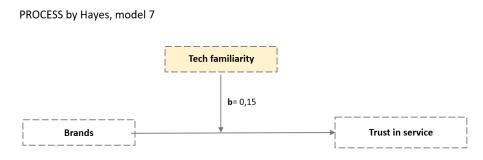


Figure 20: Extract of model 7, moderating role of Technological knowledge/familiarity

Model summary	$R^2 = 0,08$	F-value= 7,76	P-value= 0,00**
	Coeff= b	t-value	P-value
Technological knowledge	0,15	1,62	0,11

 Table 43: Extract of model 7, moderating role of Technological knowledge/

 familiarity

From table 45, we discover that the overall model has an explanatory power of  $R^2 = 0,08$ , classified as being relatively weak. The model is statistically significant (p= 0,00\*\*) with an F-value equal to 7,76. The coefficient of *Technological knowledge* is positive b= 0,15, but not significant (t= 2,08: p= 0,11). The results therefore dictate that *Technological knowledge* does not have a sufficient effect on trust, in order to be classified as a moderator. *The hypothesis is not supported.* As a consequence, Technological familiarity does not seem to bolster the relationship between Brand Trust and Trust in a FinTech service.

## 7.3 Summary of results

#### 1. Brand Trust can be transferred from a brand to a FinTech service

	<ul> <li>H1.1 Brand trust will overall have a positive effect on a) Overall Trust, b) Ability, c) Integrity and d) Benevolence in a FinTech service</li> <li>a) Overall Trust</li> <li>b) Ability</li> <li>c) Integrity</li> <li>d) Benevolence</li> </ul>	Not supported Not supported Partially supported Partially supported
	<ul> <li>H1.2: The dimensions of trust in a brand a) Ability, b) Integrity and c) Benevolence are transferable to trust in a new FinTech service. Ability will be less transferable compared to Integrity and Benevolence</li> <li>a) Ability</li> <li>b) Integrity</li> <li>c) Benevolence</li> </ul>	Not supported Partially supported Partially supported
2. Brand Trust will h	H2.1: Brand Trust will have a positive direct influence on the a)	
	Intention and b) Attitude to adopt a new FinTech service a) Intention b) Attitude	Not supported Not supported

# **3.** Trusting beliefs will have a positive mediating influence on the adoption of a new FinTech service, some dimensions will be more prominent than others

Bene Attit	<ul> <li>a) Overall trusting beliefs b) Ability, c) Integrity and d) evolence will have a positive mediating effect on the Intention and ude to adopt a new FinTech service</li> <li>a) Overall Trust</li> <li>b) Ability</li> <li>c) Integrity</li> <li>d) Benevolence</li> </ul>	Supported Supported
	<ul><li>2: Ranking and correlation between the different trusting beliefs</li><li>a) Ability will be the most important trust-mediator towards Intention and Attitude</li></ul>	Supported
	b) A brand with a high level of affective trust is correlated with a high level of cognitive trust	Supported

# 4. Perceived "fit", Perceived Conceptual Competence and Perceived Operational Competence will have a positive mediating effect on the Intention and Attitude to adopt a new FinTech service. These variables also correlates with trusting beliefs

H4.1: a) Perceived "fit", b) Perceived Conceptual Competence and c)	
Perceived Operational Competence will have a positive mediating	
effect on the Intention and Attitude to adopt a new FinTech service	

	<ul><li>a) Perceived "fit"</li><li>b) Perceived Conceptual Competence</li><li>c) Perceived Operational Competence</li></ul>	Supported Not supported Supported
	<b>H4.2:</b> There is a positive correlation between a) Perceived "fit", b) Perceived Conceptual- and c) Operational Competence and the dimensions of trusting beliefs	
	<ul><li>a) Perceived "fit"</li><li>b) Perceived Conceptual Competence</li><li>c) Perceived Operational Competence</li></ul>	Supported Supported Supported
5. Perceived risk v FinTech service	will have a negative mediating effect on the willingness to adopt a new	
	<b>H5.1</b> : a) Financial risk, b) Privacy risk and c) Security risk will have a negative mediating effect towards the adoption of a new FinTech service	
	<ul><li>a) Financial risk</li><li>b) Privacy risk</li><li>c) Security risk</li></ul>	Supported Supported Supported
	<b>H5.2:</b> There is a negative correlation between a high level of perceived risk and the level of trusting beliefs	Supported
6. Knowledge and	Dispositional trust will have a positive moderating effect on overall tru	usting beliefs
	<b>H6.1:</b> Knowledge and dispositional trust will have an overall positive moderating effect on trusting beliefs towards the adoption of a new FinTech service	
	<ul> <li>a) Dispositional trust</li> <li>b) Brand familiarity</li> <li>c) Financial familiarity</li> <li>d) Technological knowledge</li> </ul>	Supported Supported Supported Not supported

## 8. Discussion

### 8.1 Theoretical contributions

The fundamental goal of this thesis was to gain a greater understanding of the role of Brand and Brand Trust towards the Intention to adopt a new FinTech service, and to what extent these dimensions are transferable from a brand to a service. To analyze this, we have been going into depth within the field of Trust, Brand extension, Perceived risk and the Adoption towards a new FinTech service.

From the analysis we discovered firstly that the role of Brand Trust does not divulge to be a decisive element for initial Trust in a FinTech service. When measuring the effect of Brand Trust towards *Overall Trust* and *Ability* in a service, we found a positive, but a weak non-significant effect. Concerning *Integrity* and *Benevolence* we find some significant effects, but they are still weak. This contradicts researchers such as Keller (1993), Siau and Wang (2018) and Zhang (2018), claiming the importance of a Brand Trust. The weak results are to a certain extent surprising. An explanation for our results can be due to our testing population. According to OECD (2021), Norway ranks as one of world's most trusting population. Consequently, Brand Trust becomes less important.

When investigating the transferability of Trust in a brand to a service we find it challenging to draw clear conclusions. We discovered that all off the brands loose a significant amount of trusting beliefs between the pre- and the main-study. Despite this, *Integrity* appears to be the most transferable trust dimension, since all the brands kept the same ranking position between both studies. *Benevolence* appears to show some signs of transferability, but to a smaller extent. This supports Milberg and Lawson (1991)'s research concerning the transfer of Brand Trust, through brand-affect. In contrast to the affective trust-dimensions, we find *Ability* to be non-transferable from a Brand to a service. These findings are in coherence with the literature, stating that *Ability* is domain specific (Zand, 1972). In spite of *Ability's* low transfer capability, we find that a Brand with a high level of affective trust is correlated with a brand with a high level of cognitive trust. This aligns Mayer et al., (1995)'s theory about Trust being separable but interrelated. For this reason, cognitive trust cannot be ignored in order to achieve a high level of affective trust.

When testing whether the role of Brand Trust is directly linked to the Intention and Attitude to adopt a new FinTech service, we also received poor results. This contradicts previous researchers (E.g., McWilliam, 1993). However, we detected some significant differences among the different brands and their direct effect on Adoption towards a FinTech service. Nevertheless, this is negligible considering the Brand Trust's low effect on Intention and Attitude to adopt. The poor results can be explained by the same reason as mentioned previously, Norwegians high level of trust.

Regarding the mediating effect on Trust towards Intention and Attitude, our results support previous research referring to Trust's imperative role towards the Attitude and Intention to use a FinTech service (E.g., Barbu et al, 2021; Luhmann 2018). Our study also reinforces the greater role of cognitive trust as compared to affective trust in a buyer-seller context (Xu et al., 2016), as *Ability* occurs to have the most crucial role towards adoption. On the other hand, our significant effects on *Benevolence* and *Integrity* seem to be stronger than what is supported in some previous studies (E.g., Casalo et al., 2007; Erkmen & Hancer, 2015).

Other mediators such as *Perceived "fit"* and *Operational Competence* are also relevant factors towards adoption. This is in line with Aaker and Keller 1990 and their concept towards high "fit" between the parent product and the new extension. We did not find significant results regarding *Conceptual Competence* as stated by Wang and Liu (2020). However, these mediators are statistically correlated with the trust dimensions, and must therefore not be ignored, or considered separately.

Perceived *Privacy risk* reveals to be a crucial barrier towards Trust and Adoption, especially concerning the *Intention* to adopt, compared to the *Attitude* towards adoption. The Perceived *Financial risk* was considerably less important than the *Privacy risk*. When conducting the model without *Privacy risk*, we also found negative significant effects on *Security risk*. The results support notably Featherman et al., (2010)'s theory in relation to the sensitive role of Perceived risk, that can countervail other convenient factors.

In accordance with Mayer et al,. (1995), we also discover the moderating role of Dispositional Trust towards trusting beliefs. This indicates a limit to a brand from creating trust, as human individuals are different in their ease of trust. Luhmann's (1979) research about the importance of familiarity in regard to trust is likewise supported. This presumes that incumbents launching a brand extension can have an advantage compared to start-ups. A

certain level of Financial knowledge also appears to have a positive moderating role. Nevertheless, we did not find any moderating effect concerning Technological knowledge. This can be due to Norwegians already high adoption rate of technology in the population (DESI, 2021).

### 8.2 Limitations and future directions

This thesis is subject to certain limitations that should be undertaken in further research. Our *primary limitation* is caused by the population in the two studies. Despite comparing the transferability of trust through the same age group, we can identify the different population between the pre- and the main study as a limit. The majority of the population from the prestudy consisted of students from NHH (The Norwegian School of Economics), compared to the main-study that consisted of respondents in all age groups with various professional situations. It can be hypothesized that young adults with a high level of education, have a higher propensity to trust in general. Additionally we can presume that NHH students are more familiar to the Brand Amazon, compared to the general Norwegian population. Amazon has an innovative business model and has been studied in several business cases (E.g., Ritala et al., 2014; Kotha, 1998; Klaus, 2013). This can explain why Amazon lost a great value of Trust between the pre- and the main study. For further research it would be beneficial to use the same population for both of the studies to correct for these differences. Regarding the population of the main study, we discovered that Brand Trust did not reveal an important effect towards Initial trust in a FinTech service, nor the Intention to adopt. As mentioned earlier this might be caused by the Norwegian population, having a general high level of Trust compared to other countries. In the future it can be relevant to conduct the same experience for a different population in another country as we might see a higher importance in the role of Brand Trust.

Our *second limit* is related to the length of the pre-study. We can question the risk of maturation, as it lasted for approximately 20 minutes. The pre-study appeared to be longer than expected and contained the same Likert scale through the entire survey. A concern is that respondents answered similarly for several brands in order to complete the survey quickly, despite checking for this with a testing question. Future studies should mitigate this risk by having less questions and fewer brands.

A *third limit* is that we only tested three brands, this can create a narrow picture of the results. Further research with several brands would make it possible to draw a more representative conclusions concerning the transferability of trust. Further on, we recommend to test brands that are in the same domain, in order to reduce bias, and to focus primarily on the role of a brand exclusively.

*Further*, given the findings concerning the crucial role of mitigating risk, scholars should in the future address how companies can manage to alleviate this in the most optimal way. A failure of convincing the consumers perception about risk can hurdle potential success of adoption.

*Lastly*, we consider our mock-up as a limitation of measuring *Intention* towards adoption. The respondents were aware of our service being fictive and non-existent. Studying a mock-up from pictures can be assumed to not generate the same sensation as using a real FinTech service. For this reason we might consider a gap between the registered scores of Intention compared to the responses if the service was real. Thus, it could be beneficial to conduct a similar study with a real FinTech service.

### 8.3 Practical implications

Our results entail several facets that are relevant for managers wanting to launch a FinTech service. The results suggests that the role of a brand is limited, and not critical towards creating initial Trust, and direct adoption of a FinTech service. This encourages start-ups and brands with a low notoriety to launch themselves within this domain. It also proves why the world is said to be victim of "FinTech fever". Our results reveal that *Ability* is the most important trust dimension in order to achieve a high level of adoption. Thus, it is crucial for brands to convey their level of *savoir-faire* (know-how) and competence within their domain. Companies must therefore convince potential customers, that they possess the number of resources, skills and capacity to produce the most optimal FinTech service. However, the transfer of *Ability* from a brand to a service appears to be challenging according to our analysis. If FinTech services are far from the brands original domain, the brand cannot leverage its level of initial perceived *Ability*. In this situation, it is crucial that the company succeed in conveying their level of *Ability* within the FinTech industry. We witness that *Integrity* appears to be the most transferable trust dimension. This can imply that brands that possesses a great level of *Integrity* have an advantage when it comes to

conducting a brand extensions. Brands that have a great image of honesty and sincerity should use it to its advantage. However, due to the interrelation between the different trust dimensions this requires that the brand manages to convey their level of *Ability* within the FinTech domain synchronically. In order to achieve a high level of cognitive trust, the company must also focus on achieving a high level of affective trust. Further, the analysis reveals that Initial trust in a service has a critical importance towards the *Intention* and *Attitude* to adopt a new FinTech service. Companies, cannot avoid focusing on this in order to succeed. Additionally, it is vital to mention the importance of mitigating perceived *Privacy risk* for FinTech services. If the customers are worried about the company's management of private information, this can be a barrier for adoption regardless of the high performances of the service. Lastly, the analyses reveal that people with higher dispositions to trust, more knowledge about the -brand, -and financial services and are to a certain extent more likely to trust a new FinTech service provided by a certain brand. To obtain a successful level of adoption, these are the people that should be focused on in the beginning of the launch.

### 9. Conclusion

Overall, it appears that potential customers of FinTech services are disposed to make space for various brands, as Brand Trust does not seem to be crucial towards Initial Trust in a FinTech service and neither the adoption. Nevertheless, we disclose a significant vital role of Trust in a service towards the Intention to adopt. Obtaining Initial trust in a service is therefore a key factor for succeeding in a brand extension. We discover a challenging situation, where *Ability* appears to be the most crucial dimension towards adoption, despite of being the least transferable dimension from a brand to a service. The skills and resources of the company to produce the most ideal service in the FinTech domain must therefore be highly communicated. This can imply that brands with a close initial relation to this domain might have a favorable position compared to others. This is enhanced by the significant positive effect on Perceived "fit" and perceived Operational Competence. Further, the incumbents should leverage its level of affective Brand Trust, as these dimensions are more transferable. Regardless of the limited effect of Brand Trust, this might give a competitive advantage to well established incumbents possessing high levels of affective trust. Most importantly the trusting beliefs are interrelated, making it essential not to ignore any of the dimensions. Additionally, we discover the decisive role of perceived risk, and in particular the perceived Privacy risk. If the customer feels concerned about the handling and collection of private data, it can create a crucial obstacle towards the *Intention* and *Attitude* to adopt. We observe Dispositional Trust, Brand Familiarity and Financial knowledge to have a positive moderating effect on initial Trust in a service. Potential customers that have an ease of trusting new instances, combined with a certain fellowship to the brand and are experienced with financial services should therefore be targeted at the time of the launch. We do not find a significant relationship between *tech-savvy* people and trusting beliefs.

Our results builds up to a FinTech market that is favorable for both Incumbents and Start-ups that can leverage their diverse competitive advantage in contrasting ways. The role of a Brand is not decisive for adoption, but the way it manages to create initial trust in their service and mitigate perceived risk is crucial in order to succeed. We can therefore align our results in favor of an environment with FinTech fever, with opportunities for traditional incumbents, as well as eager start-ups.

### 10. References

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# 11. Appendix

## Appendix 1: Descriptive statistics, all brands

	Ν	Mean	Std. Deviation	Skewness	SK. St error	Kurtosis	Kurtois .St error
Dependent variables							
Intention	450	3,02	1,72	,51	,12	-,76	,23
Attitude	450	3,65	1,73	,11	,12	-,92	,23
Moderating variables							
Financial familiarity	450	3,26	1,39	,09	,12	-,72	,23
Technological knowledge	450	3,49	1,24	,16	,12	-,42	,23
Brand familiarity	450	3,59	1,80	,11	,12	-1,08	,23
Dispositional trust	450	4,31	1,28	-,31	,12	-,28	,23
Mediating variables							
Perceived fit & type of competence							
Perceived fit	450	3,24	1,56	,22	,12	-,81	,23
Conceptual competence	450	3,72	1,59	-,04	,12	-,72	,23
Operational competence	450	3,74	1,54	-,12	,12	-,53	,23
Trusting beliefs							
Trust Integrity	450	3,45	1,39	,13	,12	-,24	,23
Trust Benevolence	450	3,09	1,67	,43	,12	-,66	,23
Trust Ability	450	3,39	1,38	,02	,12	-,38	,23
<u>Risk</u>							
Risk financial	450	3,49	1,34	-,05	,12	-,36	,23
Risk privacy	450	3,19	1,62	,36	,12	-,70	,23
Risk security	450	3,16	1,49	,26	,12	-,63	,23

# Appendix 2: Descriptive statistics of the dependent variables, by comparing the different brands

Brand		Intention	Attitude
Prisjakt	Mean	3,04	3,71
	Std. Deviation	1,62	1,67
	Ν	150	150
Amazon	Mean	2,52	3,2
	Std. Deviation	1,60	1,62
	Ν	150	150
Tryg	Mean	3,50	4,00
	Std. Deviation	1,81	1,81
	Ν	150	150
Total	Mean	3,02	3,65
	Std. Deviation	1,72	1,73
	Ν	450	450

The variables are means, calculated from the items of each construct

# Appendix 3: Descriptive statistics of different trust dimensions, by comparing the different brands

Brand		Ability	Integrity	Benevolence
Prisjakt	Mean	3,34	3,45	3,20
	Std. Deviation	1,3	1,3	1,7
	Ν	150	150	150
	Kurtosis	-0,65	0,07	-0,78
Amazon	Mean	3,21	3,15	2,74
	Std. Deviation	1,34	1,27	1,61
	Ν	150	150	150
	Kurtosis	-0,35	-0,36	-0,47
Tryg	Mean	3,63	3,76	3,34
	Std. Deviation	1,47	1,52	1,65
	Ν	150	150	150
	Kurtosis	-0,3	-0,52	-0,56
Total	Mean	3,40	3,45	3,10
	Std. Deviation	1,38	1,39	1,67
	Ν	450	450	450
	Kurtosis	-0,38	-0,24	-0,66

# Appendix 4: Pearson correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Intention (1)	1														
Attitude (2)	,877**	1													
Ability (3)	,639**	,694**	1												
Integrity (4)	,650**	,670**	,816	1											
Benevolence (5)	,543**	,560**	,594**	,669**	1										
R_financial (6)	-,516**	-,537**	-,577**	-,575**	-,493**	1									
R_privacy (7)	-,674**	-,620**	-,609**	-,644**	-,534**	,680 <sup>**</sup>	1								
R_security (8)	-,566**	-,537**	-,590**	-,616**	-,524**	,612 <sup>**</sup>	,855**	1							
P_fit (9)	,466**	,473**	,575**	,557**	,444**	-,432**	-,483**	-,439**	1						
Conceptual (10)	,422**	,473**	,639**	,614**	,458**	-,425**	-,457**	-,452**	,610 <sup>™</sup>	1					
Operational (11)	,485**	,529 **	,661 <sup>°°°</sup>	,670 <sup>**</sup>	,488 **	-,481**	-,500**	-,492**	,597 <sup>™</sup>	,817**	1				
TechFam (12)	,254**	,269**	,231**	,231**	,098*	-,211**	-,150**	-,146**	,114 <sup>*</sup>	,174**	,234**	1			
Fin_Fam (13)	,192**	,176**	,188	,207**	,137**	-,172**	-,098	-0.078	,131	,192**	,209	,515	1		
Bra_Fam (14)	,270**	,301 **	,297 **	,267**	,180	-,228**	-,209**	-,214**	,266 <sup>**</sup>	,296**	,386	,351 **	,252**	1	
Dispositional (15)	,150**	,195**	,297**	,256**	,257**	-,231	-,233**	-,254**	,170 <sup>**</sup>	,224**	,216 <sup>°°°</sup>	0.067	,101 <sup>*</sup>	0.013	1

\*\*. Correlation is significant at the 0.01 level (2-tailed). \*. Correlation is significant at the 0.05 level (2-tailed).

# Appendix 5: Factorial analysis

					Comp	onent				
	1	2	3	4	5	6	7	8	9	10
Intention1									-,793	
Intention2									-,662	
Attitude1									-,764	
Attitude2									-,722	
Trust_ability1	,550									
Trust_ability2	,579									
Trust_int1	,689									
Trust_int2	,715									
Trust_ben1	,628									
Trust_ben2	,720									
Rrisk_fin1										,849
Risk_fin2										,800
Risk_priv1					,647					
Risk_priv2					,861					
Risk_sec1					,874					
Risk_sec2					,843					
Perceived_fit1								,864		
Perceived_fit2								,849		
Comp_conc1			,678							
Comp_conc2			,724							
Comp_oper1			,707							
Comp_oper2			,604							
Tech_fam1		,589								
Tech_OPT		,857								
Tech_INN1		,849								
Tech_INN2		,526								
Fin_fam1							1,002			
Fin_fam2							,917			
Brand_fam1						,974				
Brand_fam2						,966				
Disp1				,908,						
Disp2	d. Dein ein els		A markunia	,918						

Pattern Matrix<sup>a</sup>

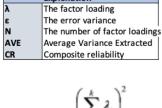
Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 12 iterations.

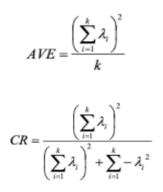
	λ	λ^2	ε	1
		Λ 2	c	-
	Loadings from			
	pattern		The error	
Adoption	matrix		variance	N CR AVE AVE^2
Intention				
	-0.793	0.628849	0.371151 0.561756	
sum	-0.002	1.067093	0.932907	-
Jun	1.455	1.007033	0.552507	
Attitude				
	-0.764	0.583696	0.416304	4 2 0.71158308 0.55249 0.3052452
	-0.722	0.521284	0.478716	5
sum	-1.486	1.10498	0.89502	2
Mediators				•
Trust Ability				
Ability	0.55	0.3025	0.6975	2 0.48338617 0.3188705 0.1016784
	0.579	0.335241	0.664759	
sum	1.129	0.637741	1.362259	9
Integrity				
megny	0.689	0.474721	0.525279	2 0.66031414 0.492973 0.24302238
	0.715	0.511225	0.488775	5
sum	1.404	0.985946	1.014054	1
Benevolenci	e 0.628	0.394384	0.605616	2 0.62565558 0.456392 0.2082936
	0.028	0.5184	0.603816	
sum	1.348	0.912784	1.087216	
Perceived ri	sk			
Financial	0.849	0.720801	0.279199	2 0.80967157 0.6804005 0.46294484
	0.8	0.64	0.36	
sum	1.649	1.360801	0.639199	•
Security	0.647	0.418609	0.581391	1 2 0.73023961 0.579965 0.3363594
	0.861	0.741321	0.381391	
sum	1.508	1.15993	0.84007	7
Privacy				
	0.874	0.763876	0.236124 0.289351	
sum	1.717	1.474525	0.525475	
Type of com	petence			-
Conceptual	0.678	0.459684	0.540316	2 0.65921286 0.49193 0.24199512
	0.078	0.524176	0.340318	
sum	1.402	0.98386	1.01614	
Operational				
	0.707	0.499849	0.500151 0.635184	
sum	1.311	0.864665	1.135335	
Perceived fi				
	0.864	0.746496	0.353504	4 2 0.84635364 0.7336485 0.53824012
	0.864	0.746496	0.253504 0.279199	
sum	1.713	1.467297	0.532703	
Mediators				
Lechnology	knowledge	0.046004	0.052020	4 0.80553545 0.51971175 0.270100
reenhology	0.589	0.346971		
reennology	0.589	0.346921 0.734449	0.653079	L
reclaidingy	0.857	0.734449 0.720801	0.265551 0.279199	9
	0.857 0.849 0.526	0.734449 0.720801 0.276676	0.265551 0.279199 0.723324	Ð 4
sum	0.857 0.849 0.526 <b>2.821</b>	0.734449 0.720801	0.265551 0.279199	Ð 4
sum	0.857 0.849 0.526 <b>2.821</b>	0.734449 0.720801 0.276676 <b>2.078847</b> 0.948676	0.265551 0.279199 0.723324	
sum Brand know	0.857 0.849 0.526 2.821 Nedge 0.974 0.966	0.734449 0.720801 0.276676 <b>2.078847</b> 0.948676 0.933156	0.265551 0.279199 0.723324 <b>1.921153</b> 0.051324 0.066844	2 3 4 2 0.9695582 0.940916 0.88532293
sum <b>Brand know</b> sum	0.857 0.849 0.526 2.821 Nedge 0.974 0.966 1.94	0.734449 0.720801 0.276676 <b>2.078847</b> 0.948676	0.265551 0.279199 0.723324 <b>1.921153</b> 0.051324	2 3 4 2 0.9695582 0.940916 0.88532293
sum <b>Brand know</b> sum	0.857 0.849 0.526 2.821 0.974 0.966 1.94 owledge	0.734449 0.720801 0.276676 <b>2.078847</b> 0.948676 0.933156 <b>1.881832</b>	0.265551 0.279199 0.723324 <b>1.921153</b> 0.051324 0.066844	2 3 4 2 0.9695582 0.940916 0.8853229; 3 3
sum <b>Brand know</b> sum	0.857 0.849 0.526 2.821 1edge 0.974 0.966 1.94 wiedge 1.002 0.917	0.734449 0.720801 0.276676 2.078847 0.948676 0.933156 1.881832 1.004004 0.840889	0.265551 0.279199 0.723324 1.921153 0.051324 0.066844 0.118168 -0.004004 0.159111	1         2         0.9695582         0.940916         0.88532293           1         2         0.95958301         0.9224465         0.85090755
sum <b>Brand know</b> sum <b>Financial kn</b> sum	0.857 0.849 0.526 2.821 ledge 0.974 0.966 1.94 owledge 1.002 0.917 1.919	0.734449 0.720801 0.276676 <b>2.078847</b> 0.948676 0.933156 <b>1.881832</b> 1.004004	0.265551 0.279199 0.723324 1.921153 0.051324 0.066844 0.118168	1         2         0.9695582         0.940916         0.88532293           1         2         0.95958301         0.9224465         0.85090755
sum Brand know sum Financial kn sum	0.857 0.849 0.526 2.821 1edge 0.974 0.966 1.94 0.969 0.917 1.919 0.917	0.734449 0.720801 0.276676 2.078847 0.948676 0.933156 1.881832 1.004004 0.840889 1.844893	0.265551 0.279199 0.723324 1.921153 0.051324 0.066844 0.118168 -0.004004 0.159111 0.155107	2 0.9695582 0.940916 0.88532293 4 2 0.95958301 0.9224465 0.85090753
	0.857 0.849 0.526 2.821 ledge 0.974 0.966 1.94 owledge 1.002 0.917 1.919	0.734449 0.720801 0.276676 2.078847 0.948676 0.933156 1.881832 1.004004 0.840889	0.265551 0.279199 0.723324 1.921153 0.051324 0.066844 0.118168 -0.004004 0.159111	2         0.9695582         0.940916         0.88532292           4         2         0.95958301         0.9224465         0.85090755           4         2         0.95958301         0.9224465         0.85090755           7

## Appendix 6: Disciminant validity calculations



Explenation





Square root value of 
$$AVE = \left(\frac{\left(\sum_{i=1}^{k} \lambda_i\right)^2}{k}\right)^2$$

	Intention	Attitude	Ability	Integrity	Benevolence	R_financial	R_privacy	R_security	P_fit
Intention	0.285								
Attitude	,877 <sup>⊷</sup>	0.305							
Ability	,639**	,694**	0.319						
Integrity	,650 <sup>**</sup>	,670**	,816 <sup>**</sup>	0.493					
Benevolence	,543 <sup>**</sup>	,560**	,594**	,669**	0.456				
R_financial	-,516 <sup>**</sup>	-,537**	-,577**	-,575**	-,493**	0.680			
R_privacy	-,674**	-,620**	-,609**	-,644**	-,534**	,680**	0.544		
R_security	-,566**	-,537**	-,590**	-,616**	-,524**	,612**	,855 <sup>**</sup>	0.336	
P_fit	,466 <sup>**</sup>	,473 <sup>**</sup>	,575⁺⁺	,557 <sup>™</sup>	,444 <sup>**</sup>	-,432 <sup>**</sup>	-,483 <sup>**</sup>	-,439**	0.538
Conceptual	,422 <sup>**</sup>	,473**	,639**	,614**	,458**	-,425**	-,457**	-,452**	,610 <sup>**</sup>
Operational	,485 <sup>**</sup>	,529**	,661 <sup>**</sup>	,670 <sup>**</sup>	,488 <sup>**</sup>	-,481 <sup>**</sup>	-,500 <sup>**</sup>	-,492**	,597 <sup>**</sup>
TechFam	,254 <sup>**</sup>	,269**	,231 <sup>™</sup>	,231 <sup>**</sup>	,098*	-,211 <sup>**</sup>	-,150 <sup>**</sup>	-,146 <sup>**</sup>	,114
Fin_Fam	,192 <sup>**</sup>	,176**	,188**	,207**	,137 <sup>**</sup>	-,172**	-,098*	-0.078	,131
Bra_Fam	,270 <sup>⊷</sup>	,301	,297 <sup>**</sup>	,267**	,180 <sup>**</sup>	-,228 <sup>**</sup>	-,209 <sup>**</sup>	-,214 <sup>**</sup>	,266 <sup>°°</sup>
Dispositional	,150 <sup>™</sup>	,195**	,297**	,256**	,257**	-,231**	-,233**	-,254**	,170 <sup>**</sup>

Not valid Valid

## Appendix 7: The intro to the main study



Tusen takk for at du ønsker å delta i vår spørreundersøkelse. Denne undersøkelsen er laget i forbindelse med en masterutredning på Norges Handelshøyskole.

Formålet med undersøkelsen er å kartlegge kundereaksjoner og holdninger til en ny finansiell tjeneste.

Som deltaker kommer vi til å vise deg noen skjermbilder av den finansielle tjenesten. Det er viktig at du leser forklaringen til skjermbildene godt før du svarer på de tilhørende spørsmålene.

Spørreundersøkelsen er anonym, og det vil ikke bli mulighet til å identifisere svarene ved en senere anledning.

Undersøkelsen vil ta ca. 10 minutter å gjennomføre. Det er viktig at undersøkelsen gjennomføres alene på et sted uten distraksjoner.

For å kunne få et presist resultat blir det satt stor pris på dersom alle spørsmålene blir svart på.

Dersom du har noen spørsmål, kan du sende mail til: kjersti.sveen@student.nhh.no eller ta kontakt via telefon: 41406110.

Tusen takk for hjelpen!

#### Med vennlig hilsen,

Nikolai Kaldahl-Miller Aleksander Skugstad Kristian Gjønnes Kjersti T. Sveen

## Appendix 8: Main experiment, without mock-up

Kjønn Alder Høyest fullført utdanning Har du boliglån? Har du kredittkort? Hvor mye oppsparte midler har du? (Oppgitt i NOK)

Før du blir introdusert til den tenkte finansielle tjenesten, vil du få noen spørsmål om hvordan du er som person, og dine holdninger til teknologi, finansielle tjenester og den aktuelle merkevaren.

Spørsmålene skal besvares ved hjelp av en skala fra 1 (i svært **liten** grad) til 7 (i svært **stor** grad). Sett kryss i den ruten du mener stemmer best med din oppfatning

	I hvilken grad er du enig med følgende påstand?	Sources
	(1= i svært <i>liten</i> grad; 7= i <i>svært stor</i> grad)	
Technology familiarity	<ul> <li>Jeg kjenner godt til AI (kunstig intelligens?)</li> </ul>	(Gefen, 2000; Luhmann; 2018; Mazey, 2018; Yuan Li, 2008)
«Individual Technology readyness Index»	<ul> <li>Jeg liker teknologi som tilpasser seg mitt behov</li> </ul>	(Parusaraman & Colby, 2015)
	<ul> <li>Andre folk kommer til meg for å spørre om råd angående nye teknologiske produkter</li> </ul>	
	<ul> <li>Blant mine venner er jeg en av de første til å bruke produkter med ny teknologi</li> </ul>	
	Jeg liker teknologi som tilpasser seg mitt behov	
	<ul> <li>Av og til tenker jeg at teknologi ikke er laget for at vanlige folk kan bruke det</li> </ul>	
	<ul> <li>Det er generelt utrygt å gjøre finansielle transaksjoner over internett</li> </ul>	
	I hvilken grad er du enig med følgende påstand?	
	(1= i svært liten grad; 7= i svært stor grad)	
Financial familiarity	<ul> <li>Jeg har høy kunnskap om finansielle tjenester</li> <li>Jeg har høy kunnskap om digitale finansielle tjenester</li> </ul>	(Gefen, 2000; Luhmann; 2018; Mazey, 2018; Yuan Li, 2008)
Dispositional trust	<ul> <li>Jeg pleier generelt å stole på andre</li> <li>Jeg pleier å tenke det beste om folk</li> </ul>	(Wingreen & Baglione 2005/ Chen & Barnes 2007; Mayer et al., 1995)
Risk aversion	<ul> <li>Se for deg et spill der du starter med 6 000 kroner. Beløpet du velger under vil med 50% sannsynlighet legges til, og med 50% sannsynlighet trekkes fra de 6 000 kronene. Hvilket beløp velger du? (Slider hvor man kan velge hvilket som helst heltallbeløp mellom 0 og 6000)</li> </ul>	(Aarbu &Schroyen, 2014; Dohmen et al., 2005).

#### For de neste kommende spørsmålene ønsker vi å kartlegge dine tanker og holdninger til **merket Prisjakt.** I hvilken grad er du enig med følgende påstand?

(1= i svært liten grad; 7= i svært stor grad)

**Brand familiarity** 

Hvor godt kjenner du til dette merket?Hvor godt kjenner du til produktene til dette merket?

(Rossiter, 2014; Washburn & Plank, 2002; Yusuf, 2018)

### Experiment..

1		
	Hva er dine tanker om følgende påstand?	
	(1= i svært uenig; 7= <i>svært enig</i> )	
Attitude	Jeg er positiv til denne tjenesten	(Compeau & Higgins, 1995)
	Denne tjenesten er attraktiv	
Intention	<ul> <li>Jeg hadde tatt i bruk denne tjenesten dersom den kom</li> </ul>	(Yuan Li., 2014)
	på markedet.	(10011 El., 2014)
	<ul> <li>Jeg er villig til å oppgi personlig informasjon til denne</li> </ul>	
	tjenesten, slik at den kan finne optimale produkter for	
	meg	
I hvilken grad er du <u>eni</u>	i <u>g</u> i følgende utsagn om <u>dette merket?</u>	
	I hvilken grad er du enig med følgende påstand?	
	(1= i svært <i>liten</i> grad; 7= i svært <i>stor</i> grad)	
Perceived «fit»	Denne tjenesten passer til merkevaren	(Ciartage 2015)
	• Det er logisk at dette merket leverer denne tjenesten	(Gjertsen, 2015)
Percieved conceptual	<ul> <li>Jeg ser på dette merket som kreativt</li> </ul>	(Mang Lin 2020)
competence	<ul> <li>Jeg ser på dette merket som fremtidsrettet</li> </ul>	(Wang,Liu, 2020)
Perceived operational	<ul> <li>Jeg ser på dette merket som dyktig</li> </ul>	(Mang Live 2020)
competence	<ul> <li>Jeg ser på dette merket som kompetent</li> </ul>	(Wang,Liu, 2020)
Ability	Hva er dine tanker om følgende påstand? (1= svært usannsynlig; 7= svært sannsynlig)	(Mayer et al. 1005)
Ability	<ul> <li>Denne tjenesten har tilstrekkelig kompetanse for å finne de beste betingelsene for meg</li> </ul>	(Mayer et al., 1995)
	<ul> <li>Denne tjenesten vil over tid tilpasse seg meg og mine finansielle behov</li> </ul>	
Integrity	<ul><li>Denne tjenesten oppgir pålitelig informasjon</li><li>Denne tjenesten holder løftene den gir meg</li></ul>	(Mayer et al., 1995)
Benevolence	<ul> <li>Denne tjenesten sin primære intensjon er å hjelpe meg</li> <li>Denne tjenesten ønsker genuint at jeg skal være fornøyd</li> </ul>	(Mayer et al., 1995)
	Hva er dine tanker om følgende påstand? (1= svært sannsynlig; 7= svært usannsynlig)	
Perceived financial risk	<ul> <li>Det er sannsynlig at jeg taper penger ved å bruke denne</li> </ul>	
	tjenesten	(Featherman & Pavlou, 2003;
	<ul> <li>Ved å bruke denne tjenesten vil jeg bekymre meg for å ha</li> </ul>	Skard , Nysveen & Thorbjørnse
	gjort en dårlig investering	2016; Grewal et al., 1994)
Perceived privacy risk	Jeg føler meg ikke trygg når jeg oppgir informasjon til	(Mcknight et al., 2002a; Oliveir
	denne tjenesten	T., Alinho, M. & Dhillon, G. 201
	<ul> <li>Merket prøver ikke å verne mine personopplysninger</li> </ul>	
Perceived security risk	• Tjenesten har ikke ressurser eller kompetanse til å unngå at	(Flavian & Guinaliu, 2006a;
	hackere får tilgang til systemet	$\Omega'_{\rm Cass}$ & Eenech 2003:

hackere får tilgang til systemet Tjenesten kan ikke garantere sikker flyt av min personlige

•

O'Cass & Fenech, 2003;

informasjon

Ranganathan & Ganapathy, 2002)

## Appendix 9: Photos of mock-up



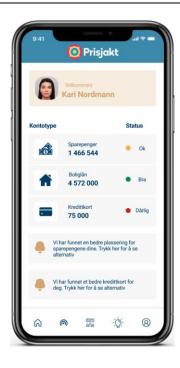




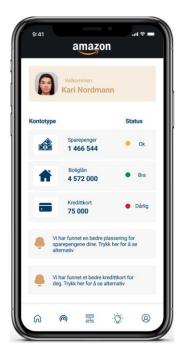
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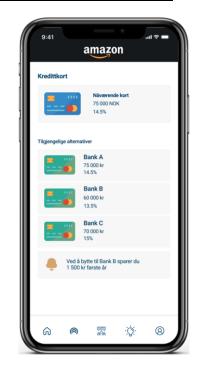








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