FINTECH SUCCESS FACTORS

THE DEVELOPMEMT OF THE DANISH FINTECH SECTOR

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Abstract

Purpose – The purpose of this study is twofold. The first purpose is to gain an extensive overview of the development of the Danish fintech sector from 2017 to 2020 (cf. Appendix 3 and Section 5.1), including identifying and assessing the developmental stage and trajectory of the sector as a whole. Second, the study identifies critical success factors with the purpose of contributing to the theoretical lens of CSFs for fintech companies; by testing and increasing the explanatory power of Nicoletti's (2017) framework of CSFs (cf. Section 3.2) as well as extending it.

Methodology – Theoretically, the study is intended to test and/or improve the framework of Nicoletti (2017) to increase the theoretical exploration within the fintech area and gain a sufficient understanding of critical success factors in the context of fintech. Empirically, the research is divided into two separates but still intercorrelated studies. To explain the above-mentioned development, *Study 1* is based on an extensive review of domestic and foreign-based companies that were operating in Denmark as of 2017; this includes a self-created database of all the companies using only secondary data (cf. Appendix 3). Then, to identify and classify critical success factors, *Study 2* is based on an extensive review of nine case study companies using only secondary data as well.

Findings – Following the extensive secondary research in both *Study 1* and *Study 2* was it possible to answer the research question. *Study 1* created an extensive database with the development of Danish fintech companies from 2017 to 2020. This resulted in an output where 14 of the 107 identified companies in 2017 had failed, while the remaining 93 saw a substantial growth of 166% (DKK 1,229 million) in gross profit and 279% (DKK 13,825 million) in the level of funding, and 17 of the remaining 93 companies were acquired. In addition, it was clear that companies operating within the categories of payments and enterprise financial software were more developed and mature, than those working within other categories. *Study 2* identified eight critical success factors within the nine case studies, with some variation in the degree of explanatory power. The identified factors are innovation, scalability, customer centricity, organisation, agility, low profit margin (funding), simplicity, and products and services.

Research limitations – While the critical success factors identified and classified in this study could help fill a gap in knowledge by increasing the explanatory power of critical success factors for fintech companies, there is nevertheless room for further research to test the current findings of critical success factors and contribute with additional new factors. Qualitative research with both customers and fintech practitioners would be a particularly valuable contribution to this study to conclusively determine the critical success factors of fintech companies.

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1. Introduction

This chapter first describes the background of the emergence of technology in the financial services industry. Thereafter, it sets the scene for the research and defines the scope, objective, and limitations by primarily focusing on the gap in knowledge that forms the foothold for the research questions.

1.1 The innovation and evolution of technology in the financial services industry

The financial services industry has reached a brand-new transformational pace, primarily converging around technology-enabled innovations. The proliferation of advanced technological innovations, an increasing focus on societal demand, the availability of data, a supportive regulatory environment, sufficient investor capital, and financial education are paving the way for new entrants who are challenging the conventional business models of financial services with their radically innovative and creative business models (Gomber, Kauffman, Parker, & Weber, 2018). Even though fintech as a concept is relatively new, its emergence and affirmation started a revolution that has already significantly impacted the financial services industry. The Economist notes the following:

> 'The magical combination of geeks in T-Shirts and venture capitalists that has disrupted other industries has put financial services in their sights. From payments to wealth management, from peer-to-peer lending to crowdfunding, a new generation of start-ups is taking aim at the heart of the industry – and a pot of the revenues that Goldman Sachs estimates is worth $4.7 trillion dollars' (Gomber, Kauffman, Parker, & Weber, 2018, p. 3).

Fintech refers to companies that provide or facilitate financial services by using information technology. In its current form, fintech is characterised by technology companies that disintermediate formal financial institutions and provide direct products and services to end users, often through online and mobile channels (World Economic Forum, 2015). Fintech is here to stay, supported by the widely emerging technologies such as artificial intelligence (AI), blockchain, smart contracts, and machine learning, among others. To support this is it possible to seek precedents from other previously disrupted industries, such as the music industry and the mobile phone industry, it is clear that a technological revolution within the financial services industry is undeniable (Riemer & Johnston, 2019). The financial services industry has historically been the most resistant to disruption by technology, thus resulting in defensive economics. The last significant period of technological disruptions was the dotcom boom, which provided further evidence of the resilience of incumbents (McKinsey & Company, 2015). This has now changed as fintech has become the poster child that continues to grab headlines.

This momentum can be explained by technological innovation, process disruption, and services transformation that are evolving due to the ever-increasing computational capability, which has now reached the application purposes of financial services (Gomber, Kauffman, Parker, & Weber, 2018). All of this has led to fintech being at the centre of attention in the industry of financial services, gaining the attention of incumbents, venture capitalists, investors, customers, and public institutions (Gomber, Kauffman, Parker, & Weber, 2018).

1.1.1 Setting the scene for this study

Fintech companies are challenging current and resilient business models and long-held value propositions by applying technological innovation for further efficiency and cost reduction of financial services.

On the one hand, working around a common technological denominator, which is spread throughout numerous areas of financial services, fintech companies are rethinking many of the industry's outdated processes, services, and business models, with a number of companies or start-ups working on replacing them (Nicoletti, 2017, p. 161). On the other hand, launching and running a start-up is not an easy job (Horowitz, 2014). Approximately 90% of all start-ups fail; this percentage is an average across all industries, and start-up failure rates seem to be close to the same across all industries (Embroker, 2020). As such, succeeding with a fintech company can be highly difficult, which might indicate that further exploration of fintech is needed in order to get an understanding of why some companies succeed.

Fintech, along with its development and disruptiveness, as a collective force, has consequently been used with no specific knowledge about the wide variety of underlying companies[1]. Analysts and experts have written some case studies and articles about the most promising and successful companies[2]; however, from an academic context, it remains unclear what makes some fintech companies successful. This might be because the research on fintech still is in an early-stage (Tucker, 2018). As such, in an attempt to determine why some fintech companies have become sustainable and successful, this thesis explores critical success factor (CSF)-related literature, with particular emphasis on fintech companies in Denmark, in order to identify and recognise CSFs for fintech companies.

[1] (CB Insights, 2019; EY, 2019; McKinsey & Company, 2015; EY, 2016)

[2] (Trefis Team, 2018)

1.2 Research area

In the past years, fintech have gained significant momentum and traction both in terms of the volume of start-up ventures and the level of funding, which have rapidly accelerated fintech companies' funding from US$17.0 billion in 2015 to US$40.6 billion in 2018 (CB Insights, 2019). Given this high exponential growth among such companies, this gap in knowledge is of great interest and must be addressed; however, publications on fintech success are primarily derived from magazines and newspapers (Tucker, 2018). The scientific research done on fintech has primarily been focused on categorising fintech as well as attempting to develop a consensual definition[3], such literature and research focus more on the descriptive work of fintech[4] (Puschmann, 2017). The questions of why and how some fintech companies have been able to achieve success have merely been raised, and as a result, limited empirical evidence is available about fintech success (Emergence of FinTech and the LASIC Principles, 2015; The Future of FinTech, 2017).

In 2017, a comprehensive database of all fintech companies in Denmark was established (Eleish, 2017). The study found that the financial services industry could be divided into six distinct categories, which consisted of 17 sub-sectors (Eleish, 2017). Furthermore, the study investigated each company in the Danish fintech sector to understand its unique business features (Eleish, 2017). However, it left some questions unanswered, especially regarding which factors are important to become a sustainable financial technology business. Another question of great interest pertains to how the development and progress of the fintech sector has been since then. The study laid the groundwork for a process of recognising factors essential, when identifying future sustainable financial technology businesses and explaining the development of the Danish fintech sector.

The fundamental premise of this thesis is thus to fill this gap in knowledge by conducting a literature review as well as collecting and analysing data to analyse the development of the fintech sector as well as identify, recognise, and classify CSFs for fintech companies.

1.3 Research questions

Having established the research area, the validity of the problem, and its importance for current and future fintech, the primary constituting topic of discourse in this thesis is limited to fintech in Denmark. Given the

[3] (Gomber et al. 2018; Coeckelbergh, DuPont, & Reijers, 2018)

[4] (EY – Global Fintech Adoption Index 2019, 2019; Deloitte – Connect Global Fintech: Interim Hub Review 2017, 2017)

importance of understanding why and how some fintech companies succeed, this study contains all 107 companies from the comprehensive database created by Eleish (2017).

To achieve the research objective, this study is two-sided, including an analysis of the development in the Danish fintech sector as well as nine individual case studies, that are structured around the following research question:

Research question
What explains the development of the fintech sector, and what are the critical success factors of fintech companies?

This is a twofold question, aiming 1) to analyse the development in the fintech sector and 2) to determine what the critical success factors are for fintech companies.

1.4 Relevancy

Theoretically, this research is approached by adopting Nicoletti's (2017) framework of CSFs for fintech companies that support the early identification of sustainable financial technology businesses. This is done to gain a sufficient understanding of the critical success factors related to fintech companies. The reviewed literature, together with the analysis, explores Danish fintech companies to 1) analyse the development of the Danish fintech sector and 2) identify the CSFs for fintech companies.

Empirically, the study is predicated on an extensive analysis of the progress of all identified fintech companies in Denmark – both domestic and foreign-based companies operating in Denmark – as well as case studies of specifically chosen fintech companies. The analysis contains second-hand data, which can enable the identification of CSFs.

1.5 Limitations

In the light of the chosen method, research design, and theories applied, the study in relation to the analysis and results is subject to a number of limitations that are important to clarify and consider.

The scope of this thesis was limited to only fintech companies – both domestic and foreign-based companies – operating in Denmark as of 2017. The analysis was divided into two separates but still intercorrelated studies. The purpose of Study 1 (cf. Section 5.1) was to explain the development of the Danish fintech sector; this was done by assessing the development of the sector from 2017 to 2020. In relation to method and research,

accessibility of information was an issue; in Study 1 specifically, financial data was in some cases undisclosed. In Study 2 (cf. Section 5.2), the information was as well primarily based on secondary desk research to approach this extensive task of identifying and documenting CSFs for the nine case study companies. While elite interviewing would have benefitted the study by providing deeper and valuable insights into identifying CSFs, this was not possible. External factors restricted the opportunity to take such an approach and achieve in-depth engagement with practitioners, such as executives of fintech companies, industry experts, and successful fintech entrepreneurs. The conclusion hence cannot be definite; however, it is one step closer to clarifying why some fintech companies have succeeded. The study should therefore not be interpreted as conclusive recommendations.

This study merely describes the development of the Danish fintech landscape and tackles the challenge of identifying which factors of a fintech business can be critical to success. Studying companies in depth to determine whether it is possible to identify a generic set of success factors might contribute to identifying future sustainable financial technology businesses.

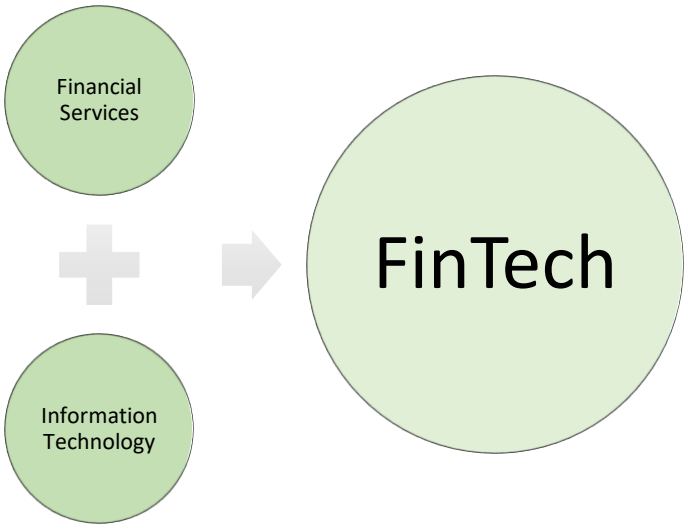
2. Background

The purpose of this chapter is to review the literature about fintech and understand the general development of the industry as well as reviewing the literature on business models. The gaps in the literature are identified, and a working delimited definition and categorisation of fintech should be established in order to explain the development of the Danish fintech sector.

2.1 Defining fintech

Fintech is an abbreviation of financial technology, which is the intersection of financial services and information technology, visualised in figure 1.

Figure 1: Fintech illustration
Source: Own creation



According to Gimpel et al. (2017), the term fintech was first used in the early 1990s as the name of a technical collaboration by Citigroup. However, it was already used two decades earlier, when Bettinger (1972) noted that fintech is a combination of the words 'financial' and 'technology' and represents the amalgamation of bank expertise with computer accessibility and functions. It has since gained much attention in the context of business models (Gupta, 2018) (Gimpel, Rau, & Röglinger, 2017, p. 246) (Bettinger, 1972) . Since the industry is developing at a rapid pace, with new emerging technologies evolving, it can blur the lines between industries. The definition of fintech can consequently be rather subjective and ambiguous, with no total consensus on the exact definition. Given the limited insight into fintech, it is often referred to as innovative personalised financial services and products. However, to other scholars, it is related to a specific business model or an entire sector or industry, as well as a reference to start-ups, incumbents, and providers leveraging data and using technologies to cover a wide range of services within the financial sector (Gimpel, Rau, &

Röglinger, 2017). One reason for the ambiguity could be the novelty and rapid rise of the fintech industry. Fintech brings new opportunities for individual empowerment, for example, by reducing costs or by making information accessible. This lack of clarity around fintech makes it challenging to explain the development of the fintech sector and identify CSFs for fintech companies.

In the most objectively reasonable sense, fintech companies make use of a wide array of digital technologies such as the Internet, mobile computing, and data analytics to enable, innovate, or improve value propositions within the financial services industry.
For the sake of austerity, this study relies on a modified version of the definition of fintech companies provided by Deloitte (2017):

> '*Companies entering the financial market, seeking growth rather than profitability, and building their business on some form of innovation which is new to the market.*'

However, for preciseness, this study imposes some limitations on the definition:

1. This definition does not include large technology firms that enter financial services (e.g. Apple with Apple Pay) or incumbent financial institutions that increase their focus on technology.
2. According to the problem question, the study is restricted to focus solely on fintech companies operating in Denmark.

These limitations, together with the definition by Deloitte, propose an applicable working definition when trying to explain the fintech development and map out CSFs for fintech companies.

2.1.1 Categorisation of the fintech sector

Fintech companies currently cover many different areas within the entire financial services industry. However, as categorising the fintech market is important, making a distinction between classic banks (incumbents) and non-banks is it not sensible, because of the complexity in the consolidation processes and co-operations between classic banks and non-banks. As a result, a functions-oriented categorisation is preferred, based on a sector, sub-sector, or solution categorisation.

As the purpose of this study is not to deep dive into the segmentation and categorisation of the fintech market, this study adopts the categorisation presented in the thesis 'Fintech Disruption – Landscaping the Danish

Fintech sector' by Eleish (2017) as a working categorisation. Fintech companies are categorised into six distinct core categories covering the whole financial services industry. Each category is then sub-categorised into various different sectors, which are listed in Table 1:

Table 1: Categorisation of the financial services industry
Source: Eleish (2017)

Capital Raising	Deposit and Lending	Enterprise Financial Software
- Crowdfunding	- Personal finance	- Collaboration and workflow
- Alternative financing	- Digital banking	- Accounting and invoicing
	- Alternative lending	

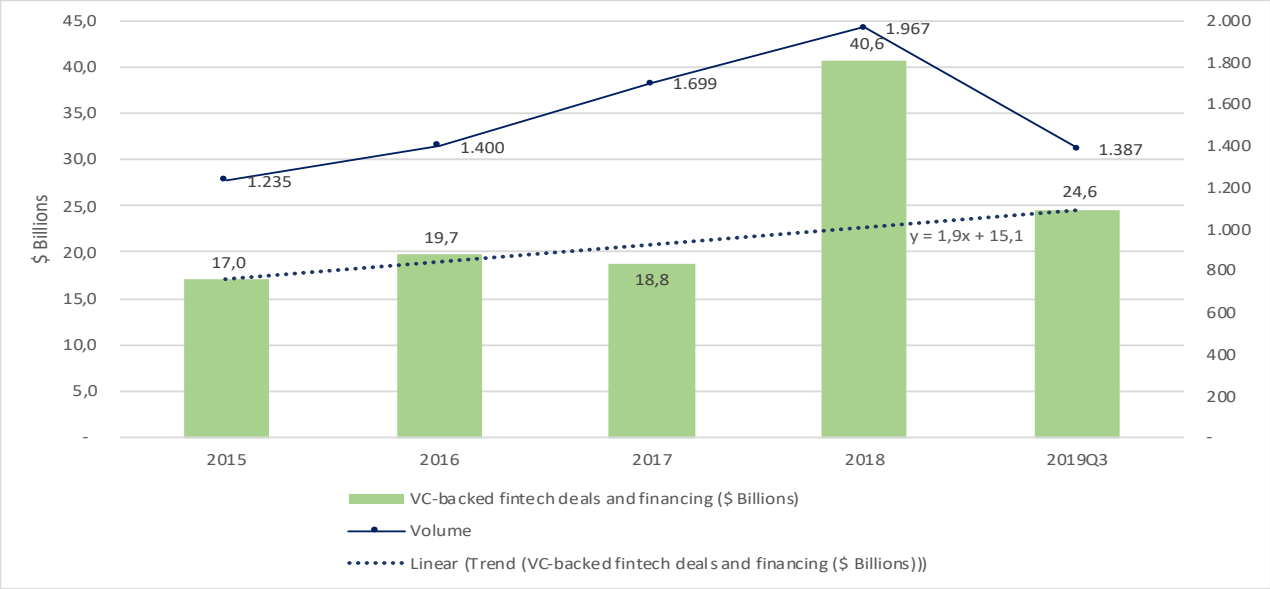
Investment Management	Market Provisioning	Payments
- Retail investment	- Comparison and matchmaking	- Backend and infrastructure
- Institutional investment	- Data and analytics providers	- Consumer payments
	- Financial social networks	- Cryptocurrency

Eleish (2017) drew inspiration from the World Economic Forum and Deloitte (2015). The categories were created by structuring a framework of six functions within financial services, all comprising financial services. Eleish (2017) then restructured the framework by replacing the category 'insurance' with 'enterprise financial software'. This was done on the basis of studies by accredited fintech reports and practitioners (Eleish, 2017). It is important to note that this categorisation is a working categorisation in this study, because the industry is undergoing rapid changes in design, delivery, and providers, the categorisation can thus be challenged by other practitioners (Eleish, 2017).

2.2 Fintech maturity

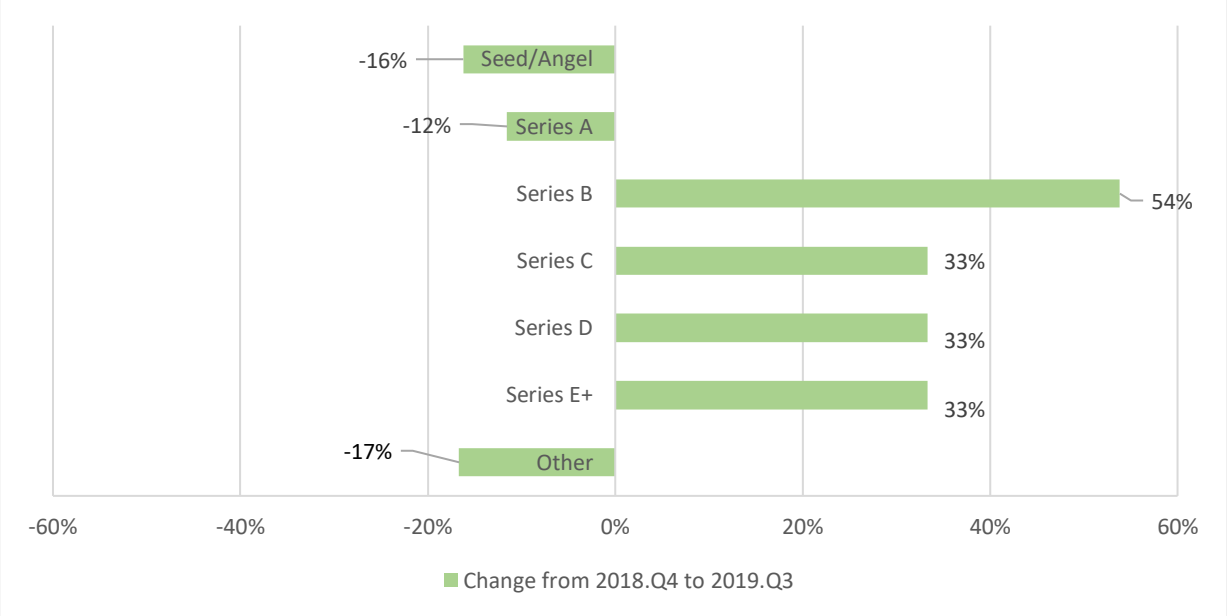
As of the end of 2019, there has been an indication that fintech companies are beginning to converge towards a state of maturity. Fifty-eight fintech unicorns exist globally, which in aggregate are valued at $213.5 billion (CB Insights, 2019, p. 6). This might be a sign that fintech companies have explored a market with a strong demand for financial services, such development might indicate some level of maturity, that can be further reinforced by the acceleration in the development of VC-backed fintech deals and financing. The development has been almost unbelievable, going from US$17.0 billion in 2015 to US$40.6 billion in 2018 (cf. Figure 2).

Figure 2: Change in VC-backed fintech deals and financing
Source: CB Insights (2019), cf. Appendix 1



The amount of funding more than doubled from 2017 to 2018; such a large increase could cloud the objective eye from seeing the real trend. Removing the record year of 2018 as an outlier, it is still clear that there is a positive trend of $1.9 billion each year. After the record year of 2018, a normalisation can be seen in terms of both funding and volume in 2019YTD (Q3), but still with a positive trend. The convergence towards maturation is further reinforced by a decrease in the volume of early-stage deals, such as Series A, angel funding, and seed capital, and an increase in later-stage deals such as Series B, Series C, Series D, and Series E+ funding from 2018 to Q3 2019 (cf. Figure 3).

Figure 3: Change in volume of deal types
Source: CB Insights (2019), cf. Appendix 1



The development depicted in Figures 2 and 3 is notable because a general trend of maturity can be observed in the fintech industry. As seen in Figure 2 and Figure 3, larger funds are invested in later stages of a company's life cycle. This, combined with the development towards a withdrawal in funding for seed-stage companies, could possibly indicate a general consolidation and development of the sector. With such a trajectory towards maturity, it is time to see which companies are here to stay; this might result in some necessary consolidations and conceivably some high-profile failures.

However, it is still clear that the fintech industry only is on the verge of shifting from the growth stage into the maturity stage, primarily supported by the accelerating rate of consumer acceptance. According to EY (2019), consumers like what they see. The adoption of fintech services is on the rise, growing from 33% in 2017 to 64% in 2019. Even the awareness among non-adopters is now increasingly high. Globally, 96% of consumers know of at least one fintech service for transferring money and making payments (EY, 2019, p. 6). Another telling sign of the fintech industry's maturation is the evaluation of consumer priorities towards financial services. Favourable rates and fees have overtaken the ease of setting up an account as the primary reason for selecting a fintech company over an incumbent. In 2017, 30% of adopters ranked the ease of setting up an account as the first priority when selecting a provider; however, this declined to 20% in 2019. In contrast, only 13% of adopters ranked attractive rates and fees as there first priority in 2017, whereas in 2019, this changed to 27% of the adopters (EY, 2019, p. 6). In addition, fewer adopters indicated access to different and more innovative products and services as their top reasons for choosing a fintech company. This might indicate an increase in the competitiveness and comparability of fintech services provided by incumbents. Given the increasing pressure from widely available fintech services, providers have shifted from aiming to attract consumers with practical advantages and processes to developing new strategies to retain customers (EY, 2019, p. 6).

The market is now converging towards maturity and is currently challenging incumbents' resilient business models using smarter, faster, cheaper, and more transparent means (PwC, 2016). This is done by exploring new markets and simultaneously blurring the lines between industries while challenging the foundations of financial services (Goldman Sachs, 2015, p. 4).

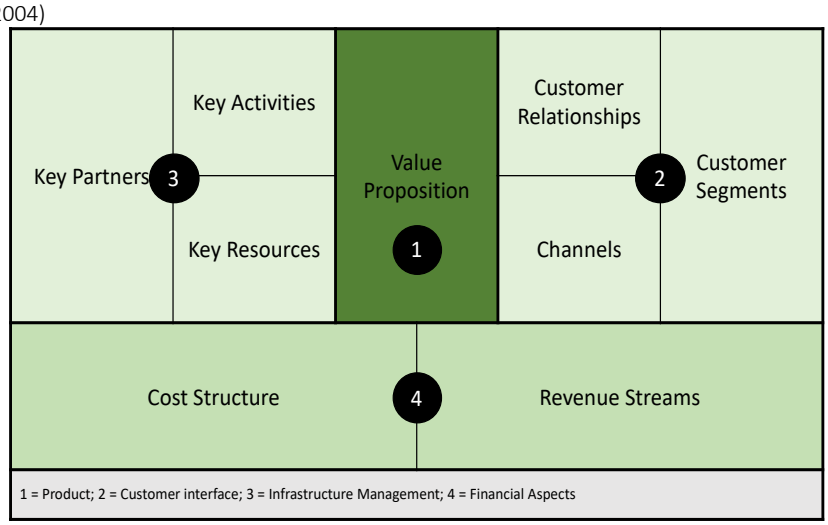
2.3 Business models

Business models are of great importance for companies. Incumbents need to rethink business models, and entrepreneurs must create new ways of thinking about such models from the beginning. For entrepreneurs, the business model canvas (BMC) is the simplest and most well-known way of approaching business models.

It is a firm-level concept of a business model and is popular among entrepreneurs because it helps them to make sense of 'doing business'. The BMC contains nine structured elements of knowledge that represent the content ('what') of doing business. However, these elements can be difficult to operationalise and measure because they do not consider the process ('how') of doing business (Osterwalder, 2004).

The foundation of the BMC was proposed by Osterwalder (2004). He suggested a business model concept containing nine elements of doing business, as illustrated in Figure 4. The relationship among the nine elements can be explained as a four-dimensional concept of doing business, meaning that the nine elements can be explained by four factors, which are labelled 1–4. However, these are not the core of the elements, but rather a rough categorisation thereof, which might raise the question of the elements' individual importance to the dimensions in which they are included (Osterwalder, 2004).

Figure 4: Business model canvas
Source: (Osterwalder, 2004)



According to Gupta (2018), a business model defines the way a company creates, delivers, and captures value. Here, it is important to understand the concept of business models in the context of technology companies, which include fintech companies. Technological innovations often lead to changes in consumer behaviour and the emergence of new competitors, which require companies – both start-ups and incumbents – to radically transform their business models. This means finding new ways of capturing value, including creating value through experiences, adopting agile and asset-light business models, and being service-based. Furthermore, as global competition for products intensifies and product differentiation diminishes, it is not surprising that companies are relying more on a service-based value capturing, since society is now moving towards a demand-based economy (Gupta, 2018, pp. 31-58). This shift will make new innovative business models increasingly important in the future, and new ones will thus emerge in the future. Digital technology in any sector – not only fintech – will be a threat to incumbents, but also provide a new set of opportunities if they are willing to rethink their business models.

3. Literature review

Following chapter 2, this chapter aims to review and clarify theoretical and empirical implications related to CSFs, while additionally presenting and exploring a framework of CSFs for fintech companies that will be used later in the analysis, in order to test and increase the framework's explanatory power as well as extend it into a richer framework. The purpose of the exploration is to gain a sufficient and comprehensive understanding of each factor within the framework. Firstly, the progression of general CSF dimensions will be described; secondly, Nicoletti's (2017) framework of CSFs for fintech companies will be explored.

3.1 A descriptive review of critical success factors

Critical success factors are defined as critical aspects of a business that must go well to ensure the success of an organisation. In other words, they represent the business areas that must be given special and continuous attention to bring about high performance. Critical success factors include issues vital to a company's operating activities and its future success (Boynton & Zmud, 1984, p. 17).

This description was inspired by Rockart (1979). However, the research on CSFs can be traced back to 1961, when Daniel (1961) first discussed success factors in management literature. He broadly focused on industry-level CSFs, which are relevant for any company in a particular industry. Anthony et al. (1972) went a step further and emphasised the need to tailor CSFs to a company's strategic objectives and managers. By combining the perspectives of Daniel (1961) and Anthony et al. (1979), Rockart (1979) confirmed that organisations in the same industry may exhibit different CSFs because of anomalies in their environmental situation, temporal factors, geographic location, or strategic situations (Baporikar, 2020, pp. 1331-1332).

Reflections on the progress of CSFs have emerged in literature over the course of years. The most common dimensions are explained in the following paragraph:

1. Hierarchy vs. Group of CSFs. Rockart (1979) defines a specific hierarchy of CSFs, primarily based on the organisational level at which the individual strategic issues are discussed. More specifically, a CSF can be addressed on an industry, corporate, or sub-organisational level. Moreover, the hierarchical approach is extended to include groups of CSFs, meaning a group of organisations belonging to the same industry or a group of managers in particular roles belonging to different organisations (Baporikar, 2020, p. 1332).
2. Temporary vs. Ongoing CSFs. According to Khandelwal and Ferguson (1999), CSFs can be of either a temporary or an ongoing nature. An ongoing CSF is the existence of a project champion that influences

the full development of an organisation. In contrast, with a temporary CSF, the main difference is the scope because this type of CSF is only critical for a specific period of time. However, the key is to recognise each of the CSF's individual relevancy (Baporikar, 2020, p. 1333).

3. Internal vs. External CSFs. CSFs can further be distinguished based on whether they are internal or external to the particular organisation or unit to which they are applied. Arce and Flynn (1997) described that internal CSFs are related to actions taken within an organisation, whereas external CSFs are related actions performed outside the organisation. Moreover, internal CSFs are linked to issues within a manager's range of control, whereas external CSFs are not exclusively controlled by the manager. Rockart (1979) highlights that the relevancy of this CSF dimension is high when determining the correct source of information (Baporikar, 2020, p. 1333).
4. Building vs. Monitoring CSFs: These refer to the amount of control that management have and the monitoring or building nature of their actions taken. Arce and Flynn (1997) describe a monitoring CSF as a factor only concerned with monitoring an existing organisational situation, whereas a building CSF is concerned with changing the organisation. For example, the maintenance of technological leadership would be a CSF, which a company could build and control, while changing consumer demands would represent a CSF that needs to be monitored (Baporikar, 2020, p. 1333).
5. Strategic vs. Tactical CSFs. The dimensions here focus on the type of planning that takes place within an organisation, hence differentiating between strategic and tactical CSFs. Esteves (2004) describes strategic factors as those that identify which goals are to be achieved, while tactical factors relate to possible alternatives in regard to how these goals can be achieved. Strategic factors, although based on opportunities, often contain a great amount of risk and therefore require primarily long-term planning. In contrast, tactical factors deal with the resources required to reach the goals described on the strategic level and only call for a short- or medium-term planning effort (Baporikar, 2020, p. 1333).
6. Perceived vs. Actual CSFs. CSFs identified in one organisation do not necessarily apply to all other organisations. More reasonably, each individual company must align its own specific goals and needs and distinguish between perceived and actual CSFs. This distinction was initially proposed by Ellegard and Grunert (1993) and could bring forth useful implications; for instance, it could lead to more stable strategy formulations and implementations (Baporikar, 2020, p. 1333).

Even though the intention for each of these dimensions of CSFs is optimistic, there are still weaknesses related to the use of CSFs in any case. First, the approach can be difficult to apply and can only be used appropriately by skilled individuals. Second, the validity of such test results can be questioned due to the possibility of biased results. Third, given that humans have a limited capacity to deal with complexity effectively, this can result in

a causality and an association between CSFs and organisational success that are unprecedented due to misinterpretation by an individual (Boynton & Zmud, 1984, pp. 18-19).

In addition, confusion can exist between CSFs and goals, which are not the same. Goals are broad and high-level, and they support the accomplishment of a mission statement; CSFs represent actions that enable the success or contribute to the accomplishment of a mission. The difference is that goals are often derived from a performance management exercise rather than strategic planning and are set with a focus on achievability rather than organisational success or contribution to the accomplishment of the mission. Furthermore, CSFs refers to the ongoing operational activities that must be sustained for an organisation to function successfully. If an organisation is primarily goal-oriented, it might, as a result, drop attention on the day-to-day activities that sustain its success (Baporikar, 2020, p. 1343).

The CSF concept has inevitably evolved over time, and it has been possible to see it implemented in different contexts. CSFs are strongly related to the vision and strategic goals of any business or project; however, while the vision and goals focus on what is to be achieved, CSFs focus on the most important areas of the process and get to the heart of both the 'what' and 'how'. Furthermore, it is really important to emphasize that organisations in the same industry may exhibit different CSFs because of anomalies in their environmental situation, temporal factors, geographic location, or strategic situations (Baporikar, 2020). That poses as a challenge when trying to identify a generic set CSFs for fintech companies.

3.2 A Framework of critical success factors for fintech companies

As mentioned in section 3.1 has the CSF concept evolved over time and has been applied in many different contexts. One of those contexts is information and communication technology (ICT); however, such examinations are limited in relation to financial services. Nicoletti (2017), using ICT research of Pieterse (2012), Kiioh (2015), and Chuen and Teo (2015), presented a framework of CSFs for fintech companies. Their research is briefly described in the following paragraph.

First, Martin Pieterse (2012) investigated CSFs for ICT projects. The purpose was to identify CSFs that would increase the probability of an ICT project succeeding. The investigation revolved around the business environment to understand project success, since systems and components that compromise ICT can provide a business with a significant competitive advantage. What was found was that despite the competitive advantage that ICT can provide, more than half of such projects fail, mainly due to the lack of management and leadership. However, a number of factors were also found that are critical to success: customer

involvement, a positive attitude towards the project, flexible project tools, schedules and budgets in place, and team management and communication (Nicoletti, 2017, p. 162). Second, Kiioh (2015) examined why many projects continue to fail despite large investments and well-defined project methods and tools. The primary cause of this was the lack of leadership competency: a project's success or failure is primarily determined by the ability to effectively manage the constraints of scope, time, costs, and quality (Nicoletti, 2017, p. 163). The aim of Kiioh's study was to add to the existing body of leadership research on project management by examining the influence of leadership aspects on ICT projects. The study identified four factors of leadership, namely, skills, experience, control, and style. Then, the influence of the factors was tested on the performance of ICT projects at a fintech company in Kenya. The investigation found that a significant relationship existed between the leadership of project management and the performance of a project (Nicoletti, 2017, p. 163).
Lastly, Chuen and Teo (2015) explained some factors that can support the early identification of future sustainable financial technology businesses. The factors are low-margin, asset-light, scalable, innovative, and compliance-easy (LASIC). Each of the factors were explained and then applied to small case studies of Alibaba and M-PESA (Chuen & Teo, 2015).

Nicoletti (2017) used the findings of all three previously mentioned works and proposed a framework primarily based on the work done by Chuen and Teo (2015). Their LASIC principles were modified and expanded by Nicoletti (2017), who coupled the attributes proposed by Chuen and Teo (2015) with the research done by Pieterse (2012) and Kiioh (2015). This resulted in an approach that presented seven CSFs, by a modification of 'asset-light' to 'agility' and the addition of 'customer centricity' and 'security management'. Nicoletti termed these factors mnemonically as CLASSIC, constructed by the following:

1. Customer centricity;
2. Low profit margin;
3. Agility;
4. Scalability;
5. Security management;
6. Innovation;
7. Compliance easy.

The following sections explore in detail the seven CSFs included in Nicoletti's (2017) framework. Furthermore, the CSFs are summarised, substantiated and a keyword-based description of each of them is presented as well as critically reviewed.

3.2.1 Customer centricity

'It is the customer who determines what a business is, what it produces, and whether it will prosper.' – Peter Drucker

Already in 1954 in the first version of the Practice of Management, Drucker (2007) proposed that a company is not determined by the producer, but by the consumer. A company is defined by what satisfies the consumer; therefore, instead of focusing on selling products, it should try to fulfil the customer's needs (Drucker P. , 2007). Customer centricity objectively means providing the customer with an optimal experience at all physical and digital contact points and adding value to the company. Such a customer-centric approach is a prime way for fintech companies to differentiate themselves from competitors that do not offer the same experience and value. The characteristics of a customer-centric approach are as follows:

- Convenient;
- Customer needed;
- Customer engagement.

3.2.2 Low profit margin

A low profit margin is a key characteristic in the initial phase of a fintech business (Chuen & Teo, 2015). According to Accenture, even successful fintech companies have taken 8 to 14 years to become profitable. Many spend a significant amount of time 'waiting in the lobby' which implies a significant probability of the company going out of business. However, if the initial phase of growth remains sufficiently high and volatile over time, there is a real possibility that a company can obtain operational success (Schwartz & Moon, 2000). It is all centred around the idea of obtaining a large mass of users while attaining a high burn rate and high customer demand.

The internet has become globally accessible, where information and services are often available for free, and users consequently have a low willingness to pay for any kind of information or services offered by providers. From the perspective of the providers, there is a need to build a critical mass of users from the very beginning of the business. In this initial phase of mass accumulation, a large network effect is crucial and requires an extensive and expensive marketing effort. This will cause a period of high burn rate with low or no profit. However, when the critical mass has been contained, monetisation becomes possible. Therefore, it is also sensible to measure success in the initial phase by factors other than profitability, such as customer retention rates, customer lifetime value, and daily active users (Hatzakis, Nair, & Pinedo, 2010). The initial phase will then be followed by a maturity phase, with exponential growth coming from multiple sources of revenue, such

as advertising, subscription fees, and consumer data. Over a long period of time, the profit margin will appear low but will increase as different sources of revenue are captured (Hatzakis, Nair, & Pinedo, 2010).

In general, profit margin is part of a category of profitability ratios. Within this category, there are various ratios that measures profitability; among them are gross profit margin, operating profit margin, net profit margin, earnings per share, return on assets, and return on equity. The net profit margin is calculated as net income divided by revenue, or net profits divided by sales. Even though profitability measurements can be important indicators, other measurements not related to profitability, such as customer acquisitions costs, customer lifetime value, customer retention rate (churn rate), net promoter score, and daily active users, are also sensible to use (Gitman & Zutter, 2015, pp. 113-116).

3.2.3 Agility

The Advanced Research Programs Agency (ARPA) and the Agility Forum (AF) define agility as '*the ability to function and compete within a state of dynamic, continuous and often unanticipated change'* (Appelbaum, Calla, Desautels, & Hasan, 2017, p. 7). As this is a broad definition of the term, specifying it in the context of organisations and/or enterprises is important. Yang and Liu (2012) synthesised the work of researchers and presented a description of agility in an enterprise context. They describe enterprise agility as '*a complex, multidimensional, and context-specific concept comprised of the ability to sense environmental change and quickly respond to unpredicted change by flexibly assembling resources, processes, knowledge, and capabilities*' (Yang & Liu, 2012, p. 1023).

The convergence of information technology provides companies with significant opportunities for enhancing agility. Their ability to detect and seize market opportunities at a rapid pace and the element of surprise are considered to be imperative for their market justification and operational success (Sambamurth, Bharadwaj, & Grover, 2003, p. 238). To seize opportunities, it is important for companies to continually sense the opportunities in their market spaces and then quickly acquire the knowledge and assets needed to capture them. In a broad sense, a company's underlying success is related to its ability to continually augment and redefine its value creation and competitive performance through innovations in products, services, channels, and market segmentation (Sambamurth, Bharadwaj, & Grover, 2003, p. 238).

Agile companies are able to be augmented and redefined, thereby enabling them to innovate and scale without incurring high fixed costs on assets. This will result in relatively low marginal costs. Examples of this could be to add onto an existing system that depreciates quickly and to offer an alternative revenue source at

low marginal costs by using existing infrastructure; the fixed costs and initial setup costs can then be minimised. This approach is also supported by two of the fundamental principles of digital technology: re-programmability and self-reference (Vial, 2020).

The reason agility is preferred over asset-light is that the latter is a mean, not an objective. In addition, being asset-light will also be a generalisation, which can be difficult to objectivise because the understanding of asset-light can vary (Nicoletti, 2017, p. 167).

3.2.4 Scalability

Scalability is the degree to which an asset can be adapted to support application-engineered products for various defined measures. It specifically refers to the ability of a system or software to effectively and efficiently incorporate additional resources (Hughes, 2016, p. 276). In an organisational capacity, it can be described as system's, network's, or processes with the capability of handling a growing demand or with the potential to be enlarged in order to accommodate such growth; this could involve a system increasing its total output under increasing demand (Hughes, 2016, p. 276).

To scale up at the correct time, the timing of such an expansion is as important as the timing of the entry. Staykova and Damsgaard (2015) argue that the timing of entry is the key to a successful market entry because it can bring a significant competitive advantage if the most opportunistic time to enter a market is estimated. The timing of expansion, however, is of even more importance in this context. Fintech companies should pursue multi-sided markets while using a get-big-fast strategy, which, according to Staykova and Damsgaard (2015), can only be successful when the network effects are strong, scale economies are significant, and retention rates are high. This reinforces the argument for an initial phase of mass accumulation in the second CSF, namely, low profit margin (Staykova & Damsgaard, 2015). However, the network effects alone cannot create high barriers of entry; high switching costs are also important. If the expansion is not executed within the optimal time, then the previously gained competitive advantage could be annulled (Staykova & Damsgaard, 2015).

Fintech companies may start small but must be scalable to reap the full benefits of the network effects. The technology used needs to be easy to scale without any significant increases in costs or any compromises to the underlying technology. Digital business models have made scaling a business exponentially easier, despite developers having to be mindful that their technology itself is scalable.

3.2.5 Security management

Security management is the identification of an organisation's assets, followed by the development, documentation, and implementation of policies and procedures for protecting these assets (Nicoletti, 2017, p. 168).

A security management procedure is used within an organisation as an informal classification, risk assessment, and risk analysis to identify threats, categorise assets, and rate the vulnerability of the company's systems so that the most effective controls can be implemented. Such controls are presented by Focardi and Martinelli (1999) in an approach of analysing various security properties (Nicoletti, 2017, p. 169). The general idea is that security property should be satisfied even in a hostile environment. A set of general conditions were presented that permits one to check a property only against a most powerful intruder. The approach is applicable to a number of existing security properties (Nicoletti, 2017, p. 169).

Security should be the main concern when customers are using the internet or mobile applications. With financial services, this concern should be heightened. Companies must maintain effective procedures to protect information, and it is mandatory for fintech companies to build secure services regardless of geography and local regulation (Nicoletti, 2017, p. 169). This can be done by complying with the Framework for Improving Infrastructure Cybersecurity by the US Department of Commerce's National Institute of Standards and Technology (NIST). The framework represents a guide on how key organisations with critical infrastructure can enhance their cybersecurity by providing a structure that organisations, regulators, and customers can use to create, guide, assess, or improve comprehensive cybersecurity programmes (Nicoletti, 2017, p. 169). This allows organisations to apply the best practices of risk management to improve security and resilience. They can use the framework to determine their current level of cybersecurity and co-ordinate with their business environment to establish a plan for maintaining or improving cybersecurity (Nicoletti, 2017, p. 170).

Such a framework methodology will protect privacy and civil liberties and help organisations to incorporate those protections into a comprehensive cybersecurity programme (Nicoletti, 2017, p. 170).

3.2.6 Innovation

'This is obvious! Why didn't I think of it? It's so simple!'

To be successful within the fintech area, being innovative in products and operations is important. With the emergence of technology and digitalisation, the majority of innovation in the fintech space can be performed through technology such as mobility, Big Data, analytics, the Internet of Things (IoT), social networks, cloud

computing, and AI. Successful fintech companies need to be innovative in multiple aspects of their businesses: products, processes, organisation, and business models (Nicoletti, 2017, p. 170).
According to Drucker (2013), innovation is the specific function of entrepreneurship. Regardless of whether it is in an existing business, a public service institution, or a new venture started by individuals. It is the means by which an entrepreneur creates new wealth-producing resources or endows existing resources with the enhanced potential to create new wealth; in some literature, this can hence also be distinguished as incremental and radical innovation (or entrepreneurship). There is still no proper definition of entrepreneurship; the ambiguity varies from small businesses to new businesses. However, many well-established companies engage in successful entrepreneurship; therefore, the term does not refer to the size or age of a business, but the type of activity performed (Drucker P. F., 2013, p. 143).

In relation to innovation, it can often be associated with a spark of genius. However, most innovations derive from a conscious and purposeful search for innovation opportunities. Within a company or industry, four such opportunities exist: unexpected occurrences, incongruities, process needs, and industry and market changes. Three additional sources of opportunity exist outside a company in its social and intellectual environment: demographic changes, changes in perception, and new knowledge (Drucker P. F., 2013, pp. 144-154). A systematic and purposeful innovation begins with a continuous analysis of new opportunity sources. Depending on the context, each of the sources will have its own distinct importance. In the context of fintech companies, the industry and market changes, combined with new knowledge, are of great importance (Drucker P. F., 2013, p. 155). Other factors could also be influential, which means that regardless of the situation, innovators must analyse all sources of opportunities. Since innovation is conceptual and perceptual, innovators must use both parts of the brain to look, ask, and listen (Drucker P. F., 2013, p. 155). In addition, they must work analytically to determine what the innovation must be in order to satisfy an opportunity. Finally, innovators must study the expectations, values, and needs of the potential userbase, which also reinforces the first success factor of customer centricity (Drucker P. F., 2013, p. 155).

In an innovation process, it is necessary to take into account all the different aspects and sources of new opportunities. All of these must be integrated and consistent, and they must seek to supersede earlier definitions with their specific disciplinary biases and recognise that an all-embracing definition of innovation should encompass a number of aspects and opportunities as the essence of innovation.

3.2.7 Compliance easy

The financial compliance and regulatory landscape in Denmark is overseen by the Danish Financial Supervisory Authority (DFSA) as an integrated supervisor. The DFSA engages in the preparation of financial legislation and regulatory frameworks. As Denmark is a member of the European Union (EU), it is also subject to the overarching regulatory infrastructure provided in EU directives and regulations (International Monetary Fund (IFM), 2014). This means that they are subject to directives related directly to financial services, such as the Markets in Financial Instruments Directive (MiFID-I/MiFID-II), the Payment Services Directives (PSD/PSD2), and the Anti-Money-Laundering Directive (AMLD), as well as privacy and data protection regulations such as General Data Protection Regulation (GDPR).

The regulations of financial institutions are becoming increasingly complex and potentially costly, particularly for fintech start-ups. Modifications to the regulatory framework have been identified as important factors influencing the innovation activities of companies, industries, and whole economies (Blind, 2010). In general, being compliant means conforming to requirements such as specifications, policies, standards, or laws[5]. Compliance regarding legal financial regulation is mandatory, and every nation has its own individual financial regulation based on culture, financial system, and historically based experiences (Nicoletti, 2017, p. 171). As fintech companies often work in cross-border operations, they need to comply with multilevel regulations overseen by different regulators, which can be complex to manage. Due to the rise in the number of regulations and the need for operational transparency, organisations – including both fintech companies and incumbents – are increasingly adopting consolidated and harmonised sets of compliance controls. This approach can ensure that all necessary requirements are fulfilled without any unnecessary duplication of work (Nicoletti, 2017, p. 171).

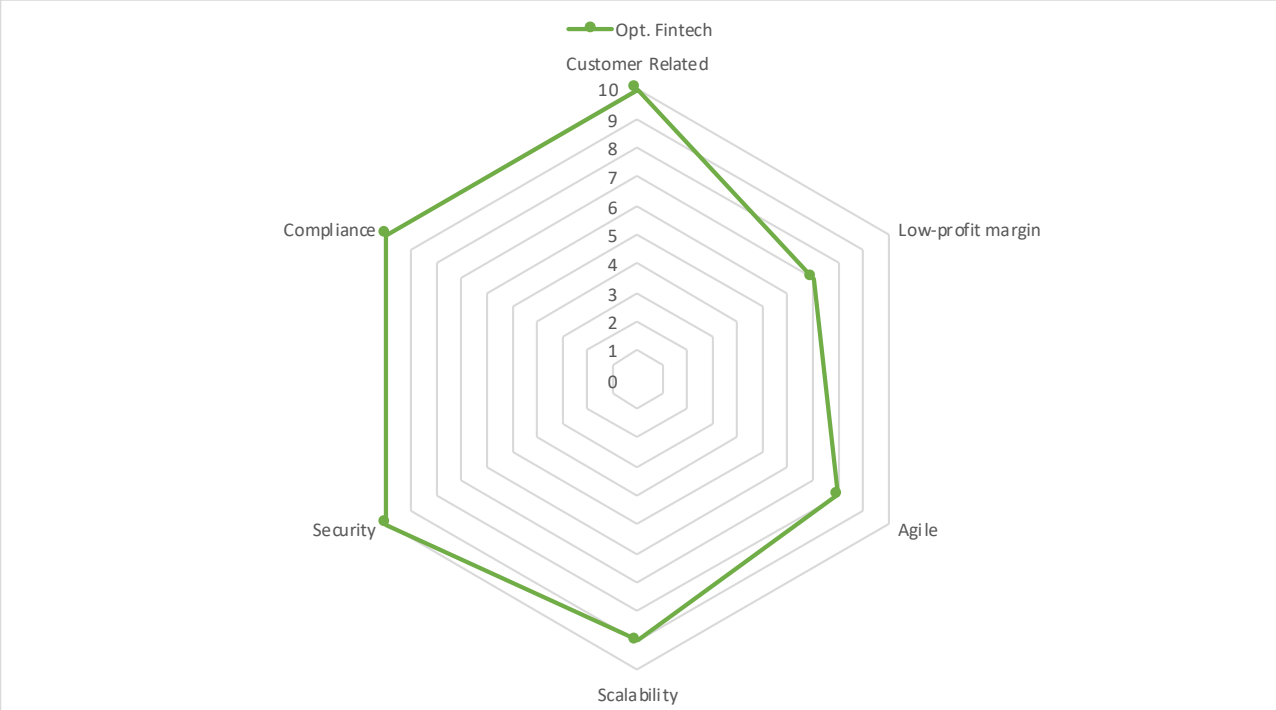
The number of such regulations and directives with which organisations must comply is only going to grow in the future (Nicoletti, 2017, p. 171). Some regulators are now attempting to shift away from a retrospective approach to a more forward-looking one, with directives such as the PSD2 (Nicoletti, 2017, p. 171). This should allow for markets to be more efficient and competitive. The potential for a common international fintech approach towards regulations thus arises, with an objective to maximise the market opportunity while setting a benchmark for managing the risks of financial stability and customer protection (Nicoletti, 2017, p. 171).

[5] (Merriam-Webster, 2020)

3.2.8 Substantiation of the critical success factors

Nicoletti (2017) proposed a method for substantiating the importance of each of the proposed CSFs based on previous research. This encompassed the exploration of CSFs in ICT: Pieterse's (2012) investigation of CSFs for ICT projects, Kiioh's (2015) examination of project failure despite large investments and well-defined project methods, and Chuen and Teo's (2015) recognition of factors that can support the identification of future sustainable financial technology businesses (Nicoletti, 2017). This substantiation highlights the importance of each of the factors on a scale from 1 to 10, as visualised in Figure 5. A radar diagram was chosen as the visualisation tool; however, it is missing the factor innovation without any explanation for why this is. This means that there are no conclusive remarks on how important each of these factors are. Nicoletti's (2017) substantiation of the CSFs does not conclusively explain their validity or explanatory power of the framework.

Figure 5: Substantiation of factors
Source: (Nicoletti, 2017, p. 173)



3.2.9 Critical review of the framework

As fintech has achieved widespread attention, the exploration of the subject has become more attractive to practitioners. However, research of the topic is still in its infancy, which means that a large gap in knowledge still exists and is in need of further exploration. The following paragraph presents the prevailing disputes and significant limitations that are important to take into consideration when discussing the framework.

1) Fintech success is not exclusively related to the proposed factors

The rules and players of the game are changing fast, and the fintech sector thus faces unprecedented challenges. These challenges could affect success both negatively and positively. Therefore, the seven CSFs in the framework presented by Nicoletti (2017) are not definitive, meaning that the framework is an early attempt to support the theoretical exploration of fintech. Some of the unmentioned factors are subsequently addressed in the following section.

1. Talent Acquisition. The financial services industry is facing an unprecedented change, and some non-traditional financial players are jostling for their place in this changed market. The changes will result in unemployment within traditional areas, specifically for bankers, lawmakers, and accountants. Future professionals must be multitalented in the fields of design, IT, business, law, and marketing. The professionals of tomorrow are thus required to be different from the professionals of today, and acquiring these professionals will be a challenge (Bhandari, 2020, p. 115).

2. Simplicity. Simplicity in a business exists when one has exactly the right number of essential components and connections to achieve a successful result. Complexity is the opposite of simplicity and can be characterised by diversity, ambiguity, unpredictability, and changes in conditions (Collinson & Jay, 2012, pp. 5-6). In general, it can be summarised as follows: the more a system or process is made up of people, the more complex it is. Moreover, since people are far from rational, stable, or predictable, even though it might suit the average economist, they are the source of diversity, ambiguity, and unpredictability (Collinson & Jay, 2012, p. 6). A fundamentally simple customer proposition can therefore be crucial to success; customers must be able to easily understand the services or products a company provides – moreover, the business processes must be transparent and highly focused (Collinson & Jay, 2012, p. 6). In addition, the proliferation of product and service varieties, the growing segmentation of markets, various new communication and information technologies, the increased specialisation of expertise and knowledge, and the geographic spread of the supply chain, driven by globalisation, pressure firms to become multinationals. All of these trends have added complexity to established corporations. Given this degree of complexity among incumbents, simplicity can be the livelihood of fintech companies. Simplicity is therefore important because fintech will benefit from not needing to deal with old legacy systems, complex processes, and bureaucracy, among other things, incumbents will most likely have to face (Collinson & Jay, 2012, pp. 7-9).

3. Organisation. An optimal organisational structure is eminent for companies. The importance of an optimal organisational structure should be emphasised, specifically that a company has all competencies and processes in house, for example product development (Harroch, 2019). Additionally, it is important that the management team is well composed of talented and experienced individuals who have knowledge of the financial services industry as well as the technological industry (Harroch, 2019).

4. Cultural Change. The way in which traditional financial institutions accept technology is a cultural challenge. Without any fintech innovation, the risk of technology complacency and eventual obsolescence exists, especially towards other countries. The reason for this is that without taking some steps towards advancing financial technology, financial institutions in some countries will run the risk of losing competitiveness by allowing their financial environment to become non-competitive in the global marketplace (Nicoletti, 2017, p. 26).

Furthermore, it also important to take into account the systemic risk as a result of a partly unregulated and dense sector (World Economic Forum, 2015).

2) The exploration of Fintech is still in an early stage

The factors presented by Nicoletti (2017) combined do not present a model of success; however, a framework at this stage should only be used as guidance for further exploration. The factors can vary greatly as a result of different business models. Therefore, the responsibility of using the factors correctly falls to the specific practitioner or scholar. Due to the early stage of, and wide variety in the fintech industry, creating a generic model for all companies can be difficult (cf. Section 3.1).

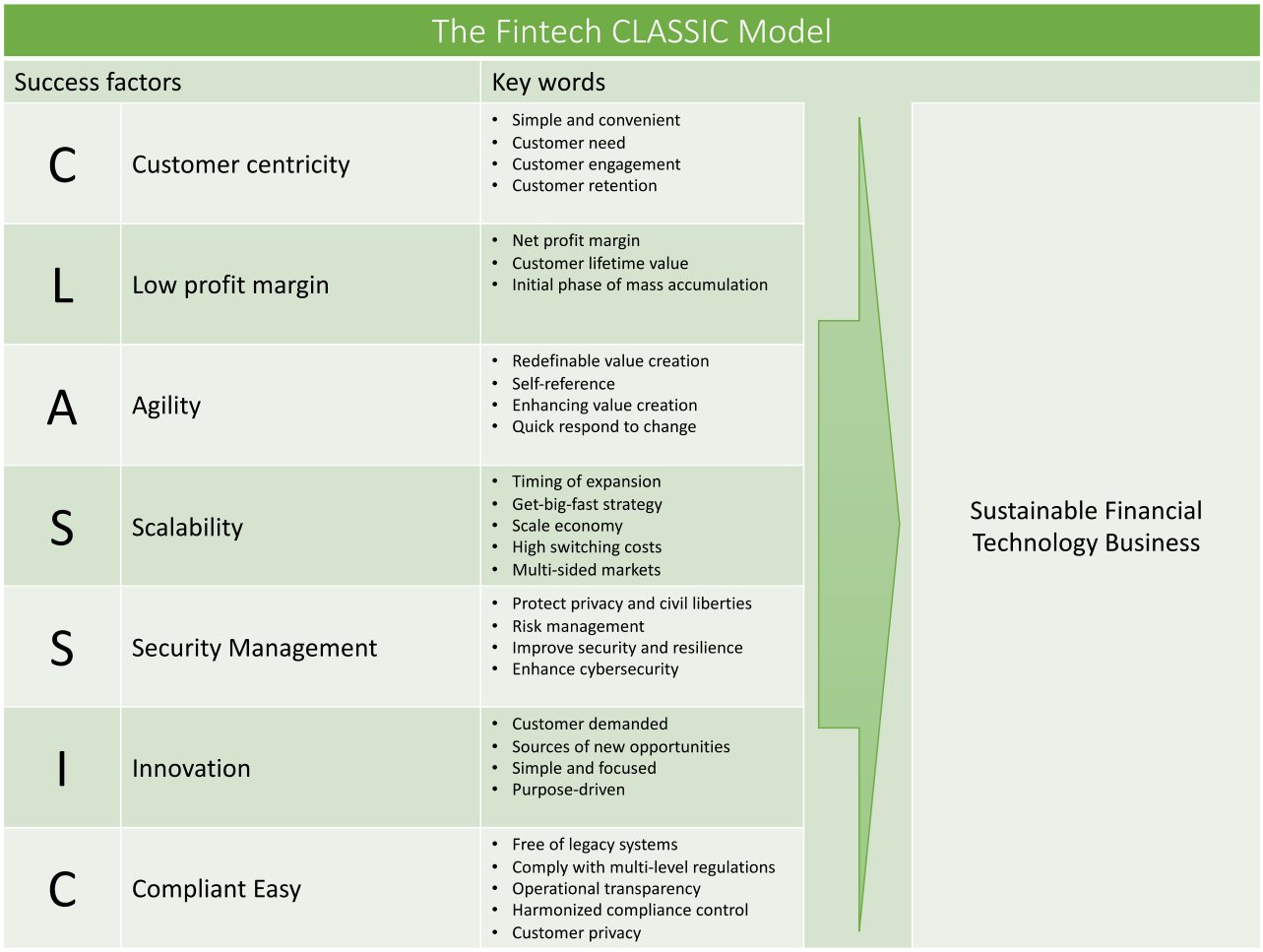
3) Limited review of the factors

Since the framework presented is relatively new, the explanatory power is low due to the limited research done. The factors are mainly derived from research conducted on ICT studies, which can vary from fintech. The factors proposed by Chuen and Teo (2015) have been examined in relation to M-Pesa and Alibaba; however, two case studies will score low on the generalisability of the findings. This means that the review is undispersed and narrow, and it consequently does not present an adequate picture of the whole industry. To present a generic framework, research should be done by thoroughly exploring an adequate and dispersed number of fintech companies.

3.3 Concluding remarks on literature

Apart from demonstrating a framework of CSFs for fintech companies, the reflection and critical review of the framework has particularly highlighted some challenges by attempting to present such a framework, mainly due to the rapid pace of change in the industry and the limited exploration of fintech. When presenting each factor, it has been possible to identify some keywords for each of the factors. Based on Nicoletti's (2017) framework, figure 6 presents a visualisation of the seven CSFs as outlined in the fintech CLASSIC model.

Figure 6: Description of critical success factors
Source: Own creation based on the research done by Nicoletti (2017)



The framework of CSFs for fintech companies have now been explored in detail and presented in a keyword form. Furthermore, the prevailing disputes and significant limitations have been described. The purpose of the exploration was to gain a sufficient and comprehensive understanding of each factor within the framework to later test and increase the framework's explanatory power and extend it into a richer framework, that has now been achieved.

3.4 Discussion

The purposes of this discussion are a) to interpret and describe the significance of the findings so far in light of what is already known about the research problem and b) to explain any new understandings of or insights into the problem after considering the findings.

The research question of this study is twofold: 1) what explains the development of the fintech sector, and 2) what are the CSFs of fintech companies? In relation to the first part of the question, the general development of the global fintech industry has been explored. The findings suggest that despite the industry being relatively new, it is converging toward a more mature market state. This is primarily evident in the increasing level and amount of funding as well as the significant rise in the adoption of fintech products and services. All of this has contributed to the understanding of the industry, which should no longer be considered as one of only promising starts-ups, but also well-established enterprises who are challenging the status quo. This consequently increases the relevance of identifying the CSFs of fintech companies.

To identify these CSFs a literature review of CSFs has been conducted as well as a framework of CSFs for fintech companies has been explored. The reason for this has been to lay the groundwork for explaining existing literature on CSFs with an emphasis on fintech. Critical success factors were found to be key aspects of a business that must go well to ensure the success of an organisation. These CSFs include issues that are vital to a company's operating activities and its future success; as such, it is clear that CSFs refer to ongoing activities that are important for success. However, it is also important to emphasize that companies within the same industry may exhibit different CSFs due to anomalies in their environmental situation, temporal factors, geographic location, or strategic situations, which might pose as a challenge for this study and the future exploration towards a general set of CSFs for fintech companies.

Most of the factors explored in Nicoletti's (2017) framework of CSFs for fintech companies can support the identification process of future sustainable financial technology businesses (Nicoletti, 2017). This is not to say that no additional review or testing is required or possible for increasing the explanatory power of the framework or that no other factors may be relevant to extend it into a richer framework. The point is that it has analytical, ex post value for a more precise identification of future sustainable financial technology businesses. Additionally, the prevailing disputes and significant limitations has been described, which even further intensifies the need for further exploration of fintech in relation to CSFs.

4. Methodology

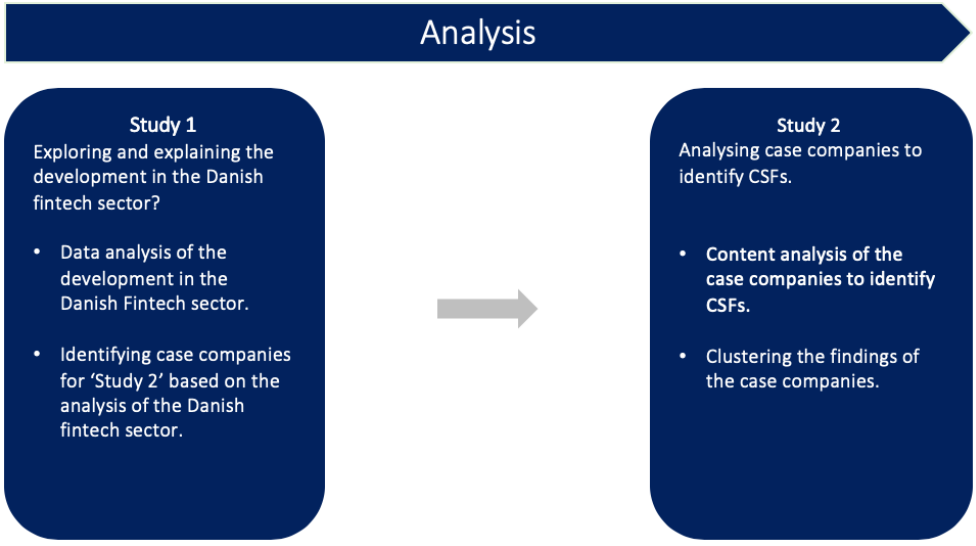
This chapter presents a detailed and reflective evaluation of the selected theory, chosen method, data gathering techniques, and analytical approach as well as the validity and reliability of the study.

4.1 Methodological considerations

The objective of the research question is twofold: what explains the development of the Danish fintech sector and identify and recognise CSFs for fintech companies. To explain the development of the Danish fintech sector, this study takes a descripto-explanatory approach in order to most sufficiently and effectively describe and explain the first part of the research problem while filling the gap in knowledge and expanding the understanding of fintech. Furthermore, to identify the CSFs for fintech companies, the study takes an inductive approach, aiming to generate meaning from the data collection to identify patterns and relationships to test and/or extend Nicoletti's (2017) framework of CSFs for fintech companies. The research approach taken is a case study approach, with the aim of testing the explanatory power and extending the CSFs of the framework (cf. Section 3.2).

The study is structured through a synthesised mass of knowledge from two areas: the Danish fintech sector and Nicoletti's framework of CSFs (Nicoletti, 2017). The quality of this study relies primarily on the methodological fit and causality between the two fields. Throughout the study, much emphasis is placed on describing and explaining the development of the fintech sector on the one hand and generating meaning from the data collection in coherence with the existing CSFs on the other. The two-sided analysis is visualised in Figure 7.

Figure 7: Analytical approach
Source: Own creation



4.1.1 Research approach

Study 1 – The research approach of Study 1 is based on a descriptive explanation of the development of the Danish fintech sector. The reason for this is to understand the development in gross profit, funding, acquisitions, business failures, and business models from 2017 to 2020 as well as to identify already successful fintech companies, which fits the purpose of the case study research in Study 2.

Study 2 – In Study 2, the research design is structured as a theory-building case study research. The objective here was not only to test the explanatory power of Nicoletti's (2017) framework of CSFs for fintech companies, in a specific case, but also to extend it into a richer framework, if possible. A case study research design was deployed for this purpose. A case study is a well-known research method for exploratory, theory-building research (Eisenhardt, 1989; Yin, 1989). However, as a research method, case studies – especially single-case ones – score low on the generalisability of findings. To improve this, nine companies were chosen to increase the generalisability. The case study approach has its real benefit in the richness of data, which fits well for an inductive process of theory building. It is precisely such a connection with empirical reality that permits the development of a testable, relevant, and valid theory (Eisenhardt, 1989, p. 532). The case companies are Klarna, E-conomic, Inpay, iZettle, Bambora, Tradeshift, Pleo, Easypark, and Unwire.

4.1.2 Data collection and analytical approach

Given the large number of stakeholders involved in the Danish fintech sector, data collection can be challenging. In this study specifically, the challenges relate to the sensitive nature of the financial industry and the rapid pace at which this sector is changing. In a condition such as this, the implication is that gaining access to the appropriate information will be difficult.

Study 1 – The analysis of the Danish fintech sector in Study 1 is based on a field study of the current market development. For this study, the collection of data is based exclusively on secondary desk research. This includes publicly available sources from the Danish Business Authority, Crunchbase.com, the companies' web pages, their LinkedIn pages, web articles, press releases and fintech-related magazines. The analysis is based on five key areas of the Danish fintech sector: gross profit, funding, acquisitions, out of business, and business models. To explain the analysis process, gross profit was used as an illustrative example. First, it is important to mention that the development is based on a timespan from 2017 to 2020. However, as the 2019 and 2020 annual reports of the companies have not yet been published at this time, the annual reports from 2015 to 2018 were used instead. Moreover, the gross profit in 2015 and 2018 was retrieved from the annual reports published by the Danish Business Authority. All the information was then mapped in a database to be able to

summarise all the information (cf. Appendix 2). Next, the information of all the companies, both in 2015 and 2018, was analysed and illustrated in a summarised form, but still differentiated across the fintech categories (cf. Section 2.1.1, Table 1). To further analyse the gross profit, the absolute growth for all of the companies was determined to identify the companies with the highest growth in gross profit. This would indicate which categories and companies have had the highest growth. To support the understanding of why and how this growth has been achieved within the companies, key companies with a high gross profit growth were made the subjects of an approach to identify some key explanations for that growth. The other key areas of the first study underwent the same steps of data gathering, data analysis, and data visualisation as well as an approach of identifying key explanations for such developments. In addition to explaining the development, it was also important to identify nine companies that fit the purpose of Study 2. The process of selecting these companies is explained in the following paragraph.

Study 2 – As with Study 1, Study 2 is also based solely on publicly available information. This includes research papers, books, reports, academic papers, news stories, press releases, research articles, articles, web pages, and theses, which links well with the purpose of establishing a relationship to the empirical reality. This method of data collection strengthens the grounding of a theory by triangulating the evidence (Eisenhardt, 1989, p. 533). The selection of case study companies was based on a holistic evaluation of all the companies included in Study 1 and an intercorrelated and dispersed selection process. This means that some companies were chosen because they have been acquired, while others were selected because of their level of funding, and some companies were chosen because of their duration of existence. This selection process was chosen because the purpose of this case study research approach is to achieve a high level of generalisability of the findings; however, as it was found in Study 1, that companies operating within the enterprise financial software and payment categories were more developed and mature, the selection process was therefore focused on companies within those specific categories. As such, the companies were selected from a specified population of fintech companies, which sharpens the external validity (Eisenhardt, 1989, p. 533):

- Klarna, Tradeshift, iZettle, and Pleo were selected on the basis of their level of funding.
- E-conomic and Bambora were selected because they were acquired.
- Inpay, Unwire, and Easypark were selected on the basis of their duration of existence.

Since the study was developed as a case study research, the empirical findings did not only test the explanatory power of the framework of CSFs in a specific case, but also extend it into a richer framework. Each of the case study companies was analysed with the purpose of identifying the factors critical to the success they have achieved. The analyses were done by holistically trying to review all essential, publicly available information

about the companies. Then, content analysis was employed to cluster the different types of data into fewer overarching factors.

The factors were then were reflected upon in relation to Nicoletti's (2017) framework and its concepts. To illustrate the process of clustering the observations, Klarna was used as an illustrative example. An empirical observation was made that Klarna creates experiences tailored to its customers, which is only possible due to its extensive approach to collecting customer data. This data collection approach makes it possible for the company to provide much more value in terms of service to customers. Such an observation would demonstrate that keeping customers centred in the business has been key for Klarna, and such observation would consequently be clustered as a customer centricity factor.

4.2 Methodological delimitations

The delimitations of this study have the objective of clearly informing readers about the definition of the boundaries that have been set. These delimitations are based on the practical reasons of the wide-ranging global fintech landscape. When stating the delimitations, it was crucial that the objective was to improve the standards of a professional field by revealing certain findings. With reference to the research question, the study was delimited geographically to only encompass fintech companies with operations in Denmark, also referred to as the Danish fintech sector in this work. A further delimitation of the study relates to the adopted objective of explaining the development of the Danish fintech sector; to do that, a timespan delimitation was applied – from 2017 to 2020. The reason for using 2017 as a basis year was that in 2017, a comprehensive list of all fintech companies operating in Denmark was created, and this list laid the ideal groundwork for studying the progressions of the Danish fintech landscape as well as identifying and recognising CSFs for fintech companies.

The study could have been delimited to encompass all fintech companies globally and with a larger timespan; however, due to reasons of practicality and relativity to the study at hand, these options were not appropriate. Furthermore, a possible delimitation would have been to focus on one specific category of the fintech landscape; however, this was inadequate because of compromised scope of such a study.

4.3 Methodological evaluation

Study 1 primarily focused on a quantitative gathering of financial data to describe the development of the Danish fintech sector; however, a limited use of secondary qualitative data was also appropriate for briefly explaining the development seen within the sector. Study 2 primarily focused on a content analysis of the

secondary data, as it was important to gather sufficient information about the case companies, first, to develop a thorough understanding of the companies and second, to identify factors closely associated with success. Content analysis is defined as a 'systematic, replicable technique for compressing many words of text into fewer content categories' (Stemler, 2000). This technique allows for large volumes of data (written text, oral text, audio-visual text, and hyper-text) to be analysed in a systematic, reliable, rational, and useful way that provides new insights and increases the understanding of a research phenomenon (Krippendorf, 2012).
Content analysis places specific emphasis on studying data within its context, which means analysing various forms of gathered data with the purpose of understanding, reflecting on, and making contextualised interpretations of salient messages and subject matter that the given data set actually communicates.

While content analysis might be predicated on subjective interpretations of data, the benefit of this technique is that it allows a study to reduce a large amount of different data while still being a systematic and replicable way of grouping large data sets into relevant clusters to make general interpretations about what the CSFs are for fintech companies and then, in particular, understand why some companies are successful.

The foundation for content analysis is to be insightful and meaningful, which depends on the clustering of data. For the purpose of this study, a preliminary examination and understanding of the data is necessary to group the information into relevant and inclusive factors. As such, content analysis is often associated with analysing secondary data, and it may arguably qualify as both a qualitative and quantitative methodology (Krippendorf, 2012).

Validity and reliability

Considering that the validity and reliability of the study are somehow concurrent in content analysis, as with other research methods, this study takes two approaches: a field study approach and a content analysis approach.

Study 1 – In the context of validity, the field study approach employed in Study 1 utilized financial data from the Danish Business Authority, funding data from CrunchBase, and information on company and LinkedIn pages to study acquisitions and bankruptcies. To ensure validity, Study 1 placed much emphasis on the data analysis as well as the correctness and relevance of the data that was retrieved. To ensure reliability in Study 1, the sources used to gather information were carefully evaluated in the context of reliability (Danish Business Authority, CrunchBase, company web pages, LinkedIn pages). However, not all information is publicly

available. Such undisclosed information might not be possible to collect unless special agreements are made, and since that was not the case in this thesis, emphasising the issue further was not possible.

Study 2 – In Study 2, a content analysis approach was applied. While validity in the context of content analysis refers to the information gathered as well as the definition of the factors, reliability refers to the researcher's stability and accuracy, which should result in findings that are replicable. In the case of ensuring validity, it was important to consider and thoroughly reflect on the degree to which the data corresponded to the actual meaning of the text while still being within its context (Krippendorf, 2012). Therefore, the study placed much attention on the preliminary examination of the data gathered to ensure that only the relevant data was gathered, analysed, and clustered into factors. The matter of reliability is perhaps more questionable and difficult to ensure because of the idiosyncratic element of the study. In particular, the fintech sector is rapidly changing, as is the advancement in technology, meaning that the question of whether other researchers will reach similar observations might be challenging and definitely an issue that is worth emphasising. To address this issue, this study methodically attempted to transparently show the steps carried out to search for, map and cluster the factors related to success and to define the reasoning behind each of the clustered factors to allow others to do the same.

5. Analysis

This chapter analyses the development of the Danish fintech sector and identifies CSFs for fintech companies by that contributing to the theoretical lens of fintech. This is done not only to test the explanatory power of the of the framework presented in section 3.2, but also to extend it into a richer framework.

To establish the theoretical and empirical depth of the results in this study, as well as the extensiveness of their relevance and usefulness, this analysis is divided into two related parts named Study 1 and Study 2. Study 1 seeks to explore the development of the Danish fintech sector, while Study 2 uses a case study approach to identify CSFs for fintech companies. This is done by pre-examining, analysing, and reflecting the empirical results in the following systematic manner:

1) First, explore the development of the Danish fintech sector to gain an overall and deep understanding of what the sector has developed into;
2) Second, determine which general CSFs are associated with sustainable financial technology businesses;
3) Third, reflect on the identified CSFs in relation to the CSFs presented in Nicoletti's (2017) framework (cf. Section 3.2), with the purpose to test and increase the explanatory power as well as extend it into a richer framework.

5.1 Study 1 – Danish fintech sector development

Overall, the Danish fintech landscape in 2017 was composed of 107 companies. In this analysis, these 107 companies are used as a basis for gaining a representable understanding of the development of the sector. First, it is important to note that of these 107 companies, 14 have failed and 17 have been acquired or gone public. However, the latter group of 17 companies are still operational and therefore represented in the analysis, meaning that 93 of the 107 fintech companies are represented in this analysis, as listed in Table 2. The status and development of all 107 companies are visualised in Appendix 3.

The reason that some have succeeded is explored later in the analysis. However, what is important to notice is the number of companies that have either been acquired or gone public since 2017, including both small and large acquisitions. Among the largest is PayPal's acquisition of the Swedish-based iZettle for DKK 15.1 billion[6], together with Visma's acquisition of E-conomic for DKK 1.5 billion (Larsen, 2020). Since 2017, Visma has acquired four fintech companies, which means that one of the successful technology companies from the

[6](Cruncbase, 2020)

dotcom boom has seen some potential or opportunities within this sector. The companies that have failed or been acquired are explored in detail in Sections 5.1.3 and 5.1.4.

Table 2: Development of Danish fintech, by category
Source: Own creation derived from the data analysis (cf. Appendix 2)

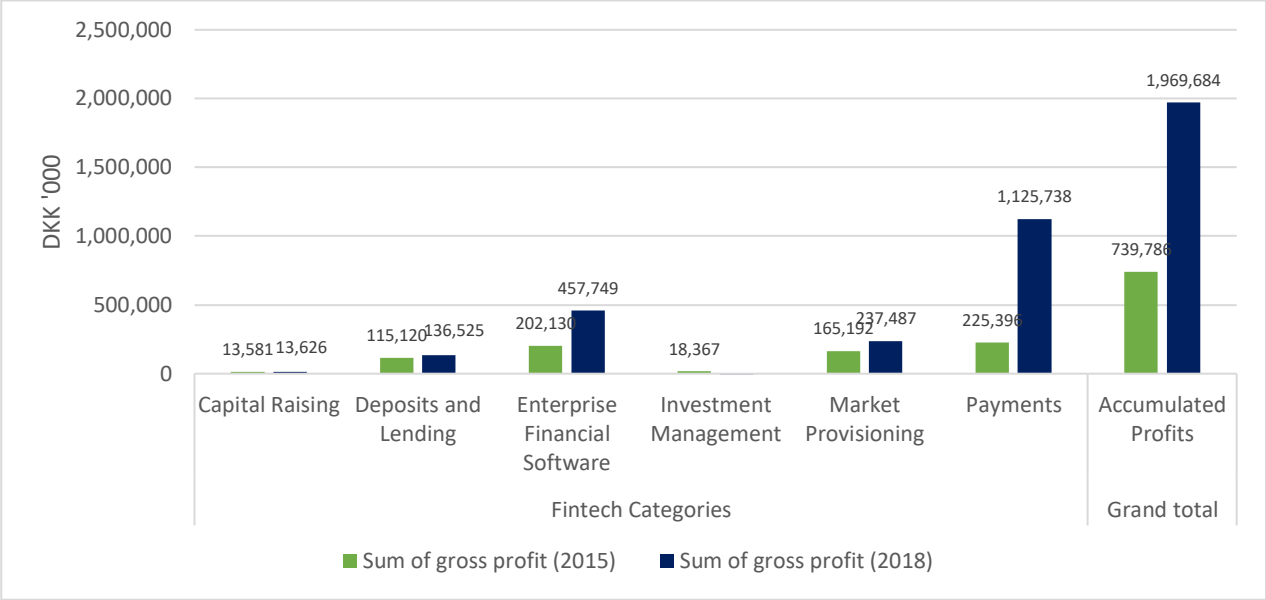
Fintech Category	Number of Companies in 2017	Out of Business	Acquired	Number of Companies in 2020
Capital Raising	15	5	2	10
Deposits and Lending	14	1	2	13
Enterprise Financial Software	10	1	5	9
Investment Management	13	2	1	11
Market Provisioning	24	2	1	22
Payments	31	3	6	28
Grand Total	**107**	**14**	**17**	**93**

5.1.1 Gross profit

The development in gross profit is important because it demonstrates the operational growth of the companies. The most appropriate way to show this development would be to examine the revenue growth, However, revenue is not a figure that companies are generally willing to disclose; therefore, gross profit was chosen as the most appropriate replacement.

The majority of fintech companies will encounter an initial phase during which mass accumulation is important. In this period of time, a high burn rate will be necessary to acquire a large mass of customers. After this phase, the large customer base can be monetised in multiple ways (e.g. advertising, subscription fees or data monetisation). If companies have reached the phase of customer monetisation, this will be reflected in the gross profit. In Figure 8, the distribution of gross profit growth from 2015 to 2018 is depicted by category. The total accumulated growth from 2015 to 2018 was 166.25%, from DKK 740 million to DKK 1,970 million. Attention should be paid to the primary growth categories: payments and enterprise financial software. The percentage growth of these two categories is 399.45% and 126.46% respectively – roughly DKK 900 million and DKK 256 million respectively in absolute numbers. However, even though the most significant growth can be seen within those two categories, every category, except investment management, has seen some degree of growth. This development might be an indication of the growing ability among the companies to monetise their businesses, either internally or through third parties.

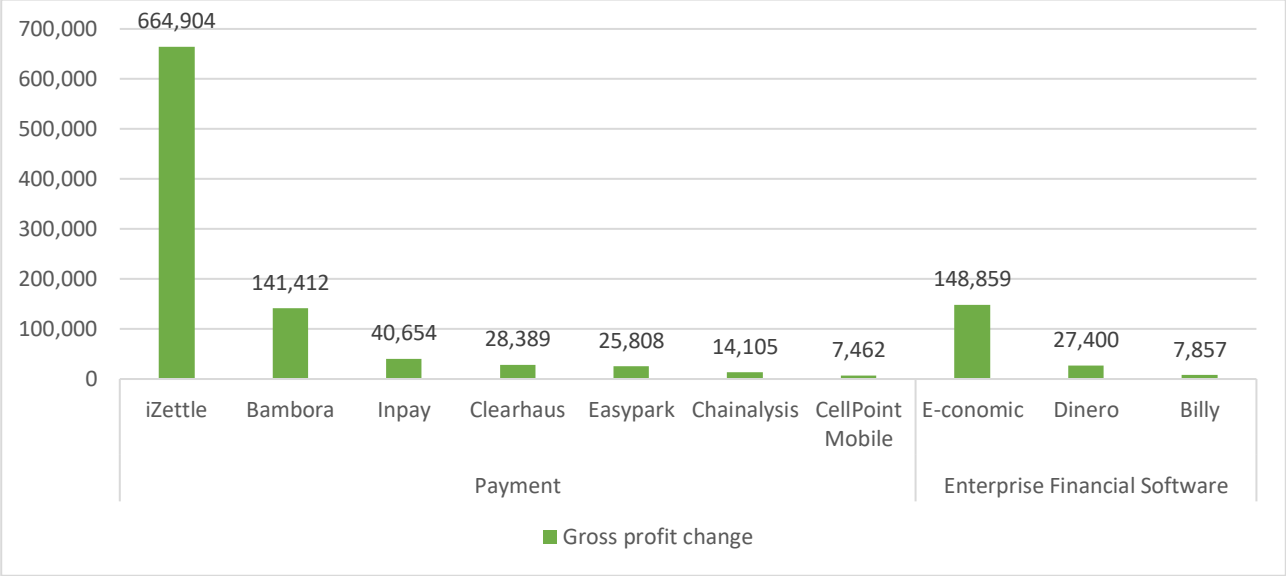
Figure 8: Gross profit development of Danish fintech, by category
Source: Own creation derived from the data analysis (cf. Appendix 2)



The gross profit development is primarily driven by companies within the payments and enterprise financial software categories. Figure 9 depicts 10 companies with the highest level of absolute growth from these two categories. It is clear that iZettle, Bambora, and E-conomic are the growth drivers both within the two categories and in the Danish fintech sector in general. They account for a total growth of DKK 996 million combined, which represents about 80% of the total DKK 1,229 million gross profit growth in the Danish fintech sector from 2015 to 2018. In relation to iZettle, the steep growth rate is strong evidence of the attractiveness of its offerings and the scalability of its business model. The growth is primarily a result of a large mass of new customers signing up to the company's platform every day as well as improved user engagement. iZettle's merchants are currently using many of the tools on offer, with payments being just one of them (iZettle, 2020). For Bambora, the growth has primarily revolved around the ability to successfully develop new products, particularly for the SME segment, where the company has also significantly increased its market share. The acquisition of Bambora by Ingenico Group, one of the world's largest payment companies, further provided Bambora with the potential to maintain its high growth rate by leveraging its technology platform within the Ingenico Group (Nordic Capital, 2020). Like iZettle, the large growth in E-conomic is a result of a large mass of new customers. In 2018, E-conomic experienced the largest mass of customer acquisitions – more than 28,000 new customers – which was only possible with a high customer satisfaction rate. Simultaneously, new customer segments are beginning to use E-conomic as their financial software solution. E-conomic has primarily been used by SMEs; however, larger and more complex enterprises are now starting to recognise E-conomic's solutions. In addition, in 2015, E-conomic was acquired by Visma and has since maintained a

significant growth, primarily spurred by Visma's ability to support the automation of business processes (Visma, 2020).

Figure 9: Top 10 company-specific gross profit growth, within the payment and enterprise financial software categories (DKK '000)
Source: Own creation derived from the data analysis (cf. Appendix 2)



The level of growth in gross profit has increased across almost all categories in the Danish fintech sector, primarily driven by a few payment and enterprise financial software companies. The three companies with the largest gross profit growth from 2015 to 2018 were iZettle, Bambora, and E-conomic, accounting for around 80% of the total growth. Such growth might indicate that the companies have found a way to further monetise their operations while continuing to build a large mass of customers. Noteworthy is that the growth has demonstrated an exponential increase within payments and financial enterprise software, while the other categories experienced a more stable development in terms of growth. Such diversification of growth might indicate that payments and financial enterprise software are ahead in terms of maturity and development relative to the other categories.

Disclaimer: Undisclosed financials in 2015 and 2018 represent an over- and underreported gross profit. In 2015, 37 companies did not disclose their gross profit, and by 2018, 6 of them were out of business and 7 of them still did not disclose their gross profit. The 24 companies that disclosed their gross profit by 2018 had an accumulated gross profit of DKK -4,635,000 in 2018. Furthermore, two companies with disclosed gross profits in 2015 withdrew disclosure in 2018, with an accumulated amount of DKK 39,244,000 in 2015. The purpose of explaining this is to fill in some of the under- and overreported amounts. It could be argued that the accumulated gross profit in 2015 should decrease by DKK 4,635,000, while the accumulated gross profit in 2018 should increase by DKK 39,244,000 (cf. Appendix 2). However, in these calculations, no growth rate has

been taken into account; and it is not certain that the gross profits of the two years reflect each other in any way; therefore, this disclaimer should be taken with a pinch of salt.

5.1.2 Funding

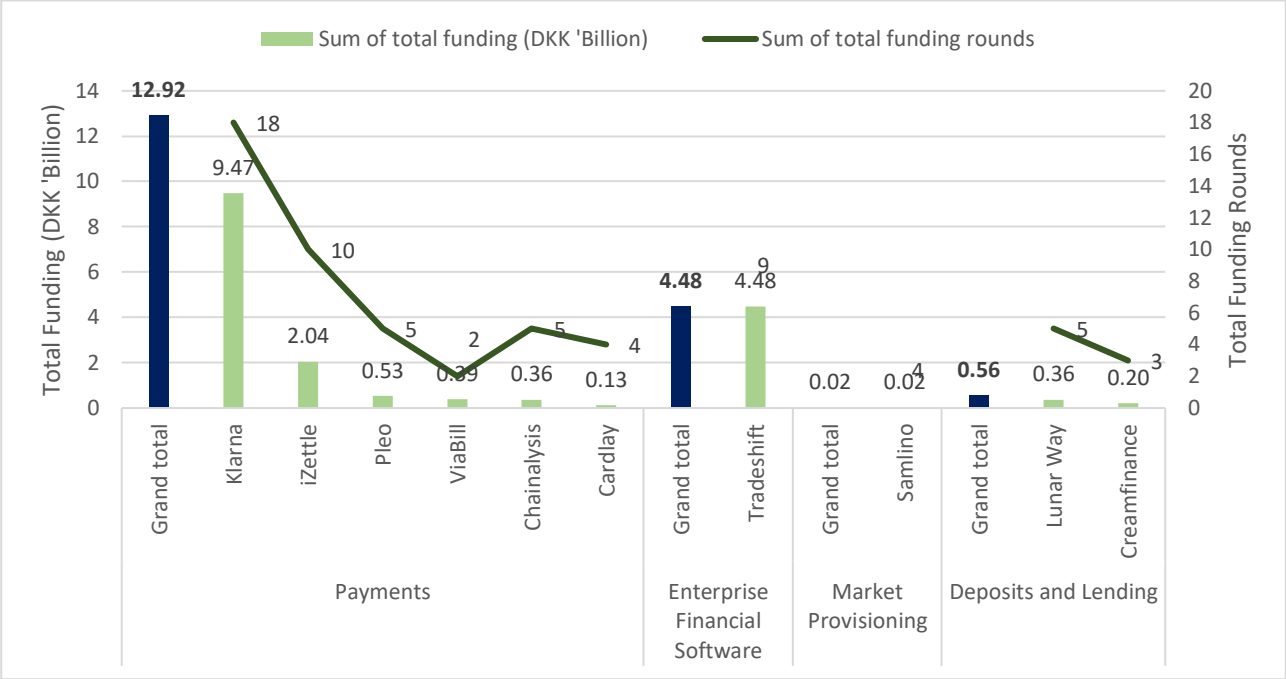
In addition to the gross profit, it is also plausible to assess the development in funding. It should be noted that the acquisition amounts have not been included in the sum of funding; they only encompass all the funding received until the company was acquired. The companies included are both foreign-based and domestic, which at the time of this study (January 2020) had attracted more than DKK 18.7 billion in investments, as displayed in Table 3.

Table 3: Development of Danish fintech, by category
Source: Own creation derived from the data analysis (cf. Appendix 2)

Fintech Category	Sum of Total Funding (DKK '000) – 2015	Number of Companies	Sum of Total Funding (DKK '000) – 2018	Change (%) from 2015 to 2018
Capital Raising	18,394.00	10	55,235.00	200.29%
Deposits and Lending	170,194.00	13	753,909.00	342.97%
Enterprise Financial Software	1,281,259.00	9	4,519,981.00	252.78%
Investment Management	8,566.00	11	8,566.00	0.00%
Market Provisioning	176,439.00	22	190,798.00	8.14%
Payments	3,304,731.00	28	13,255,636.00	301.11%
Grand total	**4,959,583.00**	**93**	**18,784,125.00**	**278.74%**

Since 2017, the total funding has increased by DKK 13.8 billion, which is a total growth of 278.74%. This might indicate that the companies that have survived have shown competitiveness and potential, not only to investors but also to the incumbents in the industry. As shown in Table 3, the development in funding has been significantly increasing across almost all categories. It is interesting to note that capital raising, deposits and lending, enterprise financial software, and payments have all increased between 200% and 400%. However, in absolute growth, again enterprise financial software and payments have by far increased the most, with DKK 3.2 billion and DKK 10 billion respectively. A noteworthy observation is that a particular group of companies have received the majority of the funding. Figure 10 visualises these companies, and it is explicitly shown that Klarna, iZettle (until the acquisition), Pleo, and Tradeshift have received the most funding. The 10 companies displayed in Figure 10 accounted for DKK 18.5 billion of the total DKK 18.8 billion – 96% of the total funding growth. It can also be seen that, as anticipated, a close relationship exists between the total amount of funding and the total number of funding rounds.

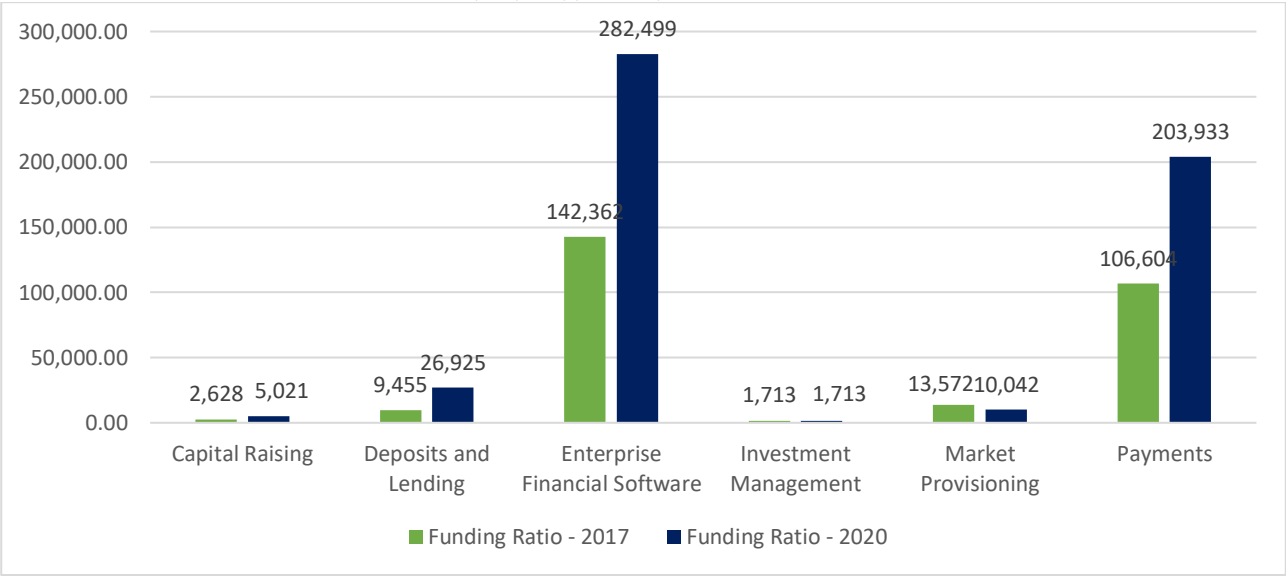
Figure 10: Top 10 funded companies, by category
Source: Own creation derived from the data analysis (cf. Appendix 2)



*There is an underreported amount of funding due to 10 companies having their funding undisclosed. 1 = Capital Raising, 3 = Enterprise Financial Software, 1 = Investment Management, 3 = Market provisioning, and 2 = Payments.

Furthermore, larger funds are invested in later stages of the companies' life cycles, primarily seen by the increase in later-stage deals such as Series B, Series C, Series D, and Series E+ (cf. Section 2.2, Figure 3). While it is unclear whether this is actually the case in the Danish fintech sector based on Figure 10, to conclude on this development, a funding-ratio for 2017 and 2020 was calculated. It is displayed in Figure 11 and shows the average amount of funding per round by category.

Figure 11: Funding ratio for 2017–2020, by category
Source: Own creation derived from the data analysis (cf. Appendix 2)



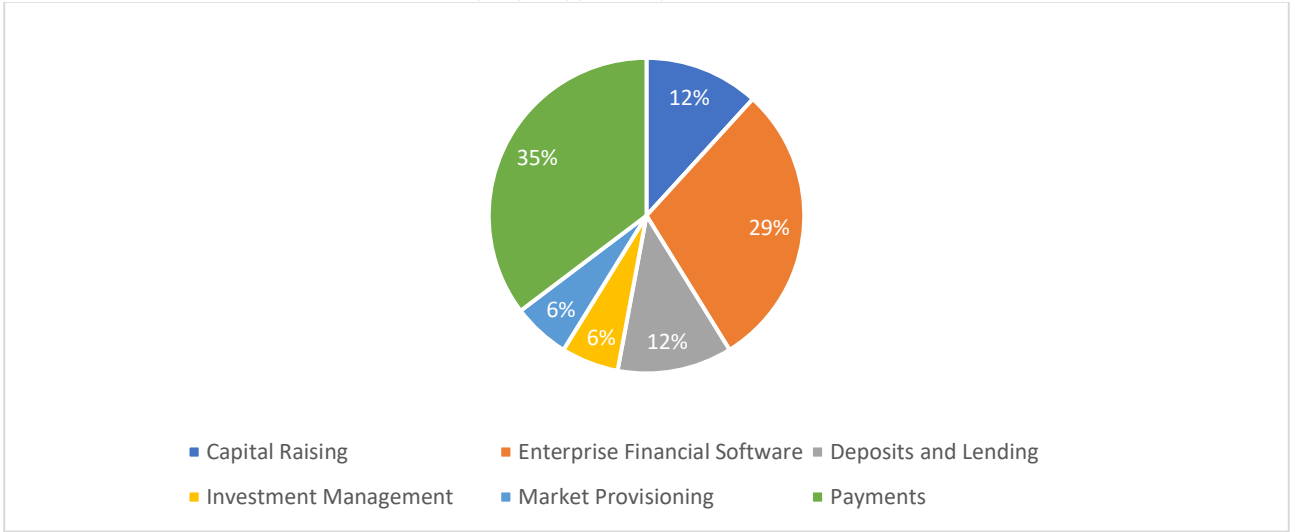
Noteworthy is that that the amount of funding per round has increased in almost all of the fintech categories. It should be emphasised that the analysis does not encompass companies founded after 2017. A consequence of this is that the analysis does not take into account smaller investments that might have been made in companies founded after 2017, which in this case would have lowered the average amount of funding per round. Nevertheless, the general level of funding is growing, and some significantly large investments in the Danish fintech sector can currently be seen.

The general level of funding has increased, and as with gross profit, payment and enterprise financial software companies have also seen the largest absolute funding growth. Fintech companies are currently experiencing several later-stage funding rounds, which reinforces the previous understanding of maturity in the Danish fintech sector. While some companies have raised undisclosed amounts and were therefore not accounted for in the analysis, it can be concluded, based on the data available, that the Danish fintech sector, in terms of funding, is undergoing a significant positive development, primarily driven by a few major players that are extremely successful in attracting funding and several smaller players yet to develop into something interesting for investors.

5.1.3 Acquisitions

As shown in Table 2, 17 of the companies that operated in Denmark by 2017 have been acquired. All 17 acquisitions are explored and described in Appendix 4. The growing interest in acquiring fintech companies is a solid indication of the increasing potential, competitiveness, and expertise of these companies. For the purpose of gaining a general understanding of the companies that have been acquired, a categorisation of these companies is displayed in Figure 12.

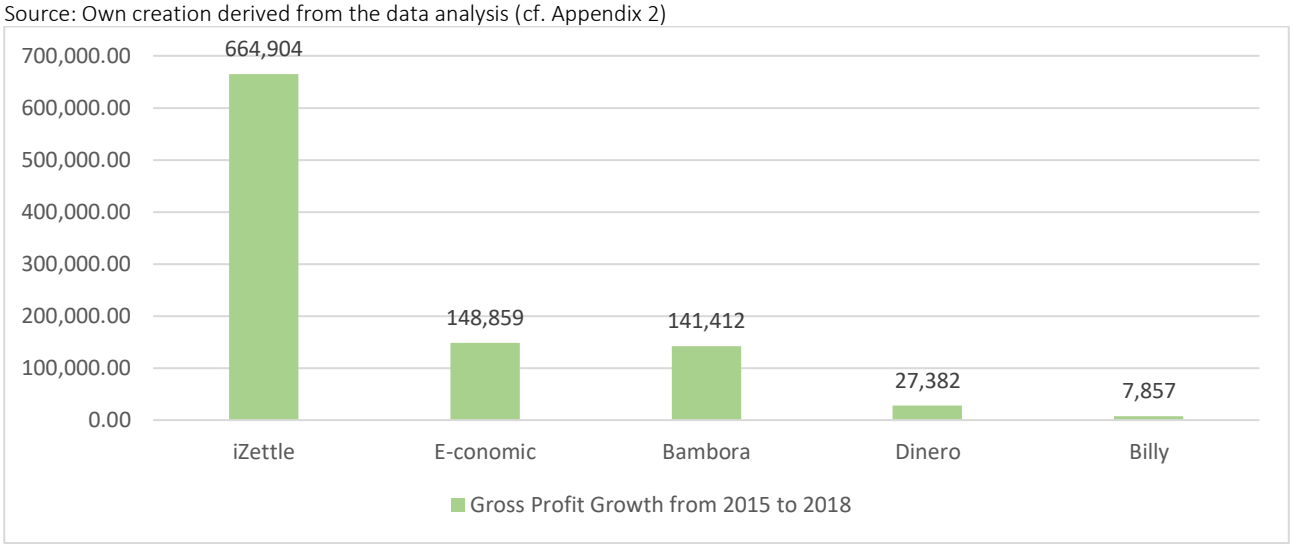
Figure 12: Distribution of acquisitions, by category
Source: Own creation derived from the data analysis (cf. Appendix 2)



It is evident that the categories with the most acquisitions are payment and enterprise financial software, which combined account for 64% of all acquisitions – a further indication that these two categories, similarly to gross profit and funding, are more developed than the others. The rest of the acquired companies are more or less evenly distributed throughout the four remaining categories. Appendix 4 demonstrates that the acquirers always have a fundamental premise for making these acquisitions. Compressing the information from Appendix 4, it is possible to provide some general key aspects of the acquisitions: the acquisitions are usually part of a strategic manoeuvre from the acquirer, either to gain a competitive advantage, a larger market share, faster market expansion, or a stronger presence in current markets. In addition, the acquisitions can also be a strategic digitalisation approach of the acquiring company by acquiring new innovative solutions, technological experts, the ability to scale, and the ability to improve automation and efficiency (cf. Appendix 4).

In the majority of the acquisitions, the acquired company is disintegrated as a subsidiary, but it is still able to draw on the support of acquirer. A fact is that all the companies acquired have experienced significant gross profit growth rates (cf. Appendix 2). In Section 5.1.1, the top 10 companies with the highest gross profit growth in payments and enterprise financial software are visualised (cf. Figure 9), 5 of which have been acquired. These five companies are displayed in Figure 13. This might indicate that a relationship exists between acquisitions and growth rates. With the data available, it was not possible to clarify which of the two has the largest influence on the other; however, it is clear that companies with high growth rates often get acquired. Moreover, will it always be in the acquirers' best interests to further promote the growth of the acquired company to the best of their ability.

Figure 13: Relationship between growth and acquisitions
Source: Own creation derived from the data analysis (cf. Appendix 2)



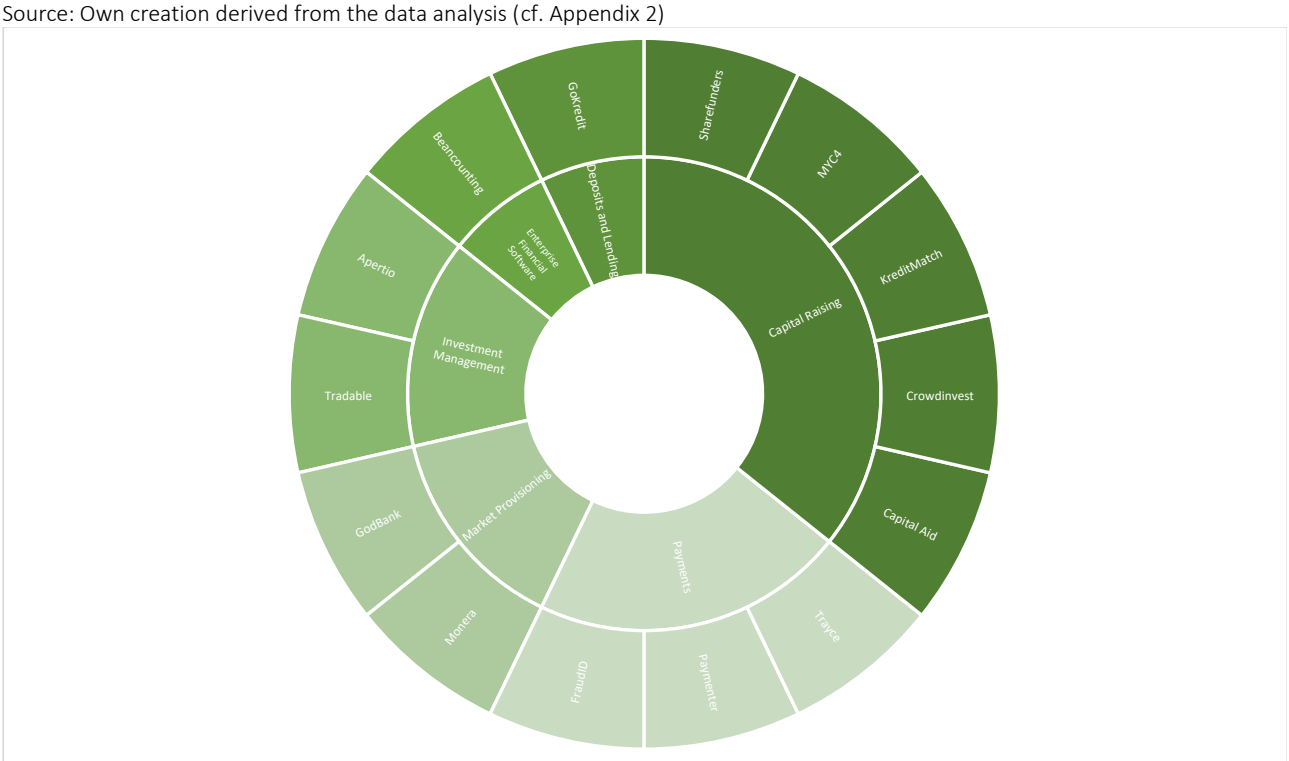
Since 2017, the Danish fintech landscape has seen both major acquisitions and smaller ones. As it is evident with gross profit (cf. Section 5.1.1) and funding (cf. Section 5.1.2), payments and enterprise financial software are the most prominent categories. In general, across all categories, the acquisitions have been based on certain strategic manoeuvres or strategic digitalisation approaches by the acquirers. While the strategic manoeuvres have the primary purpose of self-promoting competitiveness by gaining market share, a stronger presence, or fast market expansion, the purpose of the strategic digitalisation approach is to bring on new innovative solutions, technological experts, the ability to scale, and the ability to improve automation and efficiency. Furthermore, it is possible that there might be a relationship between growth and acquisitions.

5.1.4 Out of business

As shown in Table 2, 14 of the fintech companies operating in Denmark in 2017 were out of business by 2020. In the introduction, it was mentioned that 90% of all start-ups fail; however, this does not correspond to the finding in this study, though this is not a comparable measurement because the companies included in the database of 2017 (Eleish, 2017) were not limited to start-ups only.

The distribution of the companies that went out of business is illustrated in Figure 14. What is significant here is that companies across all categories have gone out of business and that capital raising and payments have had the largest amount of business failures.

Figure 14: Companies out of business, by category
Source: Own creation derived from the data analysis (cf. Appendix 2)



Capital raising has primarily been the category in which most companies have failed. It is difficult to make any general assumption about why this is the case; however, capital raising companies come in many forms, from MYC4 as an alternate financer supporting projects in developing countries to Kreditmatch, which were a P2P platform-based company facilitating investment and loans to companies through its network of large and long-term investors.

The following paragraph briefly describes the business failure of the capital raising company MYC4 and the market provisioning company Monera. MYC4 was a capital raising company specialising in providing microloans to entrepreneurial entities in developing countries. The background of its failure is that it was caught up in a pyramid scheme, where a Kenyan fraud drained the investors of DKK 13 million in microloans. As a result, MYC4 was forced to shut down all activities and liquidate the company in 2016 (Grøn, 2020). The story of the market provisioning company, Monera, was significantly different. From its start in 2015 until its end in 2018, almost DKK 10 million was invested in the company, more than 45 individuals were employed, and the growth was high. In a matter of weeks, the dream of high ambitions was lost; the team and investors were so blinded by the growth that they forgot the most important thing: customers. The mistake was that the investments were tied to economic goals, which meant that throughout the period, Monera was focused on reaching growth goals. This might work in a product market; however, the consequence was short-term thinking. As a result, the business model was pivoted twice in the two first years; Monera went from being a fintech company helping private individuals to becoming a platform-based company helping local craftsmen with marketing. This was not a strategic choice, but a choice driven by the hunger for growth. The company's final business model involved helping service companies to acquire customers and then administrating them through an online, subscription-based CRM system. However, craftsmanship is highly seasonal work, which meant that Monera grew in the winter and autumn periods and was obsolete in the summer periods because the service companies had more than enough work during these periods (Okkels, 2020).

In general, only 13% of the 107 fintech companies operating in Denmark as of 2017 have gone out of business, which is an opportunistic ratio. Payment and capital raising companies represent the largest proportion of companies that went out of business; however, companies in the other four categories have seen failures as well. Even though all 14 failed companies were – at some point – considered as fintech companies, their business models and failures were far from similar. MYC4 was involved in an unexpected fraudulent scheme in Kenya, while Monera became so focused on growth that it actually forgot about its real strategic objectives. Apart from not allowing financial milestones to control the strategic objective of a company, it is not possible to make any general assumptions about why failure caught up with these companies.

5.1.5 Business models

Another way of investigating the development and change in the fintech sector is to zoom in on the business models among the fintech companies. These models are highlighted in this section by using the BMC, modified to suit technological instead of brick-and-mortar companies. The factors are value proposition, target market, problem, solution, delivery model, and revenue model. The largest challenge here is to identify whether there have been any changes to these factors.

It should be mentioned that none of the 107 companies have changed the category in which they operate. Only the 14 companies that went out of business are no longer to be found in their respective area of work. In terms of value proposition, only Cocoa Invest has gone from a proposition of a 'Convenient and easy way for people to control and manage daily finances and wealth' to 'Enabling economic inclusion and literacy'. In 2017, Cocoa Invest was a platform-based investment company, personalising its solutions to the specific customer needs, such as buying a new car, putting a down payment on a new home, or even saving up for a rainy day. In 2020, Cocoa Invest's business model is a fully diversified ethical investment solution where one can start from as little as $100 (Cocoa Invest, 2020).

Furthermore, it is of great interest to investigate whether there have been changes to the companies' target market, solutions, and problems. Table 4 displays all of these changes. It is noteworthy that both Aidbuilder and BetterNow have changed target market, problem, and solution. In target market, the changes are primarily driven by two factors: a focus solely on the business-to-business (B2B) sector or on an expansion in geographical reach. The changes to solutions follow the same path. AidBuilder and BetterNow, which were Peer-to-Peer (P2P) fundraising companies, have changed their solutions to providing white-label P2P fundraising platform solutions to businesses. Moreover, Bancore has gone from a solution of only providing customers with a mobile bank account to also establishing itself as a mobile payment provider. Lendino has changed from only lending B2C to also having a solution where businesses can lend to one another.

Table 4: Changes of target market, problem, and solution
Source: Own creation derived from appendix 3.

Company	Target Market (2017)	Target Market (2020)
Aidbuilder	B2C and B2B – International	B2B – International
BetterNow	B2C and B2B – International	B2B – International
FundedByMe	B2B – Europe	B2B – International
Lendino	B2C – Denmark	B2C and B2B – Denmark

Company	Problem (2017)	Problem (2020)
Aidbuilder	Disintermediation (cut out the middleman)	Disaggregation (cheaper, faster, simpler)
BetterNow	Disintermediation (cut out the middleman)	Disaggregation (cheaper, faster, simpler)

Company	Solution (2017)	Solution (2020)
Aidbuilder	P2P social fundraising platform	White-label P2P fundraising platform
Bancore	Mobile bank account	Mobile bank account and mobile payments provider
BetterNow	P2P social fundraising platform	White-label P2P fundraising platform
Lendino	P2P business lending marketplace	P2P business and consumer lending marketplace

Table 5 lists the changes in business models – herein the delivery model and the revenue model. There have only been changes in the delivery model and revenue model of a few companies, again including Aidbuilder and BetterNow.

Table 5: Changes in delivery model and revenue model
Source: Own creation derived from appendix 3.

Company	Delivery model (2017)	Delivery model (2020)
Aidbuilder	Online – Software-as-a-Service (SaaS) / Webapp	Online – platform
BetterNow	Online – SaaS/Webapp	Online – platform
Spiir	Online	Online – API

Company	Revenue model (2017)	Revenue model (2020)
Aidbuilder	Commission	Subscription
Cocoa Invest	Commission	Fee-for-service

Aidbuilder and BetterNow both pivoted their target market from B2C and B2B to only including B2B, and their delivery model also consequently changed from software-as-a-service (SaaS) to a white-label platform. In terms of revenue model, BetterNow already made use of a subscription-based solution, while Aidbuilder went from a commission-based to a subscription-based revenue model as well. Cocoa Invest changed its revenue model as a result of a business model pivot from commission-based to fee-for-service. Regarding why BetterNow pivoted its business model, in the initial phase, it was convinced that a fundraising platform was the way forward; ultimately, the company was wrong. It learned that donors wanted to engage with charities, not the company itself – BetterNow as a brand provided little value and was just noise between the donors and charities. After this lesson, BetterNow focused on what to do and launched a white-label P2P fundraising solution for charities across Scandinavia, the UK, and the rest of Europe. Thus, all charities can now rebrand the BetterNow platform and have it placed on their own website (BetterNow, 2020).

Pivoting a business model can clearly be a determining factor for a company's livelihood, as demonstrated in Section 5.1.4 about Monera; however, what is crucial is not that companies are pivoting their business models, but why they are doing it. In general, there were only a few minor changes in terms of business model changes; nothing significant was found to support a change in business model having any association with the development in the Danish fintech sector. However, it is clear that changes in business models can determine the livelihood of a company.

5.1.6 Findings following the analysis of the development of the Danish fintech sector

Following the analysis of the development of the Danish fintech sector, it is now possible to present some findings. The analysis was divided into five distinct, but still interrelated sections: gross profit, funding, acquisitions, out of business, and business models. Each of the sections is summarised in Table 6 to 10.

Table 6: Summary of findings regarding the development of gross profit

Gross Profit			
Fintech Category Development:			
Fintech categories (DKK '000)	**Sum of gross profit (2015)**	**Sum of gross profit (2018)**	**Change (%)**
Capital Raising	13,581.00	13,626.00	0.33%
Deposits and Lending	115,120.00	136,525.00	18.59%
Enterprise Financial Software	202,130.00	457,749.00	126.46%
Investment Management	18,367.00	-1,441.00	-107.85%
Market Provisioning	165,192.00	237,487.00	43.76%
Payments	225,396.00	1,125,738.00	399.45%
Gross total	739,786.00	1,969,684.00	166.25%
Top 5 Companies			
Fintech companies (DKK '000)	**Sum of gross profit (2015)**	**Sum of gross profit (2018)**	**Change (%)**
iZettle	-201,070.00	463,834.00	N/A
E-conomic	109,391.00	258,250.00	136.08%
Bambora	173,220.00	314,632.00	81.64%
Tradeshift	50,044.00	116,041.00	131.88%
4finance	85,130.00	150,186.00	76.42%
Key take-aways:			
1	Total growth of DKK 1,230 million		

2	Growth is strongly related to the following: - Scalability of business model - Large mass of new customers - High user engagement - Innovation: Developing new products
3	Payment and financial enterprise software companies are ahead in maturity and in the development of products and services

The analysis of the development of gross profit found that fintech in Denmark had grown 166% (DKK 1,230 million) in gross profit from 2015 to 2018. The primary drivers of this growth were the enterprise financial software and payment categories – including companies as iZettle, E-conomic and Bambora – which might indicate that payments and financial enterprise software are more developed and mature than companies operating within the other categories. The gross profit growth was a result of the scalability of their business models, large acquisitions of new customers, high user engagement, and innovation.

Table 7: Summary of findings regarding the development of funding

Funding			
Fintech Category Development:			
Fintech categories (DKK '000)	**Sum of funding (2017)**	**Sum of funding (2020)**	**Change (%)**
Capital Raising	18,394.00	55,235.00	200.29%
Deposits and Lending	170,194.00	753,909.00	342.97%
Enterprise Financial Software	1,281,259.00	4,519,981.00	252.78%
Investment Management	8,566.00	8,566.00	0.00%
Market Provisioning	176,439.00	190,798.00	8.14%
Payments	3,304,731.00	13,255,636.00	301.11%
Grand total	4,959,583.00	18,784,125.00	278.74%
Top 5 Companies			
Fintech companies (DKK '000)	**Sum of funding (2017)**	**Sum of funding (2020)**	**Change (%)**
Klarna	1,934,538.00	9,473,157.00	389.69%
Tradeshift	1,266,185.00	4,483,879.00	254.13%
iZettle	1,144,068.00	2,039,292.00	78.25%
Pleo	19,921.00	533,203.00	2576.59%
ViaBill	10,824.00	387,723.00	3482.07%
Grand total	4,375,536.00	16,917,254.00	286.63%
Key take-aways:			
1	Total funding growth of DKK 13.8 billion		
2	Larger funds invested in later stages of the company life cycle		

3	Funding can affect growth, but primarily long-term
4	Significant positive development, primarily driven by a few major players being extremely successful in attracting funding

The analysis of the development in funding found that Fintech in Denmark had grown by 279% (DKK 13.8 billion) from 2017 to 2020. There could be seen a significant growth across four of the categories; however, the enterprise financial software and payment categories had grown most in absolute figures, which included Klarna, Tradeshift, and iZettle. The development also showed that larger funds were invested in later stages of the company life cycle, which indicate an understanding of a convergence towards more maturity in the Danish fintech sector. Additionally, the analysis of the development in funding showed that funding can affect growth, but primarily in the long term.

Table 8: Summary of findings regarding the development of acquisitions

Acquisitions			
Fintech Category Development:			
Fintech categories	**Number of acquisitions**	**Distribution**	
Capital Raising	2	12%	
Deposits and Lending	2	29%	
Enterprise Financial Software	5	12%	
Investment Management	1	6%	
Market Provisioning	1	6%	
Payments	6	35%	
Grand total	17	100%	
Key take-aways:			
1	Acquisitions are often based on the following: - Strategic manoeuvre to gain a market advantage - Strategic digitalisation approach for obtaining innovation, tech experts, scalability, and/or efficiency		
2	Acquisitions are strongly related to growth		
3	Payments and Enterprise Financial Software accounting for 64%		
4	iZettle was acquired for DKK15.1 billion and E-conomic for DKK1.5 billion		

The analysis of the development in acquisitions showed that from 2017 to 2020 were there 17 acquisitions in the Danish fintech sector, where the enterprise financial software and payment categories accounted for almost 64% of the acquisitions combined. The acquisitions were often based on a strategic manoeuvre to gain a market advantage or a strategic digitalisation approach for obtaining innovation, tech experts, scalability,

and/or efficiency. Additionally, it was found that acquisitions are often are strongly related to high growth rates.

Table 9: Summary of findings regarding the development of out of business

Out of Business			
Fintech Category Development:			
Fintech categories	**Number of out of business**	**Distribution**	
Capital Raising	5	36%	
Deposits and Lending	1	7%	
Enterprise Financial Software	1	7%	
Investment Management	2	14%	
Market Provisioning	2	14%	
Payments	3	21%	
Grand total	14	100%	
Key take-aways:			
1	Payment and capital raising represented the largest proportion of companies that went out of business		
2	All categories have had business failures		
3	All companies that went out of business received only minor funding		

From 2017 to 2020 was there 14 business failures in the Danish fintech sector. They were more or less equally distributed across all of the categories; however, with capital raising being the majority holder representing 36%, followed by payments representing 21%. Additionally, it was found that all the companies that went out of business had received minor or no funding.

Table 10: Summary of findings regarding the development of business models

Business Models			
Development:			
Companies	**2017**	**2020**	**Number of changes**
Target Market			4
- Aidbuilder	B2C and B2B - International	B2B - International	
- BetterNow	B2C and B2B - International	B2B - International	
- FundedByMe	B2B - Europe	B2B - International	
- Lendino	B2C - Denmark	B2C and B2B - Denmark	
Problem			2

- Aidbuilder	Disintermediation (cut out the middleman)	Disaggregation (Cheaper, faster, simpler)	
- BetterNow	Disintermediation (cut out the middleman)	Disaggregation (Cheaper, faster, simpler)	
Solution			4
- Aidbuilder	P2P social fundraising platform	White label P2P Fundraising platform	
- Bancore	Mobile bank account	Mobile bank account & Mobile payments provider	
- BetterNow	P2P social fundraising platform	White label P2P Fundraising platform	
- Lendino	P2P business lending marketplace	P2P business and consumer lending marketplace	
Delivery Model			3
- Aidbuilder	Online - SaaS/Webapp	Online - platform	
- BetterNow	Online - SaaS/Webapp	Online - platform	
- Spiir	Online	Online - API	
Revenue model			2
- Aidbuilder	Commission	Subscription	
- Cocoa Invest	Commission	Fee-for-service	
Key take-aways:			
1	Pivoting of business model can challenge livelihood		
2	Only pivot on a well-grounded basis		
3	Nothing significant was found to suggest that changing a business model could have any association with growth or success		

Following the analysis of business models was it found that four companies had changed their target market, two had changed their problem, four had changed their solution, three has changed their delivery model, and two had changed their revenue model. It was primarily Aidbuilder and BetterNow which were common denominator across all of the business model changes. Nothing was to suggest that changing business model could have any association with growth or success; however, pivoting business model can challenge the livelihood, shown in section 5.1.4. Additionally, it was found that changing business model should only be done on a well-grounded basis.

5.2 Study 2 – Case studies

The following sections describe and explore nine companies that were the subject of analysis with the objective of determining what general factors are associated with fintech success. The nine companies were selected on the basis of the analysis of the development of the Danish fintech sector (cf. Appendix 2 & Section 4.1.2).

5.2.1 Klarna

Klarna was founded in 2005 in Stockholm, Sweden, with the aim of simplifying e-commerce shopping. While technology has evolved and transformed the world in the past 15 years, Klarna's mission is still to make the e-commerce payment process as simple; safe; and above all, smooth as possible. Klarna provides direct payments, pay-after-delivery options, and instalment plans in a smooth, one-click purchase experience that allows consumers to pay when and how they prefer to. Today, Klarna is one of Europe's largest banks and is backed by investors such as Sequoia Capital, Bestseller, Permira, Visa, and Atomico (Klarna, 2020). Key statistics are as follows (Klarna, 2020):

- Total end customers: 85 million
- Total number of merchants: 205,000
- Number of transactions per day: 1 million
- Number of employees: 2,500
- E-commerce market share in northern Europe: 10%

Since Klarna was founded, it has raised more than $1.4 billion from investors, With its latest $460-million fundraising round, its valuation stands at $5.5 billion, making it Europe's most valuable fintech company (Shead, 2020).

Klarna has become successful for numerous reasons. First, its remarkably good product provides an indispensable payment solution, where customers can choose from three options by using the bank to make retail purchases (Donovan-Stevens, 2019). The second reason pertains to the way the company has managed its strategic market expansion: Klarna has partnered with more than 130,000 merchants globally, including major corporations (Donovan-Stevens, 2019). In addition, users can suggest companies that they would like Klarna to partner with, thereby returning the power to the customer in terms of the strategic market direction (Donovan-Stevens, 2019).

With regard to returning the power to the customers, Klarna understands its customer base and creates experiences tailored to them (Donovan-Stevens, 2019). The company has taken an approach to data collection that helps it to really understand its customers. Every time users make a purchase, the items are recorded by Klarna (Billing, 2019). This affords Klarna massive advantages because data itself allows the company to

provide much more value in terms of service to customers, and no other payment company has access to the same amount of data (Billing, 2019).

Furthermore, Klarna's marketing effort is specifically tailored to the millennial generation. One of its shareholders is the media and cultural icon Snoop Dogg, and it has utilised his involvement in the company to present a marketing campaign with complimentary values that other brands can only dream of. The whole campaign revolves around smoothness – Klarna has advertised him as 'Smooth Dogg', and the adverts explore the concept of smooth through the five senses, which sets the basis for Klarna's demand for splitting costs (Donovan-Stevens, 2019). In general, fintech is about creating seamless and trustworthy solutions, and as Klarna focuses its marketing on the branding slogan 'Smooth Payments', pairing this with Snoop Dogg's smooth voice and easy living enables an amplified ethos (Donovan-Stevens, 2019).

Moreover, talent acquisition has been essential for Klarna. The importance of talented and committed people working toward a unified goal has been key to success (Donovan-Stevens, 2019). Following the importance of talent is the island-centric organisational structure, meaning a less top-down structure with more isolated islands of employees. This structure has motivated and encouraged the employees even more (Billing, 2019).

Over the years, Klarna has kept challenging itself by remaining innovative and continually evolving its product offering. The key has been to repeat its offerings and ensure that at any given point, the company is able to deliver the best possible service or product and then continue to develop (Loritz, 2019).

Klarna has struck an ideal balance between providing an indispensable solution and keeping customer centricity key. The choices to use partnerships as a strategic market expansion and to collaborate with a public figure who complements the values of Klarna, while sustaining a continuous innovative product offering, have been clear competitive advantages. In addition, its ability the acquire multitalented employees while also establishing an organisational structure suited for this specific type of business has been crucial as well. Klarna's key attributes of success are as follows:

- Products and services: indispensable solution;
- Scalability: partnerships and marketing efforts that complement the business, Snoop Dogg;
- Customer centricity: data collection;
- Innovation: continually evolving the product offering;
- Organisation: island-centric approach and acquisition of multitalented employees.

5.2.2 E-conomic

E-conomic was founded in 2001 by the accountant Jacob Wandt, who had an idea to provide a solution to uncomplicate the co-operation between accountants and their clients. He developed flexible, secure, and easy-to-use financial software (Wittorff, 2017). The idea came just as the dotcom crisis was sending shockwaves across the world; however, he embraced the crisis and saw an opportunity to create solution inexpensively. At the same time, E-conomic was spurred by the growing adoption of internet banking, which most individuals at the time had already been acquainted with (Wittorff, 2017). Today, E-conomic has been acquired by Visma and is the Danish market leader in cloud-based financial software solutions, with more 130,000 customers (E-conomic, 2020).

According to the founder himself, the breakthrough came just three years after the launch, specifically when the company reached 1,000 customers. The viral network effect was working, and since then, it has only been growing, complemented by the easy subscription-based revenue model. Since the beginning, this type of model has been a significant part of E-conomic's success. The fixed monthly revenue streams ensured that the company had financial stability, and they were able to predict its future revenue. At the same time, E-conomic also offered customers security, since they had a holistic view of their future expenses and were ensured that no further costs would be incurred; for example, telephone support was included in the subscription (Wittorff, 2017).

Apart from the subscription-based revenue model and the network effect, employees have been key to the success of E-conomic because they are the ones who are demonstrating high engagement with and support for the customers (Visma, 2020). While employee engagement is essential, user engagement is also a cornerstone of success. The market is transparent; therefore, when customers are selecting their financial software, recommendations from current users are important for E-conomic. Therefore, employee engagement and user engagement are crucial in everything from developing innovative solutions and functionality to customer support (Visma, 2020).

E-conomic was one of the early adopters of SaaS and has consequently gained much momentum from being a first-mover within financial software. There is no question that its solution was disruptive in terms of financial software at the time; however, the company was mostly spurred by the growing adoption and viral network effect of internet-based solutions. At the same time, its subscription-based revenue model was making it attractive for customers due to the high predictability of future expenses. Lastly, customer centricity has been eminent for E-conomic. Keeping the customer central in any interaction point is a cornerstone of its success in terms of employee engagement, user engagement, innovation, customer support, and user recommendations. E-conomic's success factors can be condensed to the following:

- Products and services: revolutionising solution;
- Scalability: their first-mover advantage as well as the network effect and growing adoption of internet banking;
- Customer centricity: customer and user engagement as well as innovation and subscription-based revenue model;
- Innovation: continuous development of functionality and products.

5.2.3 Inpay

Inpay is a payment service provider founded in 2007 and still owned by the founder, Jacob Tackmann Thomsen. Inpay has always had a vision that payments should not be limited by international borders (Inpay, 2020). The current technology allows people to live and work across borders, and the same goes for news, shopping, or interacting with friends. Inpay believes that the same principles should apply to payments: payments should be fast and efficient across borders as well as locally (Inpay, 2020). This is achieved by netting transactions, meaning that one cross-border payment is converted into two domestic payments.
Inpay considers itself to be an interface between the financial technology revolution and the established financial services industry. Its services embrace these two worlds: a company that believes in innovation and maturity. According to Inpay, financial cross-border transactions should be accessible, safe, and reliable for every customer, both large and small (Inpay, 2020). Its DNA comes from working with big data, compliance, and AI for more than 25 years, and it is therefore important for the company to continuously create innovative leading-edge infrastructure, which plays a vital role in its customer payment offerings (Inpay, 2020).

The success of the company has been driven by its ability to apply immediateness in domestic payments to a cross-border application purpose. Furthermore, Inpay's success is closely related to its customers' success; customer centricity is therefore central for Inpay to be as aligned with its customers as possible (Inpay, 2017). Company agility is also key to the success of Inpay, as the company is privately owned by the CEO with no investors or shareholders. This makes it possible for Inpay to be agile and often create solutions within timeframes that would not be possible otherwise. It believes that by being agile, it is possible to better service clients, improve innovation, and rapidly respond to market changes. Inpay's products and services are consequently also based on a cloud solution (Inpay, 2017). In addition, having the correct team in place – there should be an alignment of mindsets, vision, and a unified goal – and having a multicultural work environment have also been crucial (Inpay, 2017).

It has not been possible to obtain a clear view of what has driven Inpay's vast success. However, some indications are clear: immediateness is a cornerstone of everything the company does, from processing payments to innovating new solutions. This has only been possible with a highly agile organisational structure and a close relationship with customers, keeping them centred around everything Inpay does. The success factors of Inpay are as follows:

- Customer centricity: aligning with customers – a close relationship exists between the company's success and the success of its customers;
- Agility: immediateness in products and services as well as innovation. Customer support and the ability to rapidly respond to market changes;
- Innovation: new and disruptive products and services;
- Organisation: team, mindset, vision, and purpose.

5.2.4 iZettle

iZettle was founded in Stockholm, Sweden, in 2010 with a mission to help small businesses succeed in a world of giants. In 2010, the company revolutionised mobile payments with the world's first mini chip card reader and software for mobile devices, enabling small businesses to accept payments in a simple and affordable way. However, it did not stop there; today, iZettle's e-commerce platform provides a wide range of tools for small businesses in Europe and Latin America to get paid, sell smarter, and grow. These tools include point-of-sale services (POS software), invoicing, and eCommerce tools (cf. Appendix 5). The segment of small business is often neglected, and iZettle serves this segment because it is vital for a sustainable economy: '*Their success is our success*' (iZettle, 2020).

The mission of iZettle is to serve the underserved by providing them with innovative, easy-to-use, and affordable tools. Since competition is important for development, it is a good way for iZettle to keep the incumbents on their marks. iZettle is ultimately founded on three core values: easy, reliable, and inspiring (iZettle, 2020). In 2018, iZettle was acquired by PayPal for DKK 15.1 billion, which is conclusively a recognition of what the company has achieved. iZettle will, however, still continue to scale and innovate as before, but now supported by the vast amount of resources at PayPal (iZettle, 2020).

The primary idea of iZettle arose when the founders noticed that SMEs were underserved in terms of affordable and easy-to-use payment solutions. At the time, payment solutions provided by incumbent banks typically required a substantial sum invested, combined with a fixed commission, which could be expensive for entrepreneurs and SMEs with neither time nor capital. This became the foundation of the company, and

the team started to build a solution to challenge this status quo. This included to getting to know the market and its challenges and raising capital for product development (IRIS Group, 2019, p. 79).

By the time iZettle's initial product had been launched, the company quickly realised that it needed to raise further external capital. Furthermore, the company was based on a low-friction acquisition model, which meant that customers faced few expenditures in the early stages when adopting the iZettle payment solution. The consequence of this was that it took a long time for iZettle to build up a sufficient revenue; however, the result was a massively growing customer base. iZettle also needed capital to pursue new innovative solutions as well as realise its ambition to become a global company, implicitly implying expansion into new markets (IRIS Group, 2019, p. 80).

Following this, iZettle managed to raise capital from a broad range of venture funds almost every year. However, it took the path of not raising too much capital at one time to ensure that it did not dilute its ownership (IRIS Group, 2019, p. 81). It remained confident in its own ability to raise the company's value through frequent financing rounds, which was a wise strategy as iZettle kept increasing the company valuation in every financing round (IRIS Group, 2019, p. 81). With the capital raised and the revenue from a growing customer base, it was possible to expand into new markets (IRIS Group, 2019, p. 80). The choice of expansion was based on cultural closeness, which meant that the first expansion was into the Nordic countries (Norway, Denmark, and Finland). Apart from market expansion, the expansion into new business areas was also important to optimise the company's potential earnings. It decided to pursue lending services as a new business area because it was yet another underserved area for SMEs by incumbent banks (IRIS Group, 2019, p. 81). In this way, iZettle could further monetise and utilise its large build-up of consumer data. Based on daily transaction data, it could evaluate the creditworthiness of each customer (IRIS Group, 2019, p. 81). The product development continued to be centred around customers' needs, and in the end, it was possible to offer a full package of software, payment, and lending services (IRIS Group, 2019, p. 81).

The success of iZettle was based on a mixture of targeting an underserved segment with an innovative, easy-to-use, and affordable solution and using a low-friction acquisition model, resulting in a large build-up of consumers. In addition, the company was agile and scalable while utilising a get-big-fast strategy in terms of market and business area expansion. iZettle relied solely on external funding but chose a strategy that did not dilute its ownership. The success factors of iZettle are as follows:

- Low profit margin: low-friction acquisition model (get-big-fast strategy);
- Scalability: scale economy – market and business area expansion;

- Innovation: continuous development of products and services – utilisation of consumer data;
- Simplicity: easy for customers to use – easy to onboard;
- Customer centricity: tools and products are customer demanded (SMEs);
- Agility: reacting quickly to new opportunities.

5.2.5 Bambora

Bambora is based on a platform carve-out from one of the largest Nordic banks. It was created with the purpose of becoming a leading player within payment services; this was achieved through a carefully crafted acquisition strategy and a significant investment strategy in products, capability, and organisational framework (Nordic Capital, 2020). In May of 2015, the Bambora Group was launched as a payment service group based out of Stockholm, Sweden, offering online, in-store, and mobile payment solutions. From the beginning, Bambora's ambition was to become global, and it succeeded in this regard by being one of the very few payment providers with global omni-channel payment capabilities. It launched itself as a single brand platform with a strong technological base and a customer-centric offering. Within two years of the launch, Bambora had established a world-leading payment powerhouse for the SME market as a result of successfully innovating new products and a rapid expansion into new markets. In 2016, a year before it was acquired by Ingenico Group, the company achieved annual revenues of DKK 1,491 million; employed more than 700 people; was helping 110,000 customers to grow in 70 different markets; and managed transactions with a value of DKK 410 billion per year, with 70% of them coming from online and mobile areas (Nordic Capital, 2020).

In July 2017, Bambora was acquired by Ingenico Group for DKK 11.8 billion. By then, it had provided payment services to more than 450,000 merchants in Europe, North America, and the Asia-Pacific (APAC) area (Nordic Capital, 2020).

Bambora has seen enormous growth rates in the two years since its launch, and it has established itself as a global provider of payment solutions. The reason for this can be found in the company's ability to innovate products successfully, its strong technological base, a customer-centric approach, rapid market expansion, and significant investments in its own capabilities and organisational framework (Raven, 2019). Bambora understood that all retailers had to reconsider their strategies and change their mindset to understand how technology would affect their businesses. However, for many companies with a traditional siloed business model, shift away to an omnichannel business model can be a challenge. For companies that wanted to support an omnichannel customer experience, an increased engagement in technology was required. More importantly, it was necessary to have a payment provider that believes in omnichannel success. Bambora did

exactly that by adopting ideas from successful technology companies, which in turn brought more value to the customers (Raven, 2019). The company used a combination of cloud integration, automated testing, continuous integration, and continuous deployment of upgrades to offer a higher level of service and to quickly and securely process transactions. Furthermore, it also had a high level of customer support, smarter incident management, and a suite of various monitoring and logging tools. All of this allowed Bambora to constantly tweak and upgrade its systems, thereby enabling the company to offer more stability and a high-quality customer experience (Raven, 2019).

In addition, its ability to rapidly scale its business and create a culture that enables a more agile approach to developing software has been important to ensure its rapid success. Numerous challenges are related to such a rapid expansion, both in terms of cultural differences and practicality in general; however, Bambora has mastered them primarily with its strong and experienced management team, led by former Point CEO Johan Tjärnberg. According to him, the key success factor at Bambora has always been to have constant focus on the customers (Bambora, 2020). To conclude, Bambora's success factors are as follows:

- Customer centricity: constant focus on customer demands and customer experience;
- Agility: software creation, enhancement of value creation and rapid respond to change;
- Scalability: omnichannel approach, market expansion, get-big-fast strategy;
- Innovation: customer demanded as well as investment in own capabilities;
- Organisation: skilled management team.

5.2.6 Tradeshift

Tradeshift was founded in 2005 with the vision of an open business platform for the whole world. From the beginning, the purpose of the platform was to transform the way businesses work together: from broken to efficient, from complicated to simple, and from archaic to modern (Tradeshift, 2020). In 2019, Tradeshift was selected for the 2019 Forbes fintech start-ups list.

Tradeshift is a B2B supply chain platform that connects buyers, suppliers, and all their processes by making use of Blockchain. Tradeshift helps businesses of every size to run efficiently by using cloud technology to improve processes such as AP automation, procurement, supplier management, and working capital optimisation. Tradeshift's open platform enables third parties to build business apps allowing businesses to respond to their growing business needs now and, in the future (MEDICI, 2020). The company is a SaaS-based B2B platform for suppliers and enterprises to come together, transact, connect, and collaborate with one another (MEDICI, 2020).

- For suppliers, Tradeshift offers free electronic invoices and enables faster payments and predictable cash flow.
- For enterprises, Tradeshift empowers them to work more easily and productively with their entire supply chain.

Tradeshift offers the following products and services (MEDICI, 2020):

- Tradeshift Buy – eProcurement software that enables users to find and buy from various online sources;
- Tradeshift Pay – an AP automation platform that manages and collaborates business documents, including invoices, purchase orders, and credit notes;
- Tradeshift Risk – which collects risk data and then stores and analyses it.

As of 2019, Tradeshift processes USD 500 billion annually in supply-chain payments and has 1.5 million customers across 190 countries, including over 150 customers from the Fortune 500 (Forbes, 2020). Tradeshift's success is underlined by its vision, its platform strategy, and the speed at which businesses are embracing digital transformation in the source-to-pay process and global supply chain management (Tradeshift, 2020). Tradeshift has been able to continuously be innovative with products such as Tradeshift Buy and Tradeshift Risk. It entered the world with only Tradeshift Buy, designed for accounts payable automation, which disrupted the stagnant e-procurement sector with a new end-to-end solution uniting buyers, suppliers, and products in one open, collaborative platform. It then launched Tradeshift Risk, which brings in real-time risk monitoring and compliance through a supplier collaboration platform. Innovation has without a doubt been one of the keys to its success (Tradeshift, 2016): 'Rapid innovation is at the heart of everything we do at Tradeshift', says Thijs Stalenhoef, SVP of Enterprise Products at Tradeshift.

Tradeshift has also mastered the ability to attract talent. Although the company was founded in Copenhagen, its global headquarters have been relocated to San Francisco (Mallner, 2016). However, being a Danish company actually helped it to stand out and succeed, mostly because Danes have an informal and non-hierarchical working culture and are straightforward in their communication. Such a company culture helped Tradeshift attract top talent, which has been vital for its success (Mallner, 2016).

When Tradeshift was launched, its level of capital was low, and it consequently chose to outsource the development of the platform to Sri Lanka and Peru. The operation was run through Amazon's cloud, and the code was based on open-source software controlled via Github (Thomsen, 2020). This outsourcing made it difficult to work agilely. The development of the platform was therefore brought back home to operate more agilely. To further increase agility, the Kanban method was implemented. Such a method made it possible to handle sudden input from the market, and it provided a holistic overview of the products' functionality pipeline. In terms of agility, Tradeshift also split its teams into teams of three to five people, with designers

and developers within the teams, thereby eliminating a siloed organisational structure. The agile development process has been a cornerstone for Tradeshift; new functionality and solutions needed to be delivered rapidly to its customers to receive relevant feedback (Thomsen, 2020). Tradeshift makes use of user cases and user stories to develop the functionality of its current products as well as to develop totally new solutions. The company stays in close connection with its surroundings to be completely aligned with its customers. A continuous development process is therefore important for Tradeshift because it receives feedback from customers on a regular basis (Thomsen, 2020).

The success of Tradeshift is based first on the fact that it found a market with so much potential for digitalisation, efficiency, and optimisation. Furthermore, the company was aware that growing the size of its network in the initial phase was important because with a mass accumulation of customers, there are many opportunities to become profitable (Thomsen, 2020). Based on these observations, the success factors for Tradeshift are as follows:

- Innovation: products and solutions;
- Organisation: the ability to attract top talent – Danish company as well as Kampan;
- Agility: Kampan – in-sourcing of product development;
- Scalability: time of expansion and large market potential;
- Low profit margin: initial phase of mass accumulation;
- Customer centricity: feedback from customers on a regular basis.

5.2.7 Pleo

The vision of Pleo was based on the founder's experiences with the broken concepts of 'out-of-pocket' purchasing and expense reports. Such concepts could often disempower employees and create a serious mess for financial people. Pleo was thus launched in 2015 with a vision of dedicating all attention to solving this problem (Pleo, 2020). Pleo is fundamentally a new way of managing company expenses; it enables employees to buy the things they need to work, while allowing the company to be in full control of the spending. With the emergence of technology, the company can eliminate or completely reduce the complexity of administrating expense reports and bookkeeping.

Pleo consists of the Pleo MasterCard, which is a prepaid card that can be handed out to employees, either physically or virtually. It is powered by Pleo's backend system and app; the card is somewhat intelligent, promising to categorise spending automatically using AI and ML as well as capturing any receipts associated with each transaction. Pleo has many functionalities, including the Pleo Company Dashboard, custom spending rights and limitations, real-time transaction updates, quick onboarding using one's current bank, accounting software integration, fraud detection, and customer support (Pleo, 2020). It utilises algorithms to monitor a

company's inbox for incoming receipts and see whether it is possible to recognise and pair them with the transaction data that has already been obtained. Categorising transactions can often be done through identifying the merchant; however, when that is not possible or the merchant is ambiguous in terms of details, then Pleo uses machine learning with parameters such as 'time of the day', 'amount', 'calendar information', and 'previous behaviour of the user', among others, and then makes an educated guess. The same metrics are used to detect fraud (O'Hear, 2016).

Pleo employs a subscription-based revenue model with three levels: essential, pro, and premium. The prices of the essential and pro levels are DKK 50 and DKK 90 per user/month respectively, and the price of the premium subscription level is undisclosed. Furthermore, there are no upfront setup costs, long-term commitments, or complicated extra fees (Pleo, 2020).

Today, over 8.000 companies are using Pleo across the UK, Denmark, Sweden, Germany, Ireland, and Spain.

According to the CEO of Pleo, Jeppe Rindom, entrepreneurship is a dream for numerous people; however, not many are successful. He mentions that it is all about identifying a problem, finding a prime solution to the problem, putting together a team that can build it, and working hard (Jersin, 2019). Such an equation of success might be easy to describe, but difficult to solve. In relation to Pleo, the market scalability has been key to the company's success; employee spending and the tracking of receipts are present in every business, and the potential within this market is therefore significant (Creandum, 2017). This is reinforced by the large demand for Pleo's new way of handling business spending, a demand that has been seen across different countries, company sizes, and industry verticals (Rindom, 2019). Next, the company's ability to be innovative in its solutions as well as in the way it involves its employees in the innovation process has been key to its success. First, its product is unique and different in many ways from that of other companies; the way it utilises transaction data by using the emergence of technology in the form of AI, ML, and API gives Pleo a competitive advantage. Second, the company is continually developing new features for its platform in the form of new functionalities or services. This can also be referred to as self-referencing, which is one of the fundamental principles of all digital technology. Third, from the beginning, it has been important for Pleo to stimulate creativity; within the organisation, everybody must have a purpose and an experience of being part of the company and culture, and most of all, they must feel that their input is valued. Furthermore, the workplace fosters transparency, flexibility, and autonomy, all of which engage the employees. The company's thriving innovation has been a result of that, specifically with many small independent teams that all have the knowledge about their specific areas of innovation (Tholstrup, 2019). Fourth, the simplicity of Pleo's product has also been key to the company's success because its product is easy for companies to onboard, use, and understand. The secret has been to solve the problem by using credit cards instead of switching to a brand

new bank account, which can complicate a company's financial backend (Creandum, 2017). In addition, Pleo's solution is simple for customers, as is its subscription-based payment model. The customer pays a fixed fee per user/month with no upfront setup costs, long-term commitments, or complicated extra fees, thereby making it even more transparent for the customer.

Lastly, funding has been a factor that has made it possible to scale and grow exponentially in such a short timeframe. Pleo has raised about DKK 530 million in five funding rounds from 2016 to 2019, where the latest Series B raised around DKK 380 million (O'Hear, 2019). The large volume of funding has helped the company across all dimensions: expansion, employee count and talent, and product development. The success factors of Pleo can be summarised as follows:

- Scalability: market potential, large demand, timing, expansion, and scalability of technology;
- Innovation: unique product, data utilisation, self-reference, and product development;
- Organisation: stimulate creativity, unified purpose, talented, flexible, transparent, engaged, and team structure;
- Simplicity: the product is easy to use, onboard, and understand, and Pleo's subscription-based revenue model makes the payment process simple for the customer as well;
- Low profit margin (Funding): growth potential, expansion, concentrate on developing and acquiring customers.

5.2.8 Easypark

Easypark Group is the leading European provider of digital parking services. Easypark is fundamentally a provider of a mobile payment platform designed for parking transactions (Easypark, 2020). The company's mobile payment platform provides software for paid parking services, enabling motorists and parking operators to use digital parking and make online payments via phone calls, smartphone applications, text messages, and the internet[7]. Since the beginning in 2001, Easypark's smart parking services have helped drivers find and pay for parking in over 1.300 cities in 18 markets (Easypark, 2020). On a larger scale, its technology helps businesses, operators, and cities with administration, planning, and the management of parking (Easypark, 2020).

Easypark's initial vision was to be a mobile wallet, and it took several years to become a mobile parking application. Nevertheless, the vision since then has been to participate in solving parking-related problems, with a digital parking ecosystem where city authorities, private garage owners, and drivers are interconnected to effectively use parking spots (Easypark, 2020). This results in better space utilisation; reduced congestion;

[7] Pitchbook.com

and most importantly, reduced pollution. This has Easypark termed as parking excellence, which is a scenario in which technology, parking supply, and driver demand are working in perfect balance, making urban life easier for citizens, businesses, and institutions. In essence, it is a perfectly balanced parking ecosystem, where drivers can find parking easily and simply and where the insights needed to efficiently manage the parking operation are provided. Easypark believes that this can be achieved through smart data with future-oriented technology (Easypark, 2020).

In relation to its services, for more than a decade, Easypark has been customer centred in every aspect of its business by delivering digital parking services with a constant drive to bring superior interfaces and services to the user. This has led to many important insights into users' needs and expectations. The first application that was rolled out was the mobile paid parking app. For more than 10 years, Easypark has offered this product to all drivers across Europe, and it is now the largest provider in Europe both in terms of users and coverage (Easypark, 2020). This product has simplified parking for the end user by improving convenience and efficiency. The solution is offered B2C and B2B, and it can be used via the Easypark app, in-car payments, the web, SMS, or interactive voice response (Easypark, 2020). In addition, Parking Permit administration, EV Charging, and Find & Park have been added to the list of services. Find & Park, which is a guidance tool helping customers find parking spaces by using a collection of data from garages and extensive communication networks, has recently been rolled out across Europe (Easypark, 2020).

The Parking Dashboard is a service provided to city authorities and private garage owners to deliver a macro-view of the entire parking ecosystem, bringing an unparalleled insight into parking behaviour. The data is collected by connecting, relating, interpreting, and presenting it in one simple interface, which is a necessary tool for taking full control of parking operations (Easypark, 2020).

Delivering these services in an efficient and reliable way has only been possible because of the SmartHUB; as mobile paid parking has been exploding in terms of adoption, the sources of digital input have been increasing dramatically, initially increasing the complexity of enforcement as well as the response time significantly. The SmartHUB has been the foundation for establishing a parking ecosystem. It serves as the one place where all input is automatically collected, stored, and processed; furthermore, it is also the SmartHUB that feeds the Parking Dashboard with data (Easypark, 2020).

Easypark has seen a rapid pace in innovation and development, with a continuous development of new services and its simultaneous expansion across Europe. In relation to its innovation, a great innovative concept alone is not enough. The company has a strong methodology guiding every action it takes, including a scalable platform to support all its services (Tooth, 2017). To maintain its sophisticated product development life cycle, minimising any issues that might arise has been essential; the product development strategy has afforded the

company the ability to continue to deliver outstanding services. Easypark has not only a well-defined methodology, but also a tight connection between IT and business, which enables the company to be truly agile in its product development and to adjust to business outcomes (Tooth, 2017).

Apart from its innovation, agility, and scalability, the growth of Easypark has been affected by the widespread adoption of smartphones, which was not the case in the early 2000s when digital parking was both unusual and time-consuming. Therefore, it has also taken Easypark more than a decade to make its breakthrough, which was even further spurred by the involvement of PayPal (IT-Finans, 2019).

Based on the information presented, the success factors of Easypark are as follows:

- Scalability: scalable platform to support all its services (SmartHUB) and the adoption of smartphones;
- Innovation: product development strategy, well-defined methodology to achieve success, and customer centred;
- Customer centricity: know users' needs and expectations through data collected;
- Simplicity: easy to use and understand, including a simple payment process, which makes it convenient and efficient;
- Agility: tight connection between IT and business.

5.2.9 Unwire

Unwire was founded in 1999 in Copenhagen, Denmark. The company provides mobile payments, mobile ticketing, and mobile messaging. Unwire fundamentally provides an end-to-end mobile solution, which is presented by a complete platform for mobile wallets and payment systems, with services that integrate real-time payments or card-based schemes. In addition, Unwire works as a pioneer in BLE technology solutions for payment acceptance and terminals. It has excelled in rapid speed-to-market for innovative mobile payment technologies (Unwire, 2020).

The mobile payment platform provides P2P, merchant payment, and e-commerce and is specifically designed to work with instant payment systems and open banking API. Furthermore, the platform is optimised for fast deployment and robust performance, combined with modules of card wallets, instant payment, NFC, mobile API gateways, P2P, in-app and app switching, Bluetooth, mobile point-of-sale, and mobile commerce. Examples of this include a mobile Dankort payment app using Bluetooth; the development of a platform for Nordea Bank Sweden to enable Swish merchants to manage their incoming Swish customer mobile payments; and BLE Tap and Pay; which is a device-agnostic Bluetooth tap-and-pay solution for payments, loyalty, and promotions (Unwire, 2020). Apart from its mobile payment platform, Unwire also has a mobility platform that

supports a journey planning module, a ticketing module, in-app payments, BLE check in/out, and a validation module. Its solution is characterised by balancing user experience and performance, optimised by a long history of working with high-load ticketing and payment transactions. The mobility solution has been installed globally, with the most prominent projects being the Danish Mobility Solution (the DOT app) and Dallas Public Transportation – the GoPass app (Unwire, 2020).

Unwire's native mobile apps are designed for the best user experience and performance, and its platform is designed to adapt to the changing requirements of the world while delivering an effective and reliable cloud-based solution with 24/7 support. Millions of mobile tickets are currently processed through Unwire's systems, with 100,000 daily users, and the company has a rapid speed-to-market for innovative mobile payment technologies (Unwire, 2020).

Unwire currently has 40 employees and a strong growth in such a fast-moving field of business as the mobile industry. Therefore, it relies heavily on skilled and passionate employees who can navigate the rapidly changing market. Specifically, its flat organisational structure encourages employees to speak their minds and think outside the box, with special innovation events across the organisation to produce working mobile solutions within 24 hours (Unwire, 2020). Accurately determining what has been key to the company's success can be difficult because public information is limited. Nevertheless, the information explained so far sheds light on some aspects of Unwire's success:

- Innovation: innovative solutions and underlying technology as well as special innovation events;
- Agility: platform designed to adapt to the changing requirements of the world as well as fast deployment;
- Scalability: platforms developed to handle a growing number of transactions and daily users and a rapid speed-to-market;
- Customer centricity: native mobile apps are designed for the best user experience while supporting loyalty and promotional solutions;
- Organisation: flat organisational structure – skilled and passionate employees who can navigate changing market conditions.

5.2.10 Findings regarding critical success factors following the case studies

The case studies have now been presented, and based on the companies explored, it is possible to clarify the general factors that have enabled the fintech companies to become successful. While it is clear that each company has its own specific formula for achieving success, also highlighted in section 3.1, this section summarises the consistent factors that emerged across all the case companies. Since the amount of

information available on each company was sporadic and different, the information comes in many variations. Therefore, study 2 uses the methodology of content analysis by clustering the different variations of information into a smaller number of overarching factors. However, the factors might correlate with one another because one factor might affect or depend on another factor. The analysis identified eight CSFs across all of the case companies: innovation, scalability, customer centricity, organisation, agility, low profit margin (funding), simplicity, and products and services, however with variations in the level of explanatory power. The findings are summarised in figure 15, and displays all of the identified CSFs as well as the companies they were present in.

Figure 15: Summery of finding regarding Critical success factors of Fintech companies

X = The factor was present.		CASE COMPANIES								
		Klarna	E-conomic	Inpay	iZettle	Bambora	Tradeshift	Pleo	Easypark	Unwire
CRITICAL SUCCESS FACTORS	Innovation	X	X	X	X	X	X	X	X	X
	Scalability	X	X		X	X	X	X	X	X
	Customer centricity	X	X	X	X	X	X		X	X
	Organisation	X		X		X	X	X		X
	Agility			X	X	X	X		X	X
	Low profit margin (funding)				X		X	X		
	Simplicity				X			X	X	
	Products and services	X	X							

6. Reflection on critical success factors

While the analysis only presents a snapshot of the current Danish fintech sector, which is rapidly evolving, it nevertheless represents an attempt to identify CSFs and their wider contribution to the theoretical lens of CSFs for fintech companies.

Following the results of the case studies, eight CSFs were identified for fintech companies (cf. Figure 15):

- Innovation was present as a CSF in all of the case studies.
- Scalability and customer centricity were present as CSFs in eight out of the nine case studies.
- Organisation and agility were present as CSFs in six out of the nine case studies.
- Low profit margin (funding) and simplicity were present as CSFs in three out of the nine case studies.
- Products and Services as a collective were present as a CSF in two out of the nine case studies.

All of the factors were determined as being CSFs for fintech companies. Their explanatory power varies greatly, from innovation, which is present in all of the case studies, to products and services collectively, which is only present in two of the case studies. Nonetheless, the recognition and identification support the importance and background of this study to identify CSFs for fintech companies and provides substantive arguments to test their explanatory power as well as to extend Nicoletti's (2017) framework of CSFs. In relation to Nicoletti's (2017) framework, increasing the explanatory power was possible only in four of the factors: customer centricity, agility, scalability, and innovation. Additionally, it was possible to extend the framework with two CSFs: organisation and simplicity as well as contribute funding to low profit margin. It was not possible to increase the explanatory power of security management or compliant easy; however, this does not conclusively mean that those factors do not have any explanatory power, only that more research is needed to increase the power.

The identified CSFs will be reflected on in the following paragraphs; both on the findings in study 2 (cf. section 5.2) as well as in relation to Nicoletti's (2017) framework (cf. section 3.2):

Innovation – The first factor recognised on the basis of the case studies is innovation. All of the companies have innovation in common; they have continuously evolved their product offerings with new and disruptive solutions, tools, products and/or services, which are well developed based on feedback and expectations from customers. The solutions, tools, products, and services are unique to accommodate the specific target segment, and they are often driven by the utilisation of data and superior underlying technology in addition to being re-programmable and self-referencing. Apart from the actual product development, the process of product development has been just as important. It is essential to have a product development strategy

defined by a methodology for developing a product as well as a strategy for making it a success. Examples of this could be small internal innovation sprints as well as a reduction in time-to-market. In relation to Nicoletti's (2017) framework explored in section 3.2, has it been possible to test and increase explanatory power of Innovation as a CSF for fintech companies. In all of the case studies was innovation identified and classified as a CSF, that increases the explanatory power of innovation. Specifically, the study corroborate that the term does not refer to the size or age of a business, but the type of activity performed. Furthermore, that most innovations derive from a conscious and purposeful search for innovation opportunities as well as innovators must study the expectations, values, and needs of the potential userbase, and include that as a central element in the product development (cf. Section 3.2.6).

Scalability – The second factor recognised from the case studies is scalability. First, scalability is a broad factor covering the timing of expansion, the strategy of expansion, the market potential, and the scalability of the underlying technology, as well as whether the platforms can handle increasing amount of activity. In the case studies, a get-big-fast strategy has been executed in practice, often with an initial phase of mass accumulation. Depending on the specific business area, different strategies have been chosen, such as a partnership approach, an omnichannel approach, or a marketing approach. Apart from these approaches, the companies often chose to exploit new business areas to scale excessively. The most crucial aspects have been accurately determining the timing of expansion, having a large market potential, and having technology that can handle growing activity. It has sometimes been seen that the adoption of emerging technology of all sorts has spurred such scaling, such as smartphones and internet banking. For the purpose of testing and increasing the explanatory power in relation to Nicoletti's (2017) framework explored in section 3.2, was scalability present in eight out of the nine case studies, this increases the explanatory power of scalability as a CSF for fintech companies. Particularly, the study was able to validate that the underlying technology needs to be easy to scale without any significant increases in costs or any compromises to the underlying technology. However, the study also identified new elements such as the importance of having scaling strategy and the importance of the adoption and development of emerging technologies. This have even further extended the explanatory power of scalability as a CSF for fintech companies (cf. Section 3.2.4).

Customer centricity – Almost all the companies accommodated customer centricity to some degree and with some variation, depending on the target segment. Customers have been central to the products, innovation process, support, feedback, and experience. In the majority of the case companies, their success was and still is tightly related to their customers' success. Therefore, customer experience and the ability to be aligned with customers are important for success, and this requires that the companies have a constant focus on their customers' demands and feedback. An important feature here is to utilise the data collected about customers

to know their needs and expectations. In addition, customer engagement can be useful in designing, developing, and expanding because it can balance and align the expectations and needs of the customer. In relation to Nicoletti's (2017) framework explored in section 3.2, was it possible to test and increase the explanatory power of customer centricity as CSF for fintech companies. Customer centricity was identified and classified as a CSF in eight out of the nine case studies and was able to indorse the importance of fulfilling the customer needs as well as practically using the customer engagement in every aspect of the business. Furthermore, the study was able to corroborate that customer centricity is a prime way of differentiating themselves from competitors, which have increased the explanatory power of customer centricity as a CSF for fintech companies (cf. Section 3.2.1).

Organisation – This factor covers the importance of both a flat organisational structure and the optimal composition of a team. To be successful, multitalented employees must be committed to the company; this can be achieved through unified goals and purposes and through similar visions and encouragement. The difficult part can be the acquisition of such multitalented personnel, because the professionals of today need to be passionate about the work they do as well as flexible and agile to be able to successfully navigate the rapidly changing market conditions. Apart from the acquisition of talent and engagement of employees, the organisational structure is also crucial. In some of the case studies, a flat organisational structure has been mentioned as key to their success, mostly due to the removal of bureaucracy and a further recognition of employees, which has resulted in optimised processes and better working moral. One example of this could be Tradeshift's choice of the Kampan method, which makes it possible to handle sudden input from the market and offers a holistic overview of a product's functionality pipeline. Another example could be Klarna's island-centric organisational structure, meaning a less top-down structure with more isolated islands of employees. Organisation was not present as a CSF in Nicoletti's (2017) framework of CSFs for fintech companies in section 3.2, therefore this factor did not have the ability to test the explanatory power of the framework; however, the study could extend the framework with one additional factor. Nonetheless, organisation was identified and classified as a CSF in six of the nine case studies, which might not completely fulfil the purpose of generalisability.

Agility – Agility is important in any company, but even more so in this rapidly changing market. The ability to pivot functionality or in some cases the whole organisation in a rapid manner can be the difference between success and failure, and it is an ability that should be used as a clear competitive advantage, which incumbents will not be able to match. A prime indication of being agile is that product development and other key processes of a company are done in house, because if that is not the case, then pivoting and quickly responding

to changes can be difficult. Another indication is that there is a tight connection between business and IT, which enables a high degree of agility in product development and business outcomes. In regard to Nicoletti's (2017) framework explored in section 3.2, it was possible to test and increase the explanatory of agility as a CSF for fintech companies; however, agility was present in six of the nine case studies, which might not completely fulfil the purpose of generalisability as mentioned in agility. Nevertheless, the study was able to corroborate the importance of being able to quickly respond to changes as well as the ability to rapidly pivot functionality. Additionally, the study contributed that product development and other key processes of a company should be done in house, furthermore, that agility is significantly affected by a tight connection between business and IT (cf. Section 3.2.3).

Low profit margin (funding) – The essence of this factor is actually that profitability is not the most important thing in the initial phase of the company. In most cases, the initial phase can be recognised by a mass accumulation of customers, which can be represented by a low-friction acquisition model of some kind. An important aspect here is that the network effect is working; however, a consequence of such a strategy is that becoming profitable can take a long time, which makes external funding crucial. The advantage is that data has become the new gold and can be highly valuable, and with a large number of customers and users, the amount of data is significant enough to monetise, either internally or through third parties. Therefore, in some cases of massive growth, funding can be the deciding factor.

In relation to Nicoletti's (2017) framework of CSFs in section 3.2, it was possible to test, increase and extend the explanatory power of low profit margin as a CSF for fintech companies; however, low profit margin was only present in three out of the nine case studies, which seriously questions the explanatory power and the generalisability of low profit margin as a CSF; However, the study contributed with the importance external capital in the initial phase of mass accumulation and additionally corroborated the significance of building a critical mass of users from the very beginning, which as a consequence could push profitability into the future (cf. 3.2.2).

Simplicity – Simplicity comes in many forms – both internally and externally. In the matter of fintech companies, the convenience of onboarding and the use of a service or product can determine whether a customer wants to commit to using the product. The service or product must be easy for customers to use, understand, and onboard, and complexity should be non-existent. The common denominator is that the products and services are simple to understand, administrate, integrate, onboard, and use, all of which are necessary for customers to have a growing interest. In addition, the product and the charging process should

be simple. An example of this could be a subscription-based revenue model; such fixed monthly revenue streams provide financial stability and a high degree of predictability while still providing customers with security because they will gain a holistic view of their future expenses. Internally, the processes should also be simple, with a minimum amount of personal involvement. In relation to Nicoletti's (2017) framework of CSFs explored in section 3.2, simplicity was not present as a CSF. Because of that was it possible to extend the framework with simplicity; however, as with low profit margin was simplicity only present in three out of the nine case studies, which seriously questions the explanatory power and the generalisability of simplicity as a CSF at this point.

Products and services – Lastly, products and services need to be indispensable, somehow revolutionising, innovative, and spurred by the emergence of technology. It is important that products and services collect data because this information can add value or be monetised later. Furthermore, it can be difficult to explicitly describe how products or services should be because they vary from company to company. However, it is important that they rely on emerging technology, are re-programmable and scalable, and deliver what is demanded from customers. Product and services, collectively, is – in the same way as simplicity and organisation – not present as a CSF in Nicoletti's (2017) framework explored in section 3.2. Therefore, it was possible to extend the framework with products and services, collectively, as a CSF for fintech companies; however, this factor was only identified and classified as a CSF in two out of the nine case studies, which consequently resulted in a highly questionable level of explanatory power and generalisability.

Following the reflection on the findings it is reasonable to emphasize that the process of essentially identifying CSFs within an early-stage, but rapidly evolving and complex technological field, such as fintech was a challenging task for several reasons. The reasons are particularly linked to the following issues:

1. The CSFs are relative (cf. Section 3.1).
2. Accessing comprehensive and adequate company information was difficult.
3. The CSFs often cut across multiple companies with different business models; therefore, the way in which they affect companies is based on the specific sector, infrastructure, and segment, providing different benefits for each company.

The latter element of assessing the success factors and determining them as critical or uncritical was especially challenging given the assessments rather subjective nature. Indeed, it seems safe to say that the surest and most effective way to identify and test the success factors of a company, as well as ensuring the highest level of explanatory power and generalisability, is by conducting an extensive qualitative field study

of elite interviewing only encompassed by industry experts, fintech executives, and successful fintech entrepreneurs.

7. Conclusion

According to Elsevier, financial technology – fintech – is the fastest growing area of research on its early-stage research platform. This growing attention has made fintech a compelling topic for many scholars and practitioners (Tucker, 2018).

Much has been written and said about CSFs over the years (cf. Section 3.1). Nevertheless, the exploration of CSFs in relation to financial technology has been limited (cf. Section 3.2), primarily because fintech is still in an infant research stage. However, growing adoption has evolved the term into a popular label, which has intensified the attractiveness and urgency of theoretical exploration. This essentially formed the background of this study, which was driven by two fundamental objectives in response to the research question in Chapter 1: first, to explain the development of the Danish fintech sector and second, to identify CSFs for fintech companies. While this study represents an early attempt at explaining the development of the Danish fintech sector and identifying CSFs for fintech companies, it should be noted that the questions cannot effectively be answered in one simple sentence.

The study found that the Danish fintech sector has developed towards a more mature market stage, which is evident in the growth rates, the large volume of investments, and multiple large and small acquisitions. In 2017, the Danish fintech sector was comprised of 107 companies, **14 of which failed**. The remaining 93 companies achieved a percentage **growth in gross profit of 166% (DKK 1,230 million**) and a total percentage **growth in funding of 279% (DKK 13,825 million)**. In addition, **17 of the remaining 93 companies were acquired**. Additionally, it was clear that companies operating within the payments and enterprise financial software categories were more developed and mature than those operating within the other categories. While the development displays an extraordinary positive trend, the fintech sector is not yet at a steady state; the potential of digitalisation and technology in the financial services industry is significant, and only the tip of the fintech iceberg has been seen.

In relation to CSFs, it was possible to **identify and classify eight CSFs** for fintech companies, with some variation in their degree of explanatory power. The identified CSFs are innovation, scalability, customer centricity, organisation, agility, low profit margin (funding), simplicity, and products and services. Finally, given the large

number of decisions that a business must make to pursue growth and achieve success, getting the theory right and filtering the noise around CSFs in relation to fintech becomes crucial in order to identify future sustainable financial technology businesses.

7.1 Recommendations for future work

Fintech does both globally and in a Danish context remain a relatively new and rapidly changing sector with an increasing number of companies emerging on the stage as well as a development towards more maturity and growth. This makes room for perpetual research in order to gain deeper insights and theoretical explorative power.

In relation to CSFs, the element of identifying and qualifying success factors as well as determining whether the success factors are critical or uncritical, has been very challenging to do using only secondary desk research. There are many different and very interesting areas of fintech which can be explored, in relation to further study and explore CSFs for fintech companies. It would be very interesting, in continuation of this study, to focus the attention on practitioners in the fintech environment in order to further test and increase the explanatory power of already identified CSFs as well as explore new CSFs (section 3.4, figure 6).

Fundamentally, it is only the practitioners who knows the critical details of established companies, hence, conducting qualitative research in order to get a holistic understanding of the challenges, pain-points and more importantly an understanding of what they have done to overcome them, while at the same time uncover company journeys, would definitely be a significant contribution and the next step to the foundation of this thesis.

Another interesting basis of further research would be to get an understanding of how customers value, determine and choose among financial service providers, in the end customers are the livelihood of financial services. This would additionally provide an understanding of the customers' needs and expectations as well as uncovering their journeys which would be a significant contribution to a further theoretical exploration of fintech.

Finally, it would also be a very valuable contribution to more thoroughly explore the different categories within the fintech environment. Currently, fintech is often explored as one combined group, it would really be interesting to focus the attention on one specific category within the fintech sector and explore the CSFs for this specific category. The interesting part would be to discover if the CSFs would be significantly different from what has been found in this study.

Appendices

Appendix 1. Fintech maturity

Figure 2 - Change in VC-backed fintech deals and financing

Data to figure 2	2015	2016	2017	2018	2019Q3
VC-backed fintech deals and financing ($ Billions)	17.0	19.7	18.8	40.6	24.6
Volume	1,235	1,400	1,699	1,967	1,387

Data: CB Insights (2019)

Figure 3 - Change in volume of deals type

Data to figure 3	Series E+	Series D	Series C	Series B	Series A	Seed/Angel
Q42018	3%	3%	6%	13%	26%	37%
Q32019	4%	4%	8%	20%	23%	31%
Change	33%	33%	33%	54%	-12%	-16%

Data: CB Insights (2019)

Appendix 2. Fintech database

Description:

The accompanying database is formatted in Microsoft Excel.

Filename:

Appendix 2 - Fintech Database.xlsx

Appendix 3. Development of fintech companies in Denmark

Description:

To provide additional perspectives into the development of the fintech companies in Denmark, a detailed view of their individual development including company specification and financials, appendix 3 (PDF file) has assembled a detailed collection of the companies. This body of work draws substantially from the fintech database available as appendix 2.

Filename:

Appendix 3 - Development of fintech companies.pdf

Appendix 4. Description of acquired companies

Description:

An additional overview of the acquired companies has been provided, appendix 4 has assembled information about all the acquisitions including, the acquirer, acquisition year, and comments about the acquisitions.

Filename:

Appendix 4 - Description of acquired companies.pdf

Appendix 5. iZettle Products

Appendix 6. Glossary and acronym directory

Term	Definition
AI	Artificial Intelligence
Algorithm	An algorithm is set of instructions for solving a problem or accomplishing a task
AP Automation	Accounts Payable Automation
APAC	Asia Pacific Accreditation Cooperation
API	Application Programming Interface
B2B	Busines to Business
B2C	Busines to Consumer
Big Data	Big data refers to the large, diverse sets of information that grow at ever-increasing rates. It encompasses the volume of information, the velocity or speed at which it is created and collected, and the variety or scope of the data points being covered.
BLE Technology	Bluetooth Low Energy Technology
Blockchain	In essence, a digital database of distributed digital ledgers that enables peers to co-create a permanent, unchangeable and transparent record (called blocks) of transactions.
BMC	Business Model Canvas
Churn rate	The churn rate, also known as the rate of attrition or customer churn, is the rate at which customers stop doing business with an entity. It is most commonly expressed as the percentage of service subscribers who discontinue their subscriptions within a given time period
Cloud computing	Cloud computing is the delivery of different services through the Internet. These resources include tools and applications like data storage, servers, databases, networking, and software.
CSF	Critical Success Factor
Customer Acquisitions Costs	Acquisition cost refers to an amount paid for fixed assets, for expenses related to the acquisition of a new customer, or for the takeover of a competitor.
CLTV	Customer Lifetime Value is the present value of the future cash flows or the value of business attributed to the customer during his or her entire relationship with the company.
Customer Retention Rate	Customer retention is the ability of a business to retain its customers
DFSA	Danish Financial Supervisory Authority
DK	Denmark
DKK	Danish kroner
E-Commerce	Electronic commerce
FS	Financial Services
GitHub	GitHub is a web-based version-control and collaboration platform for software developers
ICT	Information & Communication Technology
Incumbent	An incumbent refers to an industry leader or a legacy provider
IoT	Internet of Things

IPO	Initial Public Offering
IT	Information Technology
M-Commerce	Mobile commerce
ML	Machine Learning
Net Promoter Score	Net Promoter or Net Promoter Score is a management tool that can be used to gauge the loyalty of a firm's customer relationships
NFC	Near-field communication is a set of communication protocols for communication between two electronic devices over a distance of 4 cm (1 1⁄2 in) or less
P2P	Peer to Peer
Smart contracts	A smart contract is a computer protocol intended to digitally facilitate, verify, or enforce the negotiation or performance of a contract
Social networks	A dedicated website or other application which enables users to communicate with each other by posting information, comments, messages, images, etc.
VC	Venture Capital

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