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MASTER THESIS

Leveraging an incumbent's position in the launch of a multi-sided platform in the financial software industry

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ABSTRACT

This master thesis examines how incumbents can leverage their position in multi-sided platform launches in the financial software industry, while further accelerating the growth of an ecosystem by entering startup alliances. Through a single case research strategy, the launch of an incumbent's platform is thoroughly investigated from the perspective of the incumbent, clients, startups as well as industry experts. By integrating literature from the three distinct but interrelated areas of platform launches, incumbency, and startup alliances, a theoretical framework is derived, which guides the exploratory study. Defining variables of the framework are categorized into opportunities, challenges, and mitigation strategies, which ultimately are translated into five elements of platform launch strategies. It is concluded that launches in the financial software industry are defined by a trade-off between the openness of the platform and security, resulting in the detection of the scaling dilemma. Ultimately, when launching a platform while collaborating with startups, incumbents must consider the elements of standardization, step-by-step rollout, organizational commitment, equity involvement, and monetization of the platform.

Keywords

#multi-sided platform #platform launch #incumbency #startup alliances

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1. INTRODUCTION

The first chapter introduces the thesis by providing a (1.1.) discussion and relevance of the research topic. It further presents the (1.2.) research question investigated throughout this paper as well as the (1.3.) delimitation of the study. The last subchapter outlines the (1.4.) structure of the thesis.

1.1. Discussion and relevance

Multi-sided platforms have become the drivers of digital transformation throughout a large variety of industries, no matter if business-to-consumer (B2C), business-to-business (B2B), or peer-to-peer (P2P) (Eisenmann, Parker, & Van Alstyne, 2006; Evans & Schmalensee, 2010; Sanchez-Cartas & Leon, 2019). Open platforms, in particular, *"characterized simply by free-entry of both users and developers"* (Hagiu, 2006, p. 13), are commonly known for their creative power and disruptive forces (Lahiri, Dewan & Freimer, 2010). Over the last decade, platform business models have gained outstanding popularity, despite the increased complexity of the multi-side aspect of platforms, which poses a challenge, especially concerning their launch (Stummer, Kundisch & Decker, 2018). The 'chicken and egg problem' (Armstrong, 2006; Caillaud & Jullien 2003; Eisenmann et al., 2006) is a widely discussed phenomenon in research that refers to the attraction of one user side depending on the existence of the other. The phenomenon is further aggravated by the critical mass constraint, which assumes that a specific size of one side is required to attract the other (Evans & Schmalensee, 2010). Unsurprisingly, resolving the issues associated with early-stage multi-sided platforms have been similarly widely explored as the issues themselves (e.g. Eisenmann et al., 2006; Parker & Van Alstyne, 2014; Edelman, 2015). Nevertheless, most of these studies are conducted based on the assumption that the company behind the respective platform is a new market entrant; hence, the platform possesses no user base on either side yet.

As the digital sphere seizes consistently higher impact in the market, also incumbent companies transform their business models and launch different types of platforms to

access or create new ecosystems. Some of the world's most valuable companies, such as Apple or Microsoft, have pursued a transition from product-centricity to reestablishing themselves as platform companies (Leijon, Svenheden & Svahn, 2017). In stark contrast to startups and new market players, incumbents are equipped with preexistent assets. The previously established user base, for example, can be leveraged in the launch of the platform to attract new users and potentially overcome the 'chicken and egg problem'. What is more, it can be assumed that not only various other firm-level specific opportunities but also challenges arise from incumbency. While platforms and ecosystems have been a central focus of scholars in the field of strategic management (Stummer et al., 2018), it is at the same time emphasized that a deeper understanding of incumbents' roles in platform launches is required (Leijon et al., 2017).

Despite the fact that incumbents possess essential competitive advantages in resources endowments, the vast body of research centers around platforms being launched by startups. Hence, throughout the past decade, corporates are increasingly engaging in startup alliances, especially when seeking to foster open innovation activities (Weiblen & Chesbrough, 2015). This phenomenon can be observed particularly in the information technology and software industry (Hagedoorn & Schakenraad, 1992). Due to the complexity and velocity of this field, incumbents expand their search horizon beyond corporate borders to explore opportunities and advance their technologies (Chesbrough, Vanhaverbeke & West, 2006). A variety of scholars (e.g., Pfeffer & Salancik, 1978; Ensley, Hmieleski & Pearce, 2006; Weiblen & Chesbrough, 2015) have produced an extensive body of knowledge in the field of strategic alliances between incumbents and startups. Nevertheless, a research gap persists in startup alliances via a shared technology as a competitive advantage in platform launches.

The popularity and innovative strength of both multi-sided platform models and startup alliances result in the scholars' interest to contribute to academic literature of the interrelated fields of study. One the one side, platform launches are predominantly scrutinized from a market entrant's perspective, which is why this thesis anticipates deriving findings regarding incumbent-specific characteristics. One the other side, the respective topics are typically treated as two autonomous research areas, wherefore it is

regarded necessary to elucidate the link between these in order to explore the potential of an underlying competitive advantage. Resultantly, the scholars aim to provide impactful managerial implications for incumbents that aspire to launch a multi-sided platform in the financial software industry.

1.2. Research question

The purpose of this paper is of exploratory nature, as it seeks to close the above-described research gaps by shedding light on the position of an incumbent when launching a multi-sided platform (Saunders, Lewis & Thornhill, 2009). Consequently, the underlying core idea of this thesis is to answer the following research question:

Leveraging an incumbent's position in the launch of a multi-sided platform in the financial software industry:

- Which opportunities and challenges arise from incumbency in launching a multi-sided platform, and how can they be translated into a launch strategy?
- How can incumbents leverage startup alliances to stimulate growth in the establishment of a broader ecosystem?

1.3. Delimitation

The objective of this thesis is to elucidate the role of incumbents in platform launches. While the research aims to provide generalizability, the scope of the research is subject to several limitations. Firstly, the research is based on a single case study. Secondly, the examined financial software industry is a B2B niche market. Hence, contextual conclusions might not be applicable to consumer or mass markets. Thirdly, the cross-sectional focus of the thesis addresses the conceptualization phase of the platform until an early stage of the rollout.

1.4. Structure of the thesis

The thesis is structured as follows: The first section introduces the research question, its relevance as well as the delimitation. The second chapter provides a more profound introduction to the setting of the thesis in regard to the industry and case company. The third chapter reviews the relevant existing literature in order to introduce the theoretical framework, which consequently guides the thesis. The theoretical foundation focuses on three main research areas: platform launches, incumbency, and startup alliances. The fourth section provides insights into the methodology and research method applied to this work. Section five contains the analysis of the research results in a structured manner. The discussion in chapter six compares the results of the analysis with the existing literature and discusses the accuracy and relevance of the findings in comparison to the theoretical framework. Furthermore, it outlays managerial implications to platform launch strategies and the contribution to platform launch literature. The conclusion in chapter seven summarizes the findings of the thesis. Lastly, chapter eight reflects upon the limitations of the study and outlines suggestions for future academic research.

2. SETTING

This section elaborates on the industry and case company underlying this research. First, the (2.1.) financial software industry and its latest developments are elucidated in terms of market trends and technological innovations. Thereafter, the (2.2.) case company SimCorp is introduced, placing particular emphasis on their anticipated strategic imperative.

2.1. Financial software industry

The financial software industry provides software solutions for financial service providers such as, among others, wealth managers, asset managers, fund managers, asset servicers, or insurance funds. The solutions include automation of processes, collection,

and analysis of high-quality data, regulatory compliances, and customized reporting (SimCorp, 2020b).

At present, the financial software industry is facing rapid changes as a result of a revolution in the underlying investment management market, which is driven by four interconnected trends (PWC, 2017). First, the power is shifting to investors, establishing a buyers' market, and lowering the margins for asset managers, which is expected to result in consolidation, increase the necessity for new forms of collaboration (BCG, 2018) as well as cost-efficiency. In combination with the technological developments, experts anticipate software fees dropping 15 to 20 percent, which means the asset management software market competes on efficiency more than ever (SimCorp, 2019b). The acquisition of Charles River Development's (CRD) Charles River IMS (CRIMS) platform in 2018 was only one example of an aggressive merger and acquisition strategy applied by large software vendors, who seek to grow not only their service portfolio, but also their market share. Ultimately, competition is increasing among the shrinking number of software vendors in the market (Citisoft, 2019).

Second, technology is far behind in the asset management industry (PWC, 2017). However, the ever-faster emergence of startups and technological innovations such as cloud technology accelerate the industry's change dynamics. As the asset management firms' prosperity will depend on how well technology is embraced, pressure on technology providers such as SimCorp to develop cutting-edge solutions surges (PWC, 2017). An apparent reaction to the digital transformation trends can be observed in the market as vendors move from on-premise products to software-as-a-service and ultimately to cloud-based solutions. The next step for vendors who have successfully shifted to a private cloud-based model is to leverage scale economies by moving to a public cloud (Citisoft, 2019).

Third, to generate a profitable alpha, 'niche market involvement' such as trade finance or peer-to-peer lending will gain importance over the next years, posing a new challenge to the underlying software systems. As software provider will not be able to cover all niches themselves, neither in-house nor through mergers and acquisitions, experts expect them

to leverage their cloud-based solutions and couple them with externally managed services. Hence, the market is facing a transition towards ecosystems, where lines start to blur between software vendors and third-party service providers acting through the vendors' platforms (Citisoft, 2019).

The fourth market trend further aggravates the necessity of a transition towards ecosystems: Multi-asset, outcome-driven solutions have replaced products that fit in style boxes. The tailoring of solutions to individual investors' needs requires software solutions that allow them to focus on core functions and outsource non-core functions (PWC, 2017). Overall, these four trends were found to translate into three areas of action: revision of business strategies, focus on new technologies, and investments in employee capabilities (PWC, 2017).

2.2. Case company: SimCorp

SimCorp is a Copenhagen-based software company, which, since their incorporation in 1971, has striven to realize their vision of becoming *"the most attractive partner to investment managers and the number one provider of investment management solutions globally"* (SimCorp, 2019a). SimCorp's core product is SimCorp Dimension (see Appendix A), a fully integrated front-to-back investment management solution including intra-day data, real-time processing of cash management, elected corporate actions, and collateral management. At present times, SimCorp has more than 1.800 employees in offices across Europe, North America, and Asia-Pacific. Moreover, it is part of C25, the leading stock index on Nasdaq Copenhagen (SimCorp, 2018a).

Founded as a consulting company, which applied a budget simulation model to consult companies in long-range planning processes servicers (Tamstorf, 2009), SimCorp has gradually expanded their product line through the acquisition of other companies. To date, the company provides investment management solutions for financial institutions, asset managers, insurance companies, pension funds, fund managers, wealth managers, sovereign wealth funds, and asset servicers (SimCorp, 2019a). By courtesy of the company's accounting heritage, SimCorp possesses substantial expertise across

accounting, tax frameworks, local GAAPs, and multi-currency management (Holse, 2019). Besides SimCorp Dimension, the company's product portfolio further comprises SimCorp Coric, a global solution for client communications and reporting automation, SimCorp Gain, an EDM solution for reference and market data management, and SimCorp Sofia, a front-to-back investment management solution for the insurance market in Italy (SimCorp, 2019a).

SimCorp operates in a highly competitive niche market for asset management software. With more than 250 clients and 14,6 percent market share in the approximately 1300 client strong market (SimCorp, 2019a), as well as 45 percent of the top 100 investment managers worldwide relying on SimCorp Dimension (SimCorp, 2019c), SimCorp ranks among the heavyweights of the industry. Interestingly, SimCorp's biggest competitor is simultaneously their most relevant potential client: the investment fund Blackrock Inc. that relies on their own in-house developed asset management software 'Aladdin' (SimCorp, 2020a). A clear market trend in the increasingly complex industry can be observed in the race for the *"most comprehensive whole portfolio investment operating platform"* (Holse, 2019). While SimCorp has pursued this strategy since their early days, Blackrock Inc. is investing heavily in the acquisition of companies to enable the development and optimization of a holistic platform (Holse, 2019).

In response to the above-described industry dynamics, SimCorp has developed a digitalization strategy (SimCorp, 2020a), which will be implemented over the next three to five years. Four major transformation themes are outlined (see figure 1): Based on the underlying cloud technology transformation, the three strategic imperatives (1) customer experience leadership, (2) everything as a service and (3) ecosystem enabled innovation will be pursued to secure a five-year compounded annual growth rate of ten percent and to maintain SimCorp's competitiveness in the long run (SimCorp, 2020a). While the first two imperatives will secure SimCorp's short to medium (three to five years) competitive advantage, 'ecosystem enabled innovation' represents the company's business model innovation and strategic measure to prevail long-term market leadership (ibid.).

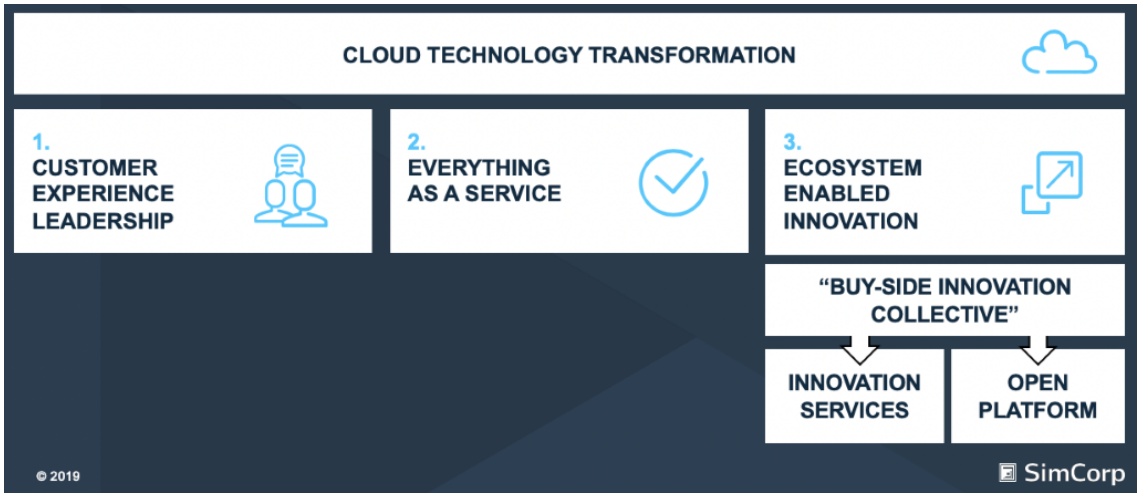


Figure 1: SimCorp strategy 2020 (SimCorp, 2020a)

One of the critical elements of the incumbent's strategy is the launch of an open multi-sided platform, which serves as the object of analysis in the following thesis. Over the last decades, SimCorp's success can be mainly attributed to their Investment Book of Records (IBOR). However, as innovation around the IBOR has decelerated to incremental steps, SimCorp faces both opportunity and pressure to rely on more externally oriented open innovation to identify the next growth-ensuring innovations (SimCorp, 2019a). The ultimate goal of the platform is to position *"SimCorp as a relevant and agenda setting innovation partner among customers and in the fintech ecosystem by 2023"* (SimCorp, 2020a, p.10). Leveraging a broad-based ecosystem of customers, partners, and startups will allow the company to explore new opportunity spaces, build and enhance internal as well as external innovation capabilities and establish a stable network in the emerging fintech ecosystem (SimCorp, 2020a).

The platform was rolled out in 2019, will be fully executed in 2020 and accelerated from 2021 (SimCorp, 2020a). While the open platform continues to live from SimCorp's IBOR and the company's own applications, open APIs allow third-party providers, such as startups, data vendors, or other strategic partners, to offer their services via SimCorp's multi-sided platform (see Figure 2). The open aspect of the platform responds to the industry trends in terms of positioning SimCorp as a facilitator of new collaborations across the ecosystem and providing significant flexibility of services through access to a

variety of partner, strategic alliances and fintech startups via the platform, which allow leveraging scale economies as well as smaller niche products (PWC, 2017).

With a client pool of 250 institutions, SimCorp possesses a promising network base to attract third-party providers. SimCorp's internal estimations predict a revenue growth curve with a 50 Mio. Euro revenue stream and 70 startups using the platform by 2025 and 80 Mio. Euro revenue stream by 2030. Ultimately, the goal will be to attract partners such as Blackrock Inc. to pay a fee for offering their APIs via the SimCorp platform (SimCorp, 2020a).

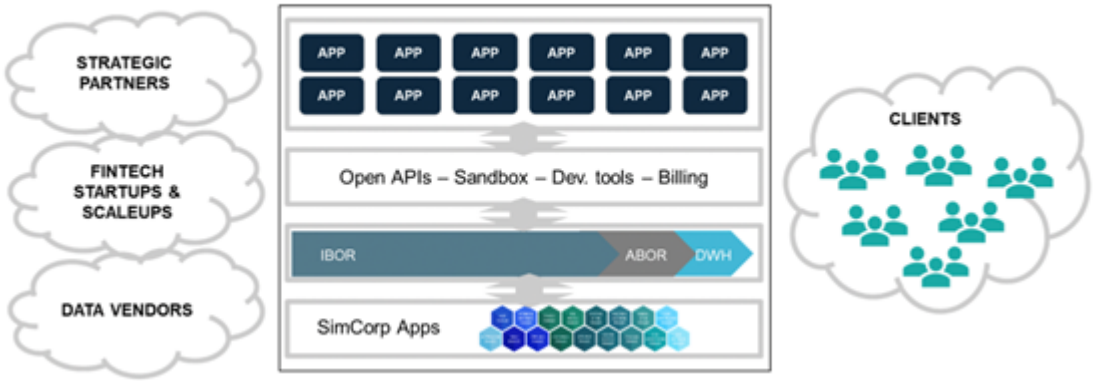


Figure 2: SimCorp open platform (SimCorp, 2020a)

3. THEORETICAL FOUNDATION

The following section provides an overview of the (3.1.) definitions and concepts used in this thesis. Furthermore, it reviews the existing literature in the areas of (3.2.) platform launches and (3.3.) startup alliances from an incumbent's point of view. Consequently, it introduces the (3.4.) theoretical framework that guides this research. The investigated areas present three distinct but interrelated fields of studies, which are anticipated to be combined to, ultimately, provide a foundation for platform launch strategies of incumbents.

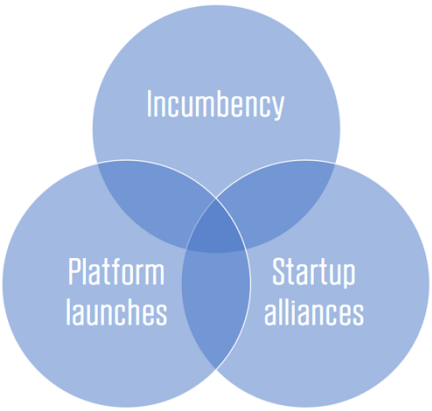


Figure 3: Theoretical positioning of the research

3.1. Definitions and concepts

Before deducing the theoretical foundation of this thesis, it is necessary to define the three concepts, which serve as the key pillars of the study: incumbency, platform launches, and startup alliances.

Incumbency

Incumbency refers to a company, *"which is already in position in a market"* (Oxford Reference, 2020) and hence stands in opposition with new market entrants. While literature does not offer a clear definition of incumbency, characteristics such as, for example, firm size, financial resources, existing customer relationships, knowledge background, and experience, or brand recognition are considered decisive in order to differentiate incumbents from startups and new ventures (Helfat & Lieberman, 2002; Sosa, 2006; Echambadi, Bayus & Agarwal, 2008; Sanchez-Cartas & Leon, 2019). Firm size has been subject to a vast amount of research as it depicts a fundamental distinguishing factor in categorizing corporations (e.g., Cohen & Levin, 1989; Echambadi, Bayus & Agarwal, 2008; Akben-Selcuk, 2016). Unsurprisingly, studies expound an intertwining of firm size and incumbency as they describe a positive correlation between operational life and corporate size. In short, with increasing time of operation, firms tend to grow larger. Also, in comparison to new ventures, the firm size of incumbents is often associated with superiority in resource endowments, such as

capital or manpower (Carroll & Hannan, 2000). Moreover, incumbents also tend to have a more extensive customer base as startups, which usually find themselves in the process of establishing and scaling a client base (Echambadi et al., 2008). Although no prior research addresses the specific firm-level-related opportunities and challenges that arise in platform launches as well as startup alliances, advantages and disadvantages impacting the role of the incumbent are touched upon in the following subsections 3.2. and 3.3.

Multi-sided platforms

Before elaborating on platform launches in-depth, it is crucial to provide a general introduction to the concept of multi-sided platforms. Over the past two decades, multi-sided platforms have become highly popular business models that fundamentally change the conventional thinking of value creation and thereby attracted a vast stream of academic research (e.g. Parker & Van Alstyne, 2000; Evans, 2003, 2011; Evans, Hagiu & Schmalensee, 2008; Eisenmann et al., 2006; Rochet and Tirole, 2006; Rysman, 2009). So far, research still does not provide one standard definition of platforms, however, throughout the numerous quests (Parker & Van Alstyne, 2000; Caillaud & Jullien, 2001; Evans, 2003, 2011; Evans, Hagiu & Schmalensee, 2008; Eisenmann et al., 2006; Rochet and Tirole, 2006; Filistrucchi, Geradin, Damme, Keunen, Wileur, Klein, & Michielsen, 2010), an agreement has been reached regarding the main characteristics of platform markets (Sanchez-Cartas & Leon, 2019). Evans (2003, p.191) suggests broadly that "multi-sided platforms coordinate the demand of distinct groups of customers who need each other in some way". Rochet and Tirole (2003) further distinguish the one-sided from the two-sided marked by outlining the centrality of network externalities and the question, which side is paying for the service versus which side requires subsidization in multi-sided platforms. Hagiu and Wright (2015), on the other hand, argue that network externalities are not sufficient to classify a multi-sided platform but are rather consequences of what defines multi-sided platforms from their perspective, namely affiliation. According to their research, a platform enables direct interaction between two sides, of which platform-specific investments, i.e. a subscription or transaction fee, are required to facilitate the transaction (Hagiu & Wright, 2015). Rysman (2009) adds that the different sides not only interact through the platform, the decision of each side also affects the outcomes of the other sides. Lastly, it can be argued that while the definitions

to conceptualize platforms are manifold, they ultimately complement rather than contradict each other (Filistrucchi, Geradin & Van Damme, 2013). Below, section 3.2. will further discuss the opportunities that prevail in launching a platform, the potential challenges companies face in platform launches, the strategies that can be applied as well as the disparity in preconditions of startups and incumbents.

Startup alliances

When examining startup alliance literature, it is inevitable to consider strategic alliances in general, which constitute the basis and origin of startup alliances. Throughout this master thesis, the term strategic alliance follows Teece's definition of *"[...] agreements characterized by the commitment of two or more firms to reach a common goal entailing the pooling of their resources and activities"* (1992, p. 19). Collaboration in strategic alliances has been a central research area and continues to be analyzed in contemporary literature (Hock & Ringle, 2010; Inkpen, 2005). Firms undertake strategic alliances for an array of reasons, which can be classified into two main theoretical perspectives. Firstly, strategic alliances may be seen from the transaction cost perspective, where organizations engage in alliances to control costs and risks associated with product development (Williamson, 1991). The resource-based view, proposed by Barney (1991), poses the second theoretical perspective, in which organizations aim to enhance their offerings utilizing either valuable, limited, inimitable, or non-substitutable resources and, thus, stay ahead of the competition. Especially in information technology, strategic alliances are of high relevance and make by far the largest field of the alliances and the sector where corporations seem to have the most extensive experience with this phenomenon (Hagedoorn & Schakenraad, 1992). When observing the information technology industries, one can recognize a significant rise of new strategic alliances in the field of software, experiencing higher frequency than firms in almost any other sector (ibid.; McNaughton, 2001). In line with this development, modern software shows a strong dependence on components and infrastructure from third-party vendors and open source suppliers, which, in turn, has led to a software ecosystem where different actors collaboratively create competitive value (Jansen, Cusumano & Brinkkemper, 2013). Building on this, success in the software industry is dependent on both the development quality of the enterprise but also the management and maintenance of alliances (ibid.).

Given the fact that this pillar of the study centers around startup alliances, Ries' (2011, p.8) definition of a startup will be used: *"A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty"*. Startups are found in both for-profit organizations and not-for-profits of different sizes and find themselves within the two first phases of the organizational life cycle, namely inception and survival (Scott & Bruce, 1987). The focus of this thesis is limited to new for-profit technology companies only. In overcoming resource restrictions and achieving more favorable outcomes, startups and incumbents frequently form alliances to profit from diverse knowledge channels and valuable network resources such as partners' R&D capacities or reputation (Pfeffer & Salancik, 1978; Doblinger, Surana & Anadon, 2019).

3.2. Launching multi-sided platforms

In order to provide a holistic review of the platform launch theories, it is necessary to shed light on four distinct areas, namely (3.2.1.) incentives to launch, (3.2.2.) opportunities in platform launches, (3.2.3.) challenges in platform launches, as well as (3.2.4.) platform launch strategies.

3.2.1. Incentives to launch

As aforementioned, the platform business model has experienced a surge in popularity. This fact can also be observed in the ranking of the ten highest valued companies, of which five, namely Apple, Alphabet, Amazon, Facebook, and Microsoft, derive their fortune from maintaining multi-sided platforms (Hagiu & Altman, 2017).

Further, as economic competition is changing and shifting from the Schumpeterian view towards Friedman's 'flat world', the locus of innovation is transitioning to a more open approach, giving rise to the era of open multi-sided platforms (Gulshan, 2011). Although the degree of openness still varies, an apparent increase in respective platform models can be observed (Sanchez-Cartas & Leon, 2019). Henry Chesbrough (2006a), a luminary in the field of open innovation research, argues for the extension of the search boundaries beyond corporate walls as a prosperous driver of innovation. Eisenmann, Parker and Van Alstyne (2009, p.131) claim that the key incentives to launch a platform derives from the

fact that it *"can spur adoption by harnessing network effects, reducing users' concerns about lock-in, and stimulating production of differentiated goods that meet the needs of user segments"*. These effects, as well as the access to more diverse and novel ideas, are found to be great incentives to launch open platforms, despite the increased competition and lower switching costs for users entailed in open platform business models (Tåg, 2008; Eisenmann et al., 2009).

3.2.2. Opportunities in platform launches

This subsection discusses opportunities in relation to platform launches of multi-sided platforms. While research (e.g. Edelmann, 2015, Sanchez-Cartas & Leon, 2019) addresses various opportunities in platform launches, they mainly concern (1) the establishment of network externalities and (2) low marginal costs. Subsequently, due to the focus on the role of incumbents of this thesis, (3) firm-level specific opportunities are discussed.

Opportunities in platform launches

Opportunities	Description
Establishment of network externalities (e.g. Bellflamme & Toulemonde, 2004; Eisenmann et al., 2006; Parker, Van Alstyne & Choudary, 2016; Sanchez-Cartas & Leon, 2019)	Positive network effects are highlighted by a multitude of researchers as significant opportunity in establishing a multi-sided platform business model supplying the platform provider with a significant competitive advantage. Network effects are described as demand economies of scale, which are driven by a positive correlation of network size and user value.
Low marginal costs (e.g. Hidding, Williams & Sviokla, 2011; Edelmann, 2015)	Due to their primarily digital character, multi-sided platforms (MSPs) are generally characterized by the lack of manufacturing and inventory cost. This offers the platform provider with the opportunity to exploit low operating costs of MSPs.
Firm-level specific opportunities (e.g. Helfat & Lieberman, 2002; Sosa, 2006; Echambadi, Bayus & Agarwal, 2008, Sanchez-Leon, 2019)	Firm size entails advantages in terms of a wider range of resource endowments. Specifically, incumbents benefit from easier access to capital and trained manpower, a broader knowledge network, established organizational structures and an existing user base when launching a platform.

Table 1: Opportunities in platform launches

Establishment of network externalities

Positive network effects are highlighted by a multitude of scholars (Bellflamme & Toulemonde, 2004; Eisenmann et al., 2006; Parker, Van Alstyne & Choudary, 2016; Sanchez-Cartas & Leon, 2019) as a significant opportunity in establishing a multi-sided platform business model. According to Parker et al. (2016), owning the largest platform with the strongest network effects supplies the platform provider with a significant competitive advantage. In their study, network effects are described as demand

economies of scale, which are driven by a positive correlation of network size and user value (Parker et al., 2016). The value creation through network effects is best articulated in 'Metcalfe's law' (cf. Metcalfe's law; see Briscoe, Odlyzko, & Tilly, 2006), which was proposed by the co-inventor of Ethernet, Robert Metcalfe, in the 1980s and continues to apply to many of the present-day technologies. He argues that while the correlation of the cost to the number of connections grows linearly, the value of the network increases exponentially to the number of users (Hendler & Golbeck, 2008). Eisenmann et al. (2006) emphasize the competitive advantage of network effects further by portraying it as an effective strategy against the threat of envelopment by other platforms, especially in so-called winner-take-all markets, where competition is even more fierce as only one or very few dominant platforms survive.

Low marginal costs

One of the most fundamental opportunities is the creation of a marketplace where no prior trade exists between the two user sides and hence being able to extract the entire surplus on both the seller and consumer side (Bellflamme & Toulemonde, 2004). As abovementioned, multi-sided platforms serve as intermediaries for a market where one side creates value for another user side. Frequently, one side subsidizes the opposite when dependencies are imbalanced, i.e. when one side depends more on the presence of the other. Thereby, the money side pays the costs for the subsidy side. Due to their primarily digital character, no physical goods need to be produced and stored. This lack of manufacturing and inventory cost offers the platform provider with the opportunity to exploit low operating costs of multi-sided platforms (Hidding, Williams & Sviokla, 2011; Edelmann, 2015).

Firm-level specific opportunities

The majority of theoretical literature discusses platform launches largely independent of the type of company. Unsurprisingly, however, a significant disparity regarding preexisting assets and capabilities can be observed between incumbents and startups, which determines their opportunities in platform launches. As abovementioned, firm size, knowledge, financial background, existing customer relationships, brand recognition, but

also agility represent impactful firm-level factors in platform launches (Helfat & Lieberman, 2002; Sosa, 2006; Echambadi et al., 2008, Sanchez-Cartas & Leon, 2019).

Firm size depicts a rudimentary distinctive factor between startups and incumbents (e.g., Cohen & Levin, 1989, Echambadi, et al., 2008; Akben-Selcuk, 2016) as firms tend to grow larger over time. Carroll and Hannan (2000) provide evidence that firm size entails advantages in terms of a broader range of resource endowments. Specifically, incumbents benefit from easier access to capital and trained manpower, a broader knowledge network, established organizational structures, and an existing user base when launching a platform (Helfat & Lieberman, 2002; Sosa, 2006; Edelmann, 2015). These resources constitute a lucrative opportunity for incumbents, particularly when competing against startups on scale efficiencies (Echambadi, et al., 2008). Especially existing customer relationships provide significant leverage in amassing a large user base in a short period of time. The length of operational activity is further positively correlated with the acquisition of experience and other specialized skills, such as technical or industry-specific knowledge (ibid.). This is found to be a substantial competitive advantage of incumbency as experience has a long-term impact on success when entering new fields (Stinchcombe, 1965). Moreover, the findings of Carroll and Hannan (2000), indicate that the incumbent's resource endowments lead to superior survival chances of larger firms.

Startups and smaller firms, on the other hand, usually possess a high degree of agility and advantages in shorter ways of communication, which allows fast movement and adaptations to market needs (Audretsch & Mahmood, 1995; Echambadi et al., 2008). While some research (e.g. Christensen, 2013; Christensen & Overdorf, 2000; Hyytinen, Pajarinen & Rouvinen, 2015) suggests that startups are the main drivers of radical innovation, others find that incumbents are better equipped to pioneer new industries (e.g. Chandy & Tellis, 2000). Despite these inconsistencies in research, findings provide evidence that in the early stages of new industries, the survival chances of incumbents exceed those of startups (e.g. Klepper, 1997, 2002; Echambadi et al., 2008). In terms of platform launches, this means that the incumbent's opportunities depend on the closeness to the incumbents' core business as well as the novelty of the industry.

3.2.3. Challenges in platform launches

The following subsection discusses the most frequently cited challenges in relation to platform launches of multi-sided platforms: (1) market entry timing, (2) openness of the platform, (3) 'chicken and egg problem', (4) monetizing network effects, (5) multihoming as well as (6) firm-level specific challenges.

Challenges in platform launches

Challenges	Description
Market entry timing (e.g. Lieberman & Montgomery, 1988; Markides & Geroski, 2004)	First movers can benefit from the advantage of establishing entry barriers by positioning themselves as market owner. However, it was found that it is usually the followers that have higher success and survival rates, as they can leverage their precursors learnings.
Openness of the platform (West, 2003, Hagiu, 2006)	The degree of openness is a central decision factor in platform launches. While proprietary platforms entail higher returns for the platform provider, openness leads to an increased attraction of platform participants.
Chicken and egg problem (e.g. Parker and van Alstyne, 2000; Caillaud & Jullien, 2001; Evans, 2003, 2008, 2011; Eisenmann et al., 2006)	Multi-sided platforms are defined by the challenge of attracting different user sides that depend on the presence of each other to an initially empty platform. The platform can only sustain itself, once a critical mass of users is achieved.
Monetizing network effects (e.g. Evans, 2003; Rochet & Tirole, 2003; Eisenmann et al., 2006)	Attracting and maintaining the platform-characteristic interdependent participants requires specific sensitivity regarding to the appropriate pricing structure as well as price level. The company needs to identify a "subsidy" side, i.e. the side with the higher relevance to the other side, and the "money" side, which carries the costs of the subsidization.
Multihoming (e.g. Caillaud & Jullien, 2003; Rochet & Tirole, 2006; Armstrong & Wright, 2007)	Multihoming results from the platform agents' desire to leverage advantages of network effects in an environment of non-interconnected platforms. Multihoming is incentivized when switching costs are low. However, incentives for multihoming were found to have a negative correlation to an increase in the size of the opposite platform user base.
Firm-level specific challenges (e.g. Echambi et al., 2008; Chandy & Tellis, 1998; West, 2003)	Firm-level specific challenges in platform launches comprise organizational inertia and internal cultural challenges.

Table 2: Challenges in platform launches

Market entry timing

While platform companies can rarely influence whether they are first-movers, fast-followers or late followers, research finds an array of strategic implications in regard to market entry timing, which are crucial to be taken into consideration for long-term success (Markides & Geroski, 2004; Hidding et al., 2011).

Leveraging the first-mover advantage is considered a powerful tool that allows companies to establish significant barriers of entry against their potential competition (Lieberman & Montgomery, 1988). The prevailing opinion used to be that entering the market first provides the company with the opportunity to build a strong brand recognition in the mind of the consumer and establish itself as the market owner (Bressler & Von Bergen, 2016). Especially when intellectual property protection of superior quality or technology is

involved, the first-mover advantage can contribute to maintaining a market leader position (ibid.). Similarly, first-movers can benefit when engaging in a market with high switching costs, which require outstanding investments in terms of time or monetary effort from customers when they attempt to transfer to the competition (Gomez & Maicas, 2011). However, more recent studies find that research examining first-mover market leaders was deceived by survivor bias, neglecting early pioneers who were evicted by their followers (Hidding et al., 2011).

In fact, various scholars (e.g., Markides & Geroski, 2008; Hidding et al., 2011; Bressler & Von Bergen, 2016) emphasize the role of followers in market leadership. Throughout literature, scholars agree that followers significantly benefit from the pioneering work and market-building activities that actual first-movers have performed, resulting in considerable savings for the follower. Hence, followers can focus their efforts on the explanation of their offer's superiority (Hidding et al., 2011). In general, research distinguishes between early followers, which enter close to the inflection point of the S-curve and leverage the rapid increase in market growth, and late followers, which enter once a market has been established. The latter apply free-ridership to build upon their precursor's learnings and either imitate the dominant design, including minor adaptations or translate the lessons learned into an entirely new solution (ibid.) The ′complementary resources hypothesis' proposed by Teece (1987), suggests that followers possess complementary skills and assets, which alone provide only a minor competitive advantage but can generate significant impact when integrated into a new product or when built upon the first-mover's product. By bundling several product functions, followers can win the market by combining the existing product with novel functions and hence offer a higher overall value to the customer (Eisenmann et al., 2006). Markides and Geroski (2008) claim that it is usually consolidators, 'fast seconds', who *"appear just when the dominant design is about to emerge"* (p. 1) and ultimately capture the market. According to their research, a fast second strategy has proven to be the most successful for large established companies (Markides & Geroski, 2008).

In examining leading platforms across fifteen markets, Hidding et al. (2011) find that solely one, namely the SAP-integrated ERP software, constitutes a first-mover. Five

platforms are fast-followers, while the remaining nine represent late followers. It can hence be derived that entering a market as first-mover poses a significant challenge to platforms. Research, in fact, indicates that a follower advantage in platform markets might have an even higher impact than in traditional consumer goods (Golder & Tellis, 2002; Hidding et al., 2011).

Openness of the platform

According to Hagiu (2007, p. 115-116), *"pure two-sided platforms entirely leave [the control over seller's goods] to sellers and simply determine buyer and seller access to (or affiliation with) a common marketplace"*. However, when launching a platform, companies still have to decide about the degree of openness of their platform, ranging from a fully proprietary platform, which *"consists of an architecture of related standards, controlled by one or more sponsoring firms"* (West, 2003, p.2), to an open-source platform, where the owner solely provides the transaction infrastructure (Economides & Katsamakas, 2006).

In his research, West (2003) examines the computer software industry to determine the tradeoffs between proprietary and open platforms. He finds that the primary challenge regarding platform openness derives from the tension between appropriability and adoption in de facto standard creation. Platform developers must balance the costs of platform development and the creation of appropriability opportunities, i.e. the ability to profit from technological innovations, for them to claim a share of the economic benefits. In order to generate revenue, however, adoption of the platform needs to be stimulated, which is often correlated with sharing economic returns in the form of subsidization with other value chain parties, such as buyers. The challenge hence prevails in the tradeoff between enticing platform participants through openness while ensuring sufficient returns for the platform (West, 2003).

Hagiu (2006) further analyzes the social welfare tradeoff between proprietary and open platforms, which results from indirect network externalities and direct competitive effect between producers. He describes that although monopoly pricing of proprietary platforms leads to deadweight loss, at the same time, network externalities between the different

platform agents and competitive effects between producers are, at least to a certain degree, taken into consideration. By controlling access to the platform, reduced competition among third-party providers can make respective platforms more socially desirable than open platforms, despite the profit-maximizing pricing approach. In open platform scenarios, on the other hand, these effects cannot be accounted for as a result of the marginal cost pricing on both sides (ibid.). Although the general prevailing opinion among economists suggests that open platforms generate a higher social efficiency (Sanchez-Cartas & Leon, 2019), Hagiu's (2006) research points out that there is no clear answer in regard to which platform type results in higher product variety, consumer adoption, or social welfare. In practice, however, multi-sided platforms are neither fully proprietary nor fully open, but a hybrid between the two approaches (Chesbrough, Vanhaverbeke & West, 2006).

Chicken and egg problem

Connecting different sets of agents and leveraging network effects among them has been constituted as defining element of multi-sided platforms by a plethora of scholars (Parker & Van Alstyne, 2000; Caillaud & Jullien, 2001; Evans, 2003, 2011; Evans et al., 2008; Eisenmann et al., 2006; Rochet & Tirole, 2006). However, the establishment and journey to co-existence of the two sides, also referred to as 'coordination problem', is one of the most discussed challenges in platform literature (Sanchez-Cartas & Leon, 2019). As a platform does not per se create value for its agents but acts as the facilitator of interaction among the different agents, each side disperses when there is no demand from the other side. Hence, the first challenge platform businesses need to overcome is to develop a strategy to attract the agents to the empty platform. Caillaud and Jullien (2001) coined this challenge the 'chicken and egg problem'.

Sanchez-Cartas and Leon (2019) argue that one of the first suggestions to solve the 'chicken and egg problem' refers to investigating users' expectations of their counterparts' participation (Jullien, 2005). The thereof derived subsidization methods provide the basis for a standard approach to discriminate among the equilibria in various research (e.g. Caillaud & Jullien, 2001, 2003; Hagiu, 2006; Economides & Tåg, 2012). While most research illuminates the 'chicken and egg' dilemma from a pricing perspective and

emphasizes different subsidization strategies to attract users and sustainable growth (e.g. Caillaud & Jullien, 2001, 2003; Eisenmann, 2008; Sanchez-Cartas & Leon, 2019), only a few investigate the underlying reason why users would engage with the platform at all (Rask & Kragh, 2004; Salminen, 2014; Nguyen, 2017). Salminen (2014), for example, distinguishes, besides the monetization dilemma, between the 'cold start dilemma' and the 'lonely user dilemma'. He defines the 'cold start dilemma; as follows: *"when there is a lack of existing content, no users are motivated to create new content, and so there remains a lack of content"* (Salminen, 2014, p.99). The 'lonely user dilemma', on the other hand, refers to individuals expecting to find other individuals when joining a social platform.

Once the first generation of users can be attracted to the platform, 'Metcalfe's law' (cf. Metcalfe's law; see Briscoe, Odlyzko, & Tilly. 2006) is set into motion, and it can be expected that new users are enticed to the platform in exponentially increasing numbers (Salminen, 2014). Achieving this viral effect is crucial, as the challenge of the 'chicken and egg problem' is only resolved once a critical mass of users is reached, and the platform can sustain itself. Overcoming this challenge, however, can be a tedious process of months and even years (Nguyen, 2017).

Monetizing network effects

Monetization of network externalities to overcome the 'chicken and egg problem' is highlighted as a key challenge of multi-sided platforms throughout literature (e.g. Rochet & Tirole, 2003; Eisenmann et al., 2006) as attracting and maintaining the platform-characteristic interdependent participants requires specific sensitivity in regard to the appropriate pricing structure as well as price level (Evans, 2003). Hence, when launching a platform, it is crucial for the platform company to fully comprehend how valuable each side perceives the other and to design a pricing strategy that sufficiently manages their interactions.

Rochet and Tirole (2003) get to the heart of the monetization challenge by highlighting what matters is who pays for the service. Eisenmann et al. (2006) further explain that the challenge derives from price sensitivity and cross-sided network effects. Both studies find

that platforms frequently distinguish between a money side and a subsidy side. The subsidy side can be defined as *"a group of users who, when attracted in large volume, are highly valued by the money side"* (Eisenmann et al., 2006, p.3). Once each side has been identified as either subsidy or money side, a subsequent challenge arises in efficiently balancing the need for subsidization with the complimentary side's willingness to pay for the transaction, also referred to as 'Seesaw principle' (Rochet & Tirole, 2003). Ultimately, the platform needs to find a price structure where the overall expenses of the platform are covered (Sanchez-Cartas & Leon, 2019).

Monetization of platform models appears in mainly two ways, either through transaction-insensitive subscriptions or through transaction-sensitive fees or commissions (e.g., Eisenmann et al., 2006; Rochet & Tirole, 2006). A notable number of platforms also employ hybrid models such as 'freemium', where a basic subscription is required, but extra fees are charged for particular services or content. Alternative revenue streams, where platform costs are shifted to another non-participatory party, imply advertising and data provision. However, the majority of prevailing literature focuses on the two main models and claim that the transaction-insensitive subscription model dominates over fees and commissions. This finding can be explained through significantly lower fluctuations in revenue streams (Eisenmann et al., 2006; Sanchez-Cartas & Leon, 2019).

In terms of platform launches, monetization decisions are found to be influenced by three main factors (Sanchez-Cartas & Leon, 2019). The level of network effects directly translates into the required need for subsidization. Low switching costs amplify the necessity of competitive pricing (Burnham, Frels, & Mahajan, 2003). The third monetization challenge, multihoming (Eisenmann et al., 2006), will be discussed in further detail below.

Multihoming

Multihoming refers to the possibility of platform agents to engage with several platforms simultaneously, which resultantly not only shapes the competitive structures of the respective market and but also the relationship between the different sides of platform users (Belleflamme & Peitz, 2019). This challenge is, in fact, a commonly observed

condition in many markets such as, for example, the software industry, where developers code for both iOS and Android. As multihoming is a fundamental challenge in multi-sided platform markets, however, the influence of multihoming in platform launches is not yet researched (Sanchez-Cartas & Leon, 2019), this subsection introduces the challenge of multihoming from a more general angel.

Multihoming is closely tied to the discussion of network externalities, which, as aforementioned, support the attraction of users to the platform and thereby create a competitive advantage, especially in winner-take-all markets (Caillaud & Jullien, 2003). *"Multihoming stems from the users' desire to reap the benefits of network externalities in an environment of non-interconnected platforms"* (Rochet & Tirole, 2006 in Sanchez-Cartas & Leon, 2019, p.11). Research argues that consumers seek to engage in multihoming in an attempt to increase their matching probability (Caillaud & Jullien, 2001) and to lower transaction fees through concentrating on the cheaper platforms (Caillaud & Jullien, 2003). Further, multihoming also occurs when platforms such as streaming providers like Netflix contain exclusive content (Choi, 2010). In contrast, incentives for multihoming are found to decrease with the growth of the opposite platform user base (Gabszewicz & Wauthy, 2004). For instance, the larger the variety of content offered on a streaming platform, the lower the incentive for entertainment seekers to subscribe to multiple other platforms. This means, platform companies operating in markets where the incentives for multihoming are high, need to lure a critical mass of opponents to the multihoming-side even faster to their platforms.

Despite the prospect of leveraging network externalities of multiple platforms, however, multihoming comes with a cost since platforms are found to increase charges for the multihoming side. This ultimately leads to the result that the multihoming side subsidizes the singlehoming side of platform users (Choi, 2010). A recent study focused on pricing implications of multihoming: "*The competitive bottleneck world is described as a world in which the multihoming side has to pay monopoly prices and platforms compete on the singlehoming side. However, this does not imply that the multihoming side were to pay lower prices if it could not multihome*" (Belleflamme & Peitz, 2019, p. 21). Among other findings, this study shows that exclusivity contracts, which platforms impose to prohibit

multihoming, inevitably hurt at least one user side. Furthermore, it is substantiated that both the platform provider and all platform sides involved can, in fact, be better off when multihoming is allowed (ibid.).

A frequent driver behind multihoming activities is that customers must employ multiple services from different platforms to cater to their needs optimally. However, multihoming is found to weaken the competition and implies costs that cannot be internalized by the firms (Doganoglu & Wright, 2006). Therefore, users can reap higher benefits when platform competitors offer compatible services. While the social desirability of compatibility is increased through multihoming, facilitating easy integration with competitors is found to be less appealing to firms (ibid.). In fact, incompatibility is still a predominant strategy against multihoming. This strategy, however, entails a significant threat of backfiring, as the company might miss out on leveraging network benefits from a broader ecosystem. Moreover, it is found that the co-existence of platforms results in overall higher market power for all platforms (Sanchez-Cartas & Leon, 2019).

Even though the direct effect of multihoming on platform launch strategies per se is still under-researched (Sanchez-Cartas & Leon, 2019), it is expected that determining whether a platform operates in a market where multihoming is feasible might impact the launch strategies.

Firm-level specific challenges

As mentioned above, platform literature largely refrains from distinguishing between the role of incumbents and the role of new market entrants in platform launches. Similarly, to the firm-level specific opportunities discussed in section 3.2.2., despite limited research in this field, a distinction is also necessary in terms of incumbent and startup-specific challenges.

While incumbents can leverage resource endowments and existing capabilities, an extensive administrative backbone frequently not only implies the byproduct of organizational inertia (e.g. Leonard-Barton, 1992), incumbency also frequently entails internal cultural challenges (Echambadi et al., 2008). Reluctance to innovation and

change is a typical agency problem, deriving from the resistance to cannibalize the existent business and, from the individual's perspective, potentially the own position in the company (Chandy & Tellis, 1998). From the perspective of an unestablished new market entrant, however, rapid scaling is restricted by resource limitations (West, 2003), and the small firm size of startups implies competitive disadvantages when competing on scale efficiencies (Audretsch & Mahmood, 1995; Echambadi et al., 2008).

3.2.4. Platform launch strategies

In order to mitigate the above-described challenges, various scholars (e.g. Parker & Van Alstyne, 2014; Edelman, 2015; Stummer et al., 2018) present a range of strategies companies can apply to launch a multi-sided platform. Studying the different strategies proposed by academia (ibid.), one can broadly classify them into (1) user-base focused, and (2) business-model focused strategies.

Platform launch strategies

User-base focused strategies	
Subsidizing (Parker & Van Alstyne, 2014; Edelman, 2015: Stummer et al., 2018)	Subsidizing refers to stimulating the attraction of one user side to the platform through typically financial incentive.
Seeding (Parker & Van Alstyne, 2014; Edelman, 2015: Stummer et al., 2018)	Seeding seeks to engage marquee user (i.e. user that have increased attractivity in the point of view of other potential users) by offering them additional complementary assets.
Micro-market launch (Parker & Van Alstyne, 2014)	In micro-market launches the platform is rolled out to a very narrow test market. It is based on the assumption that network effects are stronger in a sharper defined user community.
Side switching (Stummer et al., 2018)	When applying a side-switching strategy, the platform is effectively treated as a one-sided platform by identifying users that are active on both sides.
Business-model focused strategies	
Staging (Hagiu & Eisenmann, 2007)	When applying a platform staging strategy, the provider focuses on one user side at a time. Typically originating from a vendor-based business model, the company shifts to a platform model when a critical mass of users has been established on one side.
Platform envelopment (Eisenmann et al., 2006)	Platform envelopment refers to launching services through another platform and over time winning the opposite user side over to one's own platform.
Piggybacking (Parker & Van Alstyne, 2014)	In a piggybacking strategy, the launching company "borrows" users through deals with established players.

Table 3: Platform launch strategies

User-base focused strategies

The previous section discussed the 'chicken and egg problem', which refers to the codependency of the different sets of agents and the challenge of attracting one side despite the absence of the other. Mitigation strategies comprise subsidizing (Parker & Van Alstyne, 2014; Edelman, 2015; Stummer et al., 2018), seeding and engaging marquee users (ibid.), micro-market launches (Parker & Van Alstyne, 2014), as well as side switching (Stummer et al., 2018).

Subsidizing is a heavily discussed strategy in academia (Sanchez-Cartas & Leon, 2019). As a result of network effects, subsidizing one side simultaneously affects the opposite side as well. Typically, multi-sided platforms have a subsidy side and a money side (Eisenman et al., 2006). The subsidy side is enticed to the platform through reduced costs of usage or other incentives such as value-added services or technical support (Schilling, 2003; Dou, He & Xe, 2016; Stummer et al., 2018). Parker and Van Alstyne (2014) explicitly emphasize refraining from direct cash transfers as the risk of a moral hazard problem is high. Accepting a loss on one side is deliberately accepted by platform companies based on the underlying assumption that the subsidy side is needed to attract the money side (Stummer et al., 2014). While subsidies aim to outset the costs of joining the platform (Edelman, 2015), high subsidies are usually reduced once the platform reaches the critical mass of users (Parker & Van Alstyne, 2014).

In order to amass a large user base, as suggested by Edelman (2015), companies can also adopt a 'seeding' strategy, which *"solves participation on one side of the network by offering users of that type enough value that they adopt"* (Parker & Van Alstyne, 2014, p.3). Through seeding value is added to the engagement with the platform through complementary assets, which can be developed in-house or through partner collaborations (ibid.). In order to increase the value of its gaming console Xbox, for example, Microsoft acquired the renowned game Halo and made it available to all platform users (Edelman, 2015). Similar to seeding, platforms can seek to engage marquee users, which increase the platform value for other users and convey credibility (Eisenmann et al. 2006; Rochet and Tirole 2003, Edelman, 2015). Marquee users can further be users which are considered opinion leaders in their field and thereby provide a

branding effect (Stummer et al., 2018). In this context of seeding and marquee users, exclusivity agreements can be signed to further increase attractivity to both sides and contribute to the business' competitive advantage. Especially in the early stage of platforms, exclusive rights to high-quality content can boost the perceived value (Edelmann, 2015).

Oftentimes, it was found to be more beneficial to launch a platform focused on a limited community, such as Facebook was initially solely offered to Harvard students before gradually expanding. This strategy is based on the assumption that network effects are robust in a sharper defined user community (Parker & Van Alstyne, 2014), which allows for higher differentiation and hence adaption within the respective segment (Stummer et al., 2018). Once solid ties are created, the multi-sided platform can expand and open to adjacent groups. (Parker & Van Alstyne, 2014) The target group can be defined in terms of geographical proximity, homogeneous preferences, or similar features (Stummer et al., 2018).

Homogeneity further plays a critical role in the side switching strategy. Side switching refers to the idea of making *"a two-sided platform one-sided by finding a platform design that allows users to fill both market sides of the multi-sided platform at the same time"* (Stummer et al., 2018, p. 171). Airbnb, for example, applied this strategy and focused solely on guests who would not only demand accommodation through their platform but also rent out their own places. For the successful execution of this strategy, it is crucial to identify a user base that is interested in supplying both sides. It, therefore, can be derived that this strategy is not suitable for all platform markets and usually requires a certain amount of effort from the platform providers to convince the users to participate on both sides (ibid.).

Business-model focused strategies

While the first bundle of strategies addresses the user-related 'chicken and egg problem', strategies like platform staging (Eisenmann & Hagiu, 2007), platform envelopment (Eisenmann et al., 2006) as well as piggybacking (Parker & Van Alstyne, 2014) seek to adapt the company's business model over time to grow their user base.

Platform staging is a two-step strategy, which allows companies to focus on one side of the platform at a time (Stummer et al., 2018). Hagiu and Eisenmann (2007) rate the theory as a less risky and expensive alternative to traditional subsidization, which transforms a platform from a vendor-based business model into a platform mediation model once a critical number of users has been achieved. In order to achieve this critical mass, a company starts as a traditional product or service reseller, hence acquires ownership of the goods while establishing a supplier network. In the second step, the company shifts their role from reseller to mediator and transfers the full responsibility of the wares back to the suppliers (ibid.). Amazon, for example, started as a reseller of books before shifting to a trade facilitating marketplace business model (Stummer et al., 2018).

Platform envelopment is not only a threat to incumbent platform companies (Eisenman et al., 2006), it can also be a viable strategy for new entrants and companies expanding their platform to new markets (Stummer et al., 2018). In fact, Hidding et al. (2011) found that 12 out of 15 researched platform leaders applied the envelopment strategy. Platforms often share similar user bases. Hence, creating a situation that allows for swallowing the adjacent platform's user base can be highly effective. Especially multi-platform bundles, which offer higher functionality for an overall lower price, are found to be strategic measures that can significantly hurt a stand-alone platform (ibid.). As a result of convergence, boundaries of multi-dimensional network markets with fast-evolving technology can get blurry. Consequently, envelopment is a strategy that can be applied from any type of company, whether it is a startup or a long-established organization. Large, diversified companies were found to have an advantage as a result of their preexistent assets. At the same time, they frequently lack the required agility and cross-departmental collaboration capabilities to act upon envelopment opportunities (ibid.).

Piggybacking (Parker & Van Alstyne, 2014) is closely related to the concept of platform envelopment and refers to 'borrowing' another platform's users. The most prominent piggybacking example is PayPal, which was launched as an exclusive and mandatory payment system for buying and selling merchandise, thereby requiring the agent on the other side of the transaction to engage in the new payment platform. Similarly, Airbnb offered their services initially on craigslist before launching their own, independent

platform. Piggybacking allows launching platform products and services to circumvent the 'chicken and egg problem' by acting through an existing platform and leveraging their user base (ibid.).

3.3. Startup alliances

In reviewing the literature on alliances between incumbents and startups in platform launches, findings from various studies are categorized into five subchapters to provide a precise overview of the theoretical topic. The first section covers the (3.3.1.) incentives to enter startup alliances. The second section introduces the (3.3.2.) corporate models of engaging with startups; the third section portrays (3.3.3.) opportunities, while the fourth section reflects on (3.3.4.) challenges incumbents experience in startup alliances; the fifth section outlines (3.3.5.) mitigation strategies incumbents can apply.

3.3.1. Incentives to enter startup alliances

In contrast to strategic alliances, startup alliances show distinct characteristics, which differentiate them from traditional alliances between firms of the same size and similar organizational aspects, as described in 3.1. The first difference between young ventures and incumbent firms lies in the organizational structures in the form of resources, objectives, and approach to business. While corporations hold greater access to capital, economic dimension, influence, and the expertise to run a business model successfully, startups traditionally come up with promising concepts, a culture of experimentation and risk-taking, organizational agility, and aspirations of rapid growth (Weiblen & Chesbrough, 2015).

Throughout the past decade, corporate efforts to reach out to the startup ecosystem and capitalize on the complementarities of others are on the rise as incumbents strive to transform themselves into engines of corporate innovation. The technology industry, particularly, has produced a variety of forms of engaging with startups to nourish innovation and hence, attain competitive advantage in respective fields (ibid.). In line with this, decisions to collaborate with startups are most often linked to adaptation to technological change rather than exploiting new distribution channels (Rothaermel,

2001). Moreover, as established firms tend to concentrate on responding to the needs and requirements of existing clients, they ultimately become vulnerable to new customer segments, which are then exploited by startups. By entering startup alliances, incumbents, therefore, attempt to develop and expand their product knowledge while exploring the potential of emerging solutions (Yoon & Hughes, 2016).

What is more, the cooperation between incumbents and young ventures may positively influence the performance of the incumbent industry (Rothaermel, 2001). The advantages of startup alliances thus are closely associated with the paradigm of open innovation, which assumes that *"firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology"* (Chesbrough, Vanhaverbeke & West, 2006, p.1). This model entails strategic, managed exchanges of information with participants outside of the boundaries of an institution, aimed at integrating their resources and expertise into the organization's innovative process and thus deliver additional value for customers (ibid.).

3.3.2. Corporate engagement models

Before examining startup collaborations in platform launches more thoroughly, it is crucial to assess prevalent engagement modes incumbents choose when entering alliances with startups. In sourcing external knowledge and capabilities effectively to nurture innovations from entrepreneurial ventures, numerous scholars have analyzed various engagement models that build bridges between corporations and startups (Von Hippel, 2005; Kohler, 2016; Chesbrough, 2006b). Chesbrough and Weiblen (2015) present four engagement models, typically employed in the technology industry, two of which represent more established concepts, namely corporate venture capital and corporate incubators, while the other two constitute newer models that seem to more adequately bridge the gap between both worlds, referred to as startup programs. The rationales behind respective models differ in equity involvement and the direction of the innovation flow, which can either be understood as outside-in or inside-out. In the following, the four identified engagement models between startups and incumbents are reviewed, however, given the research focus, emphasis will be placed on the collaboration mode on platforms 'inside-out platform startup programs'.

Corporate engagement models with startups

Equity involvement	Direction of innovation flow: Outside-In	Direction of innovation flow: Inside-Out
Yes	**Corporate Venturing** External innovation to gain insights into non-core markets	**Corporate Incubation** Path to market for corporate non-core innovations
No	**Startup Program (Outside-In)** External innovation to encourage corporate innovation	**Startup Program (Platform)** Complementary external innovation to push existing corporate innovative efforts (the platform)

Table 4: Typology of corporate engagement models with startups

Corporate venturing

Traditional models of collaboration, namely corporate venturing, and corporate incubation are characterized by gaining influence in ventures through equity participation. Equity stakes in external startups allow an incumbent to follow-up on novel technologies and promising markets, take influence on the decisions, and eventually benefit economically (Weiblen & Chesbrough, 2015). Corporate venturing has been a standard mode of collaboration ever since the 1960s. It is usually implemented in the form of a separate corporate venture entity that is backed by the sponsoring organization in order to allow the adaptability, agility, and autonomy required by their management team to operate in the fast-paced venture capital world successfully (ibid.). Ellis and Taylor (1987, p. 528) define corporate venturing as radical new strategies compared to the existing ones of an organization that *"involve a process of assembling and configuring novel resources"*.

Corporate incubation

Corporate incubators, on the contrary, emerge out of ideas and technologies born inside the corporate environment, which are ultimately brought to the market as new companies. Abstractly defined, incubators are business entities, legally structured as an affiliate of the holding organization, that leverage tangible and intangible resources provided by the firm and thereby support services to startups in order to facilitate their business development and to introduce novel concepts to the incumbent (Roessler & Velamuri,

2015). Like independent incubators, corporate incubators provide and support the entrepreneurial venture with resources, such as funding, physical co-location, expertise, and contacts and thus, facilitate the early-stage development of startups. This approach, in turn, allows the founding team to operate in a startup-like environment, in which radical innovation can grow more adequately in comparison with the slow and bureaucratic parent organization (Weiblen & Chesbrough, 2015).

According to Chesbrough and Weiblen (2015), incumbent firms are more frequently complementing established modes of collaborating by startup programs, which typically do not entail equity involvement and support the corporation in engaging with a higher number of startups at the expense of a limited scope and a more standardized approach for any unique collaboration. This approach, in turn, allows for a more lightweight governance process that empowers corporations to move faster in interacting with startup ventures.

Startup program (outside-in)

As previously mentioned, Weiblen and Chesbrough (2015) differentiate two types of so-called startup programs, namely outside-in startup programs and inside-out platform startup programs, which differ from previous models as typically no ownership is involved. What is more, both programs are tailored to complement existing startup ecosystem offerings rather than providing services, which are typically found in incubators. Outside-in startup programs aim to support the achievement of outside-in innovation by providing the sponsoring organization with products or technologies of the startup. Incumbents thereby benefit from new ideas hence external innovation, enabling them to gain a competitive advantage over their peers. Furthermore, this model supports the organization in pursuing various approaches simultaneously through the engagement with multiple startup ventures it incubates, allowing for faster mutual learning and a more in-depth exploration for the sponsoring corporation (ibid.).

Startup program (platform)

In stark contrast to outside-in startup programs, inside-out platform startup programs envision to encourage several startups to develop and offer respective products on a

corporation-supplied technology, resultantly increasing the incumbent's market share and strengthening the common platform. By doing so, incumbents endeavor to become platform leaders and leveraging their position by profiting from every innovation being sold on the platform and thus benefiting from the collective intelligence (Weiblen & Chesbrough, 2015). Well-known examples include the mobile application economy, which is dominated by Apple and Google with their respective operating systems iOS and Android, making a 30 percent revenue share of every sale (ibid.). Apple's iPhone operating system, with its over two million applications, has evolved as a dominant model for software development and software-based services. Contrary to traditional software development, these services leverage the knowhow of a diverse developer community, including startups, to creatively exploit new capacities unpredictable by the original architects of the platform (Tiwana, Konsynski & Bush, 2010).

Incumbents that engage in inside-out platform startup programs, typically use initially free offerings to attract as many startups as possible into their ecosystems. Because of limited financial resources, startups, especially, are cost-sensitive and thus, are attracted by so-called 'freemium' models. This condition, in turn, usually creates a competitive environment for corporations undertaking platform startup programs in attracting startups with free offerings. What is more, the approach is further associated with additional effort and costs, as every member startup involves some incremental costs. In the long run, however, the programs are intended to create value for the sponsoring corporation, and a switch from free to fee is inevitable at some point to achieve that goal (Weiblen & Chesbrough, 2015).

3.3.3. Opportunities of startup alliances in platform launches

When reviewing the startup alliance literature, one can identify key opportunities that may significantly impact the collaboration between an incumbent and a young venture in platform launches. Key factors include (1) speed and agility, (2) scale and standardization, and (3) lower costs.

Opportunities of startup alliances in platform launches

Opportunities	Description
Speed and agility (Weiblen & Chesbrough, 2015; Berg, Birkeland, Nguyen-Duc, Pappas & Jaccheri, 2020; Contractor & Lorange, 2002)	Platform startup programs allow the corporation to move more agile in responding to the opportunities arising in its environment. Startup members on the platform are of less importance individually to the incumbent, but collectively as only together, they can shift the corporation's market position.
Scale and standardization (Weiblen & Chesbrough, 2015)	Platform startup programs allow for a faster implementation and scalability. Reduced investment levels, effort, and commitment enable a collaboration with more startups at the same time for the collaboration and further a more neutral relationship.
Lower costs (Weiblen & Chesbrough, 2015)	Platform startup programs imply lower overall costs for the incumbent given the fact that no investment is involved but also that organizational costs are reduced by developing a standardized or even automatized approach.

Table 5: Opportunities of startup alliances in platform launches

Speed and agility

Startups, in general, are known for fast-paced product development, with the ability to manage uncertainty, react to change and introduce flexibility to processes, and thus focus on speed and agility (Berg, Birkeland, Nguyen-Duc, Pappas & Jaccheri, 2020). Startup alliances, hence, are predicated on speed, adaptability, and close coordination in order to reduce resource constraints regarding in-house software development and cater users' demand for greater variety (Contractor & Lorange, 2002). What is more, alliances are formed to increase the R&D speed and, therefore, gain a competitive advantage in the learning race for innovation (ibid.). Startup alliances via platforms allow incumbents to move more agile and lean in responding to the opportunities and challenges arising in their environment, especially given the number of startups engaged. Resultantly, startup members on the platform are of less importance individually to the incumbent, but collectively as only together, they can shift the corporation's market position (Weiblen & Chesbrough, 2015). Consequently, an increase in the number of programs on the platform does not only bring financial returns but primarily research and development opportunities for the incumbent to consider. Key performance indicators (KPIs) measured include, for instance, the number of startups in the program and further respective revenues generated on the platform over time (ibid.).

Scale and standardization

Platform startup programs allow for faster implementation and hence scalability, in comparison to equity models (Weiblen & Chesbrough, 2015). This opportunity results from the fact that less due diligence and compliance is required from the incumbent side

since the strategic and financial potential of a startup does not need to be scrutinized to the extent of equity models. The reduced investment levels, effort, and commitment from both sides allow for collaboration with more startups simultaneously for the incumbent. What is more, the shared technology – the platform – facilitates the opportunity to further scale and standardize operations more efficiently. Additionally, more neutral relationships can be established with startups when solely engaging via a platform. Withholding from taking equity enables a platform provider to behave neutrally towards all the participating members in the ecosystem, whereas taking equity stakes of selected startups may create the impression that the incumbent is favoring individual members over others, rather than letting the ecosystem itself decide those outcomes (ibid.). Ultimately, for the same reasons, startup founders are more likely to agree to a collaboration, in which no equity is involved. What is more, alliances via platforms allow incumbents for a standardized approach in working together with startups but also internally, given the fact that no or less corporate workforce is needed, and operations mostly take place in the virtual space. This procedure, in turn, positively influences the scaling of the platform.

Lower costs

Startup alliances through platforms typically imply, in comparison to equity models, lower overall costs for the incumbent (Weiblen & Chesbrough, 2015). Given the fact that ownership, as in corporate incubation or venturing, is not involved, neither capital investments nor associated expenses, i.e. organizational costs, occur. Organizational costs imply, for instance, information costs, such as due diligence investigations, bargaining costs, arising from negotiations with founders or investors, or monitoring and enforcement costs, for instance, board meetings and governance activities. The respective costs imply not only pecuniary expenses but also resource commitments regarding manpower requirements. In stark contrast, incumbents engaging in startup alliances via platforms seek to standardize or even automatize proceedings in order to scale quickly. In achieving this ambition, incumbents collaborating via platform programs typically regard equity investments and costs involved as an obstacle and thus aim to omit these. Even though member startups on platforms might bring incremental costs to the

incumbent regarding attraction, onboarding, and integration, the costs can be considered marginal in comparison to capital costs (ibid.).

3.3.4. Challenges of startup alliances in platform launches

Notwithstanding the opportunities startup alliances entail, incumbents need to acknowledge that startup collaborations are laden with tensions and barriers, which potentially offset or even limit any value creation on a platform. In bridging the gap between large organizations and the startup world, alliance literature shows that incumbents need to consider three critical factors, namely (1) organizational discrepancy, (2) power imbalances, and (3) integration with the startup ecosystem.

Challenges of startup alliances in platform launches

Challenges	Description
Organizational discrepancy (e.g. Fierro & Pérez, 2018; Ensley, Hmieleski & Pearce, 2006; Minshall, Mortara, Valli & Probert, 2010)	Startups and incumbents need to share organizational complementarity or fit to some extent if they are to profit from alliances. Compatibility touches upon organizational culture, communication processes and strategic goals.
Power imbalances (e.g. Knoben & Bakker, 2019; Fierro & Pérez, 2018; Pfeffer and Salancik, 1978; Weiblen & Chesbrough, 2015)	Asymmetry in bargaining power, resource pooling and legitimacy between a startup and an incumbent can leave the startup exposed to the misappropriation of resources.
Integration with the startup ecosystem (Weiblen & Chesbrough, 2015)	Incumbents need to stress the importance and willingness of adequately integrating with the startup support ecosystem.

Table 6: Challenges of startup alliances in platform launches

Organizational discrepancy

Literature reveals that, besides holding complimentary strategic resources, startups and incumbents need to share organizational complementarity or fit to some extent if they are to profit from alliances fully (Fierro & Pérez, 2018). Compatibility touches upon several aspects, namely organizational culture, communication processes, and, lastly, strategic goals. Incumbents make explicit distinctions between roles and set transparent processes for every project. Furthermore, substantial differences in the level of bureaucracy can be found since incumbents typically show several vertical hierarchies, whereas top management teams of new ventures have considerably more discretion and less bureaucracy to deal with (Ensley, Hmieleski & Pearce, 2006). Moreover, communication within incumbents comprises aspects such as contractual features or compliance issues, where liability rests in departments, which are not proficient at interacting with startups.

When it comes to strategic goals, incumbents show a clear strategic focus, a secure positioning in the market, and robust procedures (Fierro & Pérez, 2018; Minshall, Mortara, Valli & Probert, 2010). In stark contrast, flat organizational structures of startups follow a more agile and opportunistic approach, led by generalists, so-called 'Jack-of-all-trades', who operate through informal ad hoc processes (Fierro & Pérez, 2018; Prashantham & Birkinshaw, 2008). Organizational differences between the fast-moving startup world and the more moderate complexity of the corporate environment can, therefore, result in startups being cautious of entering a collaboration and damage the alliance or even the creation of one (Weiblen & Chesbrough, 2015).

Power imbalances

According to Doblinger et al. (2019), the concept of power imbalances describes the inequality or ratio of power of the more to the less powerful player in strategic alliances. While complementary resources are vital for overall knowledge creation and relational returns that cannot be formed by a single party in startup alliances, the value appropriation mechanisms can differ considerably between incumbent and startup (ibid.). Asymmetry in bargaining power, resource pooling, and legitimacy between a startup and an incumbent can leave the startup exposed to the misappropriation of resources (Knoben & Bakker, 2019) and can make co-creation an elusive goal (Fierro & Pérez, 2018). The reason for this, as set out by Pfeffer and Salancik (1978), is that startups' fundamental feasibility may depend on an alliance given the circumstances that neither the brand nor the products or revenue streams of a young venture are fully established and steady. Incumbent firms, however, usually place marginal importance on alliances since they will be able to continue operating and maintaining even if the coalition fails (ibid.).

What is more, incumbents, possessing critical resources, are typically more powerful and tend to profit more from both the relational and spillover rents, especially when engaging with startups (Doblinger et al., 2019). Particularly in situations where incumbents realize their advantage and behave opportunistically, leveraging their negotiating power to their sole benefit, a corporation's reputation can be ruined relatively quickly in a world of well-networked startups (Fierro & Pérez, 2018; Weiblen & Chesbrough, 2015). Thus, asymmetry can play a critical role in alliances, given the different importance and

prioritization of each party. It could, therefore, be argued that power imbalances and the inherent business risks and costs of partnering with resource-rich incumbents may outweigh the benefits for startups (Doblinger et al., 2019).

Integration with the startup ecosystem

Lastly, in seeking to establish alliances with startups on a platform, incumbents need to stress the importance and willingness of adequately integrating with the startup support ecosystem (Weiblen & Chesbrough, 2015). Startups nowadays are experiencing substantial growth and increased viability, which, in turn, requires more flexible and rapid means for incumbents to engage with the startup community successfully. In order to do so, corporations need to source, identify and engage with a more significant number of startups than in the past, given the fact that the startup ecosystem is increasingly growing on a global scale (ibid.). What is more, incumbents need to consider and communicate their value proposition and how they can create value to a startup that potentially already has access to venture capital, accelerators, or the like. Attention should be paid to the resources they can provide, while further emphasis should be placed on the ease of working with them. Startups should be considered as a new group of customers that, in turn, require an individual value proposition and marketing initiatives. What is more, in order to not lose its reputation and standing in the community, incumbents need to deliver on their promises and make sure to maintain guaranteed quality (ibid.).

3.3.5. Mitigation strategies

Considering platform startup programs with all its particularities, the reviewed startup alliance literature suggests the following three mitigation strategies: (1) contractual agreements, (2) committed champions, and (3) partner-specific investments.

Mitigation strategies of startup alliances in platform launches

Opportunities	Description
Contractual Agreements (Alvarez and Barney, 2001; Minshall, Mortara, Valli & Probert, 2010; Ariño & Doz, 2000)	Alliance contracts are frequently deployed in building the foundation of a collaboration while further addressing and exposing possible threats in the relationship. They serve in aligning expectations and act as a suitable response strategy for the organizational discrepancy between asymmetric partners.
Committed Champions (Fierro & Pérez, 2018; Weiblen & Chesbrough, 2015)	Committed champions are strategic allies that bridge and facilitate learning at cognitive and behavioral levels for incumbents to fight organizational discrepancy. In establishing trust and developing efficient communication channels, committed champions foster joint action between startup and incumbent and assist in overcoming the difficulties implied by the asymmetries.
Partner-Specific Investments (Fierro & Pérez, 2018; Blonska, Storey, Rozemeijer, Wetzels & de Ruyter, 2013; Minshall, Mortara, Valli & Probert, 2010)	Non-economic partner-specific investments pose a suitable strategy to fight organizational discrepancy and asymmetrical relationships between startups and incumbents by bringing alliance partners closer together and creating dependency, which makes it difficult for both parties to switch partners or cancel a collaboration entirely.

Table 7: Mitigation strategies of startup alliances in platform launches

Contractual agreements

Alliance contracts are frequently deployed in building the foundation of a collaboration while further addressing and exposing possible threats in the relationship. Incumbents usually conduct comprehensive due diligence before entering an alliance in order to set up a contract that reduces any potential hazards of aligning with a partner (Alvarez & Barney, 2001). Startups, as well, are advised to invest in due diligence to draft an alliance contract that protects themselves from the power imbalance present in an alliance and any opportunistic behavior from its large-firm partner. Notwithstanding this, contractual agreements come with its limitations as even the most extensive contract cannot entirely and unambiguously preclude all risks or contingencies embedded in a collaboration. Especially in the ever-changing high technology sector, it is, therefore, challenging to protect all interests of both parties (ibid.).

Nevertheless, contractual agreements can further serve in aligning expectations and, therefore, be a suitable mitigation strategy for the organizational discrepancy between asymmetric partners (Minshall et al., 2010). Contractual arrangements support both parties in setting expectations for increased transparency from the commencement of the alliance. Expectations concern individual objectives, deliverables, and how these may change throughout the coalition. The so-called ‘contractual phase’ allows both parties to address any arising concerns while further agreeing on the overarching principles which oversee the collaboration and understand each other's matters. Irrespective of this, Minshall et al. (2010) encourage incumbents to take into consideration the tight economic situation startups find themselves in and suggest drafting the contract around short-term

revenue creation. What is more, it is emphasized that contractual agreements should be subject to ongoing review meetings, in which the progress of the alliance can be discussed and evaluated (ibid.). If deployed successfully, contractual agreements enable both parties to acknowledge the constraints of their counterpart caused by its context before holding it accountable (Ariño & Doz, 2000).

Committed champions

To fight organizational discrepancy, another mitigation strategy is the employment of committed champions, which are *"strategic allies that bridge both firms by facilitating learning at cognitive and behavioral levels"* (Fierro & Pérez, 2018, p. 559). In establishing trust and developing efficient communication channels, committed champions foster joint action between a startup and an incumbent, and promote organizational complementarity and assist in overcoming the difficulties implied by the asymmetries (ibid.). The primary responsibility of committed champions is the development of bilateral solutions to relational and operational problems as, for example, the identification of middle managers in the incumbent and a leading manager in the young venture. Hence, they are to bridge the organizational gaps between the two corporations. These chosen managers should, for instance, be activated to help when challenges and obstacles arise throughout the alliance or can reasonably be foreseen. (ibid.).

In establishing efficient communication channels, Weiblen and Chesbrough (2015) encourage incumbents to orchestrate diverse functions or roles within the corporation that engage with member startups as, for instance, startup managers. These are advised to be well networked across the organization to help develop a standardized approach to how a program must be set up and adequately communicated. Functions include, for instance, the development department, support team, as well as marketing and sales. A common approach in many corporations is the establishment of a startup office, in which members from each internal function act as first contacts in interactions with startups (ibid.).

Partner-specific investments

While equity investments stand in sharp contrast with Weiblen's and Chesbrough's (2015) interpretation of platform startup programs, non-economic partner-specific investments prove to be a suitable strategy to fight organizational discrepancy and asymmetrical relationships between startups and incumbents, while further integrate with the startup ecosystem. Various forms of investments self-evidently bring alliance partners closer together and create dependency, making it more difficult for both parties to switch partners or cancel a collaboration entirely (Fierro & Pérez, 2018). Relation-specific investments, for instance, enable organizations to examine and identify innovative solutions to combine their expertise and abilities to co-develop revolutionary innovations (ibid.). Such an investment creates relational capital, which *"[...] strengthens the impact of relational investments by overcoming free-riding behavior and facilitating knowledge sharing to create mutual understanding"* (Blonska, Storey, Rozemeijer, Wetzels & de Ruyter, 2013, p. 1295).

What is more, partner-specific investments are vital in building mutual understanding and awareness, being essential in bridging the gap between startup and incumbent caused by organizational disparity (Minshall et al., 2010). A partner-specific investment from an incumbent's perspective may involve disclosing its internal processes and conditions to the startup, developing and demonstrating process maps explaining how alliances could work, how internal decisions are made, and how long respective decision-making cycles last (Minshall et al., 2010). Furthermore, partner-specific investments can also include dedicated resources, such as human, physical or procedural assets. Human assets may include additional training or experiences, while physical assets could involve research labs or office space. Procedural assets, however, describe the coordination of a firm's routines with those of the partnering firm (Fierro & Pérez, 2018).

3.4. Theoretical Framework

Combining the above-reviewed models result in the following theoretical framework, which can be used to explore platform launches of incumbents operating in the financial software industry. The framework shows that platform launch strategies are thus

determined by the interplay of incumbent-specific opportunities and challenges and those of startup alliances.

Theoretical framework of the research

Launches of open platforms in the financial software industry		
	Opportunities	**Challenges**
Incumbency	• Network externalities • Low marginal costs • Firm-level specific opportunities	• Market entry timing • Openness of the platform • Chicken and egg problem • Monetizing network effects • Multihoming • Firm-level specific challenges
Research focus	**Platform launch strategies**	
Startup alliances	• Speed and agility • Scale and standardization • Lower costs	• Organizational discrepancy • Power imbalances • Integration with the startup ecosystem
	Mitigation strategies • Contractual agreements • Committed champions • Partner-specific investments	

Table 8: Theoretical framework of the research

4. METHODOLOGY

The following chapter presents the methodological framework of the thesis, which is guided by Saunders, Lewis, and Thornhill's (2009) views on how to conduct well-structured research. The outlined approach towards methodology has been employed in the thesis in order to secure coherence between the research question and its answering. At first, an overview of the (4.1.) research design will be presented, which comprises the choice regarding the research philosophy as well as the approach to theory development. The second subsection defines the (4.2.) research strategy and research purpose and,

ultimately, the time horizon of this study. Consequently, the approaches to the (4.3.) data collection and the (4.4.) coding scheme will be elaborated on.

4.1. Research design

According to Saunders et al. (2009), the research philosophy of a study serves as the foundation for the overriding research design. Apart from guiding the research in terms of the methodological framework, the fundamental belief system of the scholar further provides a basis of knowledge and how it is developed (ibid.). Therefore, deploying a research philosophy does not only have a notable impact on the approach to the conducted study but also the scholars' understanding of the exploration (Johnson & Clark, 2006). Literature defines four distinct research philosophies, namely pragmatism, positivism, realism, and interpretivism (Saunders et al., 2009). Considering the research question this master thesis aims to answer ultimately determines the philosophy that will subsequently be adopted and will, therefore, lead the investigation (ibid.).

While the main objective of the thesis is to comprehend the circumstances of how an incumbent can successfully launch a multi-sided platform in the financial software industry, the study follows the philosophy of critical realism. The principle of realism, in general, is that what senses show as reality can be considered the truth. It follows that objects have an existence independent of the human mind and that there is a reality independent of that mind (Saunders et al., 2009). Critical realism provides a philosophical justification of the written truth (Easton, 2010). In line with this, it is believed that more profound underlying mechanisms induce events in institutions and that organizations represent physical structures that form reality (Saunders et al., 2009).

Incorporating the social context of critical realists, the points of contact throughout the conducted research influence drawn conclusions, as the objective structures are explained through them being combined into the social context of the organization. As a result, their perceptions are deeply affected by the structure of the organization or industry itself, which, in turn, classifies this research to take an axiological position (Saunders et al., 2009; Hoddy, 2019). Research can be distinguished into three distinct philosophies,

namely ontology, epistemology, and axiology, by which axiology studies the influence of values in scientific research (Saunders et al., 2009). Ontology deals with the nature of reality, and scholars must consider if it is likely to prove an absolute truth or whether truth is dependent on the diverging perceptions of social characters. Epistemology, however, is concerned with what forms adequate knowledge in a field of study (ibid.). Throughout the research, it was considered that scholars and interviewees are value-laden and biased by respective views of the world and socio-cultural experiences. These factors, in turn, impact the study as it brings an inevitable subjectivity to the gathered data (ibid.). What is more, personal exchange with managers and employees is of vital importance for this study, leading to a research strategy in which personal interviews are conducted[1], which ultimately leads to the axiological stand (Saunders et al., 2009). Notwithstanding this, an axiological approach might limit the findings of the thesis to the degree that they are not proven to be the *"right answer"* (Easton, 2010, p.128).

Concerning the research approach, literature defines two distinct types, namely deductive and inductive reasoning (Saunders et al., 2009). Within a deductive approach, an existing theoretical or conceptual framework is applied and consequently tested by using data. This study intends to take an inductive approach towards the data gathering and analysis, as the primary objective of this thesis is to contribute with new findings to the academic literature rather than proving or contradicting existing theory (Saunders et al., 2009). Thus, instead of introducing a selected hypothesis for testing, a particularly developed theoretical framework is guiding the structure and analysis of the gathered primary and secondary data for this case. In this way, new and better understandings of existing theories are sought to be reached as well as expanding the theories to provide valuable insights and managerial implications on how incumbents can exploit opportunities, mitigate challenges and leverage startup alliances when launching a multi-sided platform.

Reasons for developing the theory inductively are twofold. First and foremost, the approach allows for a more comprehensive study as it is not limited to a narrowly specified research design, which does not acknowledge alternative explanations of

[1] The coronavirus pandemic led to the fact that solely two out of ten interviews were conducted in person.

phenomena (Saunders et al., 2009; Smith, Thorpe & Jackson, 2008). Management research. London: Sage.). What is more, since qualitative data is collected and evaluated, an inductive approach is more reasonable, as it emphasizes a more general conclusion (ibid.). One must, however, consider that this research originates from a deductive approach as existing theories were employed to fundamentally comprehend the topic around platform ecosystems and startup alliances (Saunders et al., 2009).

4.2. Research strategy

This master thesis deploys a case study strategy, which is considered the most appropriate method in order to gain a thorough understanding of a phenomenon and its context. Case studies are commonly applied in exploratory research and have considerable ability to answer how events unfold and why individuals act as they do (Saunders et al., 2009). For this reason, case studies are valuable for empirical studies that wish *"[...] to provoke thought and new ideas, rather than to poke holes in existing theories"* (Siggelkow, 2007, p. 20). Yin (2003) considers four case study strategies, which, in turn, are based upon two discrete dimensions: Single case versus multiple case and holistic case versus embedded case. This thesis applies a single and holistic case study strategy as its focus lies mostly on the case company and the development of several managerial implications. Although other organizations and individuals, independent of the case company, are examined throughout the research process, they do not give reason to classify the strategy as a multiple case study since findings are not directly compared but instead used to understand the context and constraints in which individuals and the case company make decisions (Saunders et al., 2009).

To evaluate the generalizability of the research and its findings, one can further distinguish between extreme, maximum variation, critical, and paradigmatic cases (Flyvbjerg, 2006). This thesis can be classified as a critical case, mainly because its purpose is to amass information that allows deriving legitimate deductions of comparable models. Consequently, the generalizability of the thesis is enhanced through the adoption of a case that reveals sufficient information to be analyzed, as opposed to a case either not providing adequate information or representing an extreme case, which contrasts

considerably from its equivalents (ibid.). This case is of strategic importance not only to the case company but also to other incumbents in the financial software industry since financial software and IT companies worldwide are starting to exploit opportunities by launching platforms or engaging in ecosystem enabled innovation (Lunden, 2020; Lochy, 2020). Hence, respective incumbents are already or will be facing similar challenges with their realization or implementation. On these grounds, this case study constitutes a critical case in which the findings offer a shared understanding concerning platform launches and the achievement of a competitive advantage through the exploitation of startup alliances (Stake, 2000).

In coordination with the philosophy of critical realism and inductive reasoning, while applying a single case study, it is favorable and encouraged to rely on qualitative research methods (Hoddy, 2019). Traditionally, qualitative research focuses on smaller data sets, which have been derived from studies such as interviews, questionnaires or experiments (Saunders et al., 2009). Due to limited existing research on firm-level specific capabilities of incumbents in platform launches (Leijon et al., 2017), the study is carried out using qualitative research of primary and secondary data, such as primary and secondary literature and the use of expert interviews with the incumbent's employees, clients, startups, and industry professionals. This, in turn, helps to obtain detailed information about social actors' personal beliefs, judgments, and views. Consequently, the data gathered can be considered highly valid and reliable (Saunders et al., 2009). The interview process of this thesis will be further elaborated upon in section 4.3. and 4.4., respectively. To ensure reliability and accuracy, the gathered data was further triangulated with alternative qualitative approaches with the overall objective to facilitate the validation of our data and test the consistency of the findings (Saunders et al., 2009).

More precisely, the gathered interview data was triangulated with the help of multiple interview partners in- and outside of the case company, secondary research on the industry, as well as existing theories. By employing triangulation, the subjectivity of the interviewees was considered, and potential interviewee bias reduced, while quantitative data and company information provided by the case company and other organizations added a more thorough context to the conducted investigation (Saunders et al., 2009).

In determining the purpose of the study, literature suggests three distinct research classifications, namely exploratory, descriptive and explanatory, while the latter two may be applied in combination (Saunders et al., 2009). The research purpose stands in close connection with the question anticipated to be answered as well as the underlying objectives of the study. Descriptive studies portray observational studies that aim to depict profiles, events, or situations in an accurate manner, while explanatory studies establish causal relationships between variables. Thus, explanatory research attempts to connect ideas to understand cause and effect (ibid.). Exploratory research, on the contrary, is conducted to determine the nature of a problem and intends to explore the research questions rather than offer final and conclusive solutions to common problems (ibid.). On these grounds, the thesis is classified as of exploratory nature as it aims to seek insights, strategies as well as opportunities on how an incumbent can launch a multi-sided platform in the financial software industry (Saunders et al., 2009). Further, Adams and Schvaneveldt (1991) claim that an exploratory approach enables scholars to take a holistic perspective of the subject initially and gradually narrowing it down over time as new insights emerge, and the research progresses.

Saunders et al. (2009) specify three principle methods of conducting exploratory research, namely (1) a search of literature, (2) interviewing experts in the studied field and, (3) conducting focus group interviews. Out of these, two methods - the search of literature and the conduction of expert interviews – are deployed within this exploratory study, which will further be elaborated upon in section 4.3.

Since this research is limited to a specific time frame, the thesis can be considered cross-sectional rather than longitudinal, which portrays studies repeated over an extended period (Saunders et al., 2009). The study examined a preselected time, namely the spring semester 2020, resulting in a time constraint typical for research projects undertaken for academic purposes (ibid.). Nevertheless, it can be said that the study entails a longitudinal element given the fact that secondary data is used and re-analyzed that has been collected over time. It can further be noted that a longitudinal study would have allowed for more extensive findings since change and development within a platform launch could have been taken into consideration more thoroughly (ibid.).

4.3. Data collection

Both primary and secondary data of qualitative nature were collected throughout the research, whereby the primary data was intentionally used to answer the research question concretely. On the contrary, secondary data was gathered by various other scholars, which was ultimately re-used to serve the answering of this thesis' research question as well (Hox & Boeije, 2005).

More precisely, secondary data was employed in order to review existing literature to establish an adequate understanding of the research topics as well as underlying theories and to evaluate findings relating to the research question of this study (Saunders et al., 2009). For the sake of validity and reliability, methods used in the literature were examined by, for instance, studying the circumstances under which the data within the sources was gathered to recognize potential biases or inaccuracies (Dale, Arber & Proctor, 1998).

The selection and use of secondary data throughout this study resulted in several advantages. Firstly, given the cross-sectional character of the thesis, secondary data allowed for more straightforward and quick access to information in comparison with primary data, which requires the conduction, evaluation, and analysis of interviews (Saunders et al., 2009). Secondly, owing to the sophisticated nature of the applied secondary literature regarding scholarly publishers and university presses, it can be reasonably assumed that the secondary data at least is of the same quality and standard if not superior (ibid.). Henry Chesbrough, for instance, is considered as a pioneer in the area of open innovation and among the leading contemporary scholars in technology management and innovation strategy, having published several studies with Harvard Business Press or MIT Sloan management review (Research Gate, 2020). The collection of secondary data allowed for comparison and hence triangulation with the primary data gathered throughout the research to augment the reliability and accuracy of the thesis (Saunders et al., 2009).

Because this thesis follows the approach of a critical realist, qualitative primary data was collected (Hoddy, 2019). The interview process itself began in late January 2020 by reaching out to potential interview partners and companies while the final interview was conducted at the beginning of April 2020. The case company provided suitable interview partners in-house and further established contact with clients and Copenhagen Fintech, allowing the scholars to concentrate on establishing contact with startups and industry experts. Predominantly, contact was made via e-mail or LinkedIn, which enabled the search for specific roles within an organization as, for instance, 'Strategic Partnership Manager'. Because the case company is operating on a global scale and holds multiple offices in- and outside of Europe, high flexibility prevailed concerning the geographic location of partners. As a result, interviews have been carried out in London, United Kingdom, and Copenhagen, Denmark. In total, ten interviews with eight different organizations were conducted, divided into one incumbent, two clients, three startups, and two industry experts, illustrated in table 9. All ten interviewees hold notable and influential roles within their respective organizations and are actively involved in either strategic and technical setups or partnership alliances (see Appendix B). This positioning, in turn, allowed for appropriate, high-quality comments and viewpoints to the questions posed. Nevertheless, it is crucial to keep in mind that interviewees solely reflect on issues and matters of their respective firms, and comments can, therefore, not perpetually be characteristic for the entire institution. The approach to interview partners from different segments of the industry and distinct organizational backgrounds allowed looking at the thesis and underlying research questions from a holistic perspective.

For reasons of confidentiality, it is not permitted to disclose the reader with detailed information about the clients and startups interviewed. However, clients, as well as startups, are considered market leaders among their peers and can be placed within the financial, regulatory, and software industry (see Appendix B). Throughout the selection process, special attention was placed on the different nature of the organizations to, again, guarantee a holistic perspective.

Interviews were conducted in person as well as virtually via videotelephony applications such as Skype or Zoom. Initially, all interviews were anticipated to be conducted face-to-face, however, the 2019–20 coronavirus pandemic left no option but to conduct most of

the interviews virtually. In fact, solely two out of the ten interviews, namely the interviews with the case company, were conducted in person, which allowed for a personal relationship to be built. In-person interviews can enhance the credibility of the interviewers and thereby obtain the trust of the interviewees, which leads to the gathered data being of higher quality (Saunders et al., 2009). Furthermore, face-to-face interviews are considered valuable in capturing interviewees' non-verbal cues, emotions, and behavior (ibid.). On the contrary, Saunders et al. (2009) underline that virtual interviews may unfavorably influence the interviewer's understanding of how far to attempt a critical line of questioning or may cause difficulties for the interviewer in developing more elaborate questions, making it challenging for both parties to engage in an exploratory discussion. This phenomenon is further reflected in the length and depth of particular virtual interviews, depicted in table 9.

All interviews took place in undisturbed locations without distraction or interference, either at the case company's Copenhagen or London office or in private households, owing to the global coronavirus lockdown. The convenience and comfortableness of the locations, in turn, have a positive impact on the participants' responses they are likely to give (Saunders et al., 2009). Given the foreign background of the interviewers and the case company's corporate language being English, each interview was conducted in English. All interviewees were either native speakers or fluent and hence able to apply company- and topic-specific terms adequately. However, it must be noted that since some interviewees and both interviewers are non-native English speakers, a likelihood of error remains (Harzing & Feely, 2007). The scholars, however, are severely aware of this dilemma and speak English fluently, which is why the validity of the findings is not significantly influenced.

Overview of interviews

Interview	Role of the interviewee	Subsequently abbreviated to	Type of interview	Length of interview
SimCorp	Strategy Principal	SC1	In person	1:09:36
	Head of Open Innovation	SC2	In person	1:10:57
Client 1	Executive Director Investments & Global Head of Trading	C1	Virtual	45:26
Client 2	Head of Private Banking & Investment Specialist	C2.1	Virtual	24:47
	Head of Private Banking & Senior Portfolio Manager	C2.2	Virtual	25:49
Startup 1	Senior Commercial Manager	S1	Virtual	40:25
Startup 2	Chief Executive Officer	S2	Virtual	55:47
Startup 3	Strategic Partnerships Manager	S3	Virtual	39:16
CPH Fintech	Head of FinTech Intelligence	CPH FinTech	Virtual	1:02:35
PWC	Management Consultant - Financial Services	PWC	Virtual	1:03:05

Table 9: Overview of interviews

4.3.1. Semi-structured interviews

Given the exploratory elements of the study, solely non-standardized semi-structured interviews were conducted, in which a variety of issues and questions were covered based on an interview guide (see Appendix C). At the same time, variation occurred from interview to interview (Saunders et al., 2009). By doing so, consistency was ensured across the interview process since the examined variables re-occurred in the interview guide. Nevertheless, the uniqueness of everyone was considered by facilitating the flexibility to adjust the order of questions depending on the interview situation, disregard unrelated questions, or developing new questions to allow elaboration on specific observations (Saunders et al., 2009). As a result, four somewhat similar interview guides were developed for (1) the case company representing the incumbent, (2) clients, (3) startups, and, lastly, (4) industry experts. To overcome challenges regarding the flood of information throughout an interview and the processing of it, all interviews were, in consensus with the interviewees, audio-recorded with the use of recording devices. This enabled both interviewers to listen to and focus solely on the interviewee, facilitated the recording of any additional questions asked, and allowed the scholars to re-listen to the interview and include direct quotes in the thesis (Saunders et al., 2009). Furthermore,

each interview was carried out by both scholars, with one member in charge of asking the main questions and the other asking follow-up questions only (Baškarada, 2014).

Both in-person and virtual interviews were intended to last approximately 60 minutes, however, as previously mentioned, ultimately differed in length. Each interview commenced with an introduction and briefing on the purpose of the study, even though all interviewees received a short briefing via e-mail in advance. It followed the request for permission on the audio-recording of the meeting. Furthermore, the confidential treatment of the interviewees' cooperation with the scholars was again made certain, thereby encouraging the manager to speak openly. Considered as a formality and straightforward way to start the interview, information on the managers' roles, and the duration of employment were requested. Subsequently, questions were divided into platform-related questions and startup-alliance questions, individually adjusted to whether the interviewee represented the incumbent, a client, a startup, or an industry expert. Subtopics included platform concepts and success factors, the position of an incumbent, and prior experience in incumbent-startup alliances, which were significant for the answering of our research questions and hence provided the primary scientific data assessed in this thesis.

In line with the concept of a semi-structured interview, the three different types of questions proposed in literature were posed, namely open, closed, and probing questions (Saunders et al., 2009). Consequently, open questions, such as *"How do you target the startups, and how do you lure them onto your platform?"* or closed questions, such as *"How many different software products does your organization currently use to conduct parallel tasks?"* were used (see Appendix C). Probing questions included, for instance, *"Do you believe that having an equity stake in the startup you are collaborating with is helping the alliance or not?"* which aimed at examining responses that are vital to the previously mentioned topics (ibid.). Questions were adjusted and altered depending on the course of the conversation, and as new insights were revealed. Interviewees' expertise on specific subtopics further influenced the sequence and flow of questions (Baškarada, 2014; Hoddy, 2019; Saunders et al., 2009). Interviews were terminated by a debriefing,

in which interviewees had the opportunity to make last remarks or provide additional information on anything not covered in the interview but worth mentioning.

In agreement with the thesis supervisor, Ali Mohammadi, there was no reason in transcribing the interviews, and audio-recordings were considered as sufficient means for the further processing and coding of the data. Nevertheless, transcripts were created through the language processing application 'otter.ai', in which live speaking is converted into a written transcription. The transcripts, in combination with the audio-recordings, supported the subsequent processing and coding of the data. It is noteworthy, however, that transcripts created by 'otter.ai' were not always entirely accurate and, therefore, sometimes needed to be corrected accordingly. Given the confidential nature of the data, neither audio-recordings nor transcripts will be attached in the appendices, however, will be made available at the oral defense for review when asked for such.

4.4. Coding scheme

Throughout the coding process of this master thesis, the ten interviews were aligned and ultimately combined through a coding scheme, which is based on the theoretical framework, illustrated in section 3.4. This has consequentially led to the fact that the coding scheme was influenced by the defining variables (1) opportunities, (2) challenges, and (3) launch- as well as mitigation strategies of introducing a platform, from each a platform theory perspective and startup alliance theory perspective. The coding scheme was further color based to highlight the respective variables and related sub-categories accordingly in relation to platform launches and startup alliances. The coding scheme allowed to scrutinize the recordings and evaluate whether and how the variables were addressed and answered in the interviews. This process required a thorough understanding of the recordings and reading between the lines in order to capture all relevant information correctly. Table 10 provides an example of how answers and statements were categorized in the coding scheme.

The described coding scheme, however, relies on the interpretation and subjective perception of the scholars and thus entails the risk of misinterpreting certain statements

or parts of the interview recordings. To combat this phenomenon, an inter-coder reliability check was applied in order to ensure the reliability of the content analysis, in which both scholars conducted the coding separately from one another and compared results afterwards (Campbell, Quincy, Osserman & Pedersen, 2013). This method positively influenced the coding process as it challenged any potential subjective perceptions by achieving inter-coder agreement, in which coding discrepancies have been reconciled (ibid.).

Coding examples

Category	Color	Statements from recorded interviews
Platform launch opportunities	Yellow	*"We are moving into complete new revenue models, new types of engagement with the customer."* (SC1, 2020)
Platform launch challenges	Green	*"So the biggest challenge when launching a platform of course is to get people to use it […] that's the main issue. And how to overcome it […] but basically, you have to pick out what companies do we have, and why should people use this compared to something else."* (CPH FinTech, 2020)
Platform launch strategies	Blue	*"The next big step for us will be to build the API […] and do it smart since we have some quite big other technical projects going on internally that take a lot of resources […]. We need to identify parts of our front-to-back solution where it makes sense to develop the APIs"* (SC1)
Startup alliances opportunities	Purple	*"If they succeed, I think that they can leverage their stronghold for many other customers that they don't have as of now. So utilize the strength to get more customers […] and then keep away some of the areas where they have some weak spots to make the cosmos shine in that regard"* (C1, 2020) *"So, you know, obviously, […] being a businessman, the number one thing that's going to attract me is the ability to make money."* (S2, 2020)
Startup alliances challenges	Grey	*"The biggest challenge is the ways of working and managing two partners against each other, especially with incumbents when they come from a successful corporate background there is always this friction in how you work together"* (S1, 2020)
Mitigation strategies	Red	*"So we tend to have quite a collaborative working relationship where we have regular touch points. We have multiple stakeholders. I think what's important is having different stakeholders at different levels in the organization. Because ultimately, you have some quick fixes where you need two people who can actually do things."* (S3, 2020)

Table 10: Coding examples

5. ANALYSIS

This chapter presents the primary data gathered throughout the conducted interviews. The following two sections examine (5.1.) the role of incumbents as well as (5.2.) the impact of startup alliances in platform launches, analyzing respective incentives, opportunities, challenges, and mitigation strategies. Findings provide an answer on how to leverage an incumbent's position in the launch of a multi-sided platform in the financial software industry. The analysis shows that incumbents' platform launches are primarily coherent with the theoretical framework (3.4.), however, certain factors are found inapplicable

while new insights emerged as depicted in the (5.3.) analyzed findings. In terms of the incumbency in platform launches, firm-level variables, such as existing customer relationships, are found to have a determinant impact on the establishment of network externalities and hence the success of the launch. Furthermore, incumbents can leverage startup alliances, subject to certain conditions, to stimulate growth of the product portfolio and, ultimately, the ecosystem.

5.1. Launching multi-sided platforms

The following section analyzes the (5.1.1.) incentives to launch, (5.1.2.) opportunities of platform launches, (5.1.3.) challenges in platform launches, and (5.1.4.) mitigation strategies from an incumbent's point of view when launching a multi-sided platform in the financial software industry.

5.1.1. Incentives to launch

Platform launches by incumbent companies are found to be primarily driven by growth or survival aspirations. The PWC (2020) industry expert summarizes this as follows: *"They [incumbents] want to launch new platforms either because […] they are losing market share, or they realized that they need to move to a new kind of product or new kind of market in order to survive long-term or in order to thrive in the long-term"*. The growth opportunities through multi-sided platforms are threefold and comprise complementary services, new customer groups, and innovation capabilities.

Established players in the financial software industry are facing increasing pressure from a rapidly growing startup community, while at the same time, the requirements of customers have reached new levels of complexity. Hence, providing holistic solutions has become ever more challenging. *"When we read the industry reports and the trends […] you have around in the world, it is becoming more and more obvious that we [incumbents] cannot develop everything ourselves"* (SC1, 2020). Subsequently, platforms depict a relatively efficient solution to offer optionality and enrich their product portfolio with complementary services.

Further, as described by SC2 (2020), partnerships that are established through a multi-sided platform have the potential to unlock new markets and customer groups. *"What is interesting, I think, is to consider whether in some cases we [SimCorp] actually invest or partner with firms that are much better at doing these horizontal plays. Because all of a sudden, you might not have 1200, but you might have 12,000 potential customers. And this is completely going beyond how we operate and how we think because we are very good at staying focused"*.

Lastly, CHP FinTech (2020) highlights the multi-sided platform as a strategic tool for incumbents to tap into external innovation capabilities: *"Most of the incumbents are fully aware that they need to be innovative in order to stay ahead of competition also in the future. [...] When we started talking fintech [...], the companies were probably a little bit more afraid that the startups would go into just be competitors. And nowadays for the last few years at least they are seeing that it makes more sense for both sides to be collaborative between each other"*.

5.1.2. Opportunities in platform launches

Guided by the theoretical framework, this section analyzes the opportunities, which incumbents can leverage in launching a multi-sided platform. Resulting from the focus on the role of an incumbent, while the opportunities (1) establishment of network externalities and (2) low marginal costs are addressed only briefly, particular emphasis is placed on the evaluation of firm-level factors. Thereby, (3) knowledge and experience, (4) financial backing, (5) existing customer base, and (6) brand recognition are found to generate competitive advantages for incumbents.

Establishment of network externalities

The establishment of network externalities strengthens the ties of the customers to the platform. Network effects are strong when the mutual dependency of the platform agents is high. Since incumbent-owned software constitutes the core of the platform, the customers are not necessarily dependent on the offers of third-party providers. However, C1 (2020) describes that the velocity of changes in requirements has accelerated to a point where established software suppliers are no longer able to keep pace. Therefore, they are

working with an increasing number of other systems to cope with the deficiencies of the incumbent's solution. Furthermore, they are partnering with other startups and indicate a low threshold to switch to other solutions, especially if offered access to an ecosystem: *"If that other vendor of similar value proposition would have the ability to engage in an ecosystem, have the open APIs, etc. […] that will have a very strong and appealing value proposition"* (ibid.). In awareness of their inability to serve all needs through in-house creations, SC1 (2020) perceives an additional opportunity in positioning the company not only as a bridge to the new technologies but also as a leader to innovative solutions: *"We [SimCorp] can grow this ecosystem of sub solutions that can provide offers and optionality to our customers. [...] So if we somehow could become the tech partner, who can also provide our customers a safe ground into all these new opportunities, then I think we could actually add a competitive advantage"*.

Transforming the software into a multi-sided platform provides the opportunity to establish network externalities, which thereby strengthens the affiliation of the users to the platform. While the establishment of network externalities depicts a lucrative opportunity per se, the firm-level opportunity 'existing customer base' discusses in further detail how the role of the incumbent provides a significant competitive advantage in comparison to new market entrants.

Low marginal costs

The opportunity of leveraging a platform's low marginal costs is found to be inapplicable since the evaluated platform does not have exclusive marketplace character but aims to integrate third-party services to the core software (SC1, 2020; SC2, 2020). Therefore, even though ambitions are made to establish *"standard contracts optimized for scale"* (SC2, 2020), which allow for streamlining partner integrations, substantial monetary and human resource investments in terms of API development are required, especially in the early stages of the platform. Moreover, the platform is based on a complex legacy system. Hence, interfaces are required to enable the transformation to a platform system (SC2, 2020). Section 5.1.3. discusses these challenges in further detail.

Knowledge background and experience

According to the industry experts, as well as both representatives of the incumbent, knowledge, and experience provide incumbents with a crucial advantage, especially in a high-sensitive industry such as the financial software industry. *"I think experience matters a lot within regulations. There is so much compliance and regulation within the financial industry, if you don't have anyone that has experience within that then […] you lose"* (CPH FinTech, 2020). More precisely, experience is found to directly translate into maintaining quality standards as well as product superiority: *"In terms of quality assurance I think incumbents have a huge advantage over startups, because they have so many more experienced people working on the product to properly overview the quality of it [...]. It would be more risky [...] to use an unestablished startup's open platform, rather than using an incumbent's open platform"* (PWC, 2020). While two of the three startups (S1 & S2) attribute high value to experience and knowledge background, they refrain from acknowledging this factor as purely characteristic of an incumbent. *"I have no issue whether somebody is a new startup or an incumbent. What I am concerned about would be is how well can that company implement [...] and whether they were able to show me a track record of implementing"* (S2, 2020). However, knowledge and experience can also create internal resistance to change. This challenge is discussed in section 5.1.3.

Financial Backing

Unsurprisingly, in comparison to new market entrants, incumbents have higher financial resources, which can be leveraged in platform launches. PWC (2020) highlights the significance of this advantage as it impacts the implementation period of the initiative: *"Especially in terms of financial backing there is a huge difference because startups will […] have to work entirely bootstrap when building a new platform so they might be able to move faster, but because they do not have the funding […] it might build the product a lot slower"*.

However, the investigation of the presumed assumption that incumbents derive a competitive advantage over startups in terms of financial resources reveals the necessity of distinguishing among the different legal structures. Both incumbent representatives

elucidate the perspective of a publicly-traded company as difficult due to the pressure of maintaining a stock price. SC2 (2020) describes the incumbent's situation in comparison to a privately owned competitor as follows: *"If [the competitor's management] believes this is important enough, then [they] can find the 10 to the 50 million euros it is going to take to make this process faster. We [SimCorp] don't have that option because we have to keep our stock price level"*. Moreover, according to SC1, the traditional business opportunity evaluation methods applied in publicly traded companies fail to account for the long-term outcome of more innovative initiatives. *"It is the old world. It is the incumbent's business way of looking at or evaluating a business opportunity that is also applied into the new area. [...] If you use the same old school tools on the new models, then you are sure that the new models will never win, because you need to calculate and see things differently"* (SC1, 2020).

Existing customer base

The opportunities deriving from existing customer relationships are twofold. First, the incumbent avoids the biggest challenge multi-sided platforms are usually confronted with, the 'chicken and egg problem'. Second, as a result of the conservative market characteristics, switching costs are high. Therefore, current customers are more likely to join the incumbent's platform instead of switching to a competitive service.

Not only does the existing user base play a critical role in the attraction of new platform players, in the case of the examined incumbent, but this advantage is further enhanced by the status of the industry leader. Both incumbent representatives (SC1, 2020; SC2, 2020) emphasize not only the number of customers but also their quality. *"I think our customer base is a is a leverage point, because we have access to users and customers that you do not just get access to"* (SC1, 2020). The attractiveness of an established customer base is further confirmed by S1 (2020): *"What attracts me is a channel that I am not currently in or I am getting to customers that are not currently talking to"*. The findings regarding marquee users will be analyzed more closely in the next subsection, which addresses the challenge of the 'chicken and egg problem'.

The interviews further elucidate that the financial service industry is characterized by conservative and risk-averse players. SC1 (2020) further adds: *"It costs millions [...] to go from one system to another, so the switching cost in the industry, in general, are super high, and it will remain that way [...] at least within the next five years"*. Although customer C1 (2020) does not exclude exchanging their software solution with a competitor's product, it similarly describes the scope of this undertaking as *"big strategic consequences and considerations"*. The risk-adversity of the customers, in combination with the enormous costs associated with the set-up of a new financial software system, the existing customers are tied to the incumbent's system more strongly. Hence, the existing users are more likely to join the transformation to a platform system.

Brand recognition

Incumbents, in contrast to new market entrants, have established a brand reputation. According to CPH FinTech, prominence and recognition of the incumbent's brand equip the firm with a significant competitive advantage as the startup is required to dedicate a considerable part of its resources on building a brand. Furthermore, the role of an incumbents benefits the attraction of attention, whereas startups need to offer a *"crazy competitive edge in user experience"* (CPH FinTech, 2020) in order to win customers. This effect is aggravated when the company is not only an established incumbent but the industry leader: *"[For the incumbent] it means that the product does not need functionality that is ten times better than their competitors in order for them to get people to use. And that is a huge competitive advantage because if you do not have to be better on the product, it is kind of easy for you. And if you are a startup, you probably have to be ten times better than the other product in order for many people to use it"* (CPH FinTech, 2020).

In terms of attracting companies to offer their services through the platform, however, S3 (2020) argues from a startup perspective: *"We are not as interested in the brand or the company itself. It is really about what is the business case. What is the upside for us?"*. S2 (2020) shares this perception to some extent but emphasizes that rather than brand recognition, it is looking for corporate credibility in a platform.

5.1.3. Challenges in platform launches

In alignment with the theoretical framework, the challenges (1) market entry timing, (2) openness of the platform, (3) 'chicken and egg problem', (4) monetizing network effects, and (5) multihoming are addressed in the interviews. While not all challenges are found to be applicable to incumbents, two additional firm-level challenges relevant specifically for established players are revealed: (6) technical challenges, and (7) corporate culture.

Market entry timing

The challenges related to a first-mover position, for example, market building, and fast-follower status, competing against a pioneer, are found to be negligible. In contrast, observations indicate that companies can leverage their role as incumbents in both the position of a first-mover as well as a fast-follower.

PWC (2020) addresses the first-mover advantage of an incumbent in regard to the firm-level specific opportunity of 'brand recognition' and the resulting ease to attract novel platform users: *"Compared to a startup being first-mover, people more quickly jump on board the incumbent first-mover. [...] I think being a first-mover as an incumbent is a huge leverage, but if the startup positions itself correctly and manages to present itself correctly in the market, I think they can use it as well. Being the first-mover is a benefit in general"*. Although PWC (2020) perceives a marginal advantage in the position of incumbents as first-movers, CPH FinTech (2020) argues that incumbents tend to more frequently pursue a fast-follower strategy, where they leave the market testing to startups and new market entrants before launching their own solutions. Additionally, if incumbents perceive high value in the products of the market pioneers, they are likely to eventually acquire them: *"The incumbents just take over when they see a startup having success but they [startups] might not have the executional skills that are needed, and then the incumbent will buy the competition. They [startups] definitely have a lot of say in regards of new ideas and testing them. Then the older companies can come in and steal them afterwards if they are good enough"*.

Openness of the platform

The openness of a platform is found to be highly dependent on the underlying strategic ambitions as it implies a trade-off between the number of platform users and their quality. In a conservative, regulatory and compliance-heavy market, such as the financial service industry, the interviews with the incumbent (SC1, 2020; SC2, 2020), the clients (C1, 2020; C2.2, 2020) as well as PWC (2020) clearly accentuate a necessity of maintaining quality standards high, indicating a tendency to a more proprietary platform. Nevertheless, opinions are contrasting regarding the responsibilities of quality screenings.

To avoid security breaches and potential reputational damage, the incumbent argues in favor of restricted access and partner portfolio curation by the incumbent, especially at the beginning of the platform launch: *"We [SimCorp] go for the more restricted route. Also seen the niche we are in and there is so much compliance around that, and EU regulations. There is a risk also security-wise, cybersecurity, and things like that. [...] I don't think it will be an advantage to let everyone [...] We also need to make sure that we do not have an ecosystem of crap"* (SC1, 2020).

From a customer's perspective, the curation is a central challenge of the platform. According to C2.2 (2020), even though startup services can be interesting for them, they are reluctant to work with startups due to the risk-reward trade-off and therefore require curation by the incumbent: *"The risk-reward trade-off [...] to go with the startup, is probably not that favorable. [...] I think there is quite a lot of appetite, particularly as I have always thought it was interesting that all these portfolio management systems are different"*. C1 (2020), in contrast, argues that in order to integrate the multitude of systems they are operating on, they would appreciate more openness and a more extensive offer of APIs. Similarly, CPH FinTech (2020) argues: "*[An open] platform is something that everyone could go on. [...] So if you decide to do something like that, then you should open it up for [everyone], and then it is their [the customers'] job of screening companies"*.

Chicken and egg problem

In contrast to new market entrants, incumbents can avoid the 'chicken and egg problem' when leveraging their existing user base in the platform launch. As already touched upon in section 5.1.2., the established customer base increases the attractiveness to third-party service providers significantly. Thus, the incumbent often finds itself in a position where it already has attracted marquee users on the client side, which ultimately strengthens its leverage. SC1 (2020) describes this advantage as follows: *"I do not think it would be that hard to get external partners on board because of the size of customers we [SimCorp] have. We have 20 to 25 percent of the world's institutional assets under management [AUM] running through our software. And we have 50 percent of the world's top 200 largest investment managers using our software, which is quite attractive"*. In fact, SC1 (2020) perceives the more noteworthy challenge lying in the attraction of the right service providers in terms of services and quality standards that match their client base.

From the perspective of external service providers, two factors are mentioned as a determinant in winning them onto the platform. First, they seek to establish new distribution channels for their products: *"Being a businessman, the number one thing that is going to attract me is the ability to make money"* (S2, 2020). Second, besides revenue, especially startups aim for rapid growth opportunities. Therefore, tapping into a large pool of potential customers serves as a fundamental incentive to join the incumbent's platform. *"Most startups that we [SimCorp] are interested in or that we meet are truly startups in the sense that they are set up for growth. [...] They care more about getting more client names signed than they do about making money and all that"* (SC2, 2020).

Monetizing network effects

The significance of the monetization challenge of network externalities is decreased by the absence of the 'chicken and egg problem'. In accordance with the challenge discussed above, the price sensitivity in attracting users to the platform is relatively low, while a challenge remains in the platform's general pricing structure. According to the incumbent, the monetization model of the platform is not yet finalized but will most likely imply a subscription model for the clients (SC1, 2020) and revenue sharing for the service providers (SC2, 2020).

In order to discuss the monetization of network externalities more detailed, it is necessary to distinguish between the money side and the subsidy side of the platform agents. Several facts indicate that the existing user base is the subsidy side, and third-party service providers are the money side. First, due to the existing platform-owned core product, clients are less dependent on the presence of third-party providers. Further, C2 (2020) expresses their restrained willingness to pay for the extra features: *"Wanting to have an open platform, comes with a big invoice to us. It really is about the business case perspective as well […] as the functionality we are gaining from it. I think our theory is that we pay more than sufficient for the things we have today and that [the platform] will come with additional costs. […] So, it would really need to add value to the business"*. However, the clients' high switching costs diminish the necessity of subsidization to retain them on the platform. On the service providers' side, the existing customer base of established financial institutions is highly valued. SC2 (2020) emphasizes the leverage the incumbent has over partners with low marginal costs: *"Why should we [SimCorp] not be charging 50 percent because if they get 50 percent of something they would not otherwise have had"*. This statement clearly demonstrates the incumbent's perception of who constitutes the subsidy side, i.e. the clients, and who represents the money side, i.e. the third-party service providers.

Give the early stage of the platform and its premature pricing model, the challenge of effectively balancing the subsidization needs of the clients with the startups' willingness in sharing revenues, hence the 'Seesaw' principle, remains to be solved in detail. *"I think it potentially could be interesting to try and work the other way, so to see this from the viewpoint of a startup […] what the revenue model should look like. This is a sort of a vague idea […] It is a bigger topic."* (SC2, 2020)

Multihoming

Regarding the challenge of multihoming, the analysis provides two key insights. First, the analysis shows that multihoming is employed by the platform side of service providers. Second, the incumbent, however, does not perceive multihoming as a threat.

Although addressed only briefly in the interviews, the challenge of multihoming is confirmed by the startups, which all unanimously agree on engaging with various platforms that serve their business purpose and enlarging their distribution channel. S2 (2020) describes this as follows: *"What is going to attract me is that it is a channel that I am not currently in or I am getting to customers that are not currently talking to"*. S1 (2020), however, further points out that distribution channels are chosen deliberately with strong focus relevancy and fit: *"We reach out to the right ones that we are happy to be associated with, and we think are relevant"*. The client side, in contrast, is significantly limited in possibilities to multihome. Although C1 (2020) describes that add-ons to the incumbent's core system have been developed by the client itself in-house, the high switching costs and incompatibility of competitive services diminishes their opportunity to multihome. This insight further impacts the monetization of the platform as it is suggested by theory that the singlehoming side is subsidized by the multihoming side and hence underlines the findings regarding the subsidy side, i.e. clients, and the money side, i.e. the third-party service providers.

The interviews further highlight, however, that multihoming is perceived as an insignificant challenge by the incumbent. In fact, SC1 (2020) portrays an opportunity to demonstrate product superiority: *"If you have a better product, then you should not be afraid of the competition. So, then I think it is more a question of how we [SimCorp] make sure that we have a superior product. I would see that rather as a positive challenge, then there is something you have to defeat. [...] A healthy challenge that can help play yourself good. One thing is that you can have a solution, or a superior partnership and you can access it through our platform. You can also access it through a [competitor], for instance. But what if the user experience through our solution was way better? Then maybe that can be an advantage. Because a potential customer would look at the specific area, and then we have a showcase of superiority compared to the competitor"*. As a result, multihoming is found to not significantly impact the launch strategies for multi-sided platforms.

Technical challenges

Despite the enormous advantage incumbents have in terms of knowledge, background, and experience, technical challenges are among the most frequently addressed issues incumbents face in platform launches. Deriving from the interviews, the three fundamental root causes of the issue are observed in the integration of legacy systems, API development as well as internal resources (C1, 2020; S1, 2020; S3, 2020; SC1, 2020; SC2, 2020).

In comparison to new market entrants, which are developing a platform free of any influence of old data or coding, incumbents have less flexibility as old legacy systems need to be adapted and integrated (S1, 2020). SC2 (2020) describes the situation of the incumbent's transition from an on-premise solution to a platform model as follows: *"Our [SimCorp's] system is [built] over 25 years, so it is functioning rich, but it is not built the way you build a system today. And for that reason, we have some gaps on the open interface side. I have been very creative as to how we can minimize that and how we might be able to build some of these interfaces cheaper"*.

Furthermore, the time-consuming development of standardized and easy to implement APIs is observed to be a significant limiting factor as it creates frustration on both sides of the platform (C1, 2020; SC2, 2020). *"You probably have to engage through the SimCorp platform, one way or the other, which is very difficult putting it mildly. I mean SimCorp has not opened up, they do not have APIs of high quality, the data model is not easy to interpret, it is very complicated"* (C1, 2020).

Both incumbent representatives attribute the slow developments to internal resource challenges. SC2 (2020) describes the internal process as *"extremely slow"*. SC1 (2020) adds that the low velocity is owed to a large scale, internal transformation process: *"We [SimCorp] are running a huge transition from on-premise to the cloud of our [core software product], so resource-wise we are loaded to the maximum so [it is about] prioritization"*.

Corporate culture

While platform launches of new market entrants are generally driven by a rapid scaling mindset, the incumbent's corporate culture is found to impede platform launch ambitions. Effectively, the established firm must redefine itself in such a transformational process. Although the incumbent aims towards having the *"muscles of a corporate and the heartbeat of a startup if we get there"* (SC1, 2020), several characteristics of incumbency, such as agency problems, organizational inertia, or prioritization challenges, can be identified as disadvantageous for launching a platform.

Firstly, as in other corporate change processes, an internal reluctance, resulting from not-invented-here notions as well as the fear to potentially cannibalize the own responsibilities in the company, is described in the interviews. For example, product owners are described to question whether certain services provided by third-party software providers should better be developed in-house (SC1, 2020). This observation further indicates a lack of understanding and commitment to the new strategic imperative. In fact, the incumbent's client C1 raises the concern of superficiality in the implementation: *"[The new strategy] says a lot of nice glossy words, like 'eco-enabled' and 'open' but it is not, not an 'eco' or 'open'. It is not a base, as of now, hence and of the technical prerequisites for delivering the strategy is not the only place as we speak. But even worse, I think that the strategy is not really anchored that strong enough yet"*. Furthermore, organizational inertia limits the incumbent's agile capabilities. SC2 (2020) admits that even though the incumbent runs agile processes, they are not particularly fast in the implementation of, for example, APIs, which can easily take up to 15 months in development. However, as previously mentioned, the currently prevailing resource scarcity and hence strict prioritization result from a large-scale strategic transformation (SC1, 2020). Lastly, a significant challenge prevails in incumbents' success measurement approaches, which are tailored to old ways of conducting business and hence not suitable to evaluate new business opportunities effectively (SC1, 2020).

5.1.4. Mitigation strategies

The following section summarizes the findings regarding strategies to overcome the challenges in platform launches. The analysis below addresses exclusively challenges

which are found to be relevant for incumbents in section 5.1.3. Hence, strategies regarding (1) openness of the platform, (2) monetizing network effects, (3) technical challenges, and (4) corporate culture are discussed.

Openness of the platform

In the financial service industry, the challenge of how open a platform should be is determined by the requirement of maintaining high-quality standards as well as complex regulatory compliance. At the same time, the complexity of clients' requirements results in the use of a plethora of systems, which they would like to see better integrated (C1, 2020).

The incumbent (SC1, 2020) describes their approach to balancing the needs of the clients with the corporate concerns in the establishment of an *"innovation collective"*. This group of incumbent representatives, clients, and industry experts together discuss the needs of the market. In the interview, C1 describes their perspective by providing examples of third-party service providers, which they consider essential: *"There are providers like 'OpenFin' [...] that enables legacy applications to speak well together within the financial world because they are using finance languages and financial APIs to speak to each other. So, for instance, you have a lot of the modern EMS providers out there, they are all 'OpenFin' enabled [...] the fact that SimCorp is not [OpenFin enabled], gives that image of a closed, old, not up-to-date platform. Whereas if you will consider you were 'OpenFin' enabled, that would, of course, change the picture"*. The insights gathered from the innovation collective subsequently allow the incumbent to make a more informed selection of partners to bring on to the platform, rather than opening to anyone. SC1 (2020) perceives this mitigation strategy vital not only to achieve the right partner portfolio but also in remaining industry leaders in the long run: *"If we [SimCorp] really hit it spot on, then this is a way for us to kind of get at the forefront of what is needed in the market going forward"*. However, due to its early stage, so far, no outcomes from the innovation collective can be observed.

Monetizing network effects

While the challenge of determining the subsidy and money side of the platform is clarified, which depicts a fundamental factor in platform monetization, the 'Seesaw' principle remains to be solved. As touched upon in 5.1.3., the exact balancing between the subsidized client side and the cost bearing provider side requires separate response strategies for each respective platform side.

As the interviews show, existing clients are hesitant to pay for additional services unless they see a significant value. To mitigate the 'Seesaw' principle, the incumbent considers introducing a *"Salesforce-like"* pricing structure that implies a basic subscription of clients to the core product and transaction-sensitive fees for add on solutions (SC2, 2020). Thereby, the client can choose individually, in which additional services are perceived as value-adding to their individual needs (SC2, 2020).

Third-party providers, on the other hand, can be attracted through either a client base large in size or value or through the expectation of revenue generation. While the incumbent still evaluates potential pricing models, SC2 (2020) addresses one option in particular. Revenues generated by startups on the platform are anticipated to be shared with the incumbent ranging *"anywhere from maybe 15 percent, and up to maybe 60 percent"* (ibid.), depending on the marginal costs startups face in offering their solutions. *"[If] sub providers will have very low or maybe zero marginal cost [...] and they are relatively young, why should we [SimCorp] not be charging 50 percent because if they get 50 percent of something they would not otherwise have had. It does not cost them anything. [...] So I think that is not unfair. Whereas if it is an organization that has a relatively small software footprint where they actually had to do a lot of human-led services, it is probably more appropriate charge maybe 20 percent"* (SC2, 2020).

Technical challenges

As discussed in section 5.1.3, technical challenges derive from the integration of legacy systems, API development, as well as internal resources. While the interviews only briefly address mitigating the integration of legacy systems through attempting to build

interfaces in a cheaper way (SC2, 2020), the other two challenges are touched upon more detailed.

As the challenge of API development and internal resources are tied closely together, the mitigating measures comprise both challenges. Due to the limited resources and need for prioritization, the incumbent follows a step-by-step approach to opening the platform, focusing on developing APIs for one software element at a time (SC1, 2020; SC2, 2020). SC1 (2020) further describes that a customer-centric approach determines which areas make sense to focus on and constructs the path along which the platform grows. Thereby it is described as critical to sign up the right partners that *"fit our bills to create the APIs they need. And then, of course, we build APIs, and we build for optimized scale within those areas"* (SC2, 2020). Similarly, in accordance with the iterative approach, these partners will be added to the platform gradually (ibid.). In order to increase the efficiency of the API development and integration processes, standard contracts for partners are being set up (ibid.). Further, standardization is not only found to matter on the partnership side, but also clients demand standards to engage through APIs (C2). Lastly, the incumbent describes developing a streamlined process to evaluate partnerships and avoid lengthy development times: *"We [SimCorp] baked it into the criteria for evaluation that we are not going to engage in something unless we can actually see that we might be able to build the API over the next twelve months"*. On the incumbent side, this helps the company in the prioritization process of internal resources. On the partner side, in combination with the standard contracts, it serves as a tool for expectation management and to reduce the partners' frustration regarding long development periods: *"for that reason [...] there is no commitment in the contracts, just attempt"* (SC2, 2020).

Corporate culture

The challenge of an incumbent's culture is fundamental to the success of the platform launch. Hence, a comprehensive corporate transformation strategy, including the creation of a shared feeling of responsibility for the new corporate strategy, efficient prioritization processes, and new success measurement methods, is found to be required.

C1 (2020) emphasizes that *"mental buy-in"* is demanded by the company, addressing the issue that the new strategic imperative has not been fully understood by the entire organization yet. In order to create shared responsibility and a feeling of co-ownership, the incumbent (SC2, 2020) is laying down a process to qualify partnerships with third-party service providers that allows anyone in the company to recommend potential partners. The process is structured lightweight to decrease the hurdles for their employees to take ownership and funnel partners into the platform ecosystem (ibid.). Furthermore, internal initiatives to promote the new strategy have been initiated. *"Fostering a specific mindset and a specific culture is definitely a way to enable this ecosystem embracement"* (SC1, 2020). Thereby, storytelling is found to be a critical element. One initiative, for example, described by the incumbent are morning sessions with industry experts who talk about the different strategic angels. Besides the informative character of the event, the ambition is to create excitement and a sense of contributing to a movement that matters. Furthermore, SC1 (2020) describes significant positive effects of external appraisal on the corporate mindset: *"There is nothing as it influential as other people telling about what they see in you, and then, of course, there is an exercise in making sure that all that vibe is internalized into the organization"*. Finally, in order to evaluate the success of the new strategy correctly, the concern was raised that new success measurement systems are required that take the full scope and long-term results of the strategy into account.

5.2. Startup alliances

The following section analyzes the (5.2.1.) incentives, (5.2.2.) engagement models, (5.2.3.) opportunities, (5.2.4.) challenges, and (5.2.5.) mitigation strategies behind entering a startup collaboration from an incumbent's point of view when launching a multi-sided platform in the financial software industry.

5.2.1. Incentives to enter startup alliances

First, when analyzing the interviews, it becomes apparent that incumbents deliberately choose to enter startup alliances to explore their potential and opportunities while further establishing a reputation for being innovative and disruptive. As SC2 (2020) reveals: *"There are some partners that I would like to sign up because [...] of the softer reasons*

for having a platform play. That is, if we [SimCorp] associate ourselves with more innovative firms, some of their innovative brand value will rub off on us as well, just through association. [...] There might be some that I think they look sexy, let us try and partner with them [...] because then we can talk about it and we can do joint events and see if it is going to look nice". This quote illustrates the incumbent's motivation to use alliances in order to work on their image to the outside world and push the organization in a new direction. This proposition is being underlined by CPH FinTech (2020), stating that *"most of the incumbents are fully aware that they need to be innovative in order to stay ahead of competition also in the future"*.

SC2 (2020) further elaborates on the expected reputational benefits concerning talent attraction: *"It is hard to attract talent, to begin with, and when potential future colleagues face the choice between a corporate, like SimCorp, or a sexy startup they may pick the latter. Working with the fintech startup scene [...] allows us to break down that barrier"*. As a result, the incumbent is engaging with several startups and hubs around the world, which tends to be London, New York, and Zurich, all in which it holds corporate offices. The observation regarding talent attraction and employer branding is further supported by PWC (2020), which has investigated the workforce development in the industry, shifting from established firms to entrepreneurial ventures: *"Ten years ago [...], all the smartest minds coming from schools went to [...] the big corporations. Nowadays, you see the most talented people, a lot of them, move into [...] startups, or start their own company. They want to [...] make some true difference, not just working in a big system. Incumbents are becoming to see this, and they realize that [...] they need to talk to startups in order to access the brightest minds"*.

5.2.2. Corporate engagement models

As described in section 3.3.2., several engagement models are being applied in practice to build the bridge between corporations and startups. While the theoretical foundation emphasizes platform startup programs as a suitable engagement model to adopt when launching a platform as an incumbent, the analysis has shown that this is not fundamentally the case. In fact, it is found that a combination of corporate venturing and platform startup programs is regarded as the most suitable engagement model in platform

launches in the financial software industry. More precisely, the equity nature of corporate venturing is observed to be the key driver in this finding. The following section will, therefore, analyze (1) the equity nature and (2) the selection and attraction of startups in light of corporate engagement models.

Equity nature

Non-equity models imply fewer organizational costs and allow for higher speed and agility to keep pace with a dynamic and potentially disruptive environment, however, given the risk-averse and conservative characteristic of the financial software industry, equity investments are regarded as a potential approach of the incumbent on how to collaborate: *"So if we [SimCorp] really believe in a particular startup, then we may also take a stake. Equity is an option"* (SC2, 2020). Especially looking at early-stage startups, the incumbent sees a greater need to take ownership in order to support and assist: *"If they are very early stage, like they have not got a management team, then it would be great if we have the corporate venturing set up so we can actually go in and help them"* (SC2, 2020).

Other interviewees stress the importance of equity participation in order to collaborate effectively because of the joint responsibility to perform and deliver: *"Definitely most successful would be the strategic partnerships where the incumbents also invest in the startups […] because it forces both sides to think really long-term in regards of what they do. […] Both sides must take everything serious and force execution"* (CPH FinTech, 2020). PWC (2020), as well, considers equity stakes in the form of venture capital as a suitable solution to engage with startups: *"It is very significant […] that they [incumbents] have an equity stake in the company [startup]. The startup can still work and be autonomous […] but now suddenly the incumbent has more of an incentive to help the startup out, because they will win themselves if the startup does good. […] Venture capital is a very effective way to get these [collaborations] out there. This has been proven over and over now"*.

S3 (2020) claims that, from a startup perspective, equity involvement is also a preferred mode of collaboration when engaging on a platform due to the increased attention and

efforts, ensuring a higher commitment from the incumbent side: *"I would be more excited about equity deals because ultimately, they [incumbents] are investing in your company. They are investing in your success, so you probably know it can work"*. C1 (2020) was observed to be in favor of equity partnerships, not least because of the risk mitigation this mode implies considering the responsibility the incumbent is bearing in offering clients startup solutions: *"There is definitely a risk if they are not close enough. […] I think there is a strategic consideration from SimCorp whether they need to have an equity share of those companies being part of the ecosystem or not. I think that would be […] one way of mitigating some risks also for us as users of the ecosystem - to know that SimCorp is more committed when they have actually invested in the company to make it fly and invest in its future development"*.

Selection and attraction

When it comes to selecting startups for the platform in the launch, the incumbent has certain ideas and requests for rules, given the complexity of the industry: *"We [SimCorp] do not want anybody who is competing with core topics like IBOR [SimCorp solution]. The ones we would like to have are a combination of […] a specific functionality and […] where we think this is an area that is changing, the market is moving our functionality that also interests our products. And by getting these partners in, we can start learning from that"* (SC2, 2020). SC1 (2020) complements the selection strategy: *"Our [SimCorp's] ambition […] on how we want to grow this platform, and we do not want to spread it out all over the place, is to say this is a relevant area and then we build it up […] from here. That is what will set the boundaries or define whom we will engage with first"*. In line with the proprietary nature of the platform, discussed in section 5.1.3., the incumbent seeks to be in control over who joins the platform, particularly in the launch phase, in order to influence its direction and coordination.

Regarding attraction, the incumbent does not necessarily see difficulties or obstacles associated with luring suitable partners onto the platform, given its *"established name globally"*, which consequently results in *"requests"* from the startup community. *"I think our customer base is a leverage point because we have access to users and customers that you do not just get access to. Indirectly, we thereby also have access to […] loads of*

money" (SC1, 2020). This assumption is further supported by the interviewed startups, which unanimously clearly and explicitly agree to this point: *"Obviously, […] being a businessman, the number one thing that is going to attract me is the ability to make money"* (S2, 2020); *"But ultimately, we are not as interested in the brand or the company itself. It is really what is […] the upside for us?"* (S3, 2020); *"So it is really about the scale […] and what the upside of the opportunity is for us"* (S1, 2020). In line with this, CPH FinTech (2020) elaborates on the opportunities, startups see in platforms provided by incumbents: *"Basically they [incumbents] are customers for them [startups]. […] It is a distribution channel"*. Furthermore, it was found that startups are attracted to incumbent-provided platforms due to the potential negative consequences if they opt against a collaboration: *"It is hard to be a startup in today's world if you don't work with the big incumbents because they just have so much power, they can crush you if they want to. They can copy your product […] and might steal it if you don't work with them"* (PWC, 2020).

5.2.3. Opportunities of startup alliances in platform launches

Guided by the theoretical framework of this thesis, the following section analyzes the opportunities incumbents seek in entering alliances with startups. Resulting from the anticipated engagement model, (1) speed and agility and (2) lower costs are found not to be leveraged, while (3) scale and standardization, (4) faster innovation and product building, (5) startup mentality and attitude as well as (6) financial upside are found to be relevant.

Speed and agility

The thorough and stringent selection process of startups joining the platform, as well as the incumbent's considerations of acquisition, are standing in opposition with the opportunity of speed and agility. In theory, speed and agility emerge from a collective of startup members on a platform in order to quickly respond to market developments and offer a greater variety of software solutions to the customers. The incumbent, however, follows a slow and gradual onboarding of partners, as described by SC1 (2020): *"We [SimCorp] will not have ten partnerships at the end of the year, I do not think there will be […] more than five on the platform"*. The envisioned approach by the incumbent

indicates that speed and agility are neither a top priority nor an opportunity they anticipate leveraging in the launch phase. Despite the fact that the incumbent seeks to onboard 70 startups by 2025 (SimCorp, 2020a), the respective opportunity is diminished by the above addressed time-consuming screening and selection process of startups in the early stage of the platform. Consequently, it can be derived that the incumbent focuses rather on quality and security over speed and agility.

Lower costs

Given the incumbent's consideration and anticipation to take ownership of selected startups, lower costs are not found to be an opportunity, which incumbents can leverage when entering alliances with startups via a platform. As SC2 (2020) describes: *"I think the reason why some of us talk about startups is that there is an investment play […], which of course, is a different angle. It is a way of creating a portfolio of bets, out of which, hopefully, some will pan out well".* The capital investments required to engage in these corporate venturing setups, as well as the thorough screening required to evaluate potential acquisition targets, imply a monetary commitment from the incumbent side (SC2, 2020). Furthermore, it is found that, especially in the financial software industry, the careful curation of third-party service providers on a platform of limited openness is considered extremely time consuming and thus entail indirect costs in the form of corporate resources such as manpower (S3, 2020). This statement is further underlined by SC2 (2020) when describing previous engagement attempts for the platform: "*We talked to some startups for years without actually getting anything done*".

Scale and standardization

Platform startup programs are characterized by their underlying potential to scale and standardize given the simplified governance process that, ultimately, allows the incumbent to move faster in working with startups. Even though scale and standardization results from platform programs, typically not entailing equity, the incumbent seeks to leverage the respective opportunity in engaging with startups irrespective of taking ownership or not. SC2 (2020) explains that it is vital to the incumbent to standardize the process of integrating and onboarding startups onto the platform in order to scale operations in the long-term. The incumbent's endeavors to scale and standardize its

operations are twofold: First, by incorporating a standardized juridical process and second, by ensuring a smooth technical integration. Therefore, *"relatively lightweight"* (SC2, 2020) standard contracts are drafted by the incumbent that will be handed to every startup wanting to join the platform so that no special attention or adaptation is required in the juridical process. Eliminating the option of 'redlining' further enhances an efficient contract conclusion, as no contractual negotiations are considered. Furthermore, the standardized API development from the incumbent side seeks to integrate startups in a fast and efficient manner over the course of time, which, in turn, *"strengthens our [SimCorp's] ability through APIs to become easier to plug into"* (SC1, 2020).

Faster innovation and product building

Throughout the interviews, it became evident that incumbents predominantly enter alliances in order to access innovative product solutions while simultaneously being able to bring them to the market in a faster manner. In contrast to the inapplicable opportunity of speed and agility, which shifts the corporate's market position through the mass of startups engaged, faster time to market is described as the opportunity to launch new solutions and features more quickly than they are today through selected startups. Especially when launching a platform, incumbents try to access and acquire complementary knowledge to ultimately offer a broader range of solutions to not only existing but also potential clients. PWC (2020) comments on the motivations with: *"Startups [...] are able to embrace new technologies a lot faster than a lot of incumbents. They are able to move faster and innovate faster. What I have seen in the market in the past few years is that a lot of big companies want to take these big tech startups and implement their products into their own systems"*. Especially when observing the financial software industry, which is subject to heavy regulation and supervision, incumbents further intend to provide a bridge between high-tech startups and institutional asset managers: *"So if we [SimCorp] somehow could become the tech partner, who provides our customers a safe ground into all these new opportunities, then I think we could actually add a competitive advantage"* (SC1, 2020).

What is more, the interviews have shown that in diversifying their product portfolio and optimizing the usage of the platform, incumbents seek complementary product

knowledge in startups. PWC (2020) states that: *"If you want to build a platform where you do not have the knowledge yet, your own necessary knowledge and your own necessary abilities within the company to launch it yourself, it can be hugely beneficial to involve startups. [...] If the incumbent has the knowledge and the innovation capabilities within a company already, then why would they include startups in the process. I think it is entirely necessary if they do not have the knowledge themselves"*. The interviewed expert at CPH FinTech (2020), responsible for ecosystem-enabled innovation, further comments on incumbents' expectations with: *"Of course it is to be innovative within product building. [...] If they [incumbents] want to start working with startups instead of building something internally, it is because it is easier for startups to set up new products in a smoother way. If you have a well-functioning startup, they will be able to execute faster on building the product than the company would be if they wanted to build it internally themselves"*.

Following the previous statements, C1 (2020) further underlines the expected long-term gains while stressing the relevance of the tradeoffs coming with being an eco-enabling sparring partner: *"That means they [SimCorp] have to deliver on it and accept that they are not offering everything to everyone as they are now and accept that, which means that you need to open up for other players [startups] in areas of the asset management value chain that they [SimCorp] have been servicing into in the past and now to admit that they are only servicing part of that. [...] That is challenging for an incumbent like SimCorp. On the other hand, if they succeed, I think that they can leverage their stronghold for many other customers that they do not have as of now. To utilize the strength to get more customers onto that [platform] and then keep away some of the areas where they have some weak spots can make the cosmos shine in that regard"*.

Startup mentality and attitude

Another opportunity incumbents seize in entering startup alliances is to influence their organizational culture and mentality by becoming more dynamic, flexible, and responsive to new challenges. *"We [SimCorp] have the muscles of a corporate and the heartbeat of a startup if we get there [successful startup alliances]"* (SC1, 2020). This statement shows that incumbents aim to access the strong attributes of startups, such as speed and

efficiency, while simultaneously leveraging their corporate advantages. Building on this, PWC (2020) addresses a startup attitude as one of the main things incumbents seek to gain in collaborations: *"I think it is the attitude of startups. It is quite different from the attitudes that you get in a lot of corporations, especially their way to properly innovate. […] Access to speed and efficiency […] could really, really help the incumbent grow and do better in their market. […] People in incumbents […] start doing their tasks and stop thinking creatively. I know from my own eyes in Revolut [startup] everybody in the company, even the people that don't work within innovation, are thinking innovation. […] I don't think there is a lot of incumbent companies where you get this mindset. Companies can utilize this by collaborating with them"*. In line with the incentives of entering alliances, described in 5.2.1., incumbents pursue alliances to associate themselves as more innovative and attractive for branding not only within the industry (SC2, 2020) but also from an employer branding perspective (PWC, 2020).

Financial upside

Lastly, although only mentioned sporadically in the interviews, incumbents seek the financial gains that startup collaborations promise on the platform in the long-term. The aforementioned intentions of entering a partnership with a young venture can ultimately result in the capitalization of knowledge, product solutions, and innovativeness and hence positively affect the appropriability of the platform. As described by CPH FinTech (2020): *"They [startups] are building products that will enable them [incumbents] to have that competitive edge in some way that will then, in the long-term, have financial upside"*. Although the incumbent has been working on a revenue model, it is not yet finalized. Nevertheless, SC2 (2020) explains that the incumbent is deliberately targeting fast-growing startups hence underlining clear intentions to capitalize on the collaborations. Startups in the growth and expansion phase typically concentrate on distribution and market penetration rather than on profit maximization, which, in turn, benefits the incumbent's revenue share: *"Most startups that we [SimCorp] are interested in or that we meet are truly startups in the sense that they are set up for growth. And growth is great because that means they don't really care about profitability, which comes back to revenue share. […] Revenue share can range anywhere from maybe 15 percent and up to maybe 60 percent"*. What is more, the incumbent anticipates financial upside by

investing in early-stage ventures and scaleups to ultimately create *"startups on the cheap"* and a "*portfolio of bets, out of which, hopefully, some will pan out well"* (SC2, 2020), emphasizing their ambition to generate returns on investment in the long-term.

5.2.4. Challenges of startup alliances in platform launches

In alignment with the theoretical framework, the following challenges are found to remain the same: (1) organizational discrepancy, (2) power imbalances, and (3) the integration with the startup ecosystem. However, one new challenge, specifically relevant for incumbents operating in the financial service industry, emerged: (4) risk and regulation.

Organizational discrepancy

In examining the interviews, 'organizational discrepancy' was found to be the most profound challenge incumbents encounter when collaborating with startups. Particularly the quick decision making of startups versus the need for internal alignment of incumbents, hence organizational pace was found to be significant from both sides. The incumbent foresees organizational discrepancy when collaborating and admits its corporate inertia, as SC2 (2020) states: *"Our [SimCorp's] way of prioritizing work internally is extremely slow. We run agile processes, but it does not mean that we are particularly fast when it comes down to being able to do something. This is both a consequence of the way we work and a consequence of just the amount of backlog work that we have got. So that is probably the biggest issue"*. In line with this, PWC (2020) is highlighting the fact that incumbents like to portray themselves as agile, while ultimately this not being the case: *"Usually, if you work with a big company, it would be way slower and a lot more bureaucracy. If it is an agile company, like most startups, you know you can make decisions right there and that is because the individual teams have more power. But if it is a big company, they are not truly agile - a lot of big companies say they are agile, but they are not"* (PWC, 2020).

S3 (2020) recognizes the delays caused by this clash in cultures and elaborates on how startups usually find themselves in bureaucratic processes when requiring quick execution: *"Bureaucratic organizational politics is one thing you got to be really careful of, so with whom are you doing the deal with and do they have this way to make it*

successful […] I think that is the main thing I would be careful of". S1 (2020) touches upon the different nature of both organizations and how difficult it is to establish a mutual and interactive way of working: *"The biggest challenges are always going to be fundamentally around ways of working and managing two players against each other, particularly with an incumbent if they come from a very successful big corporate background. There is always going to be that sort of friction […] in terms of how you first begin to work together"*. Lastly, SC1 (2020) further points out the potential differences in quality perception and standards, deriving from the startups' lack of or low experience within the financial software industry: *"They [startups] are not focused enough on quality"*. Discrepancies in quality assessments and management can thus cause friction and frustration from both sides, putting the alliance to the test (ibid.).

Power imbalances

Power imbalances resulting from asymmetrical relations are found to be considered a vital challenge in alliances between organizations of different sizes and authorities. In response to difficulties in startup collaborations, PWC (2020) *"was thinking the first thing that popped into my head is the power structure"* and is comparing unproven startups entering alliances with incumbents as a little fish in a big pond, making it extremely hard for entrepreneurial ventures to advocate for and prove themselves. S2 (2020) is experiencing power imbalances *"in every single relationship"*, underlining the strong position incumbents usually enjoy and how little compassion they have towards less influential startups when collaborating: *"Do you think [a large incumbent] really cares very much about my needs? No – they have got their model, and it is, take it or leave it"*. S1 (2020) stresses that startups partnering up with incumbents are bringing new ideas and exciting momentum to the alliance only to be confronted with historical ego and alleged legacy, making it hard to *"balance history versus innovation"*.

SC2 (2020) is aware of the concern startups raise regarding imbalances in a collaboration, claiming that *"it is our platform and we create a contract that gives us some liberties that are, in principle, unfair"*. Especially when it comes to the allocation of revenue generated on the platform, SC2 (2020) assumes that *"some partners will probably feel that we [SimCorp] […] are taking too much revenue share for what they get"*. In contrast to that

point of view, S1 (2020) is of the opinion that, throughout the last years, power relations are experiencing a shift and that startups in the financial sector with more funding are gaining in influence and power in the industry: *"It is important as an incumbent not to lean back and say, we are the one with the power. If you […] look at the advanced startup community around the globe, then I would actually say they almost all have the power because they have the future mind, and we have more and more examples of old companies that are going out of business"*.

Integration with the startup ecosystem

Following the theoretical framework, it was found that a proper integration with the startup ecosystem from the incumbent side poses a crucial challenge in order to collaborate successfully on a platform. The interviews show that startups particularly value the resource allocation from the incumbent side regarding technical assistance and integration. S3 (2020) stresses that when analyzing business opportunities with incumbents, the evaluation of costs and efforts of the integration is determining the future of the alliance and is emphasizing that *"they [incumbents] have to make it easy for you to integrate with them"*. SC2 (2020) refers to the technical integration and especially the timing of it as one of the most significant elements in the quest for connecting with the startup ecosystem effectively. Given its 25-year-old system, the incumbent's technology *"is functioning rich, but it is not built the way you build a system today"*. Especially looking at the API integration, SC2 (2020) sees difficulties in delivery: *"We can have all these very promising wonderful discussions and processes with a startup that may all come to a grinding halt because we cannot develop the API for another 15 months"*. SC1 (2020) agrees and underlines that in order to onboard startups adequately, the incumbent needs to *"strengthen [its] ability through APIs to become easier to plug in to"*.

Risk and regulation

Throughout the interview process, the challenge of risk and regulation in the financial software industry is found to be another critical challenge to consider when entering alliances with young ventures. Interviewees emphasize that the industry is not only subject to stringent regulations but to very conservative and risk-averse clients, which could negatively affect the collaboration with startups and customers making use of

respective solutions on the platform: *"In terms of […] risk and regulation I think it is a huge challenge for startups, especially in finance"* (PWC, 2020). Although C2.1 (2020) seems to be interested in startup products, they are too much focused on the security aspect of solutions and do not have the necessary confidence towards startups: *"We are very interested [in startup solutions] but the security angle of the firm ruins almost every initiative […] so the tradeoff you see to security has been outrageous. You would rather sacrifice on flexibility, on real-time, on everything in order to be the most secure system we think"* (C2.1, 2020).

What is more, incumbents in the industry need to be aware of consequences when security is violated via a startup solution offered on the platform, as it can imply enormous reputational damages: *"If the startup does something wrong and they have a collaboration with an incumbent then the incumbent did something wrong as well. […] This could kill an old company; huge companies could be killed by this"* (PWC, 2020). This statement is further supported by C2.1 (2020): *"When it comes to security, ultimately, for a bank like us, it is the number one most important factor. I mean, […] if our client data was compromised, or clients' accounts were hacked, it would be a major reputational hit"*. Many incumbents in the industry, therefore, decide against collaborating with startups and thus forego the before-mentioned opportunities and benefits startup alliances comprise: *"I know a lot of the big incumbents want to collaborate with startups, but they will not just because of the whole risk side of it. They say we will rather do this ourselves, yes slower, maybe we will not earn as much or maybe will not do as well in this part of the market, but we cannot take the risk […] if we do not have full control"* (PWC, 2020).

5.2.5. Mitigation strategies

The following section summarizes findings on mitigation strategies incumbents can apply to respond to (1) organizational discrepancy, (2) power imbalances, (3) integration with the startup ecosystem, and (4) risk and regulation.

Organizational discrepancy

In combating organizational discrepancy, it was found that the deployment of intermediaries, 'committed champions', between incumbents and startups is seen as a

useful and effective strategy to overcome the challenge. Intermediaries present individuals, hired by the incumbent, that play a decisive role in building trust, developing effective communication channels, and enable joint execution and, thus, bridge both alliance partners. In support of this, PWC (2020) explains that startups require someone on the incumbent side who is responsible for the official cooperation and adds that *"it is important to have a very stringent display of who is responsible for what and who is responsible for this collaboration"*. CPH FinTech (2020) is in support of someone responsible for building the relationship across both organizations and highlights the necessity of it: *"It is difficult to do […] the work yourself and that is why you have middlemen that will help you establish relationships"*.

In managing and coordinating the alliances, the incumbent decided to hire a *"Head of Partnerships"* (SC1, 2020), a director-level position, who will *"earn all these relationships"* and will be responsible for the qualification of startups and relationship management between both organizations, aiming to reduce any potentially upcoming discrepancies. Besides initiating the alliances, the Head of Partnerships will also be responsible for several onboarding measures (ibid.). Nevertheless, the incumbent clearly states that it wants to avoid the creation of a bottleneck when anchoring the entire communication and startup counseling around one single person and encourages the organization as a whole to engage and participate in the process in order to build a robust ecosystem. Therefore, the incumbent is in the process of laying down a procedure for employees to qualify partnerships and ultimately take ownership of the alliance in preventing the occurrence of a parallel organization: *"If you truly want to build this ecosystem, I think the quality of the ecosystem will also very much depend on the ability of the core part of the company to engage and play the […] plug-in groups [startups], as well as the plug-ins, should have the best opportunities possible to play with [SimCorp's core product]"* (SC1, 2020).

The analysis further shows that partner-specific investments are less addressed by both the incumbent and startups to overcome organizational discrepancy. Nevertheless, the incumbent offers additional fee-based onboarding services to startups, which *"come with additional five percent extra revenue share that we have for us [SimCorp]"* (SC2, 2020).

According to SC2 (2020), numerous startups have shown interest in these services *"because they [startups] do believe they get more value"*. From the interviewed startup side, however, no statements are made concerning such, or other partner-specific investments as stakeholder management is found to be of higher relevance.

Power imbalances

As previously mentioned, power imbalances are a commonly experienced problem in alliances and pose a significant threat to the relationship between an incumbent and a startup. Nevertheless, not much attention has been paid to potential mitigation strategies or ways to overcome the respective challenge. Solely the incumbent uses or anticipates using juridical measures, such as standard contracts, to avoid the occurrence of imbalanced relationships in the alliances. Standard contracts are employed to hedge against uncertainties or obscurities arising from both sides and to set boundaries as well as expectations from the beginning (SC2, 2020). Standard contracts are drafted by the incumbent, aiming to treat all startups equally with the same rights and liabilities: *"We [SimCorp] have almost finished the standard contracts. And that is something we have never had in SimCorp before. We will meet with a prospective partner […], plan the integration, and give them the contract - if you want to be on our platform, this is our contract"*. What is more, SC2 (2020) aims to keep the contract relatively lightweight to avoid overly complicated procedures and unnecessary requirements for both, the incumbent but also for the startups and *"seeks to find the appropriate balance between the needs of SimCorp, […] customers and other partners [startups]"*. Among others, the alliance contract covers the revenue distribution and period of notice (ibid.).

Integration with the startup ecosystem

In accordance with the technical challenges, analyzed in 5.1.3., the technical integration with the startup ecosystem is found to be mitigated in the same manner as disclosed in 5.1.4, namely through a step-by-step approach to opening the platform and by focusing on developing APIs for one software element at a time. By demonstrating the willingness to adequately connect and enable an efficient technical workflow, a successful engagement with the startup community can be achieved. Building on this, the incumbent must identify and efficiently communicate, which resources they can allocate, and how

these facilitate the integration. Lastly, in order to maintain a reliable reputation, incumbents must ensure to deliver on their support function, by, for instance, incorporating the anticipated integration initiatives in the standard contracts.

Risk and regulation

In response to the risk and regulatory issues startups in the financial service industry might bring onto the incumbent's platform, a proper risk and security assessment was found to be an appropriate mitigation measure to adopt by incumbents before entering an alliance. In order to properly evaluate the risk and get an unbiased and comprehensive opinion, PWC (2020) argues that a third party, such as a consulting company or audit, should execute due diligence and *"look through the potential collaboration partner before going into collaboration"*. According to C2.1 (2020), the risk assessment should cover, among others, issues relating to server capacities and security, data storage and processing, security track records, and breaches.

Another risk management strategy proposed by PWC (2020) implies to initially start collaborating with a small number of startups on the platform before scaling up over time: *"Start testing with one startup, and then move forward […] once you have had more experience with it"*. This approach allows the incumbent to gradually onboard young ventures and gain the required knowledge on how to ensure a regulatory and compliant integration properly (ibid.). In line with this, the incumbent envisions to adopt an iterative approach when onboarding startups to guarantee a sophisticated standard of solutions to the customers: *"We [SimCorp] will not have ten partnerships at the end of the year, I do not think there will be […] more than five on the platform"* (SC1, 2020). What is more, the incumbent seeks to integrate startups of one particular area - *"niche areas"* - of its product portfolio, build an ecosystem around this area, and successively move to another product line (SC1, 2020).

5.3. Analyzed findings

The analysis has revealed practical insights into the theoretical framework, which led to confirmed, inapplicable and new findings, as shown in table 11. The following discussion will further elaborate on the analyzed findings regarding (6.1.1.) incumbency and (6.1.2.) startup alliances in platform launches.

Analyzed framework of the research

Launches of open platforms in the financial software industry		
	Opportunities	**Challenges**

Incumbency	• ✓ Network externalities
	• ✗ Low marginal costs
	• ✓ Firm-level specific opportunities
	  ◦ ✳ Knowledge background and experience
	  ◦ ✳ Existing customer base
	  ◦ ✳ Brand recognition
		• ✗ Market entry timing
		• ✓ Openness of the platform
		• ✗ Chicken and egg problem
		• ✓ Monetizing network effects
		• ✗ Multihoming
		• ✓ Firm-level specific challenges
		  ◦ ✳ Technical challenges
		  ◦ ✳ Corporate culture

Research focus	**Platform launch strategies**	
Startup alliances	• ✗ Speed and agility • ✓ Scale and standardization • ✗ Lower costs • ✳ Faster innovation and product building • ✳ Startup mentality and attitude • ✳ Financial upside	• ✓ Organizational discrepancy • ✓ Power imbalances • ✓ Integration with the startup ecosystem • ✳ Risk and regulation
	Mitigation strategies • ✓ Contractual agreements • ✓ Committed champions • ✗ Partner-specific investments • ✳ Risk and regulation management • ✳ Technical integration with the startup ecosystem	

✓ confirmed, ✗ inapplicable, ✳ new finding

Table 11: Analyzed framework of the research

6. DISCUSSION

The first part of the chapter focuses on the (6.1.) discussion of analyzed findings in light of the theoretical framework. Following, the trade-off between security and scalability, the (6.2.) scaling dilemma, which emerged in the analysis, is discussed and elucidated. The second part of the chapter leverages the findings and discussion of this research in order to provide (6.3.) managerial implications for incumbents operating in the financial software industry and (6.4.) contribute with novel insights to the platform launch literature.

6.1. Discussion of analyzed findings

The analyzed framework portrayed in section 5.3. reveals the confirmed and inapplicable variables as well as new findings in light of (6.1.1) incumbency in platform launches and (6.1.2.) startup alliances.

6.1.1. Incumbency in platform launches

Confirmed variables

In general, the establishment of 'network externalities' is found to be the decisive opportunity in platform launches, given its competitive advantage through tying both user sides to the platform, which can ultimately result in rapid scaling and high switching costs. Especially in combination with the existing 'firm-level specific opportunities', which are further elaborated on in new findings, incumbents can leverage upon them significantly. Regarding this finding, it is, however, noteworthy that an existing customer base can only be leveraged under the assumption that incumbents launch platforms based on their core product offering or a complimentary service that targets the same user base. In light of the challenges, 'monetization' remains crucial as the price sensitivity of both sides, clients and third-party providers, needs to be carefully balanced in determining an efficient pricing model for the platform. Nevertheless, it is found that the inapplicability of the 'chicken and egg problem', resulting from the uneven dependence between the

existing client base and service providers, weakens the impact of the monetization challenge. Lastly, the decision regarding the 'openness of a platform' is further confirmed to pose a challenge to platform providers through the necessity of weighing off capturing economic value versus stimulating platform growth. Particularly the complexity and the regulatory nature of the financial software industry emphasize thorough attention regarding the openness of the platform. Providing a wide range of complementary services is analyzed to stand in opposition to ensuring a certain degree of quality. Given its severity, the trade-off between security and openness is discussed in further detail in 6.2.

Inapplicable variables

Interestingly, the most defining challenge of multi-sided platforms, namely the 'chicken and egg problem', is proven inapplicable to incumbency in the course of the analysis, as incumbent firms, in general, have already attracted a user base one side of the platform. The firm-level opportunity 'existing customer base' is addressed as a new finding below. It is noteworthy, however, that this variable is only inapplicable on the premise that the existing user base depicts a side of the launched platform. 'Low marginal costs' are not found to be opportunities financial software incumbents can leverage in launching platforms, given their underlying legacy systems. The transformation of on-premise systems to platform systems requires substantial interface integration as well as adaption efforts and hence costs. What is more, third-party systems need to be integrated that further entail monetary and human resource investments. Even though 'multihoming' is considered as a viable option by startups in offering their solutions elsewhere, the incumbent perceives the threat as insignificant and thus an inapplicable challenge. In fact, the incumbent is confident in being able to turn multihoming into a chance to win over customers from competitive platforms. Moreover, findings indicate that 'market entry timing' does not pose a challenge for incumbents, resulting from firm-level specific opportunities since both the role of the first-mover as well as fast- or late followers can be leveraged from an incumbent's side. While, as a first-mover, incumbents can benefit from attracting users more quickly, they can build upon competitors' learnings or ultimately acquire them in the position of fast- or late followers.

New findings

Given the lack of existing research on the role of incumbents, particularity 'firm-level specific opportunities and challenges' are emphasized in the analysis. On the opportunity side, the 'existing customer base' diminishes the most fundamental challenge of multi-sided platforms, namely the 'chicken and egg problem'. While new market entrants with an initially empty platform attempt to attract user sides that are dependent on the presence of each other, the established customer base of incumbents lowers the barriers to attract the opposite platform side significantly. In addition, incumbents are equipped with competitive advantages over new market entrants in terms of 'knowledge background and experience'. Tacit knowledge is considered one of the most valuable resources incumbents possess, resulting from the collective know-how, techniques, processes and market expertise. Especially in the financial software industry, experience in regulations and compliance matters substantially. Moreover, 'brand recognition' emerges as another firm-level specific opportunity as a stable market position and legacy positively influences incumbents' ability to attract platform players, especially third-party providers, in a more effective manner. On the one hand, the incumbents' prominence in the industry facilitates the communication regarding the new strategic endeavor, on the other hand, third parties aim to seize the opportunity of being associated with the quality of the incumbent. On the challenges side, the existence of legacy systems emerges to pose 'technical challenges' in the development of the platform, which is in accordance with the above-discussed costs of integration. Lastly, the transformational process implied in a shift to a platform business model is accompanied by the need for the incumbent to redefine itself. Thereby, the 'corporate culture' and established structures of an incumbent can lead to organizational inertia, resulting in a reluctance to change and slow internal processes.

6.1.2. Startup alliances

Confirmed variables

The opportunity to 'scale and standardize' operations in engaging with startups is found to be applicable when launching platforms. Irrespective of equity involvement or not, the underlining objective of incumbents remains to stimulate platform and ecosystem growth

by incorporating processes that allow for efficient and straightforward integration and onboarding of startups. All challenges associated with startup alliances, namely 'organizational discrepancy', 'power imbalances', and 'integration with the startup ecosystem', are further confirmed in the analysis, thereby emphasizing the difficulty in facilitating collaboration between firms of different organizational characteristics and sizes. 'Organizational discrepancy' poses one of the most severe threats to the success of alliances, given the fundamental differences in cultures, processes, and decision making. Power imbalances are perceived as harmful and threatening, especially by startups, and must, therefore, be counteracted by the incumbent accordingly to ensure a healthy working relationship. In regard to integrating with the startup ecosystem, startups value the fast execution of technical onboarding in order to operate on the platform in a timely manner. 'Contractual agreements' and 'committed champions' continue to be supportive in mitigating challenges, such as organizational discrepancy and imbalanced relationships. Contractual agreements facilitate the alignment of expectations and set boundaries and hence delaminate the collaboration. Committed champions are considered effective means in building a trustworthy relationship between incumbent and startup and support stakeholder management.

Inapplicable variables

Given the fact that the incumbent contemplates corporate venturing, the opportunities of 'speed and agility', as well as 'lower costs', are consequently no longer applicable. The gradual and restrictive approach the incumbent anticipates in amassing startups on the platform stands in stark contrast with speed and agility that results from a multitude of startups on a platform. Regarding lower costs, capital investments, arising from corporate venturing, and thorough as well as time-consuming due diligence processes can require substantial monetary commitment. Moreover, general screening processes required by the limited openness of the platform, which seeks to mitigate security breaches, are further costs intensive and hence cannot result in lower costs. Non-equity 'partner-specific investments' are barely addressed in the interviews and are not considered relevant in mitigation challenges and hence are not adopted in the analyzed framework.

New findings

'Faster innovation and product building' and thus product portfolio enhancement surfaces as a key opportunity in entering alliances from the incumbent side, especially in the fast-evolving financial services industry. Incumbents seek to leverage the higher degree of novelty seen in startup solutions and the broad range of complementary products in order to expand the platform. Furthermore, 'startup mentality and attitude' are seen as an opportunity to insource a dynamic stance to learn from agile processes and thus maintain a competitive edge. Furthermore, it is found that, in the long-term, incumbents anticipate realizing 'financial upside' by entering alliances. On the one side, incumbents' underlying ambition is to generate revenue shares through startup services distributed via the platform. On the other side, by investing in high-growth potential scaleups, financial upside also refers to investment returns and value appreciation of acquired ventures. Particularly in financial software, 'risk and regulation' emerges as a fundamental challenge to alliances with young ventures in maintaining quality standards and offering compliant solutions to the risk-averse client base. Therefore, an adequate risk assessment is found to be inevitable in the establishment of alliances. As mentioned in 6.1.1., this variable is further touched upon in the following subsection. Lastly, the naturally different technical set-up of the incumbent and the need to onboard startups quickly require a proper 'technical integration with the startup ecosystem'. This can be achieved by introducing a step-by-step approach to opening the platform and successively focusing on the development of APIs.

6.2. The scaling dilemma: openness versus security

Multi-sided platforms, in general, distinguish between proprietary control and open source, leaving the question to the platform provider whether access restriction should be incorporated or not. As pointed out in section 3.2.3., West (2003) argues that the fundamental challenge regarding the openness of a platform derives from the tension between appropriability and adoption, hence, generating profit from the innovation while stimulating platform growth. While a fully open platform allows for rapid scaling, proprietary control limits the number of third-party providers and thereby the growth of

an ecosystem. As mentioned throughout the analysis, the specific nature of the financial software industry, namely high risk aversion and regulatory requirements, poses another strategic consideration regarding openness when launching a platform. To shed light on the trade-off between openness and security, the scaling dilemma is discussed by contrasting the implications of the extreme scenarios of a (1) fully proprietary scenario versus a (2) fully open platform scenario. Regardless of this, it is crucial to bear in mind that in practice, these extreme forms are rarely found (Chesbrough, Vanhaverbeke & West, 2014).

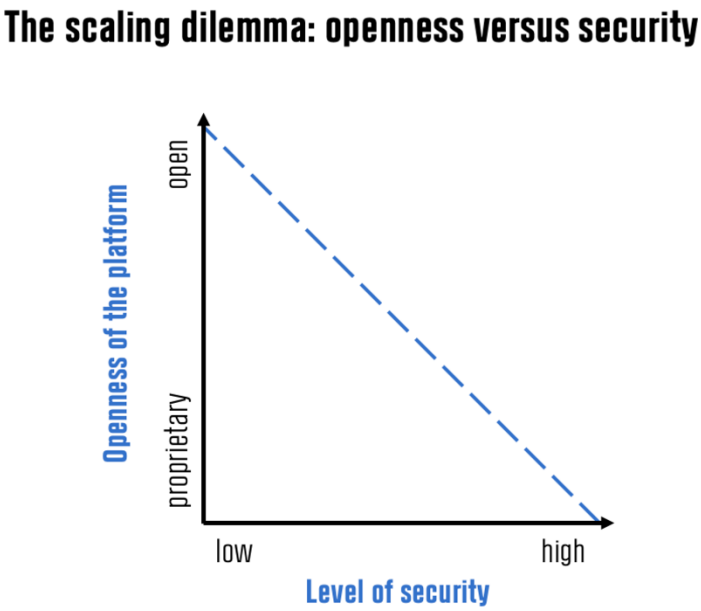


Figure 4: The scaling dilemma: openness versus control

Fully proprietary platform scenario

Full control over a platform enables the incumbent to conduct comprehensive screening and risk assessment of potential third-party providers in order to maintain high-quality standards in its product offerings. What is more, this approach may, despite an implied deadweight loss, reduce the competition among third-party providers on the platform, ultimately making it more desirable to join (Hagiu, 2006). SC1 (2020) explains the incumbents' ambition to position themselves as a bridge between customers and cutting-edge startup solutions. Furthermore, incumbents enhance the value proposition of their own software solutions by ensuring that solely complementary products are made available to the client base. This approach prevents non-compliant and regulatory

disputable startups and direct competitors from joining and jeopardizing the integrity of the platform. SC2 (2020) emphasizes: *"We do not want [the main competitor]. We do not want anybody who is competing"*. As a result, a fully proprietary platform can sustain a trustworthy and reliable reputation within the industry. On the contrary, the time-consuming evaluation and selection process negatively impacts the establishment of network effects and thus scaling of the platform. What is more, in keeping the platform compliant, the incumbent refrains from potentially lucrative solutions as well as the development of innovation capabilities. Lastly, although being a platform by definition, the perception of an intermediary might be doubted by the market. CPH FinTech (2020), for instance, argues that a platform should be made available to everyone and that it is the customers' responsibility to screen and evaluate.

Fully open platform scenario

A fully open approach can lead to rapid scaling of the platform and fostering of the ecosystem, given the fact that no boundaries hinder anyone from joining. Thereby, robust network effects are created that tie the users to the platform and establish switching costs. Consequently, the platform has the potential to become the dominant marketplace in the industry. Additionally, by allowing a diverse set of solution providers on the platform, the incumbent can enlarge its product portfolio and eventually tap into other fields or even sectors. Accordingly, startups are known as drivers of innovation and could thereby not only increase the number of services but also the degree of novelty: *"[Startups] embrace new technologies a lot faster than a lot of incumbents. They are able to move faster and innovate faster"* (PWC, 2020). As a result of a more extensive base of third-party providers, returns of revenue shares are likely to increase. At the same time, however, this approach entails a threat of envelopment as competition can join and leverage the customer base to lure them onto their own platform. Most importantly, however, full openness makes the platform vulnerable to security and regulatory breaches, which not only expose clients to considerable risk but also the incumbent. SC1 (2020) underlines the clients' implications: *"If the software breaks […] it can have big consequences for our customers money wise. That just makes the industry risk-averse"*. Resultantly, the incumbents must be vigilant as security scandals in the industry are of grave concern to software providers as *"huge companies could be killed by this"* (PWC, 2020).

6.3. Managerial implications

In examining the findings of the analysis, the presented opportunities and challenges are reflected upon holistically. Thereby, five strategic elements of platform launches in the financial software industry are derived to be relevant in leveraging the role of incumbents strengthened by startup alliances. In the following, these elements are discussed, and managerial implications are provided for (1) standardization, (2) step-by-step rollout, (3) organizational commitment, (4) equity involvement, and, lastly, (5) platform monetization. The adequate consideration and application of these strategic elements are determinant in the success of a launch and, ultimately, the long-term performance and prosperity of a multi-sided platform in the financial software industry.

Platform launch strategies for incumbents

Launches of open platforms in the financial software industry		
	Opportunities	**Challenges**

Incumbency	• Network externalities
	• Firm-level specific opportunities
	  ◦ Knowledge background and experience
	  ◦ Existing customer base
	  ◦ Brand recognition
		• Openness of the platform
		• Monetizing network effects
		• Firm-level specific challenges
		  ◦ Technical challenges
		  ◦ Corporate culture

Elements of platform launch strategies	**Standardization** **Step-by-step rollout** **Organizational commitment** **Equity involvement** **Platform monetization**	
Startup alliances	• Scale and standardization • Faster innovation and product building • Startup mentality and attitude • Financial upside	• Organizational discrepancy • Power imbalances • Integration with the startup ecosystem • Risk and regulation

Table 12: Platform launch strategies for incumbents

Standardization

Standardization is found to be crucial in long-term scaling aspirations of the platform, as with a growing ecosystem, the necessity of streamlined onboardings, integrations, and operations gain in importance. Therefore, three components, namely standardized evaluation processes for third parties, contractual agreements, and open API development, are essential to consider.

Evaluation processes for third party integrations must be employed in a standardized manner due to several reasons. First, as discussed in the scaling dilemma, risk and security are of the most significant concern in the financial software industry, resulting in the need to control the platform to some extent. In order to minimize the security trade-off, incumbents, therefore, are advised to streamline the evaluation process of potential service providers. The evaluation process should comprise, among others, a standardized checklist covering risk assessment in the areas of server capacities and security, data storage and processing, security track records, and breaches (C2.1, 2020). Secondly, a standardized evaluation process fosters the expansion of the partner ecosystem.

Contractual agreements with third-party providers are seen necessary in order to ensure an efficient juridical process and, thus, fast onboarding. Standardized contracts are anticipated to avoid 'redlining' with the counterpart (SC2, 2020), meaning that no back-and-forth negotiations can occur, in which details of the agreement are disputed. Respective contracts thus present the basis for simultaneous integration of various startups and hence long-term scaling given the minimal effort required. Contractual agreements are further considered to mitigate imbalanced relationships within alliances, however, the standardized contracts might be regarded as *"unfair"* by the startup side (SC2, 2020), given the absence of the possibility to amend the terms.

Lastly, from a technical perspective, the incumbent needs to standardize its API integrations to avoid protracted code development for each individual service provider. The upside of this is twofold: First, on the incumbent side, a streamlined process supports the coordination and prioritization of internal resources. Furthermore, potential

frustrations of both platform sides, clients, and third parties are met by this approach as more complementary solutions can be added in a timelier manner (SC2, 2020; C1, 2020).

Step-by-step rollout

In light of internal resource constraints, which incumbents may encounter in the launch phase in combination with the scaling dilemma, a step-by-step rollout is a recommended strategy, especially given the industry's characteristics. To counteract resource limitations and maintain high-quality standards on the platform, the incumbent needs to prioritize their focus areas in terms of software components as well as the curation of third-party providers.

Despite their resources in financial backing and human resources, incumbents can still face internal resource limitations in platform launches. In combination with security concerns, incumbents offering multiple software products are therefore advised to focus on a limited number of selected software components at a time and *"mushroom"* an ecosystem around respective areas *"and then build it from there"* (SC1, 2020). Employing an *"innovation collective"* (SC1, 2020), consisting of clients and industry experts, can support the selection process and creation of a roadmap for further rollout. Close collaboration with stakeholders allows the incumbent to identify customer needs and hence increase the adaption rate of complimentary services offered on the platform.

As a consequence, the same approach applies to the rollout of startups and other third-party providers, which should be integrated successively in accordance with the selected underlying focus areas. PWC (2020), as well, endorses a step-by-step rollout regarding partners as a measure of quality assurance: *"Start small […], and then it will become bigger"*. Even though the step-by-step approach decelerates scaling ambitions, it secures the compliant introduction of solutions and prevents the incumbent from any potential reputational damages caused by regulatory breaches or security scandals. In order to increase the adoption of plug-in services among risk-averse clients, incumbents thereby focus on their role as trust-builders and bridge between startups and customers. As a result, network effects among the platforms agents are established and strengthened, contributing to the long-term performance of the ecosystem.

Organizational commitment

In comparison to new market entrants, incumbents are challenged by a firm established organizational culture and *"historical ego"*, forcing them to *"redefine"* themselves when applying novel technologies and engaging with startups in platform launches (S1, 2020). To successfully adopt the platform business model and engage with the ecosystem in the medium- and long-term, internal initiatives such as change management and the recruitment of stakeholder managers, are advised.

Naturally, corporate transformation can lead to internal organizational resistance, which needs to be overcome with change management initiatives. This approach, in turn, implies to create a feeling of shared responsibility and *"mental buy-in"* (C1, 2020) among employees, which can be achieved by *"overall storytelling and self-perception of who [the incumbent is] as a company"*. Measures, for instance, entail internal and external communication and in-house awareness-raising events with industry experts. Additionally, to achieve a feeling of co-ownership, a lightweight process can integrate employees in funneling partners onto the platform. The creation of a dynamic mentality and attitude can further positively influence the incumbent's employer branding in its attempt to attract new talent.

What is more, committed champions, such as partnership managers, hired by the incumbent, can act as intermediaries to bridge the corporate and startup world, and thus create strong ties and relationships between them, thereby mitigating potential organizational discrepancies. In developing effective communication channels and trust among both alliance partners, the incumbent demonstrates organizational commitment and a *"stringent display of who is responsible"* (PWC, 2020) in onboarding and properly integrating startups into the corporate universe.

Equity involvement

Again, given the specific nature of the industry, taking ownership in startups joining the platform can be worth a strategic consideration from the incumbent side for three reasons, especially in the launch phase of the platform. First, it avoids waiving potentially lucrative

innovations, second, it counteracts clients' restraints in utilizing startup solutions, and lastly, it forces execution.

Startups are known to be drivers of new technologies and cutting-edge innovations, however, the early stage of their existence can often lead to lower experience in security precautions. In order to not miss out on innovative and high-potential solutions on the platform, which may ultimately generate large revenue shares, incumbents can, therefore, invest capital in the young ventures to influence compliance measures and assuring an adequate level of quality. This approach can help incumbents to increase the likelihood of ground-breaking innovations deriving from the marketplace and thus, not only strengthening the value proposition and disruptive reputation, but also the financial upside of the platform in the long run.

Risk-averse clients in the industry *"would rather sacrifice on flexibility, on real-time, on everything, in order to be the most secure system"* (C2.1, 2020). This statement depicts the customers' reluctancy to utilize startup solutions. Particularly in the launch phase of the platform, when the client base is not yet accustomed to the add-on services, equity involvement can serve as a trust-building measure. In taking equity in the startups, the incumbent demonstrates a firm belief in the offerings of the venture and vouches with its own reputation towards customers. While there are various ways for the incumbent to employ trust-building measures, equity can be considered the most evident and convincing. As a result, clients' confidence in the solutions, and hence their willingness to adopt them, can be increased.

Lastly, equity involvement raises the incumbent's level of commitment to joint responsibility to perform and deliver. On the one side, it allows the incumbent to assist and guide the venture with managerial expertise and resources: *"If they are very early stage like they have not got a management team, then it will be great if we have [...] the corporate venturing set up. We can actually go in and help them with that"* (SC2, 2020). One the other side, it secures the execution of high-quality product development and an adequate integration onto the platform. Resultantly, this approach ensures that standards

are set high from the very beginning and provides a benchmark for further expansion of the ecosystem.

Platform monetization

The existing client base of incumbents positively impacts overcoming the 'chicken and egg problem' and thus solves the determination of the subsidy and money side. On the one hand, clients' basic needs are covered by the incumbent's core products, while startup solutions depict optional add-ons complementing the core products, which are not necessarily essential for every customer. Therefore, they constitute the subsidy side. On the other hand, third parties highly value the access to clients provided through the platform and thus need to be considered the money side.

Incumbents must appropriately balance the clients' need for subsidization with the complimentary side's willingness to pay for the transaction. An effective revenue model must, therefore, be developed, in which both the money and subsidy side are addressed with separate strategies. While various options exist regarding subsidization and pricing, a potential approach is to introduce a basic subscription model for the subsidy side, which includes transaction-sensitive fees for add-ons. To counterbalance the subsidization challenge, revenue sharing with third-party providers can be applied to the money side. Monetization is of vital importance not only in launching a platform but also in growing and maintaining it.

While a suitable pricing strategy must not only balance the network effects between the money and subsidy side, it must further offset the tension between appropriability and the stimulation of platform growth. The platform needs to be monetized in a way where sufficient subsidization is distributed to expansion endeavors of the ecosystem while simultaneously generate revenue streams for the incumbent in order to become profitable in the long run. However, as elaborated on in chapter 8, further research is needed due to the complexity and depth of this topic.

6.4. Contribution to platform launch literature

This thesis is based on existing literature within both platform launches and startup alliances, which makes it possible to reflect on the theoretical implications of the analysis, discussion, and conclusion. By adopting the perspective of incumbents, this master thesis contributes to a yet unexplored aspect of platform launches (Leijon et al., 2017). What is more, light is shed on how incumbents can leverage startup alliances in launches while also scrutinizing the associated risks. The thesis highlights the importance of multi-sided platforms as a business model, the relevance of distinguishing characteristics of incumbency as well as underlying opportunities startup alliances entail. The thesis deducts an essential spectrum of existing theory, ranging from platform launch opportunities and challenges, over firm-level specific characteristics, to incentives to enter alliances. By combining the three research areas of platform launches, incumbency, and startup alliances, the research provides a fundamental structure, which leaves room for further in-depth exploration. This can be seen as a significant contribution not only to academic management literature but also to practice, as it can support incumbents in their launch aspirations.

Moreover, the focus of this thesis lies on the financial software industry and its particularities, thereby contributing to academic literature in the respective sector. Specific characteristics, such as security and risk, high switching costs, and increased complexity, are taken into consideration and impact the findings. The value of the implications is undermined by the fast technological developments of the industry and the increasing importance of platform business models and alliances with young ventures. Lastly, the introduced scaling dilemma, depicting the tradeoff between openness and security of the platform, was explicitly found relevant for the financial software industry. Nevertheless, it is anticipated that the respective dilemma can be applied to comparable industries, such as, for example, healthcare or insurance, where sensitive data constitutes a security concern.

To summarize, this thesis constitutes a foundation in filling the literature gap between the interrelated research topics by shedding light on the strategic elements of incumbents'

platform launches. Besides, the thesis particularly emphasizes and thus considers industry-specific opportunities and challenges, further adding literature to the financial software sector.

7. CONCLUSION

The purpose of this thesis was to examine how incumbents can utilize their position in the launch of a multi-sided platform in the financial software industry. It analyzed which opportunities and challenges arise from incumbency and how they can be translated into a launch strategy, while further examining how startup alliances can be leveraged to stimulate growth in the establishment of a broader ecosystem. Based on the analysis of one incumbent and several stakeholders of the financial services market, such as clients, startups, and industry experts, it can be concluded that firm-level specific variables are decisive for launches. Furthermore, startup alliances were found to play a crucial factor in the attempt to grow an ecosystem of solutions, while entailing certain risks that need to be addressed. Lastly, the findings were translated into five crucial elements of platform launch strategies of incumbents.

The thesis was guided by a framework that combined the three distinct, but interrelated areas of platform launches, incumbency as well as startup alliances. Through the combination of prevalent platform launch literature and firm-level specific research, alleged opportunities and challenges deriving from the role of the incumbent arose. Startup alliance literature, both from a general as well as from a platform-based perspective, was used to further complement the framework with opportunities, challenges, and mitigation strategies.

In applying a single case research strategy, the theoretical framework was tested from the perspectives of the incumbent case company, two clients of the case company, three startups in the financial and regulatory sector as well as two unbiased industry experts. The latter were selected in order to neutralize the expected subjective statements and to delineate the contextual impact on the phenomena. This approach, in turn, allowed the scholars to triangulate the findings and thus enhance reliability and validity. Semi-

structures interviews were conducted, which provided consistency while accepting the uniqueness of the interviewees and facilitated the elaboration on novel observations. The interviews were processed through a coding scheme based on the theoretical framework.

The processed primary data derived from the interviews served as a basis for the analysis, in which interview statements were compared with the respective variables of the theoretical framework. While a broad coherency with the framework was observed, several variables were identified as inapplicable, and novel insights emerged. Firm-level variables such as, for instance, an existing customer base were discovered to determine the opportunity to leverage network externalities and hence positively impact platform launches. Additionally, startup alliances, in consideration of specific requirements, can help incumbents to accelerate the scaling of an ecosystem. More precisely, the following opportunities and challenges were identified in the course of the analysis:

- **Opportunities of incumbency:** Network externalities, firm-level specific opportunities (knowledge background and experience, existing customer base, brand recognition)
- **Challenges of incumbency:** Openness of the platform, monetizing network effects, firm-level specific challenges (technical challenges, corporate culture)
- **Opportunities of startup alliances:** Scale and standardization, faster innovation and product building, startup mentality and attitude, financial upside
- **Challenges of startup alliances:** Organizational discrepancy, power imbalances, integration with the startup ecosystem, risk and regulation

In contrasting and integrating respective challenges and opportunities, a trade-off between openness and security was detected, resulting in a scaling dilemma, which significantly affected the strategy development. The financial software industry was found to be risk-sensitive, therefore, making fully open platforms less favorable. Ultimately, five strategic elements for platform launches were deducted, which serve as guidance and critical considerations to incumbents to balance scaling with the complexity of the industry. Moreover, by considering the respective elements, incumbents can increase their long-term performance beyond the launch phase.

- **Elements of platform launch strategies:** Standardization, step-by-step rollout, organizational commitment, equity involvement, platform monetization

To conclude, despite facing technical and organizational challenges, incumbents can leverage their role through an existing customer base, experience, brand reputation as well as opportunities arising from startup alliances in successfully launching a platform in the financial software industry. By standardizing approaches and gradually rolling out the platform regarding solutions and third-party providers, efficient scaling processes are facilitated. Fostering organizational commitment and taking ownership in startups depict crucial factors for the growth of a broader and secure ecosystem, especially in the launch phase of a platform. While monetization remains an indisputably critical element, given the complexity of the topic, it requires a more thorough investigation.

8. LIMITATIONS AND FURTHER RESEARCH

The final chapter of this thesis presents its (8.1.) limitations and proposes potential areas for (8.2.) further research.

8.1. Limitations

The underlying objective of the study was to provide a comprehensive and holistic overview of incumbency in platform launches, in which certain limitations in terms of the applied methodology and findings were unavoidable. Based on the broad scope of three distinct but interrelated research areas and the cross-sectional nature of the study, an in-depth exploration of particular theoretical variables was limited. Nevertheless, the most important and expressive theory has been presented with regards to platform launches and startup alliances, which led to the initial theoretical framework. In light of this, a longitudinal case study would have been more favorable to investigate and include the influence of incumbency more thoroughly for the findings of this thesis (Saunders et al., 2009). A more extended research period, in turn, would have allowed to explore the launch process over a more extensive time span rather than looking at a status quo.

Besides this, a more significant number of clients, competitors, and startups directly and indirectly associated with the platform could have been investigated and included within a more extensive analysis of data.

Regarding validity, which is described as being concerned with the correlation between examined variables, it is noteworthy that the 2019–20 coronavirus pandemic affected the data collection process. One shortcoming has been the increased difficulty in finding appropriate interview partners, who were willing to invest time during the first weeks of the global precautionary lockdown measures. Another shortcoming has been the conduction of mostly virtual instead of personal interviews, limiting the ability of the scholars to react to non-verbal cues, emotions, and behavior (Saunders et al., 2009). What is more, some interviews were found to be shorter and less in-depth than others, which can be linked to the general uncertainty in the industry, caused by the coronavirus disease in 2019. In some cases, this led to less detailed descriptions of the individual phenomena, which might have influenced the conclusion to a certain extent. However, no evidence of larger misalignments was detected in the interviews.

Considering the reliability of the study, some limitations are caused by mainly anonymizing the collected primary data. This approach was perceived as indispensable, resulting from the competitive nature of the financial industry but, most importantly, the prevalent necessity of discretion and secrecy. The anonymization supported the research by reducing participants' biases, which can be caused if interviewees hide their genuine opinions and perspectives behind a specific agenda. In assuring critical interviewees, such as clients and startups, that statements cannot be traced back to them, it was ensured that they could speak freely. Nevertheless, this approach can entail the possibility that the study is subject to observer errors and biases, given the fact that the scholars gathered and interpreted the data in a specific way. Since the audio-recordings and data coding will not be made public, other scholars will not be able to access the interviews to challenge the execution and interpretation of the analysis. To combat the ramifications, the scholars strictly followed the theoretical framework, which, in turn, can imply that data is misinterpreted in order to fit into the perspective of the framework.

As this thesis is conducted as qualitative research, quantitative data could have been additionally collected to increase the reliability and validity of this paper. In order to draw more accurate conclusions, more data could have been triangulated for validation. Investigating, for example, sensitivity towards openness and security in the scaling dilemma as well as price sensitivity of clients and third-party service providers regarding the monetization of the platform, could have substantially added to the elements of platform launch strategies of incumbents.

In applying a single case study, a thorough exploration of the underlying research question was achieved, however, the generalizability was somewhat reduced. By exclusively examining the case of SimCorp, with its particular clients and potential partners, the study focused on the launch of one platform of one incumbent. The fact, however, that the thesis is based on a holistic and critical case, allowed to amass information and derive legitimate deductions of comparable models, thus, enhancing the generalizability. Additionally, the results of the thesis are focused on the financial software industry, representing a B2B niche market. Other scholars, therefore, might experience limitations when applying the introduced framework to consumer or mass markets or other industries. Resultantly, considering the context of the thesis is essential when applying the framework in either practice or theory.

8.2. Further Research

By providing a holistic framework, the research questions proposed in this thesis and the so-far drawn findings can be tested and elaborated on in subsequent research. The further research proposed is twofold and comprises the (1) in-depth exploration of the variables determined in this thesis as well as (2) challenging and testing of the validity of the framework.

Concerning the addressed variables in this thesis – opportunities, challenges, and platform launch strategies – further research should primarily be placed on firm-level specific characteristics as this study was the first contribution to incumbency in platform launches. In particular, the implications of an existing client base provide several opportunities for

continued research as the effects on, for instance, monetization are found to be an extensive topic per se and thus requite exhaustive exploration. Moreover, although startup alliances are frequently discussed in literature, engagement models in platform launch alliances provide an opportunity for further investigation. Research could, for example, examine:

- To what extent the existing customer base can be leveraged in creating network effects to overcome the 'chicken and egg problem'.
- How the network effects created through the existing customer base impacts the balancing of the subsidization needs of the clients with the startups' willingness in sharing revenues.
- The quantitative correlation of openness and security in the scaling dilemma.
- To what extent equity involvement in startup alliances is negatively correlating with platform scaling.

The findings from such studies would considerably advance the platform launch literature and have managerial implications for incumbent firms. Furthermore, such studies would expand and strengthen the validity of the framework and the proposed platform launch strategies. In contrast to theory, the study found that equity involvement in platform launch alliances is seen as a potential engagement model, irrespective of the limitation to scale and standardize operations. Therefore, more detailed research within this area could be of interest and pose a contribution to academic literature.

In challenging and testing the validity of the framework, further research could focus more on quantitative methods. Thereby, the framework should be applied to a sufficiently representative number of incumbents, which have launched or anticipate launching a platform. The same applies to clients and other platform agents, such as third-party providers. A quantitative study could additionally cover the assessment of the price sensitivity of the money and subsidy sides in adequately introducing a pricing strategy that achieves the optimal exploitation of the respective sides while promoting platform growth. Furthermore, a longitudinal multi-case study would allow to observe phenomena and specific development implied from the ideation phase of the platform throughout the

actual launch. Such research could be employed to determine whether the limitation of representativity impacted the validity of this master thesis.

9. REFERENCES

9.1. Interviews

SC1 (2020, March 5th). Personal interview with Strategy Principal. **Not attached due to confidentiality concerns.**

SC2 (2020, March 16th). Personal interview with Head of Open Innovation. **Not attached due to confidentiality concerns.**

C1 (2020, March 12th). Virtual interview with Executive Director Investments & Global Head of Trading. **Not attached due to confidentiality concerns.**

C2.1 (2020, March 16th). Virtual interview with Head of Private Banking & Investment Specialist. **Not attached due to confidentiality concerns.**

C2.2 (2020, March 16th). Virtual interview with Head of Private Banking & Senior Portfolio Manager. **Not attached due to confidentiality concerns.**

S1 (2020, March 18th). Virtual interview with Senior Commercial Manager. **Not attached due to confidentiality concerns.**

S2 (2020, April 3rd). Virtual interview with Chief Executive Officer. **Not attached due to confidentiality concerns.**

S3 (2020, March 19th). Virtual interview with Strategic Partnerships Manager. **Not attached due to confidentiality concerns.**

CPH FinTech (2020, March 30th). Virtual interview with Head of FinTech Intelligence. **Not attached due to confidentiality concerns.**

PWC (2020, April 11th). Virtual interview with Management Consultant - Financial Services. **Not attached due to confidentiality concerns.**

9.2. Academic Literature

Adams, G. and Schvaneveldt, J. (1991). Understanding Research Methods (2nd edn). New York: Longman.

Akben-Selcuk, E. (2016). Factors affecting firm competitiveness: Evidence from an emerging market. International Journal of Financial Studies, 4(2), 9.

Alvarez, S.A. and Barney, J.B. (2001). How entrepreneurial firms can benefit from alliances with large partners. Academy of Management Executive, Vol. 15 No. 1, pp. 139-48.

Arinõ, A. and Doz, Y. (2000). Rescuing troubled alliances ... before it's too late. European Management Journal, Vol. 18 No. 2, pp. 173-82.

Armstrong, M. (2006). Competition in two-sided markets. The RAND Journal of Economics, 37(3), 668-691.

Audretsch, D. B., & Mahmood, T. (1995). New firm survival: new results using a hazard function. The Review of Economics and Statistics, 97-103.

Barney, J. 1991. Firm resources and sustained competitive advantage. Journal of Management. 1991, Vol, No. 1, 99-120.

Baškarada, S. (2014). Qualitative Case Study Guidelines. The Qualitative Report, 19(40), 1-18.

Belleflamme, P., & Peitz, M. (2019). Platform competition: Who benefits from multihoming?. International Journal of Industrial Organization, 64, 1-26.

Belleflamme, P., & Toulemonde, E. (2004). Emergence and entry of B2B marketplaces. CORE Discussion.

Berg, V., Birkeland, J., Nguyen-Duc, A., Pappas, I. O., & Jaccheri, L. (2020). Achieving agility and quality in product development-an empirical study of hardware startups. Journal of Systems and Software.

Blonska, A., Storey, C., Rozemeijer, F., Wetzels, M., & de Ruyter, K. (2013). Decomposing the effect of supplier development on relationship benefits: The role of relational capital. Industrial Marketing Management, 42(8), 1295-1306.

Bressler, M. S., & Von Bergen, C. W. (2016). When running second wins the race: examining the benefits of second-mover advantage.

Briscoe, B., Odlyzko, A., & Tilly, B. (2006). Metcalfe's law is wrong-communications networks increase in value as they add members-but by how much?. IEEE Spectrum, 43(7), 34-39.

Burnham, T. A., Frels, J. K., & Mahajan, V. (2003). Consumer switching costs: a typology, antecedents, and consequences. Journal of the Academy of marketing Science, 31(2), 109-126.

Caillaud, B., & Jullien, B. (2001). Competing cybermediaries. European Economic Review, 45(4-6), 797-808.

Caillaud, B., & Jullien, B. (2003). Chicken & egg: Competition among intermediation service providers. RAND journal of Economics, 34 (29), 309-328.

Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). Coding in-depth semistructured interviews: Problems of unitization and intercoder reliability and agreement. Sociological Methods & Research, 42(3), 294-320.

Carroll, G. R., & Hannan, M. T. (2000). Why corporate demography matters: Policy implications of organizational diversity. California Management Review, 42(3), 148-163.

Chandy, R. K., & Tellis, G. J. (1998). Organizing for radical product innovation: The overlooked role of willingness to cannibalize. Journal of marketing research, 35(4), 474-487.

Chandy, R. K., & Tellis, G. J. (2000). The incumbent's curse? Incumbency, size, and radical product innovation. Journal of marketing, 64(3), 1-17.

Chesbrough, H. (2006b). Open business models: How to thrive in the new innovation landscape. Harvard Business Press.

Chesbrough, H. W. (2006a). The era of open innovation. Managing innovation and change, 127(3), 34-41.

Chesbrough, H., Vanhaverbeke, W. and West. J. (2006). Open Innovation: Researching A New Paradigm. Oxford University Press.

Chesbrough, H., Vanhaverbeke, W., & West, J. (Eds.). (2014). New frontiers in open innovation. Oup Oxford.

Choi, J. P. (2010). Tying in two-sided markets with multi-homing. The Journal of Industrial Economics, 58(3), 607-626.

Christensen, C. M. (2013). The innovator's dilemma: when new technologies cause great firms to fail. Harvard Business Review Press.

Christensen, C. M., & Overdorf, M. (2000). Meeting the challenge of disruptive change. Harvard business review, 78(2), 66-77.

Cohen, W. M., & Levin, R. C. (1989). Empirical studies of innovation and market structure. Handbook of industrial organization, 2, 1059-1107.

Contractor, F. J., & Lorange, P. (2002). The growth of alliances in the knowledge-based economy. International Business Review, 11(4), 485-502.

Dale, A., Arber, S. & Proctor, M. (1988). Doing Secondary Analysis. London: Unwin Hyman.

Doblinger, C., Surana, K., & Anadon, L. D. (2019). Governments as partners: The role of alliances in US cleantech startup innovation. Research Policy, 48(6), 1458-1475.

Doganoglu, T., & Wright, J. (2006). Multihoming and compatibility. International Journal of Industrial Organization, 24(1), 45-67.

Dou, G., He, P., & Xu, X. (2016). One-side value-added service investment and pricing strategies for a two-sided platform. International Journal of Production Research, 54(13), 3808-3821.

Easton, G. (2010). Critical realism in case study research. Industrial Marketing Management, 39(1), 118-128.

Echambadi, R., Bayus, B. L., & Agarwal, R. (2008). Entry timing and the survival of startup and incumbent firms in new industries. Working paper, University of Illinois, Champaign.

Economides, N., & Katsamakas, E. (2006). Two-sided competition of proprietary vs. open source technology platforms and the implications for the software industry. Management science, 52(7), 1057-1071.

Economides, N., & Tåg, J. (2012). Network neutrality on the Internet: A two-sided market analysis. Information Economics and Policy, 24(2), 91-104.

Edelman, B. (2015). How to launch your digital platform. Harvard Business Review 93(4), 90–97.

Eisenmann, T. R. (2008). Managing proprietary and shared platforms. California Management Review, 50(4), 31-53.

Eisenmann, T. R., & Hagiu, A. (2007). Staging two-sided platforms. Harvard Business School Background Note 9-808-004.

Eisenmann, T. R., Parker, G., & Van Alstyne, M. (2009). Opening platforms: how, when and why?. Platforms, markets and innovation, 6, 131-162.

Eisenmann, T., Parker, G., & Van Alstyne, M. W. (2006). Strategies for two-sided markets. Harvard business review, 84(10), 92.

Ellis, R. J., & Taylor, N. T. (1987). Specifying entrepreneurship. Frontiers of entrepreneurship research, 527-541.

Ensley, M. D., Hmieleski, K. M., & Pearce, C. L. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. The leadership quarterly, 17(3), 217-231.

Evans, D. S. (2003). Some empirical aspects of multi-sided platform industries. Review of Network Economics, 2(3).

Evans, D. S., (2011). Platform economics: Essays on multi-sided businesses. Competition Policy International.

Evans, D. S., & Schmalensee, R. (2010). Failure to launch: Critical mass in platform businesses. Review of Network Economics, 9(4).

Evans, D. S., Hagiu, A., Schmalensee, R., (2008). Invisible engines: how software platforms drive innovation and transform industries. MIT press.

Fierro, J. J. C., & Pérez, L. (2018). Value creation and appropriation in asymmetric alliances: the case of tech startups. Management, 21(1), 534-573.

Filistrucchi, L., Geradin, D., & Van Damme, E. (2013). Identifying two-sided markets. World competition, 36, 33.

Filistrucchi, L., Geradin, D., Damme, E. V., Keunen, S., Wileur, J., Klein, T. J., & Michielsen, T. O. (2010). Mergers in two-sided markets-A report to the NMa.

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. Qualitative Inquiry, 12(2), 219-245.

Gabszewicz, J. J., & Wauthy, X. (2004). Two-sided markets and price competition with multi-homing. Available at SSRN 975897.

Golder, P., & Tellis, G. J. (2002). Will and vision: How latecomers grow to dominate markets. New York, NY. McGraw-Hill.

Gómez, J., & Maícas, J. P. (2011). Do switching costs mediate the relationship between entry timing and performance?. Strategic Management Journal, 32(12), 1251-1269.

Gulshan, S. S. (2011). Innovation Management: Reaping the benefits of Open Platforms by assimilating internal and external innovations. Procedia-Social and Behavioral Sciences, 25, 46-53.

Hagedoorn, J., & Schakenraad, J. (1992). Leading companies and networks of strategic alliances in information technologies. Research Policy, 21(2), 163-190.

Hagiu, A. (2006). Pricing and commitment by two-sided platforms. The RAND Journal of Economics, 37(3), 720-737.

Hagiu, A. (2007). Merchant or two-sided platform?. Review of Network Economics, 6(2), 115-133

Hagiu, A., & Altman, E. J. (2017). Finding the platform in your product. Harvard Business Review, 95(4), 94-100.

Hagiu, A., & Wright, J. (2015). Multi-sided platforms. International Journal of Industrial Organization, 43, 162-174.

Harzing, A.-W. & Feely, A.J. (2007). The language barrier and its implications for HQ-subsidiary relationships. Cross Cultural Management: An International Journal, 15(1), 49-61.

Helfat, C. E., & Lieberman, M. B. (2002). The birth of capabilities: market entry and the importance of pre-history. Industrial and corporate change, 11(4), 725-760.

Hendler, J., & Golbeck, J. (2008). Metcalfe's law, Web 2.0, and the Semantic Web. Journal of Web Semantics, 6(1), 14-20.

Hidding, G. J., Williams, J., & Sviokla, J. J. (2011). How platform leaders win. Journal of Business Strategy, 32(2), 29-37.

Hock, M., & Ringle, C. M. (2010). Local strategic networks in the software industry: an empirical analysis of the value continuum. International Journal of Knowledge Management Studies, 4(2), 132.

Hoddy, E. (2019). Critical realism in empirical research: employing techniques from grounded theory methodology. International Journal Of Social Research Methodology, 22(1), 111-124.

Hox, J. J., & Boeije, H. R. (2005). Data collection, primary versus secondary.

Hyytinen, A., Pajarinen, M., & Rouvinen, P. (2015). Does innovativeness reduce startup survival rates?. Journal of Business Venturing, 30(4), 564-581.

Inkpen, A. C. (2005). Strategic alliances. The Blackwell handbook of strategic management, 403-427.

Jansen, S., Cusumano, M. A., & Brinkkemper, S. (Eds.). (2013). Software ecosystems: analyzing and managing business networks in the software industry. Edward Elgar Publishing.

Johnson, P. & Clark, M. (2006). 'Mapping the terrain: an overview of business and management research methodologies', in P. Johnson and M. Clark. (eds) Business and Management Research Methodologies. London: Sage.

Jullien, B. (2005). Two-sided markets and electronic intermediaries. CESifo Economic Studies, 51(2-3), 233-260.

Klepper, S. (1997). Industry life cycles. Industrial and corporate change, 6(1), 145-182.

Klepper, S. (2002). Firm survival and the evolution of oligopoly. RAND journal of Economics, 33(1), 37-61.

Knoben, J., & Bakker, R. M. (2019). The guppy and the whale: Relational pluralism and startups' expropriation dilemma in partnership formation. Journal of Business Venturing, 34(1), 103-121.

Kohler, T. (2016). Corporate accelerators: Building bridges between corporations and startups. Business Horizons, 59(3), 347-357.

Lahiri, A., Dewan, R. M., & Freimer, M. (2010). The disruptive effect of open platforms on markets for wireless services. Journal of management information systems, 27(3), 81-110.

Leijon, E., Svenheden, J., & Svahn, F. (2017). Platform thinking in incumbent firms: from concept to capability. In: 50th Hawaii international conference on system sciences, Honolulu. IEEE, S 4766-4775.

Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. Strategic management journal, 13(S1), 111-125.

Lieberman, M. B., & Montgomery, D. B. (1998). First-mover (dis) advantages: retrospective and link with the resource-based view. Strategic management journal, 19(12), 1111-1125.

Markides, C. C., & Geroski, P. A. (2004). Fast second: How smart companies bypass radical innovation to enter and dominate new markets (325). John Wiley & Sons.

McNaughton, R. B. (2001). Strategic alliances in the software industry. International Journal of Entrepreneurship and Innovation Management, 1(3-4), 444-462.

Minshall, T., Mortara, L., Valli, R. and Probert, D. 2010. Making "Asymmetric" Partnerships Work. Research-Technology Management, 53(3), 53-63.

Nguyen, H. (2017). Solving chicken and egg dilemma in online platform startup: value proposition in focus. Aalto University, 1-94.

Parker, G. G., & Van Alstyne, M. W. (2000). Internetwork externalities and free information goods. In Proceedings of the 2nd ACM Conference on Electronic Commerce, 107-116.

Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). Platform Revolution: How Networked Markets Are Transforming the Economy? and How to Make Them Work for You. WW Norton & Company.

Parker, G., & Van Alstyne, M. W. (2014). Platform strategy. Palgrave Encyclopedia of Strategic Management, M. Augier and D. Teece (eds.), London: Palgrave MacMillan.

Pfeffer, J. and Salancik, G. R. (1978). The External Control of Organisations: A Resource Dependence Perspective. New York: Harper & Row.

Prashantham, S., & Birkinshaw, J. (2008). Dancing with gorillas: How small companies can partner effectively with MNCs. California management review, 51(1), 6-23.

Rask, M., & Kragh, H. (2004). Motives for e-marketplace participation: differences and similarities between buyers and suppliers. Electronic Markets, 14(4), 270-283.

Ries, E. (2011). The lean startup: How today's entrepreneurs use continuous innovation to create radically successful businesses. Crown Business.

Rochet, J. C., & Tirole, J. (2003). Platform competition in two-sided markets. Journal of the european economic association, 1(4), 990-1029.

Rochet, J. C., & Tirole, J. (2006). Two-sided markets: a progress report. The RAND journal of economics, 37(3), 645-667.

Roessler, M., & Velamuri, V. K. (2015). Corporate Incubation as a Tool to Foster Business Model Innovation. In ISPIM Conference Proceedings (p. 1). The International Society for Professional Innovation Management (ISPIM).

Rothaermel, F. T. (2001). Complementary assets, strategic alliances, and the incumbent's advantage: an empirical study of industry and firm effects in the biopharmaceutical industry. Research Policy, 30 (8), 1235–1251.

Rysman, M. (2009). The economics of two-sided markets. Journal of economic perspectives, 23(3), 125-43.

Salminen, J. (2014). Startup dilemmas-Strategic problems of early-stage platforms on the internet.

Sanchez-Cartas, J. M., & Leon, G. (2019). Multi-sided platforms and markets: a literature review.

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Essex. Financial Times/Prentice Hall.

Schilling, M. A. (2003). Technological leapfrogging: Lessons from the US video game console industry. California management review, 45(3), 6-32.

Scott, M. and Bruce, R. (1987). Five stages of growth in small business. Long Range Planning, 20(3), 45-52.

Siggelkow, N. (2007). Persuasion with case studies. Academy of management journal, 50(1), 20-24.

Smith, M. E., Thorpe, R., & Jackson, P. R. (2008). Management research. London: Sage.

Sosa, M. (2006), Decoupling Market Incumbency from Organizational Experience: A Study of Biotechnology's Impact on the Market of Anti-Cancer Drugs, PhD thesis, Cambridge, MA: MIT.

Stake, R. (2000). In Denzin, NK & Y. Lincoln. Handbook of qualitative research, 2 nd EI, 435-454.

Stinchcombe, A. L. (1965). Social structure and organizations. Handbook of organizations, 7, 142-193.

Stummer, C., Kundisch, D., & Decker, R. (2018). Platform launch strategies. Business & Information Systems Engineering, 60(2), 167-173.

Tåg, J. (2008). Open versus closed platforms. Helsinki Center of Economic Research. Discussion Paper No.29.

Teece, D. J. (1987). Technological change and the nature of the firm. Produced and distributed by Center for Research in Management, University of California, Berkeley Business School.

Teece, D. J. (1992). Competition, co-operation, and innovation. Journal of Economic Behavior and Organisation, 18(1), 1–25.

Tiwana, A., Konsynski, B., & Bush, A. A. (2010). Research commentary—Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics. Information systems research, 21(4), 675-687.

Von Hippel, E. (2005). Democratizing innovation: The evolving phenomenon of user innovation. Journal für Betriebswirtschaft, 55(1), 63-78.

Weiblen, T., & Chesbrough, H. W. (2015). Engaging with startups to enhance corporate innovation. California management review, 57(2), 66-90.

West, J. (2003). How open is open enough?: Melding proprietary and open source platform strategies. Research policy, 32(7), 1259-1285.

Williamson, O. E. 1991. Comparative economic organisation: the analysis of discrete structural alternatives. Administrative Science Quarterly, 36, 269–96.

Yin, R.K. (2003) Case Study Research: Design and Method (3rd edn). London: Sage.

Yoon, E. and Hughes, S. (2016). Big Companies Should Collaborate with Startups. Harward Business Review.

9.3. Additional Literature

BCG (2018). Global Asset Management 2018. The Digital Metamorphosis. The Boston Consulting Group.

Citisoft (2019). Outlook 2019. Asset Management's Ascent: The Trek Toward Transformation. Citisoft.

Holse (2019). In the race for front-to-back, integration makes all the difference. SimCorp. Retrieved from: https://www.simcorp.com/en/insights/journal/2019/front-to-back-integration

Lochy, J. (2020). Banks are finally embracing the Open Source movement. Retrieved from https://www.finextra.com/blogposting/18378/banks-are-finally-embracing-the-open-source-movement

Lunden, I. (2020). Aiven raises $40M to democratize access to open-source projects through managed cloud services. Retrieved from https://finance.yahoo.com/news/aiven-raises-40m-democratize-access-150806787.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAIgxa_3C2UFT_6QrpXg9Xyfbigt7dPoc8fYa9c2O69-D3z_O3dn1ZBH1_qmhMoOZpCgtaC1wA3WHwFdRP-xtAEaXn5REUMrqA2QZXDxA7_ujiZ7yNcvRI9OpbsyAonTqqrNlxSH-8bEhII-hGeTMyjcZM6pGodmxmBAbDmuEx-Nd

Oxford Reference (2020). Incumbent firm. Retrieved from: https://www.oxfordreference.com/view/10.1093/oi/authority.20110803100000653

PWC (2017). Asset & Wealth Management Revolution: Embracing Exponential Change. PWC.

Research Gate. 2020. [online] Retrieved from https://www.researchgate.net/profile/Henry_Chesbrough

SimCorp (2018a). Company brochure SimCorp 2018. SimCorp.

SimCorp (2019a). Company presentation. SimCorp.

SimCorp (2020a). Ecosystem enabled Innovation. SimCorp.

SimCorp (2020b). Industry specific solutions. Retrieved from: https://www.simcorp.com/en/solutions/by-industry.

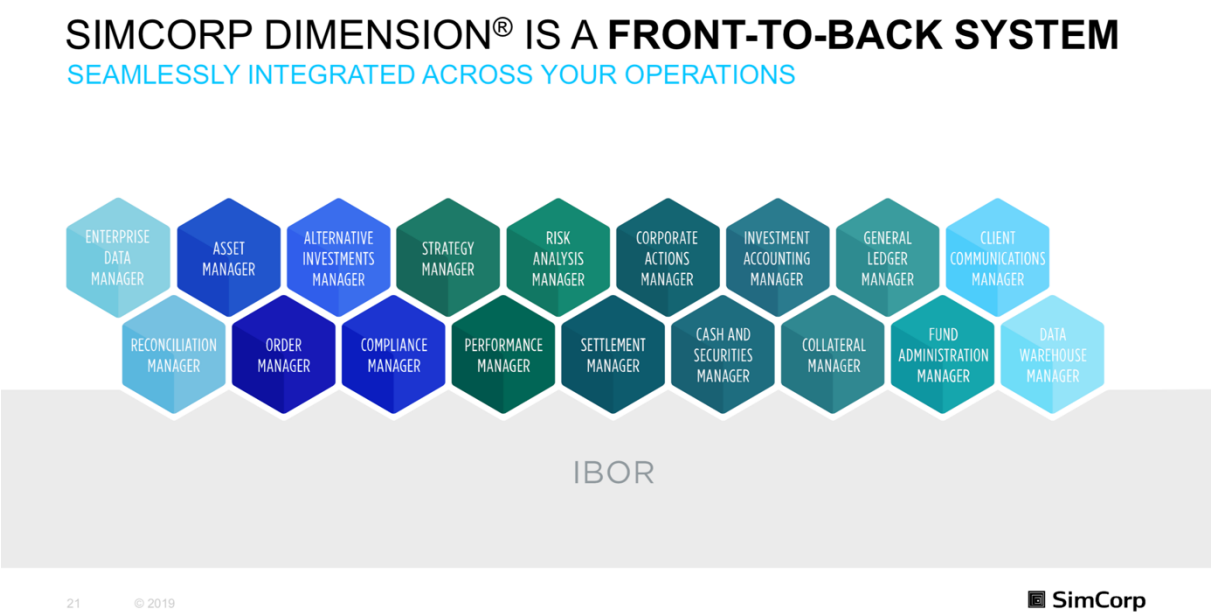
SimCorp(2019b). Strategy paper. SimCorp.

SimCorp(2019c). SimCorp Annual Report 2019. SimCorp.

Tamstorf, F. (2009). Simcorp – the story behind. SimCorp.

10. Appendices

Appendix A – SimCorp Dimension overview



Introduction of interviewees

Interview	Role of the interviewee	Abbreviated to	Description of role
SimCorp	Strategy Principal	SC1	Strategy Principal under group management, working on cross functional and transformational activities of SimCorp.
	Head of Open Innovation	SC2	Head of Open Innovation, acting as global head of overall technology strategy and user experience for leading global enterprise investment management software platforms.
Client 1	Executive Director Investments & Global Head of Trading	C1	Executive Director Investments with broad leadership experience from asset management and securities trading. Direct experience with investment, strategy and business development, strategic partnerships, business transformation, private equity, operations and risk management. Global Head of Trading, responsible for [client's] execution desk as well as for digital product offerings.
Client 2	Head of Private Banking & Investment Specialist	C2.1	Head of Private Banking, managing approximately $400 billion in private client assets, retail funds and institutional money. Investment Specialist, advising clients on investment decisions with years of experience in wealth management, previously worked at Goldman Sachs.
	Head of Private Banking & Senior Portfolio Manager	C2.2	Head of Private Banking, managing approximately $400 billion in private client assets, retail funds and institutional money. Portfolio manager with 20 years of experience, previously worked at Blackrock, GLG. Has substantial experience with different portfolio management systems.
Startup 1	Senior Commercial Manager	S1	Senior Commercial Manager for the enterprise merchant and retailer team in the United Kingdom driving the retailer relationships with the [startup's] product.
Startup 2	Chief Executive Officer	S2	Chief Executive Officer with decades of experience working at, and for, some of the world's leading finance companies.
Startup 3	Strategic Partnerships Manager	S3	Strategic Partnership Manager, working in the commercial propositions team, which covers commercial strategy, pricing, and product development, while managing partnerships and business development.
CPH Fintech	Head of FinTech Intelligence	CPH FinTech	Head of Fintech Intelligence, helping fintech ecosystem organizations (startups, incumbents, investors, educational institutions, etc.) innovate and grow.
PWC	Management Consultant - Financial Services	PWC	Management Consultant, acting as a strategic advisor on emerging technology for clients within the banking and financial services industry. Former country manager at Revolut, a growing fintech company in Europe.

Appendix C – Example of interview guide

Interview guide for industry experts (approx. 70 min.)					
Area	**Theme**	**Question**	**Follow-up questions**	**Purpose**	**Max. time**
Introduction	Introduction	Will you please introduce yourself, tell how long you have been working in your profession and describe your role?	- please tell us more about your professional background - please elaborate on your tasks / role - have you been professionally engaged in platform businesses before? - have you been professionally engaged in collaborations between startups and incumbents?	Formality - a good and quick start to the interview	3 min.
Reasons for entering startup alliances	Incentives	Why are incumbents engaging with startups?	- What are the motivations behind entering a collaboration (financial/ strategic/ competition/ knowledge/ publicity, etc.)? - What are the most frequent modes of collaborations (equity, knowledge, resources, etc.)?	Advanced introduction	2 min.
Reasons for entering startup alliances	Incentives	Why are startups/ FinTechs engaging with incumbents?	- What are the motivations behind entering a collaboration (financial/ strategic/ competition/ knowledge/ publicity, etc.)?	Advanced introduction	2 min.
Startup alliances	Differences of startup alliances	In which way do startup alliances differ from strategic alliances between firms of the same size?	- organizational structures (resources, objectives and approach to business) - bureaucracy/ hierarchies - pace - power relations	To understand the experts' view on differences between strategic and startup alliances	3 min.
Startup alliances	Modes of engaging with startups	Which modes of collaborations between startups and incumbents do you see as the most successful/ effective/ efficient? And why?	- E.g. corporate venturing/ corporate incubation/ accelerator programs/ platform programs?	To understand the experts' viewpoint on different engagement modes of startup alliances	2 min.
Startup alliances	Modes of engaging with startups	Do you believe that having an equity stake in the startup you are collaborating with is helping the alliance or rather not?	- power balances - interest - picking "winners" and "losers"	To understand whether equity might be of help also for startup programs or not	2 min.
Startup alliances	Modes of engaging with startups	In developing/ launching an open platform in the financial services software industry today,	- how crucial is it to have startups on the platform? - what role do startups play in regard to the growth of an ecosystem? - how can startups impact/	To understand what emphasis experts place on startups when launching a	3 min.

		what role do startups (FinTechs/ RegTechs) play?	influence the business model?	platform/ ecosystem	
Startup alliances	Modes of engaging with startups	Do you think that engaging with a startup/ multiple startups simultaneously via an open platform (provided by an incumbent) differ from other collaboration methods? --> If **yes**, in what way and what do incumbents need to consider when entering these?	- in regard to scalability/ pace - in regard to the personal touch of a collaboration - in regard to efforts/ outlay, etc.	To understand experts' viewpoint to startup programs via platform and how they differ to them	3 min.
Startup alliances	Platform programs	When engaging with startups via an open platform what is the best approach in regard to attraction, retention and engagement?	- freemium models, marketing, competition on who can join / open API - training, tech assistance, and support in sales - disparate functions within the corporation (relationship manager, etc.)	To understand what incumbents need to consider when engaging with startups from an expert point of view	4 min.
Success factors of alliances	Opportunities	What opportunities do you see in the collaboration with startups? And especially via an open platform provided by the incumbent?	- increase of market share, profitability, publicity, product offerings, client segments, etc. - innovation related activities - speed and agility - scale and standardization	To understand what opportunities incumbents can leverage when engaging with startups from an expert point of view	4 min.
Success factors of alliances	Challenges	What challenges do you see in the collaboration with startups? And especially via an open platform provided by the incumbent?	- attraction & maintenance - organizational setting from both sides - power imbalance - proper integration (caretaking) (- competitive product offerings?)	To understand what challenges incumbents face when engaging with startups from an expert point of view	4 min.
Success factors of alliances	Mitigation	What mitigation strategies can be applied in order to overcome the challenges you have just described? Which methods have proven to be successful over time, which methods didn't?	- separate start-up department in incumbent or point-of-contact - equity stake/ no equity stake - bring in experts - information and raise awareness	To understand what mitigation strategies incumbents can apply when engaging with startups from an expert point of view	3 min.
Success factors of alliances	Mitigation	How can incumbents with little experience in startup alliances best possibly prepare themselves to make the most of startup alliances?	- intermediaries, consultants, third parties - contracts, contractual agreements - successive rollout - etc.	To understand what mitigation strategies incumbents can apply when engaging with startups	2 min.

Introduction Platform	Introduction	Can you roughly describe the developments in the fintech industry in terms of platforms and innovation ecosystems?	- Are platforms becoming the primary business model? - How do incumbents react to new FinTechs? - Which other relevant observations did you make?	To understand industry developments in regard to the business model platform	3 min.
Platform	Platform launch, role of incumbent	How do you see the role of an incumbent when launching a novel open platform versus if a new market entrant launches such a platform?	- What role does th**e incumbency of a platform provider** play in your opinion? Would startups rather offer their services through a platform of an incumbent company or a new entrant? Please elaborate. - What role does the s**tatus of industry leader** play in the launch of a novel platform in your opinion? - If the platform is the first of its kind in the market, how willing are startups to offer their service through their API if the platform provider was a new entrant vs an incumbent? **Which factors** do you consider most crucial in your decision?	To understand which characteristics of incumbency are decisive in platform launches	5 min
Platform	Platform launch, incumbent opportunities	Why do you think does an incumbent launch an open platform and which opportunities does it aim to seize?	- What is the reason to make use of the API?/ What was the intent behind it? - Do you feel pressure from the industry? - How do you perceive the **role of a first mover as an incumbent**? - Which other incentives are relevant?	To understand the incentives of incumbents to launch an open platform	5 min
Platform	Platform launch, incumbent challenges	Which challenges do you think does an incumbent face when launching an open platform and which mitigation strategies could be applied?	- What do you think about the role of the factors agility and company culture in platform launches? - How careful does an incumbent have to be to maintain quality standards? How open can it allow its platform to be? - Is multihoming a challenge to such platforms? Why? (i.e. that startups offer their service through multiple platforms) - Do you see a risk in startups joining the platform to envelop the platform in the long term? - What could the incumbent do to mitigate these risks?	To understand the challenges of incumbents in platform launches	5 min

Platform	Platform opportunities for Startups	Which opportunities do startups see in offering their services through incumbent' platforms? Which opportunities do open APIs provide?	- How big of a role does experience play especially in your sector? - How easy do you think is it to attract new players through the existing customer base? - Focusing on the asset management industry: **Which customers do startups try to reach** through this strategy? Are there any customers that would joining a third-party platform make **particularly attractive** (e.g. a big bank)? Please elaborate. - Do you think startups could **benefit from the network of customers** when an established player launches an open platform? - Do you think working through other platforms allows startups to **lurge over customers to your platform**? - Do you expect **benefiting from complementary services** offered through the platform be a factor that makes such platforms interesting? What services would that be? Please elaborate.	To understand the opportunities and firm-level specific advantages of incumbents in platform launches	7 min
Platform	Challenges for Startups	Which challenges do you see in startups offering their services through incumbent's platforms?	- How much **effort goes into setting up such APIs** in terms of time / manpower / capital? How easily can their services be connected to other platforms? - Do you see **challenges in regional limitations?** - How do you perceive the risk for the startup of being **limited in services through or dependent** on the platform? - What would the platform need to do to **mitigate those risks**?	To get a holistic understanding of platform launches and understand how incumbents can support challenges in overcoming their challenges which ultimately leads to easier attraction of third-party providers to the platform	7 min
Platform	Selection of platform	What have you experienced, how do startups select through which platform offer their services?	- What would it require to **attract a startup to offer its services on an open platform like SimCorp's**? existing user base / special users / subsidization? - Are there any **prerequisites** the platform has to fulfill: Security / experience / reputation / size of customer base / specific customers you want to reach? - If a startup offers their services through an open plat form, do they usually choose **one partner platform** to work with or offer their services through **multiple platforms**? Which **benefits and disadvantages do you see in single-homing vs. multi-homing**? - Do startups usually **offer the full service-range** through the open platform? (or do they limit the offers to win the users over to your own platform?)	To understand what makes a platform attractive to startups	5 min