Why Fintechs Cooperate with Banks – Evidence from Germany[*]

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Abstract

We developed a conceptual framework to explain why young financial technology companies (fintechs) cooperate with incumbents from the finance sector. Examining 14 case studies on fintech-bank cooperation, we identified three main reasons: first, banks enable a fintech's market entry; second, banks increase a fintech's profits; and finally, banks enable new fintech products. We observed that each of these reasons is related to particular resources, which fintechs obtain through their cooperation partner. Additionally, we found that fintechs use different label approaches to sell their products when they cooperate with banks. Based on these results, we developed propositions that can be tested in future research.

Zusammenfassung

In der vorliegenden Fallstudie wird ein konzeptioneller Rahmen entwickelt, um aufzuzeigen, warum junge Finanztechnologieunternehmen (Fintechs) Kooperationen mit etablierten Finanzinstituten anstreben. Zur Untersuchung dieser Fragestellung werden 14 Kooperationen zwischen Fintechs und Banken in Deutschland betrachtet. Die Ergebnisse zeigen, dass Banken durch die Bereitstellung von bestimmten Ressourcen (1) den Markteintritt der Fintechs erst ermöglichen, (2) die Gewinne der Fintechs steigern und (3) an der Entwicklung neuer Produkte der Fintechs beteiligt sind. Darüber hinaus zeigt die Studie, dass Fintechs bestimmte Label-Varianten zur Vermarktung ihrer Produkte verwenden, wenn eine Kooperation mit einer Bank vorliegt. Auf Basis dieser Ergebnisse werden Propositionen entwickelt, welche in zukünftigen Forschungsarbeiten überprüft werden können.

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1. Introduction

Young companies often have no access to important resources to enable their success. However, a large body of literature emphasizes that young companies are more innovative in terms of creating new knowledge and are more likely than incumbents to develop radical innovations (Rothwell, 1983). The incumbents usually have several comprehensive and cost-intensive resources to produce their goods. Thus, intuitively, an incumbent can contribute to a young company on a number of dimensions (e.g., funds or knowledge) to increase the young company's success rate (Kelly et al., 2000; Lee et al. 2012). Clearly, the incumbents' motivation for this support is to obtain access to the young companies' innovations (Keil, 2000). Therefore, both young companies and incumbents seek to cooperate with each other.

Fintechs are young Internet-based companies that develop products that enable or provide innovative financial services (Deutsche Bank Research, 2014). They are new entrants to the financial industry and compete with incumbent banks and insurance companies (Lacasse et al., 2016; Jakšič and Marinč, 2015). However, in line with the above literature, Kalmykova et al. (2016) and Burgmaier and Hüthing (2015) emphasize that fintechs and incumbents from the finance sector would be better off cooperating rather than competing. Although cooperation between young companies and incumbents has received much attention in the literature, we argue that it is interesting to focus on collaborations in the financial industry due to some of the special characteristics:

First, the financial crisis of 2008 led to an increase in regulation requirements (e.g., regulatory capital and documentation obligation) for financial institutions, especially in Europe and the USA (Magnuson, 2018). This increase in regulation was intended to guarantee the stability of the financial market (Schleussner, 2017). In fact, the regulation of the financial industry had a great impact on the incumbent banks and insurance companies, as well as on fintechs.

Second, the finance sector is characterized by a special business-to-consumer relationship (Sapienza and Zingales, 2012). In particular, Germany is usually described as an example of a bank-based system with long-term relationships between banks and their customers, which are based on trust and loyalty (e.g., Elsas and Krahnen, 1998; Boot, 2000). Csiszar and Heidrich (2006) state a similar result for the insurance industry. Thus, the success of the incumbent financial intermediaries and fintechs depend to a high degree on the customers' belief in their quality.

Last, other markets (e.g., pharma/biotech) are confronted with greater innovation pressure historically, while the financial industry has not had to face radical innovations during the last several decades (e.g., Corea, 2015; Arner et al., 2015). This situation changed due to several technical innovations by the mid-2000s, such as the launch of smartphones and the availability of broadband Internet (Haddad and Hornuf, 2016). Young companies (i.e., fintechs) used these technologies to develop innovative products. Hence, the financial industry experienced a sudden collision with these new entrants.

To our knowledge, fintechs and cooperation between fintechs and incumbents, in particular, have received only limited attention in the research literature. Moreover, the existing cooperation literature mainly focuses on the incumbent's perspective in terms of their innovation objectives as well as on the incumbents' screening process (e.g., Corea, 2015; Bodek and Matinjan, 2017; Maxin, 2018). Therefore, we argue that the understanding of the cooperation between young companies and incumbents can be enhanced by answering the following research question: Why do fintechs cooperate with incumbents?

Since Dorfleitner et al. (2016) found that 87 percent of their surveyed German banks either already cooperate with a fintech or seek to cooperate with a fintech in the future; we believe the Germany finance industry is an interesting object of research to investigate this question.

Fintechs can be divided into different groups, whereby the main group consists of companies that are related to the banking market. A second important group belongs to the insurance industry. These fintechs are often specified as insurtechs (Alt et al., 2018). However, there exist only a relatively small number of these companies in Germany nowadays. Ernst and Young (2017) state that a total of 25 insurtechs were founded, which corresponds to eight percent of all fintechs.

Due to this limitation and to address our research question, we focus on the banking market, where we identify a sufficiently large number of collaborations. Nevertheless, especially the insurance industry often experiences a similar development as the banking sector (Alt et al., 2018). In this way, we follow Alt and Puschmann (2016) and argue that insurtechs can also strongly benefit from this study. Additionally, our results can be interesting for incumbent insurance companies in terms of dealing with insurtechs in the future (Tiberius and Rasche, 2017). Here, it is important to point out, that, despite their current small number, the insurtech sector is strongly

increasing and it is likely that these young companies take a more important role soon (e.g., KPMG, 2017; Ernst and Young, 2017).

In detail, we conducted a multiple case study and investigated fourteen German fintech-bank collaborations from 2016 to 2017. The data set mainly consists of interviews with the fintechs' CEOs. In addition, we consulted bank managers and industry experts and analyzed different data sources, such as homepages, industry reports, press release, marketing material, and newspaper articles.

The primary results of our paper consist of the following: we develop a resource-based framework that aims to explain why fintechs cooperate with banks. This conceptual framework contains three components:

- Banks enable fintech's market entry.
- Banks increase fintech's profits.
- Banks enable new fintech products.

These components are related to different label approaches and resources that fintechs can obtain when they cooperate with banks. We discuss this in detail in Section 4. Additionally, propositions are developed that can be tested in future research. In this context, we also highlight possible predictions for the insurance sector.

The remainder of the paper is organized as follows: after discussing the literature in the relevant fields of research in Section 2, we present in Section 3 the method of our study. Next, we provide the analysis of our data in Section 4. The last section concludes the paper.

2. Literature review

We proceed with the literature that we consulted either before or during the course of the study. Starting with the wider theme of cooperation between incumbents and young companies, we reviewed existing fintech literature with particular regard to cooperation with banks.

2.1. Cooperation between incumbents and young companies

Cooperation is defined as a long-term process of two or more companies working or acting together for a mutual benefit (Rotering, 1993). The literature distinguishes between different types of cooperation.

One typical form is an alliance. Gulati (1998) describes alliances as a voluntary arrangement between independent companies that share and exchange resources because they cannot generate all the necessary resources on their own (e.g., Child, 1974; Pfeffer and Salancik, 1978). For instance, resource sharing can comprise co-development or provision of products, services, and technologies. Alliances have specific objectives, which are negotiated and then pursued by all alliance partners (Dushnitsky, 2008). Hence, the partners jointly invest resources and engage in the project for which they formed their alliance. In case of success, all partners obtain a fraction of the monetary profits.

Especially for young companies, there is a lack of important resources to enable the companies' success. Therefore, they seek to cooperate with incumbents that have access to the required resources. For instance, Gans and Stern (2002) analyze a survey of more than 100 young companies. They reported that cooperation between a young company and an incumbent (through licensing, alliances, or acquisition) is the preferred approach when the incumbent has a particular resource that is crucial for the young company's success. In addition, Dushnitsky (2008) states the different resources that young companies usually obtain when they cooperate with an incumbent. Beside funds, infrastructure, and know-how, the young companies can also exploit a reputation effect (or endorsement effect) due to cooperation with an incumbent, which reduces uncertainty about the firms' quality. In other words, cooperation may enable a reputation spillover effect for young companies (Stuart et al., 1999).

Corporate venture capital (CVC) can be seen as a specific type of alliances that is based on minority equity (or equity-type capital) investments of incumbent companies in legally independent firms (e.g., Keil, 2000; Maula, 2001; Weber and Weber 2011). It plays an important role in financing young companies with uncertain but high growth expectations. CVC investments pursue two different goals in order to maximize the large companies' values: beside high financial returns, there are often more diverse and complex innovation objectives (e.g., access to new products, a window on new technologies, or generating demand). Remarkably, an important part of CVC is the non-financial support (corporate infrastructure, network, or other resources) provided by the investors. Hellmann (2002) points out that a new venture's success or failure depends on this non-monetary support.

2.2. Fintechs

The term *fintech* is a contraction of *financial technology* and encompasses young companies that develop Internet-based technologies that enable or provide financial services. Puschmann (2017) reports that the term is most likely first mentioned in the early 1990s. However, Zavolokina et al. (2016) state that the number of publications on fintechs has only recently increased. Thus, fintechs can be described as a relatively new field of research.

We identify four main topics, which are discussed in the existing literature. First, several publications have concentrated on developing definitions for the term *fintech*. Schueffel (2016), for example, states that fintechs are companies that apply technology to improve financial activities. Accordingly, Deutsche Bank Research (2014) describes the term fintech as modern technologies for enabling or providing financial services, such as Internet-based technologies in the e-commerce field, mobile payments, or early-stage crowd-based financing of young companies.

Second, other papers have considered the success factors and determinants of fintechs. According to Lee and Teo (2015), there are five factors that affect a fintech's success rate: low margins, light assets, scalability, innovation, and ease of compliance. Furthermore, Haddad and Hornuf (2016) investigate the economic and technological determinants of fintechs in 69 countries. They show that countries witness more fintechs when the latest technology is available in the economy because young companies require these technologies for their products. They also find that fintechs occur more frequently in countries with a more fragile financial market.

Third, since the financial sector is highly regulated, another strand of literature has focused on the regulation of fintech products (e.g., Douglas, 2016; Philippon, 2016, Knight, 2017). For instance, Knight (2017) analyzes the regulation requirements for the financial industry in the USA. The author shows that fintechs from the same product segment can be regulated differently across the states. This situation leads to an inefficient allocation of funds in the fintech sector. Other authors have focused on the regulation requirements in particular fintech segments, such as equity crowdfunding (Hornuf and Schwienbacher, 2017).

Lastly, some publications have analyzed the relationship between banks and fintechs. Jakšič and Marinč (2015) state that fintechs and other IT companies would cause drastic changes in the financial industry due to their innovative products. In line with this, Lacasse et al. (2016) predicts that "new services will meet or exceed expectations, and will often provide a product that is supe-

rior to that of the traditional industry." Tiberius and Rasche (2017) show the disruptive potential of fintechs by conducting a multiple-case study, which states the advantages of new services in several different product segments. Accordingly, PWC (2017) reports that more than 80 percent of their interviewees (i.e., experts from incumbent financial institutions) believe that their business is at risk due to fintech disruption. Moreover, Bunea et al. (2016) study annual SEC filings of U.S. bank holdings and find evidence that banks consider fintechs as serious threats.

However, other research has focused on the advantages of cooperation between fintechs and incumbents (e.g., Kalmykova et al., 2016; Burgmaier and Hüthing, 2015). We hereby found that authors mainly investigate reasons why incumbent banks seek for cooperation with fintechs. Accordingly, several financial institutions and consulting companies consider fintech-bank cooperation as a new opportunity for incumbent banks to obtain access to external innovation (e.g., BNY Mellon Treasury Service, 2015; Santander, 2016; Deutsche Bank Research, 2016).

Klus et al. (2018) differentiate five different motives why banks form strategic alliances with fintechs. First, banks outsource projects to fintechs within the framework of strategic alliances due to resource and cost saving, respectively. Second, banks seek for fintech alliances to accelerate their innovation processes. Third, banks consider investments in fintechs as M&A activities that may have a positive impact on their own business models. Fourth, banks are keen to cooperate with fintechs to increase revenues by offering the innovative fintech services. Fifth, banks want to have an access to the fintech's technical knowledge and to learn from the fintech's way of executing processes. Beside this, another aspect is that banks cooperate with fintechs to create a more innovate image for external stakeholders (e.g., clients and shareholders).

Other literature focuses on particular cooperation approaches between banks and fintechs (e.g., Thwaits, 2016; Bodek and Matinjan, 2017; Meinert, 2017; Maxin, 2018). For instance, some publications have focused on CVC: Corea (2015) states that the importance of CVC increases for banks. In line with this, Maxin (2018) conducts a single case study on Commerzbank's *main incubator*, which is the first CVC firm for fintechs in Germany. He shows that regulatory requirements have a great impact on the CVC firm's selection process and support for the fintechs. In addition, Bodek and Matinjan (2017) provide a case study on Comdirect's *startup garage*, which is one of the first accelerator programs executed by a German bank. They focus on the screening process, the support, and the bank's innovation objectives.

3. Method

This study is exploratory in nature because little is known regarding cooperation between fintechs and banks. We used a case study approach to develop a conceptual framework that enables a general understanding of our research topic.

We hereby define a concept as an abstract or generic idea generalized from particular instances. A conceptual framework, in turn, can be understood as a "network of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena" (Jabareen, 2009). It can be applied in different fields of science where an overall picture is required. For instance, economists developed the conceptual framework of "supply" and "demand" to explain the behavior of companies and consumers. In contrast to a theoretical model, a conceptual framework is based on flexible conceptual terms rather than rigid theoretical variables and strict causality (Jabareen, 2009). We argue that this methodical approach is suitable to explore why fintechs cooperate with banks.

Case studies often provide interesting insights and they can motivate a more rigorous analysis of a research problem. However, it is important to point out that case studies cannot provide a conclusive answer to this research problem.

3.1. Sample

We adopted a multiple-case study design because it allows us to enable cross-case analysis in contrast to the single-case study approach and hence, it provides a stronger theory basis. Moreover, Ridder (2016) reports that cross-analysis can strengthen possible results, verify relationships among these results, and offer a better understanding of the examined research topic. The fintech is the unit of analysis and each fintech in our study represents an individual case study.

In order to generate a new conceptual framework, the sample is of central importance. Notice that the selected cases are not representative of a larger population (Eisenhardt and Graebner, 2007). Ridder (2016) states that the goal is not to test a theory but to build a novel one. Statistical representativeness is not relevant. We applied maximum variation sampling, in accordance with Eisenhardt and Graebner (2007) and Yin (2014). This means that our study is designed to maximize variation along different dimensions, to reveal central patterns that hold across these dimensions in the cases (Ridder, 2016). We chose the following dimensions: *fintech product segment*, *fintech clients*, and *bank type.*

We also discussed the topic of this study with different experts in the field of fintech and banking. Based on these early discussions, we selected fourteen fintech-bank collaborations. Table 1 presents the main characteristic of each collaboration.

We investigated our research question in the context of a country in which cooperation between fintechs and banks is particularly relevant. As mentioned before, Dorfleitner et al. (2016) state that almost 90 percent of their surveyed German banks either already entered into a fintech cooperation or have the intention to cooperate with a fintech in the future. Given our sample number and dimensions, we considered a cross section of the German fintech sector that consists of approximately 24 banks that cooperate with at least one fintech (Payment and Banking, 2018).[1]

3.2. Data sources

The primary data sources of our study are semi-structured interviews. This means that our interviews structure based on two aspects, following Ridder (2016): first, we have used the literature on cooperation between incumbents and young companies and the existing fintech literature to predetermine themes and questions for the interviews. Second, we have not only limited on these structured topics. We also went beyond our prepared questions if the interview situation reveals new insights that were not expected. In order words, we combine (loose) structure and flexibility.

Ridder (2016) states that interviews can lack in reliability. Hence, in addition to the interview data, we also collected primary and secondary data by consulting company homepages, industry reports, press release, marketing material, and newspaper articles. This additional data collection increases the reliability and validity of our study through data triangulation (Miles and Huberman, 1994). Data triangulation means that our case study findings are supported by more than a single source of evidence. In contrast, if you use multiple sources but analyze each source separately, then this approach resembles the comparison of conclusions from separate studies. Each based on a different source (Yin, 2014). Moreover, we mitigate the interview bias by following an interview guide that structured our information collection.

Our interview partners are fintech CEOs and bank managers, with one interviewee for each of the fintechs listed in Table 1.[2] Interviewees were granted anonymity, thus individual names of respondents are not disclosed. Where quotes from the interviews are used in this study, we refer to

[1] This number refers to the year 2016. We have now identified 51 banks that cooperate with at least one fintech.
[2] Except for collaboration Alpha, where we also conducted interviews with bank managers.

the related cooperation with the Greek alphabet (e.g., Theta) and to the interviewee with a letter and number code (e.g., A1). The interviews were conducted by telephone and in-person on site. We also adopted pilot interviews to become familiar with the interview guidelines and to correct any mistakes.

Almost all informants were interviewed two times because our guide evolved systematically (Glaser and Strauss, 1967). Hence, we used a second interview round with the same experts to lessen possible bias. After each interview, we prepared an interview protocol and the audio recordings were transcribed by a professional service provider. Altogether 25 qualitative, depth interviews were carried out. In detail, this study is based on approximately fifteen hours of interviews, resulting in 313 pages of primary source material.

3.3. Data analysis

Through analysis we moved from raw data toward identification of central patterns. As common in the related literature, we made a cross-case analyses that was based on five steps (e.g., Andriopoulos and Lewis, 2009; Souitaris and Zerbinati, 2014):

Stage 1. Compiling separate case studies. We conducted within-case analyses by preparing a detailed description of each fintech-bank collaboration. The overall idea is to become intimately familiar with each case, which, in turn, accelerated the later cross-case comparison (Eisenhardt, 1989). Table 1 provides the results of this first step.

Stage 2. Identifying initial, broad categories for each case. Examining all interview transcripts, we used an inductive coding approach without pre-specified propositions to form provisional categories and first-order concepts, respectively, (Ridder, 2016). Inductive coding means that we started to read our data and searched for important pieces without using theoretically guided codes. This approach allows us to be open about what is happening in our data (Ridder, 2016).

The resulting first-order concepts (broad categories*)* provide general insights in our raw data. Due to high data amount and to enable a systematic analysis, we processed our data with the help of the computer assisted qualitative data analysis software MAXQDA.

We assessed the reliability of the coding in two steps (Andriopoulos and Lewis, 2009). First, both authors coded the collected text separately. Second, we compared our coding. As standard in the related literature (e.g., Andriopoulos and Lewis, 2009; Souitaris and Zerbinati, 2014), we

Table 1. Sample

Collaboration	Fintech Segment	Fintech Clients	Bank type	Fintech description	Principal informants (code)
Alpha	Payments	B2C B2B	Local cooperative bank	The fintech's main product is a mobile application for smartphones, enabling users to send or borrow money to or from other users, collect and split payments among other users for a special occasion, pay invoices in online shops and buy prepaid cards and vouchers.	CEO Fintech (A1) Manager Bank (A2) Manager Bank (A3)
Beta	Payments	B2B	Nationwide cooperative bank	Fintech Beta enables merchants of all sizes to integrate all relevant payment solutions to their own shop platform systems through a single API.	CEO Fintech (B1)
Gamma	Banking	B2B	Central cooperative bank	Fintech Gamma developed a sophisticated online exchange platform for B2B trade receivables, enabling firms to upload their invoices in order to put those up for a Vickrey auction.	CEO Fintech (C1)
Delta	Crowdfunding	B2B	Nationwide cooperative bank	The fintech digitizes emission and investment processes for companies in different industries. One of their main products is a white label crowdfunding platform.	CEO Fintech (D1)
Epsilon	Crowdfunding	B2B	State-owned business development bank	The fintech is an online platform which mainly provides reward-based crowdfunding solutions. In this form of crowdfunding supporters typically get the product as a reward when the project is successful.	Manager Fintech (E1)
Zeta	Banking	B2B	Large private bank	Fintech Zeta is an online financial service marketplace. SMEs can send a request concerning their financing or investing need. Partner banks are free to make offers. The Fintech acts as an advisor to the SME regarding the offers from different banks.	CEO Fintech (F1)
Eta	Payments	B2C B2B	Small private bank	The fintech allows consumers to buy online and make payments at partner shops with cash. The consumer print out the given receipt in form of a barcode, take it to one of thousand partner shops, scan it and pay it cash.	Managing Director (G1)
Theta	Banking	B2C	Small private bank	Fintech Theta developed a mobile application which analyzes a customer's consuming behavior by an intelligent algorithm and calculates an individual amount of money for savings which can be invested in the next step.	CEO Fintech (H1)
Iota	Banking	B2B	Large private bank	The fintech's main product is a web identification software. The sophisticated software identifies persons by analyzing biometric data during a video call. Furthermore Fintech Iota developed an online contracting solution which is typically used for online credit contracts.	CEO Fintech (I1)
Kappa	Robo Advice	B2C	Small private bank	Fintech Kappa is a high tech investment manager for private and institutional investors. By analyzing big data, the algorithm considers multiple key figures and further identifies undervalued companies in order to create a portfolio.	CEO Fintech (J1)
Lambda	Payments	B2B	Nationwide cooperative bank	Fintech Lambda provides payment solutions in the area of donation. Their main product is a donation widget for websites of charitable companies which allows supporters to donate money cashless through different payment solutions.	CEO Fintech (K1)
Mu	Robo Advice	B2B B2B	Large saving bank	The fintech is digital asset management company offering a wide range of services, such as depot opening, customer risk evaluation, depot management or performance reporting.	CEO Fintech (L1)
Nu	Payments	B2C B2B	Large direct bank	Fintech Nu provides an intuitive smartphone app for users who want to send money to friends all over Europe in a matter of seconds. By cooperating with user's principal banks, the app guarantees the bank's normal high security standards.	CEO Fintech (M1)
Xi	Text recognition	B2B	Large private bank	The company provides AI-driven content automation solutions with semantic applications, Natural Language Understanding (NLU), Natural Language Generation (NLG), and chatbots. In this way, the company is not considered as a pure but a partial fintech.	CEO Fintech (N1)

checked for Cohen's (1960) coefficient of agreement, where k = 1.00 characterizes a perfect intercoder agreement. For our data, we obtained a high agreement among the codes due to k = 0.83. We resolved any disagreements through discussions between the authors.

Stage 3. Linking related broad categories by cross-case comparison. Next, we searched for links between the first-order concepts across our cases (Gioia and Chittipeddi, 1991). Similar themes were gathered into second-order concepts that served as the basis of our emerging framework. In total, we consolidated our first-order concepts into ten second-order concepts, which are shown in Figure 2. We labeled these dimensions by capturing the content at a higher level of abstraction. For instance, statements about 'bank know-how,' 'bank knowledge,' 'knowledge transfer,' and 'bank expertise' were grouped into the second-order concept of 'know-how.' Figure 1 provides an example of this analysis step.

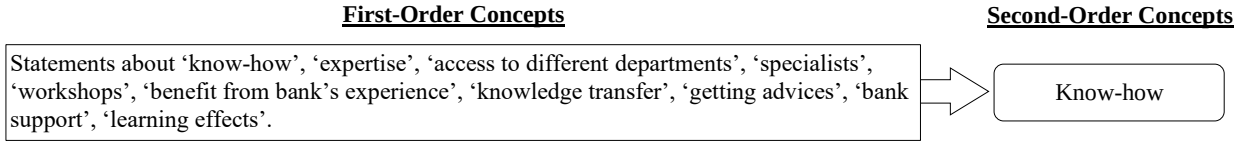

Figure 1. Second-order concepts.

Stage 4. Aggregation of the second-order concepts. Next, we identified two aggregated dimensions underlying our second-order themes, namely *bank resources* and *product labels*. Hence, we moved from our first-order concepts to higher-level concepts (Ridder, 2016). An important point of this process was that we allowed concepts and relationships to emerge from the data, rather than being guided by the existing literature. Figure 2 depicts our aggregated dimensions.

Stage 5. Building a conceptual framework. Lastly, we found that some resources were connected to other resources or to a specific product label. Given this, we developed a conceptual framework to illustrate how the lower concepts and aggregated dimensions relate to each other (Souitaris and Zerbinati, 2014). Additionally, propositions were developed that can be tested in future research. Make note that our propositions are based on a small sample and are not equivalent to theoretical propositions. Figure 3 provides the results of this final step.

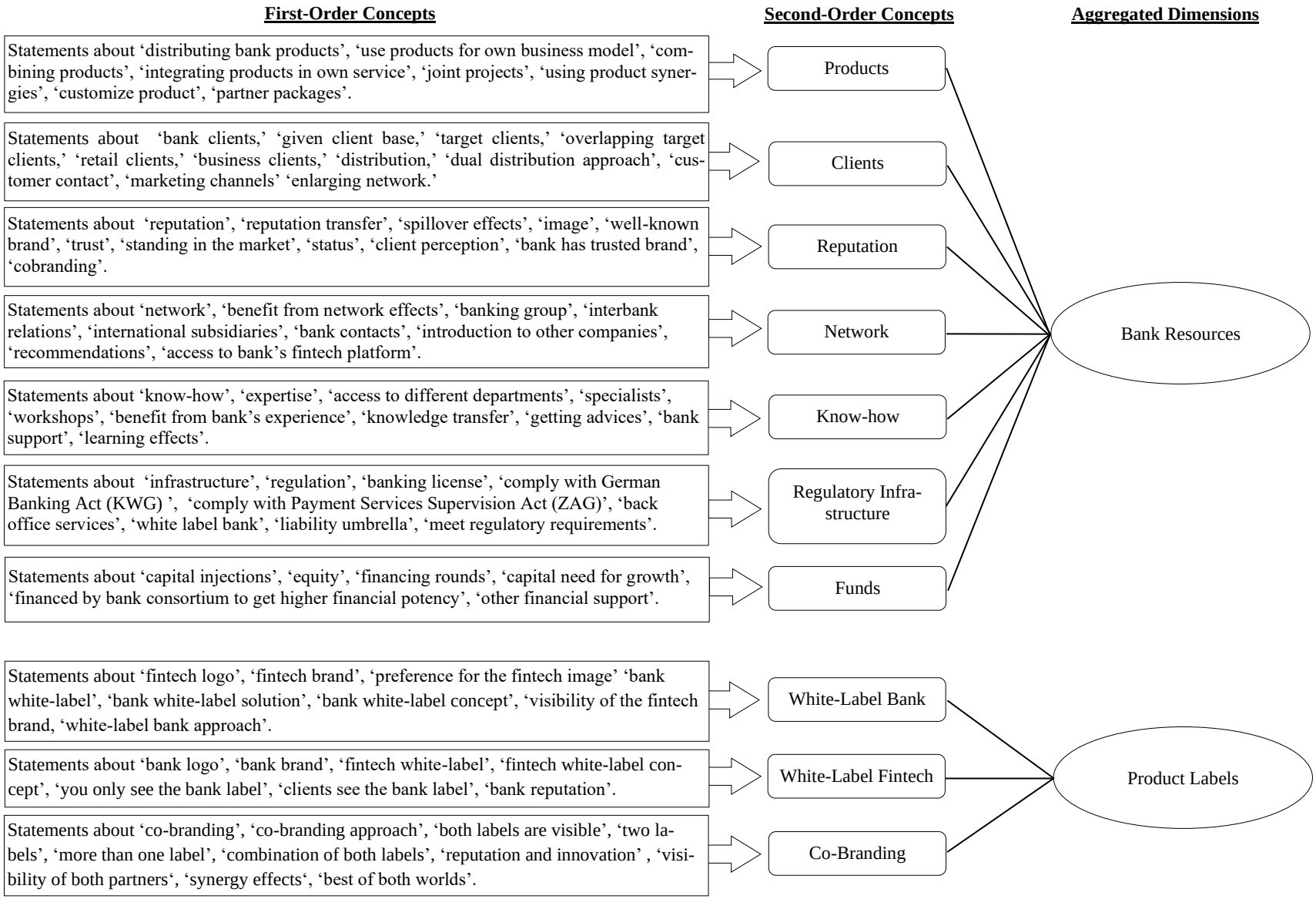

Figure 2. Data structure

3.4. Literature comparison

We compared our results with the existing literature in the fields of fintech and cooperation between young and incumbent companies to enhance the internal validity, generalizability, and theoretical level of our study (Eisenhardt, 1989).

4. Analysis

The purpose of this study is to investigate the reasons why fintechs cooperate with incumbents. In this section, we present the overall findings related to the research question from the introduction and our developed propositions.

4.1. Conceptual framework

In order to obtain a better understanding of the reasons that determine cooperation between fintechs and incumbents, we derived the conceptual framework illustrated in Figure 3. In line with the cooperation literature (e.g., Child, 1974; Pfeffer and Salancik, 1978), we argue that access to resources is an important reason for fintechs to cooperate with an incumbent bank. Hence, we selected resources as the viewpoint of our study to provide new insights in the field of fintech-bank cooperation.

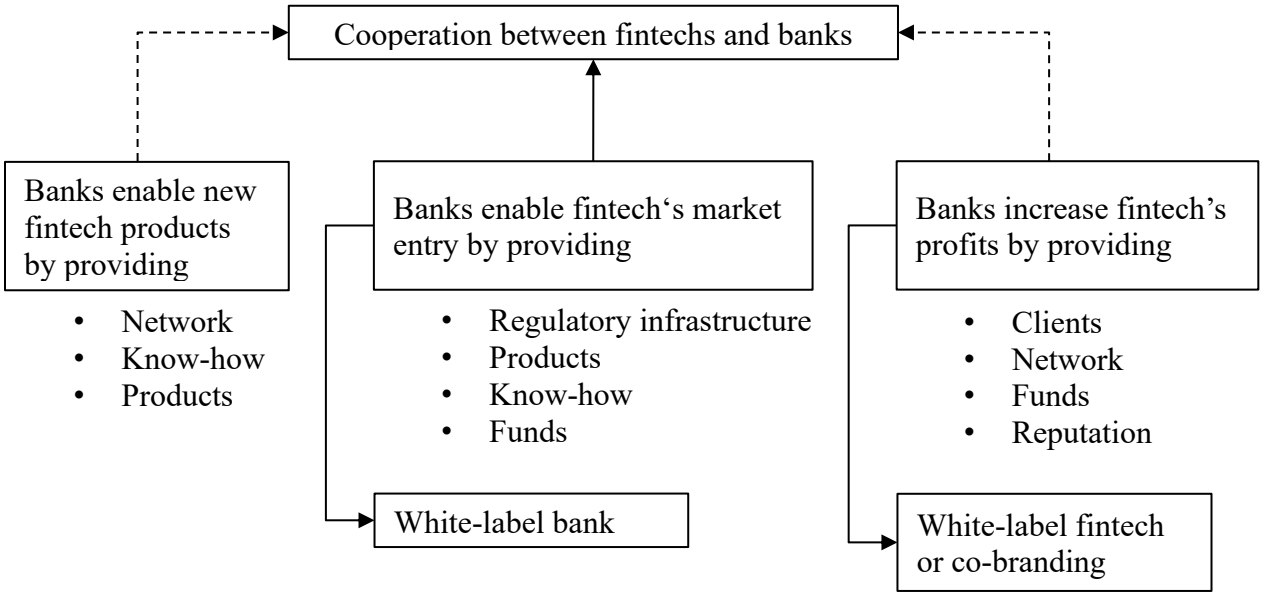

Figure 3. Conceptual framework to explain fintech-bank collaboration.

The conceptual framework emerged as a result of our data analysis (Teppo and Wüstenhagen, 2009). The dependent variable of our research is the cooperation between fintechs and banks. We found the existence of a recurrent pattern and grouped particular resources (i.e., second-order topics) together (see, for a cross-case comparison of the resources Table 2). Each resource group is related to a specific reason (explanatory variable) why fintechs cooperate with banks.

In detail, our conceptual framework is based on the argument that some fintechs are reliant on banks, in that they cannot enter the market without the banks' cooperation. Thus, cooperation is a necessary condition for these fintechs. Beside this, we also identified that fintechs cooperate with banks to increase their profits and to enable new products. Indeed, the last two points are not necessary conditions for collaborating. Bank cooperation is a possible option for the related fintechs to obtain a particular benefit. As we will show, some fintechs cooperate with a bank due to more than one reason.

Clearly, new products and market entry also increase (or enable) profits for the fintechs. Hence, it is possible to connect the first two explanatory variables with the last one. However, we want to maintain clarity of the conceptual framework and to highlight the direct impact of our resources and the fintechs' different requirements, respectively.

In addition, we found that two of our reasons (i.e., banks enable the fintech's market entry and increase fintech's profits) are linked to a specific labeling of the fintechs' products (see, for a cross-case comparison of the labels Table 3). The following sections discuss the elements of our conceptual framework in more detail. We also stress the different characteristics of our fintech segments.

4.2. Banks enable fintech's market entry

When we analyzed the empirical data from our interviews, we found several fintechs that needed specific resources to enter the market, namely Gamma, Zeta, Eta, Theta, Kappa, Mu, and Nu. The fintechs belong to three segments: payments, banking, and robo-advising (see for description of each fintech segment Table 1). We identified the main resources that are related to the fintech's market entry: regulatory infrastructure, products, know-how, and funds.

Regulatory infrastructure: Wurgler (2000) emphasizes that financial regulation is important for the efficient functioning of the financial market. For Germany, the German Banking Act (KWG)

as well as the Payment Services Supervision Act (ZAG) regulates the financial industry by means of licenses, also called bank licenses. Since it is cost-intensive and time-consuming to obtain a license, Thwaits (2016) states that fintechs seek to cooperate with a banks. In the words of one interviewed manager:

> *'An own banking license is too expensive on the one hand. On the other hand, [if we applied for a banking license] we would not have enough time to develop the [core] product, because we would have to develop many functions and many regulatory features from scratch.'* (J1, Kappa)

Another interviewed fintech commented on the regulation requirements as follows:

> *'Like every fintech, we have a partner bank in the background, whose banking license is in principle enabling our business model. In fact, we are only a technical service provider for the product we offer.'* (G1, Eta)

Recall from above that we find three fintech segments where a bank is necessary for market entry due to KWG and ZAG. The other fintech segments of our sample are either able to fulfill the regulation requirements without a partner bank (i.e., crowdfunding) or they are not regulated (i.e., text recognition). Of note, Germany recently passed a specific legislation for crowdfunding, namely the Small Investor Protection Act (see Hornuf and Schwienbacher, 2017). An interviewed crowdfunding fintech commented on the possibility of fulfilling the regulation requirements:

> *'…we fulfill the regulation requirements alone…There were some tasks, but we were able to fulfill them. Then, we have started our project and negotiated with the bank.'* (D1, Delta)

Given these results, we state the following proposition:

Proposition 1: Fintechs cooperate with banks when they are regulated in the sense of KWG and ZAG.

We find that all of our fintechs cooperate with a bank when they have to fulfill the KWG or ZAG requirements. Recently, however, there is some evidence that German fintechs can obtain their own licenses to become independent from their partner banks (e.g., the fintechs Bitbond or N26). Hence, we argue that Proposition 1 is an interesting empirical result that can be tested with a

larger sample in the future to prove whether fintechs are able to fulfill the regulation requirements without bank cooperation.

For the insurance industry, we expect a similar result in the future. To see this point, consider, for instance, the minimum capital requirement due to Solvency II. To fulfill this requirement, young companies can either seek to obtain funds from venture capital firms (e.g., the insurtech Oscar) or they cooperate with an incumbent insurance company (Rossbach and Hilberg, 2016). Nevertheless, we identify that most insurtechs focus on platforms and marketplace solutions nowadays, where the regulatory requirements do not apply.

Know-how: A number of studies state that young companies are likely to be the source of highly valuable and innovative ideas (Kortum and Lerner, 2000; Zingales, 2000). Nevertheless, incumbents usually have expertise for product development and regulatory and patent approvals because they have existed in the market for over a longer period of time (Park and Steensma, 2012). Moreover, from the knowledge-based view of the firm, know-how is the core value in any kind of organization (Weber and Weber, 2011). As a consequence, young companies seek to cooperate with incumbents to obtain access to their considerable know-how (Kogut, 1988).

Our data indicated that all fintechs, which need regulatory infrastructure, rely also on their partner banks' know-how because they have to connect their own technology with the IT system of their cooperation bank. In addition, banks advise fintechs to develop products that are in line with the market requirements and thus enable market entry. As expressed by a manager:

> *'[During the process of product implementation] the bank [sometimes] said, no, we cannot do it like this, because that violates any of our internal rules or those from the supervision…the bank specify if it is okay or not.'* (N1, Mu)

Products: Ghazawneh and Henfridsson (2015) found that Internet-based companies, which develop digital marketplaces, cooperate with other companies because they want to distribute their cooperation partners' products. Our data indicated a similar approach for fintechs. They cooperate with banks because bank products are part of their own business models. For instance, fintech Zeta has a platform for financial products, such as credits, leasing instruments or factoring solutions. A manager explained:

'The most important reason why we entered into this collaboration is…that we are driving a marketplace and do not have any own products in the market...' (F1, Zeta)

Table 2. Resource overview.

	Clients	Regulatory Infrastructure	Products	Funds	Network	Know-how	Reputation
Alpha	Yes	No	No	No	Yes	No	Yes
Beta	Yes	No	No	Yes	Yes	Yes	Yes
Gamma	Yes	Yes	No	Yes	Yes	Yes	Yes
Delta	Yes	No	No	Yes	Yes	No	Yes
Epsilon	Yes	No	Yes	Yes	Yes	Yes	Yes
Zeta	No	No	Yes	Yes	No	Yes	No
Eta	Yes	Yes	No	Yes	Yes	Yes	Yes
Theta	No	Yes	Yes	No	Yes	Yes	Yes
Iota	No	No	No	No	Yes	Yes	Yes
Kappa	No	Yes	No	No	No	Yes	Yes
Lambda	Yes	No	No	Yes	Yes	No	Yes
Mu	Yes	No	Yes	Yes	Yes	Yes	Yes
Nu	Yes	Yes	No	No	No	Yes	Yes
Xi	No	No	No	Yes	Yes	Yes	Yes

Intuitively, the partner banks are also better off because fintechs can be seen as a supplemental distribution opportunity, which increase their sales or reduce cost-intensive processes. The following quote illustrates this:

'...asset management solutions are brutally complex in the sense of the technical requirements...Hence, banks are looking for alternative systems, like us [the fintech], that can undertake these tasks…' (L1, Mu)

Funds: Naturally, a young company needs financial resources to realize its innovative product or idea (Stinchcombe, 1965). The problem is that young companies lack of collaterals and track records and thus cannot obtain bank loans. However, there are specialized investors, such as venture capital firms, which allocate funds towards young companies with growth potential (e.g., Gompers and Lerner, 2001).

In comparison to other countries (e.g., United States, United Kingdom), the German venture capital market is significantly underdeveloped. This is reflected in the small number of German venture capital firms and funds, the relatively small amounts of capital German firms have under management, and the average amount of venture capital funding rounds in Germany (KPGM, 2017). We found in our data that some fintechs abstract from venture capital financing because they require a high funding volume to realize their business ideas. Accordingly, some German fintechs need another type of investors with a higher financial power. For instance, fintech Gamma is financed by a syndicate, consisting of several banks, which hold fractions of the fintech's shares and are at the same time part of the fintech's business model. The CEO explained:

> *'The reasons why we were looking for a partner and contacted banks were that it is quite complicated to realize the fintech with venture capital [firms] only. Being backed by a bank consortium provides you [the fintech] with…a [higher] financial potency; because a bank may contribute higher investments compared to venture capital…This means you have a completely different leverage. Then, you can build entirely different structures and teams…'* (C1, Gamma)

Given these results, we state the following proposition:

Proposition 2: A higher funding requirement positively affects the founding of fintech-bank cooperation, instead of venture capital financing.

As mentioned, independent venture capital firms are still limited in Germany (KPGM, 2017). In the same way, there are only a limited number of banks that provide equity investments for young companies (Maxin, 2018). Thus, we argue that Proposition 2 is an interesting empirical statement that can be tested in future research to identify the main financing source, especially when high amounts of funds are required (independent venture capital or equity investments by banks).

This proposition is also important for the insurance industry. On the one hand, we identify only a few incumbent insurance companies (Allianz, AXA, HDI, Munich Re and Wüstenrot & Württembergische) that allocate funds towards young companies. On the other hand, the limited venture capital market is also a problem for insurtechs in Germany. Nevertheless, KPMG (2017) states that venture capital investments in this sector are strongly increasing in the last years, i.e. from 2012 to 2017.

White-label bank: A young company can reduce uncertainty about its quality by collaborating with an incumbent due simply to the fact that it was chosen by this industry incumbent (Stuart et al., 1999). The young company usually demonstrates its affiliation to the incumbent, e.g., by presenting the incumbent's brand on its products (see Section 4.3.). However, we found four fintechs in our sample that sell their product only under their own brand. Hence, they abstract from the endorsement effect of their partner bank. We refer to this as a white-label bank approach. In the words of a fintech manager:

> *'They [our partner bank] provide a white-label deposit account. If a client opens an account at our company… it is actually an account of our partner bank. However, this takes place in the background because it seems as the client opened an account at our company.'* (H1, Theta)

It is important to point out that the white-label bank approach only occurs if the fintech requires the bank for market entry. If the cooperation seeks to increase profits, then we have identified other label-approaches. We discuss this in the next section.

4.3. Banks increase fintech's profits

From the interviews, a second theme was identified regarding the effect of bank cooperation on the fintech's profits. When we analyzed our data, all fintechs, with the exception of fintech Zeta, cooperated with a bank to increase profits. We find four main resources related to this theme: clients, networks, funds, and reputation. These factors will be discussed in detail below.

Clients: Young companies have only a few clients at the beginning of their business life because they are unknown and it is cost-intensive (e.g., marketing effort) to acquire customers (Dushnitsky, 2008). In contrast, incumbents usually have a large client base due to their long-term existence in the market.

Many of our interviewed fintechs stated they obtained access to their partner banks' customers. In other words, banks help to sell the fintechs' products. An interviewed fintech manager commented on this bank support:

'…we got access to the banks' customers, which help us to expand our [user] network. We do not have to acquire these users through own marketing [activities] and this is of course an advantage.' (A1, Alpha)

Another interviewed fintech manager described the cooperation bank's client resource as follows:

'The potential of a bank [to sell the product] is, of course, much higher since it conveys and manages higher volumes [compared to other clients] because there is a better access to the [customers] projects…' (D1, Delta)

Table 3. Label overview.

	White-Label Bank	**White-Label Fintech**	**Co-Branding**
Alpha	No	Yes	No
Beta	No	Yes	No
Gamma	Yes	No	No
Delta	No	Yes	No
Epsilon	No	No	Yes
Zeta	No	No	Yes
Eta	Yes	No	No
Theta	Yes	No	No
Iota	No	No	Yes
Kappa	Yes	No	No
Lambda	No	No	Yes
Mu	No	No	Yes
Nu	No	Yes	No
Xi	No	Yes	No

It is important to notice that most of our fintechs use a dual approach. They acquire customers on their own as well as having access to the banks' customers. For instance, fintech Alpha and fintech Nu provide mobile peer-to-peer payment applications for retail clients. Bank clients increase the number of application users; thus, the payment network becomes more attractive. The following quote illustrates this:

> *'In any case, the expansion of the user group is important as this makes the app more interesting. It is like WhatsApp. You cannot imagine today that there were people who did not use it.'* (A2, Alpha)

However, some fintechs abstract from acquiring their own customers. The manager of fintech Beta, a payment service provider, chose this approach to save on costs and to focus on the development of the fintech's technology. The interviewed fintech manager described this approach as follows:

> *'There are already examples [other fintechs] which have to leave the market due to high marketing and sales activities…we are completely focused on technology and customer support. In our opinion, this is the right path for the future.'* (B1, Beta)

Network: Baum et al. (2000) provided evidence that access to an established network is another reason why young companies benefit from collaborating with incumbents. Moreover, Milanov and Shepherd (2013) emphasize the importance of the first cooperation partner's network to a young company's success. Indeed, we find that the overwhelming number of our fintechs obtained their first business contacts (e.g., other banks, auditing and consulting firms) through their cooperation bank's network. The following quote illustrates this:

> *'The bank is very open to making contacts, recommending us to other banks, other players, whenever it seems to fit…We were introduced in many circles, we had very often the opportunity to present ourselves and were then recommended once again.'* (N1, Xi)

In particular, fintechs increase their profits by using banks' subsidiaries. An interviewed manager from fintech Iota described this approach as follows:

> *'[…] In other words, having a well-functioning cooperation with [this] German bank helps us, of course, to work with the bank's subsidiaries' in all other countries of the world.'* (I1, Iota)

Funds: Dushnitsky (2008) emphasizes that young companies obtain funds to finance product development but also for other activities, such as market research or reducing production costs. Analogously, we found evidence that funds are used to increase fintechs' profits. For instance, fintech Xi finances its marketing activities and new employees with the monetary support. Funds

are also required when fintechs decide to expand their business and enter new markets. As a fintech CEO explained:

> *'…the banks distribute our joint product. Distribution is quite expensive…this will be financed by the banks on their own. Hence, we have a financial support for our fintech.'* (L1, Mu)

Reputation: Young companies often lack stable relationships with customers and suppliers (e.g., Stinchcombe, 1965). In line with this, Stuart et al. (1999) state that outsiders will generally be uncertain about the young companies' quality because they have less production experience and thus they operate with unestablished processes. An interviewed fintech manager commented on the importance of quality and reputation in the financial industry:

> '*At the end of the day we talk about payment traffic and cash flows and not somehow about the 25th social network…In this way, people consider this business as very serious…It is about finance and it is about the success of a company…' (B1, Beta)*

Reuber and Fischer (2005) and Maxin (2018) state that affiliations with prominent incumbent companies are valuable for young companies because they signal the endorsement of a reputable organization. Hence, young companies seek to cooperate with incumbents to reduce uncertainty about their quality due to a reputation spillover effect (Stuart et al., 1999; Ginsberg et al., 2011). Our data indicated that nearly all of our fintechs have confirmed the existence of such reputation effects. A manager of fintech Delta explained this effect:

> '*We were in contact with a company, even before we have started the cooperation with the bank. [Unfortunately,] the company rejected [collaborating with us]... [However] the company is also a client of our partner bank and they work together very closely. When the company heard about our cooperation with the bank, they also decided to start collaborating with us anyway. The other company has specifically referred to it [the bank cooperation].' (D1, Delta)*

White-label fintech and co-branding: Most of the fintechs that we interviewed that sought to increase profits by collaborating with a bank apply two specific product labels. First, we identify

a group of three fintechs, which sell the product only under the partner bank's brand. We refer to this as a white-label fintech approach. The following quote from fintech Nu illustrates this:

> *'The user perceives the service as a service of the bank. He primarily sees the bank logo ...They [the banks] have built trust with the customer over the years and of course we can use this trust for our innovative payment solution.'* (N1, Nu)

Our findings indicate that all fintechs that apply a white-label fintech approach cooperate with more than one bank. Then, fintechs are only technology service providers and they distribute their technology to many banks to increase profits as well as the number of users. In return, banks receive the opportunity to offer innovative products to their customers. As a bank manager explained:

> *'… but to the customers and users of this app, it [the white-label fintech app] appears as a strong technical innovation…and users who connect their account to the app have fewer incentives to change [the bank].'* (N1, Nu)

Additionally, we found evidence that some collaborations use a combination of both labels, such that the clients notice the fintechs' and the partner banks' brands together; we refer to this as a co-branding approach. A manager at Mu indicated:

> *'This is not a white-label-case but rather a co-branding case. The fintech's brand is still visible.'* (L1, Mu)

In this case, we have a combination of two effects. First, we have a reputation effect due to the bank's brand. The clients recognize that they are using a product that is distributed by an established bank. Second, we have an innovation effect because the fintech's brand is also visible. The clients also notice that they are using a new technology. The following quote from fintech Mu illustrates this:

> *'We [the bank] ensure that everything works safely, such that the clients can trust the [fintech] product. On the other hand, the fintech is responsible for the new and cool features… Hence, we have the best of both worlds.'* (L1, Mu)

The same manager concluded:

> '*… I would almost speak of Yin and Yang [with respect to reputation and innovation]…And in this way, we have a great synergy chain, because, what is missing, the bank has and vice versa.'* (L1, Mu)

Given these results, we state the following proposition:

Proposition 3: The visibility of the cooperation bank's label positively affects the fintech's profits.

We argue that Proposition 3 can be tested in future research because the financial industry is characterized by long-term relationships between customers and banks. The success of the banks depend to a high degree on the customers' belief in their quality and the banks' reputation, respectively (Caselfranchi and Falcone, 2010; Sapienza and Zingales, 2012). Hence, we expect a positive effect on the fintechs' profits due to the visibility of the cooperation bank's label. It is important to point out that we did not identify cases where the fintech product was only labeled with the partner bank's brand if the fintech reaches a particular profit benchmark. In other words, we did not find a reverse causality of Proposition 3.

Clearly, we expect a similar result for the insurance industry. Csiszar and Heidrich (2006) emphasize that insurance companies have also long-term relationships with their customers, which are based on trust and loyalty. Therefore, the visibility of an incumbent's label can have a positive effect on the insurtechs' profits.

4.4. Banks enable new fintech products

From the interviews, a last theme was identified regarding the effect of cooperation on a fintech's product line. We identify different fintechs that cooperate with a bank to develop new products, namely Epsilon, Eta, Theta, Iota, Nu, and Xi. These fintechs belong to the following segments: payments, banking crowdfunding, and text recognition. Overall, we found three main resources related to this theme: network, know-how, and products. These factors will be discussed in detail below.

Network: Fintech Theta's product calculates a monthly saving amount for the customers by using an algorithm that analyzes income and consumption behavior. Its partner bank also cooperates with several other fintechs. Most of these young companies provide investment products, such as fixed income assets, exchange traded funds, and security products. Fintech Theta inte-

grates all of these services into its own product. Hence, the customers have a wider range of investment opportunities for their saving amount. As expressed by the CEO:

> *'We are building with our fintech a layer over these fintechs and above the bank, if you now think of a bit bigger, more visionary, you can say we are the Google of the financial sector and we are looking for the right partners for our users.'* (H1, Theta)

Know-how: Fintechs also use the cooperation banks' know-how to expand and improve their products. An interviewed fintech manager commented on the possibility of generating new products:

> *'…there are frequent workshops for the exchange of knowledge where we talk about common products…The basic product… remains untouched. It's more about finding new business opportunities for using the product [technology], for instance, municipal payments, or other banking products, such as loan payments or something else.'* (G1, Eta)

Another interviewed manager whose fintech is involved in a bank's digital factory described it as follows:

> '*The idea of this digital factory is to re-think things…there are people who think differently to those in the regular departments...we have access to specialists who do not work for us [exclusively] but we can exploit their know-how for product development'* (I1, Iota)

Interestingly, fintech Xi started in the field of text recognition and is originally not a pure fintech. However, its technology is also relevant for banks and insurance companies. The fintech requires a bank's know-how to evaluate key performance indicators due to the founders' limited expertise in this field. Hence, the young company started cooperating with a bank to develop different products for the financial industry, combining its technology and the bank's know-how. The following quote is illustrative of this:

> *'...we have a basic technology ... And the [idea of this] cooperation is that we work together with different units of the bank, such as marketing, human resources, financial analysts… and think of how to make our technology usable for a bank.' (N1, Xi)*

Products: Moreover, we found evidence that fintechs in the segments of banking and crowdfunding integrate bank products in their own products to become more attractive for customers. An interviewed fintech manager commented on the product integration:

> *'We discovered a huge product flexibility at the bank…we had not seen from other bank partners. We had previously scanned the market very closely and just realized that they could offer us the opportunity to build a truly innovative product.' (H1, Theta)*

We also observed joint projects of fintechs and banks that extend the fintechs' product lines. Fintech Epsilon usually provides a reward-based crowdfunding system. Aside from this, the fintech started a co-funding project with a development bank. A manager at Epsilon indicated:

> *'…so, I [a young company] apply to the bank for funds and say:" I have a financing volume of 30,000 euros. I'll raise 20,000 euros through crowdfunding, but would like to have a follow-up financing." Then, the bank checks the document and [may] say: "Okay, that works for us. If you collect 10,000 euros minimum, you will get the follow-up financing from us." And this gives them a real market test where I can see if… anyone buys it [the young company's product]?' (E1, Epsilon)*

Hence, fintech Epsilon's crowdfunding approach has the function of a pre-market product evaluation for the bank, reducing uncertainty about the demand for new products. In this way, the joint project enhances the financing opportunities for young companies by loans and reward-based crowdfunding.

Given these results, we state the following proposition:

Proposition 4: A fintech-bank cooperation positively affects the number of products the fintech develops.

Fintechs are often described as disruptive forces in the financial industry (e.g., Tiberius and Rasche, 2017). However, we found in our study that several fintechs and banks cooperate to develop together new products. In other words, the young companies do not seek to replace the incumbents. Thus, we argue that Proposition 4 can be tested in future research to highlight the synergistic effects of a fintech-bank cooperation.

Proposition 4 is also relevant for the insurance industry. We find that most insurtechs focus on platforms and marketplace solutions nowadays due to the regulatory requirements. This shows that insurtech products can apparently be combined with products of incumbent insurance companies. Given our identified resources that increase the fintechs' number of products, we believe that incumbent insurance companies can provide the same resources for insurtechs. Thus, we expect that cooperation can also positively affect the insurtechs' number of products.

4.5. Reasons for cooperation

It is worth noting that most of our fintechs have two reasons why they cooperate with a bank. Specifically, we found that the combination of *enabling market entry* and *increasing profit* occurs most frequently. Subsequently, our fintechs have only one reason, namely *increasing profit.* Moreover, we can state that whenever a fintech requires a bank for market entry, then it also has an additional objective: either *increasing profit* or *developing new products*.

Moreover, we showed that fintechs from the banking segment especially seek to cooperate with an incumbent bank because these young companies are represented predominantly in each of our resource groups. To understand this point, remember that banking products are regulated (i.e., fintech Gamma and Theta), have high development costs (i.e., fintech Gamma), and require products of incumbent banks (i.e., fintech Zeta). Hence, these young companies need cooperation in different ways to enter the markets. In the same way, fintechs from the banking segment use the incumbent banks' clients, networks, funds, and reputation to increase their profits (i.e., Gamma, Zeta, and Iota). Lastly, these fintechs also cooperate with a bank because they want to develop new products and thus, they use either the bank's product or the network to expand their own core products (i.e., fintech Theta).

5. Conclusions

We have proposed a conceptual framework that helps to explain why fintechs cooperate with banks. It based on the argument that some fintechs are reliant on banks, in the sense that they cannot enter the markets without collaborating. Thus, collaboration is a necessary condition for these fintechs. Beside this, our framework shows that fintechs cooperate with banks to increase their profits and to enable new products.

We focus on banks as potential cooperation partner. However, we argue that insurtechs can also strongly benefit from our study because they may experience a similar development as fintechs.

In this way, we show how our results can be transferred to the insurance industry. Our identified cooperation reasons can also be interesting for incumbent insurance companies, in the sense that they disclose which resources are important for young companies in the finance sector. Thus, incumbent insurance companies can build up or extend their already existing resources if they seek to cooperate with an insurtech in the future.

Our article contributes to two strands of literature. Initially, we contribute to the fintech literature in general by documenting and explaining resources that are usually an element of fintech-bank cooperation. In contrast to recent studies that focus on different segments (e.g., payment, crowdfunding, blockchain), we analyzed fintechs in general. Moreover, we provide a deeper understanding of the fintechs perspective because (to our knowledge), no other paper considers the fintechs' point of view. The development of our conceptual framework creates new opportunities for future research on this topic. In this way, we developed propositions that can be tested in future research.

We also extend a stream of work that looked at cooperation between young and incumbent companies. We argue that fintech-bank cooperation differ from other cooperation between young companies and incumbents in several ways. First, since the financial industry is strongly regulated and many services require costly licenses, fintechs are forced to cooperate with banks to obtain regulatory infrastructure. Therefore, in many of our cases, banks operate in the background by providing white-label solutions for fintechs and enable their market entry.

Second, the financial industry is characterized by highly sensitive business-to-consumer relationships. In particular, Germany is the classic example of a bank-based system that is well known for long-term relationships between banks and their clients. Banks are usually considered trustworthy companies with great reputations. In line with this, we showed that fintechs are unknown companies and thus cooperate with banks to benefit from reputation spillover effects (company endorsement). This is underlined by the fact that fintechs and banks agree on a co-branding or white-label approach to generate a higher market acceptance for the fintech's products and hence increase profits.

Lastly, several technical innovations that arose during the mid-2000s (e.g., smartphones, broadband Internet) led to the existence of fintechs and their new products. The financial industry was historically not faced with radical innovations. However, we showed that banks can cooperate

with fintechs to generate synergistic effects and develop new products. Hence, fintechs do not inevitably lead to a disruption in the financial industry.

As this paper was concerned with proposition building rather than theory testing, a number of limitations to the results exist. First, we had a limited number of cases; hence, there will be a danger that the results are sensitive to specific case selection. However, our sample had a large number of variations, thus we argue that the findings of our study could be transferable. Second, we focused only on a single country (i.e., Germany). Thus, there is the danger of a country bias. Indeed, this focus allowed us to gain an in-depth understanding of fintechs in a country where the majority of banks seek to cooperate with fintechs (see Dorfleitner et al., 2016). Third, we mainly conducted interviews with fintech managers to receive in-depth insights from this perspective and abstracts from the banks' perspective. Hence, there is a danger of overemphasizing positive effects and neglecting potential negative effects.

The findings and limitations suggest several possibilities for future research. First of all, the conceptual framework and propositions should be quantitatively tested and further refined. Second, it would also be interesting to use empirical data from other countries in the quantitative testing of our results. Additionally, studies enlarging the young field of fintech research would be welcomed, especially in the rising field of insurtechs.

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