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Acknowledgments: This is the revised version of a paper presented under the title “Motives to Form Alliances for Digital Innovation: The Case of Banks and Fintechs” at the 31st Bled eConference Digital Transformation – Meeting the Challenges in Bled, Slovenia on June 20, 2018. The conference version has been published with alphabetical order of the authors in the conference proceedings “31st Bled eConference Digital Transformation: Meeting the Challenges”, edited by Pucihar, A., Kljajič, M., Ravesteijn, P., Seitz, J., & Bons, R., Bled, Slovenia, 2018, pp. 301-316, online at http://press.um.si/index.php/ump/catalog/book/343 (last retrieved June 28, 2018). The current version of the paper has further benefitted from comments received at the 6th Crowdinvesting Symposium at the Max Planck Institute for Innovation and Competition in Munich. The authors further thank Pascal Ravesteijn, Peter Bamberger, and an anonymous reviewer for their valuable comments and suggestions.

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Strategic Alliances between Banks and Fintechs for Digital Innovation: Motives to Collaborate and Types of Interaction[1]

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ABSTRACT

In times of digitalization, established firms operating in the financial services sector increasingly form alliances with start-up companies to satisfy the customers´ demand for rapid innovation and cope with the growing dynamics of markets. Technology-enabled innovation challenges traditional business models of incumbent institutions (e.g., banks) and requires them to adapt swiftly to the needs of the digital age. However, young firms providing technological solutions for the financial services industry (fintechs) also face difficulties, such as meeting regulatory requirements and winning the trust of potential customers. To compensate for these shortcomings and to exploit synergies, banks and fintechs are increasingly pooling their strengths in alliances. However, so far there is little empirical evidence on the motivation of both sides, banks and fintechs, to collaborate. We use an explorative research design and conduct semi-structured interviews to bridge that gap and shed light on what motivates banks and fintechs to join forces. Building on that, the resulting motives are systematized in a novel conceptual framework and associated with different types of alliances. Our results show that banks are particularly interested in benefiting from rapid innovation without necessarily being involved in its development, while fintechs demand resources and know-how to scale in the highly regulated financial sector. Our results have several practical implications and open up opportunities for future research.

Keywords: Alliances, Digitalization, Banks, Digital Innovation, Fintech, Motives
JEL Codes: G21, G23, G34, M13

I. Introduction

The rise of fintechs has drawn significant attention to the financial services industry. Once believed that the technology-enabled services associated therewith would enable young ventures to disrupt the banking sector, it has rather led to the co-existence of start-ups and established firms and, as a result, to bank-fintech alliances (Bocks, 2017). The advantages offered by fintechs have been identified in the area of customer experience, whereas those of banks lie mainly in back-office processing and meeting regulatory standards (Jenkins, 2016). Consequently, fintechs have established an image representing innovation and exploration, whereas banks represent continuity and seniority (Bussmann, 2017).

These aspects have been believed to be mutually exclusive, and experts have thought this would lead to fierce competition (Nienaber, 2016). However, the co-existence of incumbents and start-ups can be beneficial. For example, in the beer industry, the increasing number of microbreweries has broadened the beer market and created new business opportunities and customer groups. Thus, many big players have reconsidered their product portfolio or actively approached microbreweries. Similar developments are unfolding in the financial services industry, where ongoing digitalization requires extensive innovation (Brandl & Hornuf, 2017). Digital innovation

incorporates processes, services/products, and business models enabled by digital technologies (Fichman, Dos Santos, & Zheng, 2014).

The rise of fintechs has gained speed in light of these developments (Puschmann, 2017). Typically, fintechs are small, nimble start-ups that have taken advantage of new digital technologies to deliver specific forms of financial services. Fintechs have partly taken over functions previously reserved for incumbent banks; e.g., in payments, lending, and investing (Eickhoff, Muntermann, & Weinrich, 2017).

For the rather conservative banking sector, aligning with fintechs requires opening up their traditionally closed organizational boundaries to new digital market participants and, more importantly, to new business models. From a fintechs´ perspective, alliances with banks may help to target their digitally augmented services/products toward the large customer base of banks (Puschmann, 2017). Furthermore, banks can support fintechs financially and help them overcome regulatory boundaries. Some fintechs would probably not even have been able to enter the market without resources of cooperating banks (Bömer & Maxin, 2018). Consequently, alliances between banks and fintechs are emerging, even though the phenomenon remains novel and the motivation, on both sides, for starting such partnerships is not yet well understood. Extant literature has treated the "selection of partners […] as exogenous" (Li, Eden, Hitt, & Ireland, 2008). Hence, the topic of partner selection has received little attention, despite longstanding research emphasizing its crucial role in alliance formation (Hitt, Tyler, Hardee, & Park, 1995). Accordingly, a more comprehensive understanding of the motivation to collaborate is needed before analyzing the process of partner selection and the nature of alliances (Bresnen & Marshall, 2000).

A study by Bömer & Maxin (2018) focusing on German fintechs provides first insights into rationales of fintechs to cooperate with banks: market entry, increase of profit, and enabling new products. However, it is important to take both partner's motives into account to understand the occurrence and character of bank-fintech alliances. The present paper contributes to the existing literature by providing an in-depth analysis of what motivates both sides, banks and fintechs, to join forces. To generate insights into these largely unexplored business alliances, we conduct semi-structured interviews with representatives of banks and fintechs, analyze the motives mentioned and develop a conceptual framework to categorize the motives. Furthermore, we develop a maturity index to shed light on how different motives of fintechs relate to the respective form of alliance.

The paper is structured as follows: Section two outlines existing research on digital innovation, the general motivation for business alliances, and recent developments within the financial sector. Section three explains our methodology. The identified motives are presented and systematized in section four. Section five discusses the findings and concludes.

II. Background

A. Digital Innovation

In order to compete in a business environment strongly disrupted by technological developments, it is important for firms to participate in digital innovation (Nambisan, Lyytinen, Majchrzak, & Song, 2017). Yoo, Henfridsson, and Lyytinen (2010, p. 725) define digital innovation as "the carrying out of new combinations of digital and physical components to produce novel products." Financial innovation can be measured in numbers of financial patents, which have increased in recent years (Lerner, 2002; Miller, 1986). Digital innovation augments traditional physical products with digital components (Yoo, Boland Jr, Lyytinen, & Majchrzak, 2012) and enhances the usage of these products and the customer experience (Porter & Heppelmann, 2015). Thus, digital technologies are being used to design new processes, products, services, and even business models (Fichman et al., 2014).

While changes in financial institutions have often been driven by financial innovation (Merton, 1995), the financial services industry has generally been perceived as less innovative. However, digital innovation has started to impact established firms' performance. As these firms often lack internal knowledge of digital technologies, they often acquire and integrate complementary external knowledge (Hildebrandt, Hanelt, Firk, & Kolbe, 2015). According to Yoo et al. (2012, p. 1401), "the convergence of pervasive digital technology intensifies the degree of heterogeneity and the need for dynamic balancing and integration of knowledge resources. For example, convergent products may derive from completely different industries and unrelated bodies of knowledge". Consequently, the quest for new knowledge to develop digital innovation is very likely to trigger various motives for banks and fintechs to close ranks in order to gain access to external knowledge.

B. Motivation of Alliance Partners

Alongside digital innovation, additional factors may elicit motives to form alliances. For instance, increases in international inter-organizational collaboration are attributed to disrupting changes in the market and ongoing globalization (Robson, 2002). In management literature, several theoretical perspectives have been applied to explain alliance formation, including transaction cost theory, resource dependency, organizational learning, strategic positioning, and institutional theory (Nielsen, 2003). Consequently, it is widely assumed that motivation to forge alliances is based on a rationale that the perceived value or benefit from an alliance outweigh its costs (Geringer, 1991). Benefits that one alliance partner can offer the other include "skills, competencies, capabilities, and knowledge" (Nielsen, 2003, p. 302), but these can only be fully captured

when partners are carefully selected and both sides' motives are well understood. According to Osland and Yaprak (1995), alliances are formed to improve the allied partners' competitive position. Glaister (1996), for instance, identifies 16 different motives in a sample of UK joint ventures with Western European partners: Gain presence in a new market, obtain faster entry to markets, facilitate internal expansion, compete against common competitors, obtain economies of scale, maintain market position, exchange complementary technology, diversify products, concentrate on higher-margin business, obtain faster payback on investment, spread out the risks of large projects, share R&D costs, reduce competition, produce at lowest cost locations, exchange patents/territories, and conform to foreign government policies. The wide spectrum of motives shows that alliances "are becoming an essential feature of companies' overall organizational structure, and competitive advantage increasingly depends not only on a company's internal capabilities, but also on the types of its alliances and the scope of its relationships with other companies" (Parkhe, 1991, pp. 579-580). Overall, the existing literature indicates an ongoing interest in academia concerning corporate alliances and their underlying motives.

C. Alliances in the Financial Services Industry

The growing importance of alliances is also influencing the financial services industry. One contributing factor therein is digital innovation leading to increased customer expectations. Customers are demanding financial services 24/7, and at the greatest convenience. Moreover, digital technologies enable the provision of financial services at any given location. Digital technologies create substantial cost saving potentials for banks by reducing the traditional brick-and-mortar infrastructure and streamlining the workforce as Brynjolfsson, Malone, Gurbaxani, and Kambil (1994) show with respect to the potential of information technology. New technologies also facilitate the creation of new services and accessing new sources of revenue (Brynjolfsson & McAfee, 2014). However, banks often lack the flexibility and know-how needed to rapidly develop digital innovation, which gives fintechs a competitive advantage and enables them to enter the market.

Existing literature distinguishes between different types of alliances: They can be vertical, i.e. between sellers and buyers (Bouncken, Plüschke, Pesch, & Kraus, 2016), horizontal, i.e. between competitors (Chou & Zolkiewski, 2017), or a combination of both. Furthermore, alliances can be additive or complementary (Gulati, 1998; Hennart, 1988). Given the differences in skills and knowledge, which have been identified as "ingredients" for alliances (Hagedoorn & Schakenraad, 1994), banks and fintechs appear to be well suited candidates for complementary alliances.

Due to high regulation, very specific service offerings, and the novelty of digital innovation, more general assumptions and empirical findings regarding joint ventures (Glaister, 1996) or classical R&D alliances (Bai & O'Brien, 2008) do not seem applicable.

III. Methods

A. Qualitative Protocol

We built our analysis upon primary and secondary data, where the alliances under consideration have been identified through an in-depth analysis of press releases and an online search for news sources and databases, such as 'Crunchbase' and 'Payment and Banking'. Within each case, the interviewees from the respective sides were selected according to set criteria: First, they had to be actively involved in the alliance (in either its formation or managing the modus operandi) and be in touch with the alliance partner on a regular basis. Second, they had to hold a managerial position at the bank or a high position in the fintech (typically, we interviewed founders). Lastly, they had to have a profound understanding of the innovation developed within the alliance or the innovation that initiated the alliance. To conduct an in-depth investigation of the motives of both banks and fintechs for getting involved in an alliance, we follow Eisenhardt (1989) and Yin (2009) and apply a qualitative research protocol comprising semi-structured interviews with open-ended questions. This approach guarantees capturing all perspectives and assessments expressed by the interviewees. With respect to potential changes of a fintech´s requirements in different stages of development, we provide additional data on the fintechs´ age, number of employees, and funding rounds. Building on that, we derive insights into possible associations between their maturity level and individual motives.

B. Data and Sample

We identified 19 banks who announced alliances with 29 fintechs. An alliance is considered as either a low-institutionalized customer-service provider relationship with a long-term contract or a highly institutionalized type where a bank is financially invested in a fintech. Interview partners were extracted from press releases and through a network research on LinkedIn and Xing. This structured approach led to a detailed list, comprising more than 70 potential interviewees. Following suggestions by Dillman and Redline (2004), we addressed our request to the potential candidates in several waves until a solid count of diverse interview partners was reached.

Given that bank-fintech alliances are a multi-layered phenomenon, we applied an explorative case study approach (Eisenhardt, 1989). For this, we conducted 18 interviews with an average duration of 65 minutes per interview to get a comprehensive overview of what motivates banks and fintechs to collaborate. The final selection of

interview partners is well-divided: In total, we collected data on 16 different cases (nine banks and seven fintechs) within the financial services industry in Germany. For banks, interview partners working for branch banks, online banks, and private banks have been acquired. On the side of fintechs, a diverse set of experts from different fintech categories (payments, investment/trading, and service and software) participated in the interviews. In total, nine interviews were successfully conducted with banks, seven with fintechs, and two with independent consultants who were not involved in any alliance of our set but have been involved in bank-fintech alliances before. A brief overview of the cases is presented in Table 1. We aimed for equal representation of fintechs and banks, while the consultants were used to triangulate the findings. All interviews were audio-recorded and transcribed for further analysis. The interviews took place from August to September 2017. Transcript coding was performed using MaxQDA v.12.2.

C. Data Analysis

In order to analyze the interview data, we apply the Gioia methodology (Gioia, Corley, & Hamilton, 2012) and derive 266 1st-order categories. Here, our main objective was to "organize and make sense of the qualitative data" (Basit, 2003, p. 152) and understand how the motives were perceived and understood by the interviewees. Subsequently, we controlled for duplicates and similar content. This process was highly iterative and involved studying each interview individually and in contrast to interviews from the other (bank or fintech) group. After aggregating the 266 categories to 33 2nd-order themes, this detailed analysis of the motives enabled us to derive nine motives from our 18 interviews. Three authors independently coded the studies to ensure the accuracy of the coding process and there were no major discrepancies. To contrast differences between fintechs of different levels of development, we created a maturity index, which consists of a fintech's age, employees, and funding rounds. First, we converted all characteristics to a scale, ranging from 1 to 10, to avoid the influence of outliers. Second, we calculated the average of the three scores for each fintech.

Table 1. List of interviewees, their position and the type of alliance.

ID	Group	Description	Position	Type of Alliance
1	Bank	Startup incubator of a large, publicly listed German bank	Director Venture Vehicle Incubator	Incubator
2	Bank	German subsidiary of a large, publicly listed French bank	Director B2B and Innovation	Strategic Partnership
3	Bank	German direct bank, owned by a German Landesbank	Director Investing	Strategic Partnership
4	Bank	German publicly listed direct bank with majority ownership by a large German bank	Director Trading and Investing	Incubator
5	Bank	Private German bank with multi-channel strategy	Director Business Development	Outsourcing
6	Bank	German publicly listed direct bank with majority ownership by a large German bank	Director Business Development	Incubator
7	Bank	Private German bank with start-up platform for fintechs	Director Business Development	Strategic Partnership
8	Bank	German direct bank, owned by a German Landesbank	Director Partner & Innovation	Strategic Partnership
9	Bank	German specialist bank with fintech roots	Board Member and Director B2B	Outsourcing
10	Fintech	German online asset-management and investment service provider	Founder and Chief Executive Officer	Customer Service Provider
11	Fintech	German provider for Peer-to-Peer Payments	Founder	Strategic Partnership
12	Fintech	German provider of banking API and data analysis for banks	Chief Customer Officer	Customer Service Provider
13	Fintech	German provider of fully automated online investment services	Founder	Strategic Partnership
14	Fintech	German provider of content automation	Founder	Investor (Incubator)
15	Fintech	German online-payment processing platform	Head of Sales	Investor (Incubator)
16	Fintech	German social trading platform	Head of Partnerships	Co-Shareholder
17	Consultant	Consultant and advisor for venture capitalists	Fintech Mentor, Venture Partner	
18	Consultant	Entrepreneur, investor and consultant	Partner Consulting for Fintechs	

IV. Findings

This section presents the five motives for banks and the four motives for fintechs and outlines a systematization thereof. The motives are backed up by quotations from our interviewees (in italic with interviewee IDs given in brackets). An overview of each respondent's motive is provided in Table 2 and Table 3.

A. Motives of Banks

Outsourcing. In eight out of nine cases analyzed, interviewees explained that banks try to avoid using their own resources on new and risky innovations with unknown results, and they attempt to save costs as "smaller firms with only a few employees can simply produce considerably cheaper and achieve […] more attractive prices for the market" (ID4). Banks use fintechs to reduce their own workload, so that their employees can focus on core activities. Thus, banks "do not need to tie [up] additional manpower as we already have enough other issues" (ID3). As the development of new business areas would use up already scarce internal resources, one bank interviewee mentioned that "we do not need to set up these internal resources anyway. We can acquire them [from] the market just as well" (ID5) as "fintechs are, even with the API [Application Programming Interface] development, faster and better than when we would use our own internal resources we currently have in stock" (ID5). Banks also consider the extent to which, and for what purpose, they outsource certain activities. Some banks consider outsourcing a huge part of their value chain, such as digital payment services, while others aim to establish a wholly new business field (ID6). In banking, services provided by fintechs often remain in the background and unrecognized by customers as so-called "white labels" that are "easier and faster to implement […] and use […] than to build the whole system up by ourselves" (ID7). Further, these partnerships allow banks to "broadly diversify their R&D activities as there is a very active fintech scene" (ID6).

In conclusion, banks prefer to focus on their core activities, as they are "not a tech company nor an IT firm. We are a bank—we are good [at] financial consulting, we are good [at] addressing behavioral finance topics […] We are not good at writing computer programs" (ID5).

(Rapid) Innovation. In seven out of nine cases analyzed, banks were keen to collaborate with fintechs to speed up innovation processes that would otherwise consume too much time and financial and managerial resources. Since this explanation applied to a major part of our sample, it reveals that banks are not only interested in advanced ideas, but they also value well-thought-out turnkey solutions for their business. Our interviewees stated that banks could innovate by themselves but have become "too

large and too ponderous to promote internal change processes" (ID5). The interviewees were aware that this is the result of old, traditional structures and "the IT implementation of an idea would take 10 times longer, as these changes are tested more extensively until everything, e.g. all regulatory requirements, fits" (ID6). Since regulators demand the implementation or alteration of various processes multiple times per year, companies outside of banks are able to screen these new demands and become "better and more efficient or safer in these topics" (ID3). Thus, from a bank's point of view, fintechs are specialists who mainly focus on problems that impact most banks' business. Furthermore, implementation for fintechs is easy, as they have a "smaller set-up and are faster" (ID8). Banks "only have to dock [the innovations] on [their] structure and then [they] can work with them" (ID8).

Business Model Evolution. Our results further indicate that banks fear the growing speed of change, as information about how banks operate has become increasingly ubiquitous, and barriers to switching financial institutions are falling (ID4). They are also afraid that "fintechs [will advance] to a point of digital transformation, where they are able to replace current business models by providing scalable, digital, and intelligent solutions" (ID6). Hence, banks are "searching for new business" (ID6) as they are feeling "very high pressure—on the one side high regulatory pressure and on the other side low-interest margins" (ID6). The interviewees stated that banks see opportunities within digital financial services as an "extremely interesting and exciting business area, but we know that our technical possibilities are by far not as advanced as the fintechs'. That's why we entered this strategic alliance" (ID2). These partnerships help to "identify and launch new business models and consider all the different possible approaches" (ID6). However, the interviewees also mentioned that some banks do not follow any clear strategy (ID7). It can also be assumed that banks fear missing opportunities to establish sustainable business models for the future, as "it is incredibly difficult to know what happens where and since we also want to follow a digital strategy, everyone in the management is anxious to follow this opportunity" (ID1). They also try to "convince the workforce to catch up speed and acknowledge the urgency for an organizational change—or, even more—to truly achieve a mindset change" (ID4). Hence, banks see investments in fintechs as M&A activities (ID9).

Competitive Advantage. In four of the nine cases, banks were motivated to join forces with fintechs to achieve competitive advantage and increase customer value. Interestingly, banks acknowledged that fintechs might provide "something different, better, higher, more advanced, or [something that] just goes down well with a customer" (ID4). As, for instance, the German financial services industry becomes increasingly competitive between traditional banks, every bank's revenues based on the classic interest-bearing business model decreases. "Every bank searches for additional potential

for revenue creation. We can perhaps also offer real added value to meet our customers' demands by using the data we have anyway" (ID3). However, fintechs usually offer their services to a variety of banks, which diminishes the unique selling proposition as banks prefer exclusive partnerships (ID3).

Learning. The banks' motivation to collaborate with fintechs does not only relate to the outsourcing of non-core activities; it is also important for banks to learn from the fintechs' way of thinking and to "break up and adjust existing processes, which becomes harder the longer the process exists. It is, of course, easier for other companies which can start from scratch and build up a blueprint of how to newly arrange a whole process" (ID3). Their "different approach causes pinpricks to reconsider our traditional thinking" (ID1). Thus, fintechs are seen as sparring partners that allow "in-depth discussions from a different point of view […] and start processes in our bank which we probably would never have seen nor pursued" (ID4). Hence, fintechs "use a very stringent approach in the processing of information" (ID3) and provide an "impulse which is a very, very exciting driver […] and always leads to cross-fertilization" (ID4).

Systematization of the Banks' Motives. Table 2 presents banks' motives for collaborating with fintechs, sorted by relevance (measured by the frequency they were mentioned). Accordingly, outsourcing seems to be the most essential motive, followed by (rapid) innovation, business model evolution, competitive advantage, and learning. The high relevance of outsourcing is interesting, as banks could become increasingly dependent on their alliance partners when outsourcing their innovation. Taking into account the equally important motive of "(rapid) innovation", this creates a field of tension because, although digital innovations can be offered, the banks themselves are not becoming more innovative.

After assigning the motives to different types of alliances (customer-service provider relationship and financial investment), the results were indistinctive, suggesting that the motives have no significant impact on the chosen type of alliance. This indicates that the phenomenon of alliances between banks and fintechs is still at an early stage, where much is being tried and best practices are still unidentifiable. Although the motive of "learning" is not among the most popular, it is mentioned in the case of customer-service provider relationships as well as financial investments. The existing literature on organizational learning shows that a learning process requires many interfaces (Cegarra-Navarro, 2005; Knight, 2000), which are, however, relatively limited in case of both types of alliance.

Table 2. Overview of each bank's motives.

ID	Sector	Type of Alliance with Fintech	Outsourcing	(Rapid) Innovation	Business Model Evolution	Learning	Competitive Advantage
1	Bank	Financial Investment	X			X	
2	Bank	Customer Service Provider			X		
3	Bank	Customer Service Provider	X	X		X	X
4	Bank	Financial Investment	X	X	X	X	X
5	Bank	Customer Service Provider	X	X		X	
6	Bank	Financial Investment	X	X	X		X
7	Bank	Customer Service Provider	X	X	X		X
8	Bank	Customer Service Provider	X	X	X		
9	Bank	Customer Service Provider	X	X	X		
			89%	78%	67%	44%	44%

B. Motives of Fintechs

Resources and Synergies. Surprisingly, the interviewed fintechs' motives for partnering with banks are less diverse compared to the banks' motives. All seven fintech representatives interviewed mentioned that they see their partners as a "customer that also has the financial endowment to break new ground, which in turn helps us" (ID11). Fintechs further benefit from the higher marketing budgets of banks and from other synergies in marketing (ID11). Besides a customer-service provider relationship, "there are banks which also invest in start-ups—which means that in some partnerships the bank only wants to get to know [the fintech] and vice versa to investigate [whether] the partnership might be expanded to an investment" (ID11). As soon as fintechs provide services where any type of payment is involved, they need deep knowledge as well as assets to ensure proper handling, and they also need a license to conform to regulations (ID16, ID10). As these requirements can be a financial burden for fintechs, or sometimes "impossible" according to European policies (ID11), three out of seven fintechs mentioned sharing costs of conforming to regulations as an alliance motivation. However, alongside being funded by banks, fintechs often wish to access banks' data and infrastructure to apply and test their products or services using realistic cases (ID10).

Trust and Credibility. Five out of seven respondents considered alliances as valuable assets for obtaining trust and credibility. On the one hand, gaining trust and credibility through alliances with established banks is central to attract end customers, as "trust is very, very important and helps the investors to gain confidence in the product" (ID16). Particularly in the "payment sector, the brand, or better said the trust, is very, very important—especially in Germany" (ID11). On the other hand, fintechs wish to

collaborate with more banks and get access to their customer base. Since failures in alliances with fintechs might harm a banks' reputation, banks become cautious as they "are always a bit afraid of how long the fintech will still exist or if the processes are [as] reliable as they are in old traditional institutions" (ID11). To overcome this burden, fintechs wish to win partners for their products or services in order to establish a "trust element" (ID11) and run a "flagship project to overcome reputational risk issues" (ID11). Furthermore, they use feedback discussions to ask the banks to "assess out of their own experience how the acceptance of the product or service among customers will be" (ID12). Thus, fintechs use banks for "entrance to the market" (ID12).

Customer Acquisition. As incumbent banks can provide large customer bases, which might be an even more compelling asset for fintechs than financial support, three interviewees from fintechs described "higher prominence […] which means more customers and transactions" (ID11) as a key motivation for alliances, as a database of "around one million existing customers is incredibly tempting" (ID13). Five out of seven fintechs mentioned access to the bank's customer base as one of their motives to join forces with a bank.

Learning. Only two fintechs mentioned intending to acquire knowledge about the market and the industry (ID11), as banks "already have a long tradition" (ID10). Alongside learning how banks think regarding partnerships and investments, fintechs want to "understand more and more how the customer thinks and how industry structures work" (ID11) or how banks provide "services for independent financial service providers" (ID10).

Table 3. Overview of each fintech's motives.

ID	Type of Alliance with Bank	Regulations, Resources & Synergies	Trust & Credibility	Customer Acquisition	Learning
10	Customer Service Provider	X			X
11	Customer Service Provider	X	X	X	X
12	Customer Service Provider	X	X	X	
13	Customer Service Provider	X		X	
14	Financial Investment	X	X		
15	Financial Investment	X	X	X	
16	Financial Investment	X	X	X	
		100%	71%	71%	29%

Systematization of the Fintechs' Motives. As with the banks' motives, the fintechs' motives can be arranged according to their relevance. Fulfilling regulatory requirements and taking advantage of resources from banks seems to be highly relevant for fintechs across the two identified types of alliances. Likewise, fintechs want to benefit from the bank's reputation and expand their customer base. The motive of learning could indicate that the corresponding fintechs hope for interfaces and knowledge exchange when choosing to collaborate with banks. This indication, however, needs to be verified with an in-depth analysis.

To address this, we apply our maturity scale in Table 4, which represents the average of the scaled fintech characteristics age, number of employees, and number of funding rounds. The table shows that fintechs with a noticeable low maturity index are particularly keen to learn from their alliance partners. Furthermore, all of the more mature fintechs in our sample received a financial investment from their alliance partners. They have the motive in common that a bank as an investor increases the stakeholders' trust and credibility in this fintech.

Table 4. Overview of each fintech's motives and characteristics.

ID	Type of Alliance with Bank	Regulations, Resources & Synergies	Trust & Credibility	Customer Acquisition	Learning	Age	Employees	Number of Funding Rounds	Maturity Scale
10	Customer Service Provider	X			X	3	7	0	1.6
11	Customer Service Provider	X	X	X	X	1	7	1	1.7
12	Customer Service Provider	X	X	X		3	30	3	5.7
13	Customer Service Provider	X		X		3	47	2	6.0
14	Financial Investment	X	X			9	45	1	7.2
15	Financial Investment	X	X	X		3	49	4	7.8
16	Financial Investment	X	X	X		9	35	3	8.2

C. Motivation Framework

Most motives within the bank and fintech groups are unique and distinct, with only one overlap (learning) between both groups. However, the picture becomes more complex when looking at each sides' different motives. The framework provided in Figure 1 compares the motives of banks and fintechs. The size of the squares indicates, comparatively, how frequently the respective motives were mentioned. The color-coding

shows whether the motives are complementary (white) or neutral (grey). This categorization reflects how the motives relate to each other in our cases.

Complementary motives are considered as beneficial for both sides of an alliance and as supportive for fostering digital innovation. For example, the banks' motive of allying with fintechs to encourage innovation and speed up the introduction of financial technology harmonizes well with the fintechs' need for resources (e.g. banking licenses). Further, banks aim to outsource certain activities, such as developing digital applications for standard services (e.g. peer-to-peer money transfer apps), implementing new regulatory rules, and servicing niche customer groups, and fintechs can cover these activities and, at the same time, acquire more customers with the banks' help. This may lead to 'coopetition' as banks and fintechs cooperate and compete simultaneously (Bengtsson & Kock, 2000).

The only matching motive for forming an alliance was learning, as both banks and fintechs mentioned it. Learning can improve both partners' positioning through making up for certain shortcomings, such as the banks' lack of knowledge about digital technologies or fintechs' lack of knowledge on regulatory and legal specifications. However, learning requires time and trust to create in-depth business knowledge (ID11).

Neutral motives are predominantly beneficial only to one partner within an alliance. To improve their own competitive advantage, some banks use fintechs for innovative (often also highly customized) application programming or specialized tasks. Other banks use alliances with fintechs as an opportunity to evolve their business model. Some fintechs pursue alliances with banks primarily to promote their products based on the banks' trust and credibility.

V. Discussion and Concluding Remarks

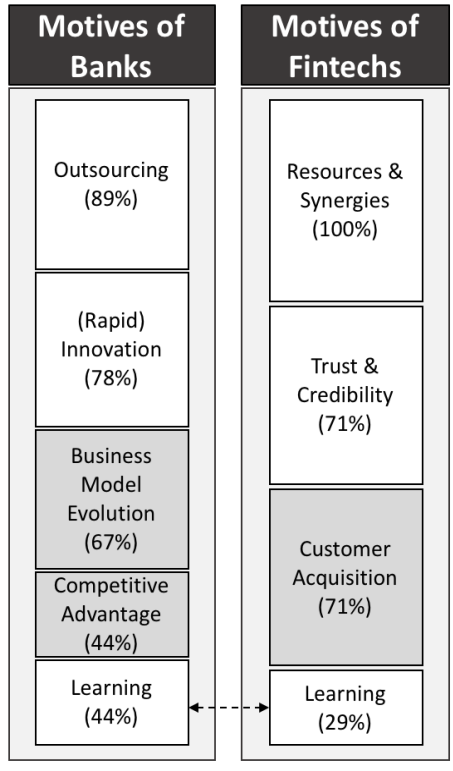
As the financial services industry is considered relatively conservative, and alliances with start-up companies are a novel phenomenon in this field, the topic of bank-fintech alliances is highly relevant in both practice and science. Recent studies provide suggestions for categorizing the fintech-industry (Puschmann, 2017) and explain the emergence of a global fintech market (Haddad & Hornuf, 2016). However, the motives on both sides, banks and fintechs, to collaborate have not been analyzed sufficiently so far. Building on existing literature concerning fintechs, digital innovation, and alliance-partner selection, this paper identifies several motives of banks and fintechs to join forces. To structure the heterogeneity of fintechs included in our sample, we take into account their maturity level and different types of alliances.

The results show a variety of motives, which are often heterogeneous both within the two groups and across the comparison. The clustering proposed in Figure 1 is a first

approach for systemizing different motives in this context. The categories within the framework are based on the frequency with which similar motives were mentioned, which we take to indicate their relevance in certain types of alliances.

The findings show that banks tend to pursue outsourcing and rapid innovation, while fintechs seek to benefit from the banks' resources and reputation. Thus, a key motivator for fintechs, beyond just having access to banks' licenses to handle regulatory requirements, is their desire for banks to act as guarantors to the customer. This is important for fintechs because finance is a sensitive issue for customers who do not want to entrust their money to small and unknown providers without regulation. Thus, established banks have to protect their own reputation, which could be damaged by alliance partners' misconduct. This is especially valid as banks usually bring in a large customer base, which fintechs also want access to. Bömer and Maxin (2018) support our finding, as many of their interview participants also emphasize the relevance of access to the banks´ customer base. Therefore, our results reveal that, while banks desire fintechs to be more or less loosely integrated and exclusively outsourcing providers or customer-service providers, fintechs desire the competencies of banks that usually require deeper integration.

Figure 1. Overview of the motives to form alliances.



Our finding that more mature fintechs in our sample have received a financial investment indicates that they have to hold their own in the market for a while before becoming an interesting candidate for institutional investors. However, it has to be considered that our analysis is based on relatively small fintechs with a maximum of 50 employees. In a multinational study also considering larger fintechs, Hornuf, Klus, Lohwasser, and Schwienbacher (2018) show that banks are more likely to invest in relatively small fintechs while engaging in product-related collaborations with large fintechs. One possible explanation is that fintechs need a start-up phase to become attractive for financial investments. On the contrary, larger fintechs might be more attractive for product-related collaborations as they are already established in the market and provide a mature product portfolio.

Furthermore, our results show that trust and credibility are important motives of fintechs to engage in alliances with banks. This finding is in line with Bömer and Maxin (2018), who find that many fintechs confirm the existence of important spillover effects in this context. In our sample, the motive of gaining trust and credibility seems particularly related to those fintechs which have received a financial investment from their collaborating bank. Fintechs may use a bank's investment decision as a strong signal for other stakeholders, whereas fintechs with comparatively loose forms of collaboration might suffer from the risk of being replaced by another supplier with a more suitable product.

The heterogeneity of the identified motives is not necessarily negative, as they are not contradictory in all cases and thus not mutually exclusive. For example, banks' strategic motivation to become more digital aligns with fintechs' motivation to expand their customer base. For example, the alliance partner's expanded customer base increases the visibility of the bank's new orientation, yielding a common benefit.

A comparison of the motives shows that only learning applies to both alliance partners. Fintechs are especially interested in building functioning and stable companies, while banks want to learn more about the dynamics and agility of fintechs. Our analysis of the maturity level further indicates that fintechs are particularly interested in learning from banks when they are in their early stages. Organizational learning, or, more precisely, inter-organizational learning, is an often-discussed topic in both academia and practice, which is also relevant for bank-fintech alliances. Banks can either develop innovative products themselves or outsource to fintechs for more rapid outcomes; if banks want to become more innovative themselves, fintechs can serve as a companion throughout the learning process. Theoretically, banks can then develop "fintech products" in-house and no longer depend on alliances. Fintechs could also benefit from temporary alliances by developing stable organizational structures, expanding their customer base, and building their reputation. They may also be able to eventually break away from the partnership to establish themselves as competitors.

However, if banks do not strive for learning but rather want to save costs and resources through outsourcing, they will become increasingly dependent on their partners. Consequently, fintechs' bargaining power may increase over time, and the conditions for further collaboration could be renegotiated. Our findings show that banks value achieving competitive advantage slightly more than learning. This poses a question regarding the actual design of the alliances and the associated objectives of banks and fintechs.

Knight (2000) states that trust, teamwork, and commitment are prerequisites for learning in inter-organizational relationships. Corresponding factors require time and interfaces in daily collaboration. Furthermore, Sobrero and Roberts (2001, p. 493) identify that the performance outcomes of a partnership depend on "the type of problem-solving activities being partitioned and their level of interdependency with the rest of the project". This stimulates a trade-off between a short-term efficiency increase and a long-term learning process (Sobrero & Roberts, 2001). If a well-functioning learning process is of interest, which seems to be the case for both banks and fintechs, a customer-service provider relationship, which is limited to sharing the fintech product, is insufficient. A closer type of alliance with close collaboration, efficient knowledge management, well-coordinated interfaces, and appropriate organization is also required. Since knowledge is a fundamental resource for gaining competitive advantage (Cegarra-Navarro, 2005), and learning promotes process and product co-innovation (Westerlund & Rajala, 2010), we suggest that future research should investigate inter-organizational learning in the context of bank-fintech alliances. In this setting, particular attention should be paid to existing types of interaction to identify opportunities for inter-organizational learning.

This paper focuses on what motivations both banks and fintechs have for joining forces and considers the design of the alliance itself. However, due to the relatively small number of companies interviewed, our study is limited, which restricts the validity of the results. Additionally, only the German market was considered; thus, larger studies are needed to confirm the robustness of the results. Furthermore, it should be investigated why certain banks or fintechs form alliances and how other non-partnering banks and fintechs address the challenges of their business environment.

Despite these limitations, the present paper outlines an approach to systematizing the various motives for bank-fintech alliances. In addition to the above-mentioned implications for future research, practical implications include that both banks and fintechs should identify their respective motivations before getting involved in an alliance. Their own motives should be compared with those of the potential partner to identify synergies as well as potential conflicts of interest at an early stage.

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