

The adaptability of Dutch banks in the changing Fintech environment

Information Systems f/t Financial Services Industry

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Group 03:

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1. Introduction

As part of the course 'Information Systems for the Financial Service Industry,' this chapter touches on the topics of Fintech, traditional banks, and consequences of explosive digital and technological innovations on the two of them.

1.1. Problem context

The financial services (FS) industry relates to everything that has to do with economics, payments, and the banking environment. Certainly, in the last two decades, the field has evolved drastically. To get a grip on Fintech services, it is necessary to understand where we are in the FS industry, and how we have come to this point.

We should start by asking ourselves the question: 'What is a financial service?'. Asmundson [1] provides a broad introduction, by elaborating on what people can buy with money. A distinction is made between goods and services, i.e., tangible, and intangible assets. In the case of FS, it does not serve self, it is the process of acquiring a financial good, e.g., a mortgage to buy a house [1]. Insurance matters, deposits, loans, payment systems, and issuing securities are common examples of financial services.

Provision of these services exist in three types: personal, consumer, and corporate [2]. The FS industry's activities vary from insurance and money management to payments and digital banking or providing an integrated package of activities. As stated by Deloitte [3], organizations active in the industry should be one of the pioneers of technological innovation and increase the efficiency of financial-related activities.

From tradition, organizations active in FS are institutions we know as banks. To save, loan, invest or withdraw money usually you go to the bank. Innovations in digital technology enabled developments in digital banking. After the financial crisis in the late '00s, developments rapidly increased. Fintech firms entered the FS industry, crossing the waters of traditional banks. Because of their explosive growth, some even claimed that banks were "on the verge of extinction ... about to be replaced by Fintech firms" [4, p. 86]. Though, it does not seem to become as drastically as sketched by some, Stulz [4] concludes that Fintech firms can compete with banks. Because they have a competitive advantage, being less regulated. One step further, the threat of Bigtechs is depicted. Bigtech firms, such as the common 'Big Five' [5], "have a business model focused on exploiting digital technologies" [4, p. 95].

They are not only able to compete severely with banks, but they also even have characteristics to completely replace them.

The phenomenon of nonbank organizations competing and taking over FS activities of banks is also known as shadow banking [6]. The regulatory arbitrage of nonbanks relative to banks is examined in several studies and depicted as a key factor why banks can hardly compete with fast-growing Fintech and Bigtech firms [7, 8, 4, 9, 10].

Fintech services tend to be dominant in the broad sense of financial services. In combination with the expanding rise of digital banking [11]. Besides, Schueffel [12] suggested further examination of how Fintech services need to be priced, which is relevant for both banks and nonbanks. In all this raises the question of how banks adapt to, and anticipate the evolving FS market, by implementing Fintech services in their activities.

1.2. Research goal and question

Sketching the context of the rapidly evolving FS industry, concludes with the question how banks can survive in an increasingly digital and integral environment. Since this is a broad issue, in this chapter we zoom in on a small part of this wide context. Specifically, we examine how ‘traditional’ banks in The Netherlands integrate Fintech services into their business model. To produce an answer to this statement, the following research question is drawn up for this chapter:

“Can traditional, Dutch banks succeed in adapting to the rapidly evolving financial services environment by implementing Fintech services?”

1.3. Outline of the chapter

As can be read above, dynamics in the FS industry are changed and will be changing in the upcoming years. As a result, a research question focused on the traditional players in the field, i.e., banks, is drawn up, regarding their adaptability to these changing dynamics.

In the next section, we will extend the problem's context by a review of the literature. Evolvments in Fintech, the rise of Fintech and Bigtech firms, and competitive advantage because of regulation and customer information are discussed. In section 3., three Dutch banks are considered as a case of their adaptability to the changing industry; being respectively ING, Rabobank, and ABN Amro.

In section 4 the chapter is concluded by interpretation of the theory, lessons from case studies, and implications of theory and cases for banks. Also, limitations of the study are discussed and suggestions for further research are made.

2. Theory

In the introduction, a brief introduction to the FS industry is given (see section 1.1 ‘Problem context’). Dynamics of the industry (section 2.1) and evolvments of Fintech section 2.2) build further upon this introduction. Besides, the rise of Fintech and BigTech firms in the FS industry (section 2.3) plays a significant role, given their explosive growth in the past decades, and competitive advantages in relation to banks (section 2.4). Finally, a summary of the review is provided.

2.1. Dynamics in the FS industry

The basic purpose of firms that provide these financial services is to collect temporary free money from some market participants and distribute it to others who require it on a return, time-limited, and compensated basis. Financial market institutes that fulfill this duty and activate payment systems have long been seen as conservative, with corporate processes, tools, and services remaining unchanged for decades or centuries. Financial market institutes' activities are highly regulated. They consistently

fight for further limitations to avoid corporate competition. New services and facilities are classified as financial (non-bank) and are not permitted to be provided without a license because of these restrictions.

FinTech is being used not only in the financial market, but also in other industries such as IT, retail, and social media (see Figure 1). This reflects the financial world's convergence [13], as well as the market segment's expansion and existence of new system quality.

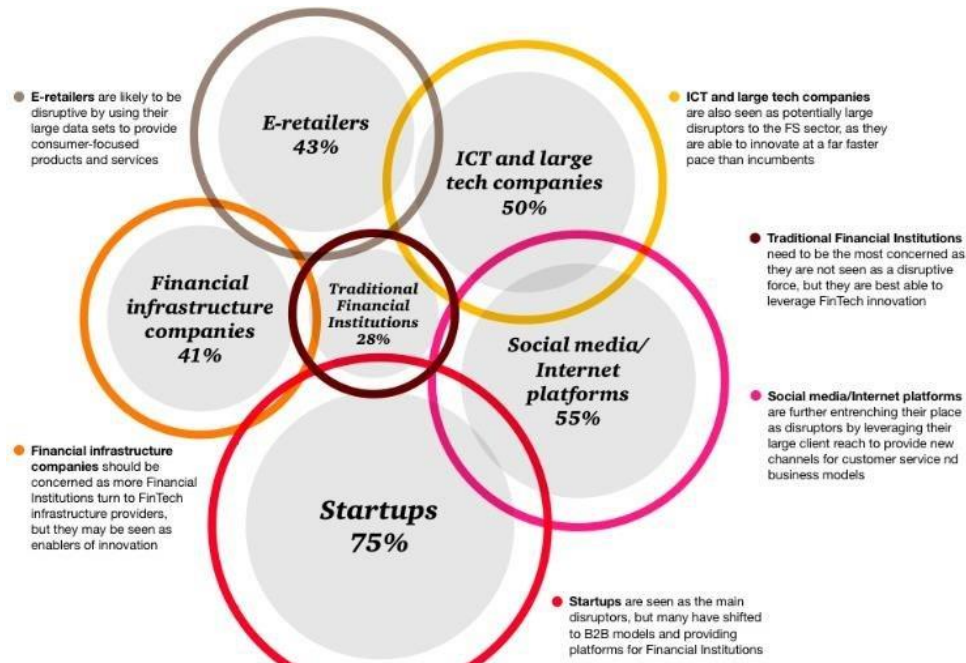


Figure 1: Convergence of the financial world [13]

2.2. Evolving towards a digital environment: Fintech services

The term Fintech is widely used; however, an unambiguous definition seems hard to provide. Though, Schueffel [12] tried by reviewing over 200 research articles. He concluded that there is no single definition of Fintech. But terms such as “strategy,” “innovation,” and “business model” are common, and consider the application of technology to improve financial activities [12, pp. 45-47]. More practical definitions of online blogs and organizations within the industry consider Fintech as digital platforms to facilitate transactions and payments between two or more parties. Given that financial services are completely in a digital environment nowadays, you could state that the term ‘Fintech’ operates as a complete substitute for financial services.

According to a report by Arneris, Barberis & Ross [14], FinTech can be divided into different eras. In each of these three (and a half) eras, there is a clear level of differentiation in the market, which has changed the way consumers manage their money. Each era is elaborated below and illustrated in Figure 2 [15].

Fintech 1.0 (1886 – 1967)

The infrastructure that will support globalized financial services is being built at this point. In the US, the first transatlantic cable and Fedwire enabled the first electronic fund transfer system employing telegraph and Morse code. Nowadays It seems simple, but at a period when infrastructure and transportation were still developing, the capacity to conduct financial transactions over longer distances was revolutionary.

Fintech 2.0 (1967 – 2008)

Barclays established the first ATM in 1967, indicating the start of this phase, which is marked by the shift from analogue to digital financial systems. NASDAQ, the world's first computerized stock market, and SWIFT (Society for Worldwide Interbank Financial Telecommunications), a communication system between financial institutions that facilitates massive volumes of cross-border transfers, were both founded in the 1970s.

The rise of bank mainframe computers carried this era into the 1980s. The growth of internet banking changed the way individuals did business, with the online revolution causing a shift in how people saw financial institutions.

The first steps toward digital banking were made in the 1990s, when linked clients began to manage their money in a variety of ways. In 1998, PayPal was launched, predicting the new payment methods that would develop as the globe became increasingly online.

Fintech 3.0 (2008-Current)

In 2009, Bitcoin was launched, followed by other cryptocurrencies based on blockchain technology. Users will increasingly be using their phones to access the internet and other financial services as smartphones become more popular.

The era of the start-up has arrived, with investors and consumers looking for innovative ideas, resulting in a flurry of new products and services. Also, banks are starting to function as startups and promote themselves. Fintech3.0 is defined by this deviation from the established bank for the Fintech2.0 period. Thus, recent technologies have emerged that make it easier to build digital banking solutions by enabling third-party organizations access to financial data.

Banking as a Service (BaaS) platforms have made it easier for banks and other financial institutions to move away from complex legacy systems.

Fintech 3.5 (2008-Current)

Fintech 3.5 has been created to account for changes in consumer behavior and internet availability in developing countries. India has one of the highest numbers of Fintech users in the world [16]. Emerging markets never had the opportunity to evolve their physical banking infrastructure to the same degree as developed markets, making them more receptive to innovative ideas.

An intentional government policy choice to boost their economic development is another key aspect. As a result, several parts of the globe, like Asia and Africa, have entered the Fintech 3.5 era.



Figure 2: Evolution of Fintech [15]

2.3. The rise of Fintech and BigTech firms in the FS industry

FinTech firms can introduce financial services. New services and behaviors across the economy have been made possible by digital and big data developments.

Fintech firms may now provide financial services that are more accessible and cheaper to a wider range of customers, particularly in the areas of credit and payments. Payments, digital lending, digital banking, digital investment management and personal finance, blockchain, and Insurtech are the six types of FinTech activity [17].

Data, computer, and interface are the three main components of FinTech. As a result, Fintech firms have solutions that can be used on a mobile phone, making them consumer friendly.

FinTech firms can innovate quickly. They are less afraid of making mistakes. They are more open to customers and allow them to lead them to better products. To provide the best client experience, they concentrate on the customer interface. Digital technology has significant built-in economies of scale, which allows creative FinTech firms to move faster. With digital technologies, adding one new consumer has a low marginal cost.

Fintech firms do not have to deal with vested interests within their firms or wait for permission from bureaucracy. They have the option of selecting the most appropriate IT system for the items they intend to develop. FinTech companies also have the advantage of not having any legacy systems or products to begin with. They can set up data collecting for any goal they have in mind. Older businesses, in contrast to youthful businesses, find it more difficult to innovate; they must overcome a variety of barriers.

Fintech firms' activities often do not result in new financial products or services, but in the application of recent technologies used by entities in their internal processes [18].

Fintech firms increase competition in the financial markets by providing services that are either provided inefficiently or not at all by traditional financial institutions, as well as expanding the pool of service users. They do not, however, often replace banks in most of their core operations.

Fintech firms are frequently highly specialized in a specific industry. Some are pure peer-to-peer or clean mobile payment networks, while others are lending platforms that offer finance or investment options. Others are primarily interested in new digital advising and trading systems. Fintech firms frequently choose blockchain technology, which is predicted to provide numerous benefits:

1. Lower costs for identifying transaction participants.
2. Economies of scale, large-scale data collecting and analysis.
3. Information transfer that is both safer and less expensive.
4. Lowering the cost of verification.

Fintech firms are divided into three categories: those who provide daily financial and personal financial management services, lenders, savers, and investors, and other financial services providers, such as data analysis, distributed ledger technologies, and so on [19].

Fintech firms primarily introduce new services and products that are much more efficient than those offered by traditional financial institutions, but they do not pose a threat to commercial banks' core functions.

2.4. Regulation and competitive advantages

The increased innovation in financial (banking) services really changes the traditional ways of how these financial services are provided [9]. These rapid innovations shape the future of the financial

sector and thereby offer several benefits to consumers and businesses. Several financial fields are now involved in Fintech developments, ranging from digital banks to personal finance and wealth management. Other new technological developments only further change the Fintech landscape; examples are artificial intelligence, machine learning, and big data analytics. One of the breakthroughs within Fintech is the innovative way in which data is used. This way of using data can re-shape financial services. Because of this fact, regulators and scientists are trying to find out how the challenges of managing big data exploitation in the financial sector can be overcome to keep customers protected and the competition going. In insurance and bank sectors, assessing the risk of granting money to customers is well understood and priced accordingly, leading to better credit conditions for some of these customers.

The overall change in Fintech leads to the requirement of policymakers needing to deal with legal and regulatory challenges. More questions in Fintech development arise about monetary policy and financial stability, leading to a high focus on the innovation roadmap of regulators and legislators [20]. The spread of Fintech financial services is dependent on the regulations in certain jurisdictions. A major barrier is if non-banking parties in a certain area fall under regulatory oversight and are also subject to the regulation of bank-like rules. Players in the financial industry can also be excepted by these tight rules, which forms an advantage as long as these rules are not getting stricter. With more space to operate, Bigtech and Fintech businesses have unique advantages that are difficult for banks to catch up to, so these new businesses can compete with banks, especially in loans for small firms and consumer finance [4]. Due to these advantages, banks are losing their competitive advantages as they now have less access to unique information about clients, which Bigtech and Fintech businesses can do better.

Overall, the regulation of infrastructures and institutions is a point of focus internationally. The importance of regulating the protection of consumers using (retail) payment systems is also recognized [21]. The settled financial institutions as of now do not really need competitive disruption. Also, the increase in market competition should also not be perceived as the solution to the current problems and needs for improvement. Even though the increase of concurrence may lead to social advantages, maintaining the overall public interest objectives remains important and therefore may narrow down the scope of competition.

2.5. In a nutshell

The Fintech services field is rapidly changing over the past two decades. As a result of less regulation and extensive customer information, Fintech firms, and in particular Bigtech firms, have competitive advantages over traditional banks. Successfulness in adaptability of the latter is analyzed by a case study of Dutch banks: ING, Rabobank, and ABN Amro (see next section).

3. Case studies

To provide insight into activities banks undertake in switching towards a digital environment and remain competitive in relation to Fintech and Bigtech firms, a Dutch perspective is taken. The Fintech strategies of ING, Rabobank, and ABN Amro are analyzed. Developments, similarities, and differences in these strategies will provide lessons for banks (see section 4.2). Together with the literature review, these result in recommendations for banks regarding Fintech services (see section 4.3).

3.1. Case 1: ING's 'Think Forward' strategy

On the Investor Day 2019, ING's CEO Ralph Hamers presented an evaluation on the 'Think Forward: staying a step ahead' strategy. Its purpose is to "empower people to stay a step ahead in life and in

business” [22]. To do so, they made four promises to the customer. Respectively, be clear and easy, anytime, and anywhere, empower, and keep getting better.

From a traditional bank, ING wants to transform into an integral platform for the transaction environment. As can be derived from Figure 3, they see themselves among existing tech companies, as a ‘dynamic digital player’. Personal banking, housing, shopping, and money management should all be dealt with for customers of ING. Several subsidiaries and partners form the building blocks of ING to become a platform leader:

Funding Options and FinCompare (SME lending comparison portals).

As a partner of ING, Funding Options provides SMEs tailored financing in The Netherlands since 2012. In 2018, ING invested around €10 million in FinCompare. A German startup which offers a comparison platform for SME financing [23].

Twisto (instant consumer finance solution).

In 2019, ING invested in the Czech company Twisto. They invented an app to facilitate ‘buy on installment’ and direct financing for customers [24]. They operate in eastern Europe.

Payvision (payment service provider).

As a subsidiary of ING, Payvision operates as payment service provider and acquirer. However, due to “the rapidly evolving and increasingly competitive” market of e-commerce merchant, ING decided to phase out Payvision [25].

TransferMate (digital cross-border payments).

To provide business customers with faster, cheaper, and easier international payments, ING invested €21 million in a partnership with TransferMate. Given their 24th place in Deloitte’s Technology Fast 50 of 2020, it is fruitful partnership for ING [26].

Scalable Capital (investment robo-advisor).

Since 2017, ING has been in partnership with Scalable. As a result, customers of ING in Germany can register in less than 15 minutes through an entirely paperless process [27]. Such operational improvements are clearly in line with ING’s strategy and vision to provide efficient processes and easy to use services.

AXA (mobile-focused protection services).

In 2018, ING and AXA announced a partnership to build a global insurance platform for customers [28]. Though, three years later, the ambitious plan for a global insurance platform turned out to be not realizable. Due to fewer markets served, the partnership focuses only on the local distribution of insurance distributions from the end of 2021 [29].

An unstructured interview with one of ING’s innovation strategy managers revealed that the initial ‘Think Forward’ strategy indeed turned out to be over-ambitious. As a ‘traditional’ institute, ING is increasingly accepting its role in the background. As can be derived from the list above, by partnering and investments in startups they expand their expertise and activities in the financial services industry. However, when taking the lead in additional services rather than banking, competition is severe. Although, Figure 3 presumes complementary roles of traditional platforms as ING, and tech platforms, in practice the fields overlap, and big tech companies rapidly win the challenge for direct contact with customers.

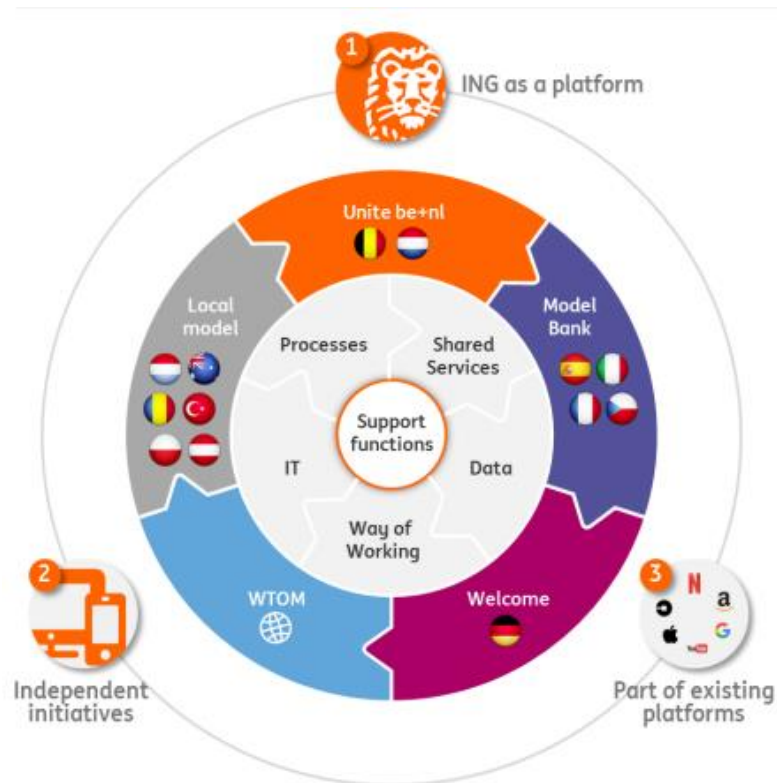


Figure 3: ING's desired role in the FinTech environment

3.2. Case 2: Rabobank's 'Partner in innovation' strategy

Rabobank sees itself as an innovator in financial technology, with a long history of acquiring and developing startups in the Fintech industry [30]. As a Dutch bank, it sees the possibility of The Netherlands becoming a key international Fintech hub in which Rabobank wants to play a key role. Rabobank employees can suggest innovative ideas through the Moonshoot program. The best ideas can obtain support from the bank and create a startup. These startups usually offer new services which complement Rabobank's existing banking services. A few of these startups will be discussed in this case study (see also Figure 4).

Surepay (IBAN-Name check).

Surepay integrates IBAN-Name checks into business processes. Banks and businesses can use this service to automatically check if an IBAN is related to a name. This is useful for preventing fraud and mistakes.

mOOvement (Animal GPS tracking devices).

mOOvement provides GPS tracking devices for cattle. Farmers can use this to track and monitor cattle, water, and their farmland. This data helps improve farms and the data can be provided to financial institutions to obtain financing more easily.

Peaks (Investment/savings app).

Peaks helps users set aside money periodically. This money is automatically put aside and invested. By making investing and saving easy and carefree, it has become more accessible to anyone.

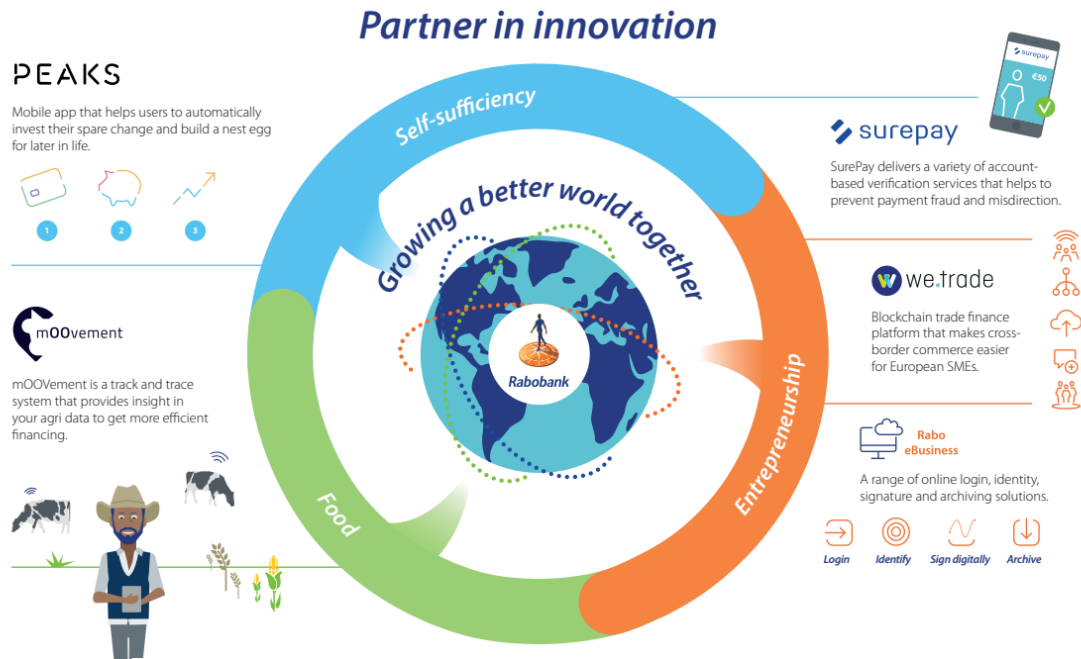


Figure 4: Rabobank - Partner in innovation

Rabobank's pricing model with regards to Fintech as a service is rooted in startups. The bank invests in existing startups and funds new ventures with ideas and plans suggested by employees. With these investments it can reap the rewards and profits of successful Fintech startups.

3.3. Case 3: ABN Amro's 'Partnering is the way to go' strategy

The warnings that the rise of Fintech will make traditional banks obsolete are not true according to Hugo Bongers [31], head of ABN Amro's digital impact fund. Instead, Bongers [31] says that "ABN Amro and the Fintech sector have become strategic partners." These partnerships boost the bank's innovation and improves the services for ABN's clients. ABN Amro has a clearly laid out acquisition strategy, which will now be discussed.

The bank started its Digital Impact Fund in 2015. This fund is used to invest in external Fintech firms. The acquisition of Fintech firms allows the bank to innovate. According to Bongers [31], investing in existing start-ups, allows the bank to be responsive to market developments and hence be extremely focused on customer interests. Investing in external Fintech is fast compared to innovating in-house, which is costly and would take longer.

ABN Amro has a policy of only acquiring a minority stake in start-ups. This allows the start-up to stay independent and keep innovating. The investment really is done to create a strategic partnership. The start-up gets professional support and advice from the bank, and the bank gets to use the innovative Fintech services (see Figure 5 for ABN Amro's portfolio).

Tink (open banking platform).

Tink's banking platform allows its customers to develop data-driven Fintech services. The service allows customers to get access to financial data from over 2,500 banks. It also allows customers to make payments and build their own Fintech tools. ABN Amro acquired a 5% stake in Tink, which it used to develop Grip and Tikkie. The use of Tink allowed ABN Amro to create apps which can be used by almost anyone. It doesn't matter that the user of the app banks with Rabobank or ING instead of with ABN Amro.

Ockto (financial data sharing).

Ockto helps you when you need to apply for a loan, a mortgage, or anything else for which you need to supply (financial) data about yourself. Their app collects data on you from the tax agency, the government, public records, etc. and gives them to the customer so they can easily and quickly apply for their loan.

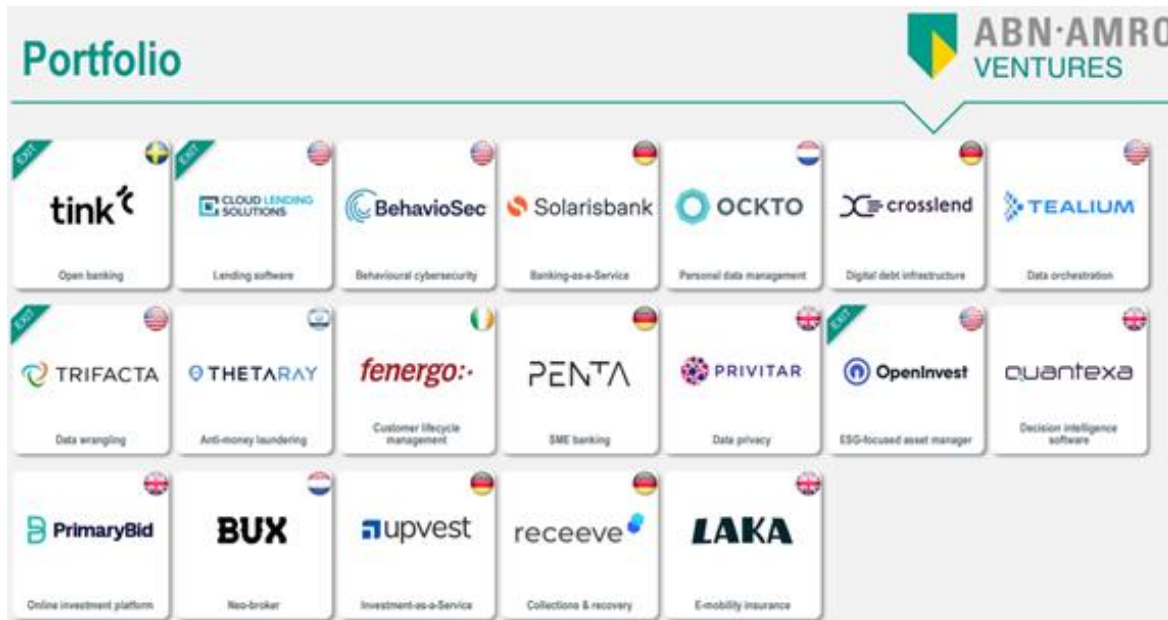


Figure 5: ABN Amro's portfolio

4. Conclusions

An interpretation on the theoretical part is provided, and lessons learned from the case studies reported in the first two sections. Thereafter, the two are combined in an attempt to answer the research question and its implications for banks. Finally, limitations of the study and suggestions for further research are mentioned.

4.1. Interpretation of theory

Rapidly innovating technologies opened the market of FS to a whole new range of firms. Where banks used to have a dominant position in the field, competition from FinTech and Bigtech has become severe [4]. The business models of these firms completely differ from those of banks, and their entrance into the FS industry is quite recent. As a result, they are less regulated, providing them with the huge competitive advantage of strongly regulated banks [7, 8, 9]. Another advantage of Fintech and Bigtech firms is their comprehensive customer information, which provides them with the potential to tailor to specific clients.

Overall, the key message for banks has been, and still is, rapid adaptability to these dynamics of complexity and competition. For banks to guarantee their existence, by 2025 they should implement strategies on blockchain, the new digital ecosystem, digital custody, and transaction, and digital (i.e., robotic) advisory [11].

Finally, there should remain focus on the regulations of financial service providers and the differences between (traditional) banks and new competitors, such as the Bigtech and Fintech businesses [4, 20, 21]. The differences in regulations are a big cause of the differences that occur now in advantages between the two sides. The changes in regulation and possibilities should be monitored in order to keep track of what will likely happen in the future due to the regulation, whether or not changing.

4.2. Lessons from case studies

Considering all cases, there seems to be one keyword: 'partnering'. Where this is not so surprising for Rabobank and ABN Amro, since it is in their strategy names, it is also applicable for ING. Each bank has had a variety of partnerships and acquisitions of start-ups in Fintech over the past decade. It might not be surprising that sometimes one of them fails, since that is the root of start-ups: considerable risk and therefore high chances of failure. Even though all three bank's strategies lie in partnering, their strategies differ significantly. Rabobank tries to innovate from within and allows employees to submit ideas and get funding to create startups. ING buys external startups, but also partners with startups. ABN Amro buys minority stakes in startups and uses their fintech to develop their own services. Overall, all three strategies seem good enough to keep up with the industry for now. Which strategy is the best remains to be seen.

4.3. Implications for banks

After banks recovered from the fright of upcoming, severe competition at the start of the last decade, they developed ambitious strategies. Initially, their goal was to remain dominant leaders in the FS industry. To do so, they intend to become platform providers to facilitate transactions between firms and their customers (e.g., ING's 'Think Forward' strategy in section 3.1.).

Given the launched platforms and contracted partnerships presented in our cases, we conclude that Dutch banks are quite successful in their adaptation process. Drastic industry changes, e.g., completely new banking institutions such as Apple Bank or Facebook, seem to stay out.

4.4. Limitations of the study

Analyses of the cases is restricted to publicly available documentation of strategies from the banks. The 'kick off' of the case studies, was an interview by phone with an Innovation Strategy manager of ING. However, no other employees of ING, or the other banks, Rabobank and ABN Amro, were arranged for interviews. Probably, additional findings could be reported by extending the amount of interviews, which would also result in a more extensive theoretical framework.

4.5. Suggestions for further research

Initially, the chapter intended to build further up the work of Schueffel [12], by analyzing the pricing models of banks for Fintech services. However, throughout the process, it was explored that it is of importance to understand one layer on top that first: How is the field of FS, and specifically Fintech, developing? And how are traditional actors, i.e., banks dealing with new dynamics? Therefore, the suggestion for further research on pricing models remains, as well for banks as other non-bank institutions. Besides, it remains interesting to monitor whether drastic changes as expected in the past decade stay away, or that Bigtech firms indeed are taking over banks in the coming decade.

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