

Chapter 2

Definition of FinTech and Description of the FinTech Industry

Currently there is not a universally accepted definition of the term “FinTech.” The following section provides a brief survey of its use within existing scholarly literature. A definition is formed by means of a general description of the characteristics of FinTechs and an enumeration of the individual segments that make up the FinTech market.

2.1 Definition of FinTech

The term “FinTech,” which is the short form of the phrase *financial technology*, denotes companies or representatives of companies that combine financial services with modern, innovative technologies.¹ As a rule, new participants in the market offer Internet-based and application-oriented products. FinTechs generally aim to attract customers with products and services that are more user-friendly, efficient, transparent, and automated than those currently available. Traditional banks have not yet exhausted the possibilities for improvements along these lines (EBF 2015; Mackenzie 2015).

In addition to offering products and services in the banking sector, there are also FinTechs that distribute insurance and other financial instruments or provide third-party services. In a generous sense of the term, “FinTech” encompasses companies that simply provide the technology (such as software solutions) to financial service providers. However, such companies are not dealt with in detail in this study.

¹Kawai (2016), General Secretary of the International Association of Insurance Supervisors, a member organization of the Financial Stability Board, offers a working definition of “FinTech” as follows: it is a “technologically enabled financial innovation. It is giving rise to new business models, applications, processes and products. These could have a material effect on financial markets and institutions and the provision of financial services.”

It is not possible to define the term “Fintech” on the basis of its use in legislation or legal documents. FinTech companies are subject to differing kinds of legal and regulatory obligations due to their differing business models and the extremely diverse products and services they offer. Companies in the crowdfunding industry offering profit-participating loans, non-securitized participation rights or silent partnerships to secure corporate financing fall under the scope of German Investment Act (Companisto and Seedmatch, for example). However, issuers on the same crowdfunding platforms are subject to the Securities Trading Act if shares are sold to the crowd (for example, the earlier business model employed by Bergfürst) (Klöhn and Hornuf 2012).

In the end, it is not possible to construct a restrictive definition of “FinTech” that applies to all of the entities traditionally associated with the term. While most companies in the FinTech industry have certain features in common, there are always enough exceptions to render them inadequate for producing a general definition. For example, many of the FinTech companies are in their start-up phase. However, since not all FinTech companies are start-ups, this category cannot be an essential part of a FinTech definition. The same applies to the participation of a large number of investors in a funding opportunity (the “crowd”) or the use of social-media components. Although these two features are integral to the operation of many segments of the FinTech industry, such as in crowdfunding or social trading, there are others, such as innovative payment services, where they have no importance at all. For this reason, rather than trying to provide a restricted or legal definition, the following section will provide a summary of the various major segments of the FinTech industry.

2.2 Segments of the FinTech Industry

Companies in the FinTech industry can be divided into four major segments in accordance with their distinctive business models. By analogy with traditional value-adding areas of a universal bank, FinTechs can be distinguished on the basis of their involvement in *financing*, *asset management*, and *payments*, as well as *other FinTechs*, a loose assortment of companies that perform other functions. Figure 2.1 illustrates this categorization and provides a detailed representation of the subsegments of the industry. In what follows, the subsegments are described in greater detail. Their market volumes will be estimated in Chap. 4.

The finance sector includes a FinTech segment that makes financing available for both private individuals and for businesses. This segment can be further divided into FinTechs whose offerings are based on the participation of a large number of contributors (the *crowdfunding* subsegment) and those that offer factoring services or credit without the participation of the crowd (the *credit and factoring* subsegment).

Crowdfunding describes a form of financing in which a large number of contributors (often called “backers”) provide the financial resources to achieve a

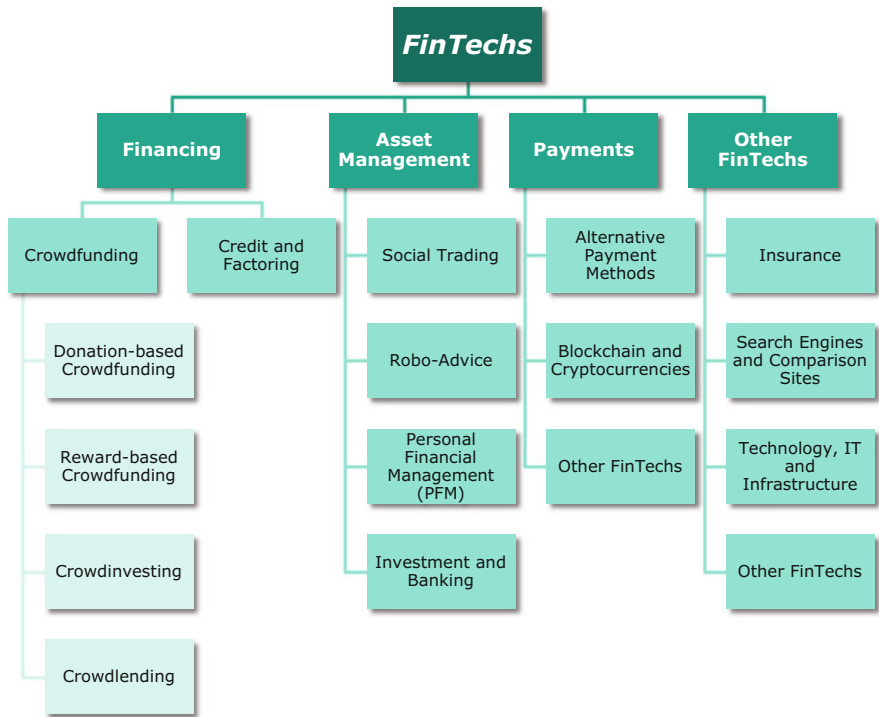


Fig. 2.1 Segments of the FinTech industry

common goal. In the place of a traditional bank, a crowdfunding portal acts as an intermediary (Belleflamme et al. 2014; Klöhn and Hornuf 2012). Crowdfunding portals can be subdivided into four further subsegments on the basis of the kind of consideration given to investors for their investments. While investors participating in *donation-based crowdfunding* receive no remuneration for their contributions (though they may derive indirect personal benefits through the act of donation; Andreoni 1989), in *reward-based crowdfunding* they receive some form of non-monetary consideration. Such consideration can take the form of the right to pre-order a product or some other form of prestige, such as having the investor’s name included in the credits of a funded film (Bradford 2012). Generally, there are no costs to individuals for initiating projects in the reward-based and donation-based crowdfunding subsegments. Some portals charge a fee of between 5% and 11% of the total amount of funding in the case of a successful campaign. Other portals gain revenue through voluntary donations from investors and the initiators of the projects.²

²For example, the crowdfunding platform Startnext financed itself through voluntary contributions.

In the third subsegment, *crowdinvesting*, investors receive a share of equity, debt or hybrid ownership. The contracts used in crowdinvesting often simulate certain aspects of equity participation using a mezzanine instrument (Klöhn et al. 2016a). As a rule, crowdinvesting portals profit from the fees they receive from successfully financed companies. In Germany, this fee is 8% of the financed amount on average (Hornuf and Schwienbacher 2014). Recently crowdinvesting portals have also gained revenue from the future success of financed companies by requiring investors to deduct a certain share of a company's potential profits, its enterprise value and exit proceeds (carried interest) (Klöhn et al. 2016a).³ Generally speaking, portals handle relatively small sums in crowdinvesting campaigns. Klöhn et al. (2016b) show that by the middle of 2015 amounts of more than 1 million EUR had been collected from only five of the 174 crowdinvesting campaigns that had taken place in Germany by that date. However, these five successful campaigns correspond to 29% of the total volume of financing from successful campaigns.

The fourth subsegment, *crowdlending*, contains platforms that enable private individuals and businesses to secure loans from the crowd. In return for the provision of the loan, investors receive a pre-determined interest rate (Bradford 2012). In Germany, the market leaders in the crowdlending industry are financed by two types of fees. On the one hand, borrowers are charged a fee that depends on their creditworthiness and the duration of the loan. On the other hand, lenders are required to pay a certain percentage of the amount invested (often 1%) or one percentage point of the interest rate.

In addition there is the *credit and factoring* subsegment. FinTech businesses in this subsegment, generally in cooperation with a partner bank (or else a number of partner banks), extend credit to private individuals and businesses without recourse to the crowd. Loans are sometimes given over short-term periods of a few days or weeks via mobile phone. In addition, these FinTechs offer innovative factoring solutions, such as selling claims online or offering factoring solutions without a minimum requirement. As a rule, companies in the credit and factoring subsegment automate many of their processes, thereby enabling cost-effective, fast and efficient services.

The *asset management* segment includes FinTechs that offer advice, disposal and management of assets, and aggregated indicators of personal wealth. This segment is also divided into further subsegments. *Social trading* is a form of investment in which investors (or “followers”) can observe, discuss, and copy the investment strategies or portfolios of other members of a social network (Liu et al. 2014; Pentland 2013). Individual investors are supposed to benefit from the collective wisdom of a large number of traders. Depending on the business model of a social trading platform, users can be charged for spreads, order costs, or percentages of the amount invested.

³In accordance with the “Pooling and Carry Agreement” used by Companisto, the platform currently receives 10% of all proceeds distributed to investors, with the exception of proceeds from the loan and from the fixed interest payment.

In addition, innovative software solutions and computer systems play an important role in the business models of many FinTechs in the asset management segment. The *robo-advice* subsegment refers to portfolio management systems that provide algorithm-based and largely automated investment advice, sometimes also making investment decisions (ESA 2015). Robo advisers' algorithms are generally based on passive investing and diversification strategies (Sironi 2016). They consider the investor's risk tolerance, the preferred duration of the investment, as well as other goals (Fein 2015). The German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht—BaFin*) (BaFin 2016a, b) also distinguishes between “automated investment advice,” in which a one-off investment recommendation is given, and “automated financial portfolio management,” which is characterized by ongoing recommendations. Since these two services often overlap, they are conflated in this study. Robo-advice providers are often financed by a fee withheld from investors that is proportionate to the sum of their investment. A performance-dependent fee is also charged.

The *personal financial management (PFM)* subsegment includes FinTech companies that offer private financial planning, in particular the administration and presentation of financial data using software or app-based services. PFM enable clients to visualize the assets they have deposited with different financial institutions as well as loans borrowed from different lenders in one application. The app or software often requires a one-off or annual fee from users. In order to integrate the accounts of different providers into a PFM system, PFM interface with the portals of financial institutions, which are frequently open-access, using application programming interface (API) technology (Glushko et al. 1999; Dapp 2015; Nienaber 2016). In many PFM systems, however, manual entry of the account data is also required.

There are also FinTech companies that offer innovative concepts for advising or managing assets that cannot be included in the social trading, robo-advice or PFM subsegments. These may be organized into two main groups. First, there is online-based asset management, in which human investment advisors actively interact with customers, though as with robo-advice they also automate or partially automate many processes. Secondly, there are deposit brokers, which arrange daily or fixed-term deposits in other EU countries and offer the opening of accounts as well as management on a German website. As a result of the EU-wide deposit guarantee scheme (Directive 2014/49/EU), using this business model it is possible to exploit interest rates from different countries. These FinTechs are included in the *investment and banking* subsegment. Also included in this subsegment are FinTechs that offer traditional banking products, such as a cash account with certain IT functionalities. By making efficient use of technologies and by abandoning cumbersome branch networks, these FinTechs can offer traditional banking products more cost-effectively and quickly, as well as more user-friendly functionalities.

The *payments* segment is an umbrella term that applies to FinTechs whose applications and services concern national and international payment transactions. Under this umbrella is included the *blockchain and cryptocurrency* subsegment, which includes FinTechs that offer virtual currencies (cryptocurrency) as an alternative to typical fiat money. As with legal means of payment, it is possible to save,

use, and exchange cryptocurrencies (BaFin 2016c). Banks are not needed to serve as intermediaries. One of the best-known cryptocurrencies is Bitcoin. Bitcoin, which has undergone large fluctuations in value in the past,⁴ has not yet been able to establish itself as a serious competitor with official currencies issued by central banks. There are more than 700 other virtual currencies that have not yet reached the level of market capitalization of Bitcoin (CoinMarketCap 2016a). As with most other digital payment systems, a blockchain is used to secure Bitcoin's transactions. With this technology, all transactions are registered and stored on a variety of servers. This makes it very difficult to falsify the information (Grinberg 2011; Böhme et al. 2015). Even companies that do not themselves offer cryptocurrencies, but solely blockchain technology for financial services, are included in the blockchain and cryptocurrency subsegment.

FinTechs that offer alternative payment methods are included in the *alternative payment methods* subsegment. Companies that offer mobile payment solutions belong to this subsegment. In the scholarly literature, the term "mobile payment" generally encompasses various functionalities that are handled via mobile phones (see Mallat 2007; Mallat et al. 2004; Merritt 2010). This includes the use of the mobile phone to make payments or bank transfers. Companies that offer eWallets or cyberwallets are also included in the alternative payment methods subsegment. An eWallet is a system in which both digital currencies and payment information for various payment systems can be stored. The payment information can then be used during the payment process without re-entering it using a mobile phone or the Internet. This enables very fast and user-friendly transactions (Mjøl̂snes and Rong 2003; Mallat 2007). Other innovative solutions for bank transfers or other payment methods are also included in the alternative payment methods subsegment. Some FinTechs in this subsegment, for example, offer the transfer of money between two individuals (peer-to-peer transfer). The money is often transferred in real time and thus is faster than in the traditional banking industry (Merritt 2010).

The *other FinTechs* segment describes FinTech businesses that cannot be classified by the other three traditional bank functions, i.e. financing, asset management and payment transactions. FinTechs that offer insurance or facilitate its acquisition are included in the *insurance* subsegment. These FinTechs are often also called *InsurTechs*. Among other things, they offer peer-to-peer-insurance, wherein a group of policyholders come together and assume collective liability in the case of damages. If no loss occurs within the group, there is partial reimbursement of the insurance premium (Wolff-Marting 2014). Furthermore, FinTechs of the *search engines and comparison sites* subsegment, which enable the Internet-based search and comparison of financial products or financial services, are included in other FinTechs. FinTechs that provide technical solutions for financial services providers are included in the *Technology, IT and Infrastructure* subsegment.

⁴For example, in October 2013 the average price for a Bitcoin on the largest virtual currency exchange was around 122 USD. A few months later, at the beginning of December 2013, the price had already risen to 1151 USD (BlockchainInfo 2016).

FinTech in Germany

Dorleitner, G.; Hornuf, L.; Schmitt, M.; Weber, M.

2017, XIII, 121 p. 44 illus. in color., Hardcover

ISBN: 978-3-319-54665-0