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THE ROLE AND INFLUENCE OF FINANCIAL TECHNOLOGIES IN THE DEVELOPMENT OF THE FINANCIAL MARKET

Abstract: This article provides a brief overview of the financial technology (fintech) industry; describes the various types of fintech firms in existence today; describes how fintech differs from traditional financial services providers; highlights the opportunities that financial technology presents for consumers; and presents the current challenges associated with this industry, specifically as they relate to regulation of the financial services industry.

Keywords: financial technology, financial markets, financial regulation, digital technologies, fintech products

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*PhD ПО ФИНАНСАМ В СФЕРЕ НЕДВИЖИМОСТИ, ПРОФЕССОР КАЛИФОРНИЙСКОГО
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РОЛЬ И ВЛИЯНИЕ ФИНАНСОВЫХ ТЕХНОЛОГИЙ НА РАЗВИТИЕ ФИНАНСОВЫХ РЫНКОВ

Аннотация: В этой статье представлен краткий обзор индустрии финансовых технологий (fintech), описаны различные типы существующих сегодня fintech-компаний, показан, чем fintech отличается от традиционных поставщиков финансовых услуг, также подчеркиваются возможности, которые финансовые технологии предоставляют потребителям и представлены текущие проблемы, связанные с этой отраслью, особенно в том, что касается регулирования отрасли финансовых услуг.

Ключевые слова: финансовые технологии, финансовые рынки, финансовое регулирование, цифровые технологии, продукты финтех

Introduction

As a result of the economic transformations of recent decades, regulatory changes and active technological development have changed the nature of financial markets, the composition of services, institutions and their relationships. To a large

extent, this part has been influenced by new approaches and progress with the development of online services and digital technologies in the economic environment. Modern innovations in the field of financial services are caused by the need to reduce the costs of their implementation, improve the security of financial transactions and their compliance with a constantly evolving society.

In this review article, we offer a brief overview of the financial technology industry, better known as the fintech industry. This article should not be viewed as original research, but rather as a summary of the current literature on the topic. Fintech can perhaps be described simply as an economic industry composed of companies that use technology to make financial systems more efficient. However, a better, more specific, definition is offered by the Financial Stability Board, which defines fintech as “technologically enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services”. This is a relatively young, but fast-growing area of the financial services industry, and has the potential to offer a variety of financial services to consumers at a reduced cost; offer services to segments of the population who previously did not have access to credit, banking, and related services; create new types of financial services; and improve market efficiency in financial markets.

Today financial technologies are discussed among representatives of credit institutions and commercial companies, in central banks of many countries and at international economic forums. However, despite the balanced approach and timeliness of determining the scope of their use, the theoretical and methodological foundations of the influence of financial technologies and innovations on the economic performance of the development of the financial market and the effectiveness of fintech services have not been sufficiently studied.

Despite its relative infancy, the fintech sector has achieved major growth and publicly-traded fintech firms have outperformed other sectors in recent years. For example, in June 2017, the market capitalization (the market value of all outstanding shares) of the top 10 publicly-traded fintech companies exceeded \$100 billion for the first time. Today, just one such firm, PayPal, has a market capitalization exceeding \$300 billion, and another, Square, has a market capitalization of about \$100 billion. Furthermore, by the end of 2020, there were 32 fintech “unicorns”, which are privately held firms with valuations exceeding \$1 billion. Therefore, the combined market valuation of these 42 firms is many hundreds of billions of dollars. In terms of stock market returns, between 2017 and 2020, the top 10 publicly-traded fintech firms (PayPal, Square) have outperformed large financial services incumbents (J.P. Morgan, Visa), large tech companies (Apple, Amazon, Alphabet), and the broader S&P500 index.

We would like to note that the related topic of cryptocurrencies such as Bitcoin and Ethereum, as well as their underlying blockchain technology, is outside the scope of this paper. Cryptocurrencies and the blockchain technology are important and relevant issues of interest in their own right, and should be discussed in detail in a separate paper.

Fintech Ecosystem

The fintech industry consists of thousands of startups, tech companies, infrastructure players, and traditional financial services institutions, which operate within virtually all segments of the financial services industry. Some of the bigger segments with prominent companies within each segment are listed below. The companies listed here are at various stages of maturity, as well as market valuation – from small, new startups to established industry giants with hundreds of billions of dollars in market capitalization.

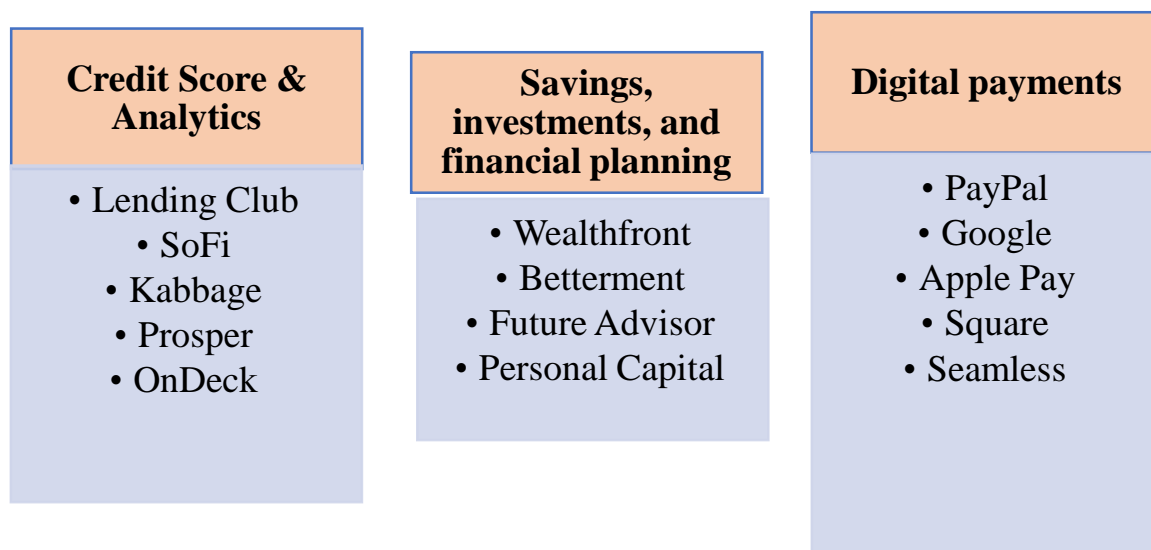


Figure 1. Examples of fintech products¹

As mentioned before, cryptocurrencies and the blockchain technology can also be considered part of the fintech sector, but they are outside the scope of this article. Of particular interest are the fintech firms involved in alternative online lending, which already involve major players such as SoFi (student loan refinancing, mortgages, personal loans, credit card, investing and banking through both their mobile app and desktop interfaces) and Kabbage (direct lending to small businesses

¹ <https://www.cbinsights.com/research/report/fintech-250-startups-most-promising/>

and consumers through an automated lending platform). Figure 1 below provides a more detailed register of the top fintech firms in chart form.

It can be noted that the rapid growth of financial technological innovations predetermined the formation of companies that provide modern financial services. FinTech is a new finance area that uses digital technologies to improve financial performance, bringing together companies that use innovative developments to provide more practical financial services. The companies that provide these services are also called fintechs and annually master significant volumes of investment. Currently, a stream of qualitative changes originates in the financial sector to ensure economic and social stability.

Differences with Traditional Financial Services

What makes a fintech firm a fintech firm? Does taking advantage of technology make a financial services provider a fintech firm? In this section, we list the key features that distinguish fintech firms from traditional firms in this industry.

First, fintech firms use big data, rather than “soft information” used by traditional banks. By soft information we mean non-quantitative data that cannot be easily and cheaply collected, stored, and disseminated. Making use of such data requires building long-term personal relationships with customers, which is very costly. Fintech firms can avoid investing in these costly relationships thanks to their access to huge amounts of financial (and non-financial) data.

Second, by replacing ordisintermediating traditional financial services providers, fintech firms have the ability to bring borrowers and savers together more directly. This has the benefit of broader consumer access and improved market efficiency. However, as we explain in the last section, these benefits may come at the risk of reduced public accountability.

Third, the fintech industry has been a catalyst for a major shift away from fee-based servicemodels, and towards targeted advertising and selling data. For example, when fintech firms started offering commission-free trades on their platforms, traditional brokerages had to respond by also going fee-free.

Fourth, due to the differences in the fixed and variable cost structures, the role of network effect in reaching scale will also be different for fintech and non-fintech firms. For example, aggregators like Credit Karma allow consumers to price shop for financial products such as mortgages, savings accounts, certificates of deposit, and insurance for free. The side effect of this is that the consumers increasingly have multiple accounts with multiple forms to meet their various financial needs.



Figure 2. The Fintech Market in India²

It is also important to point out what is not fintech. Companies that offer traditional services or solutions to new consumer markets are not considered fintech in our conception. Nor are simple, straightforward extensions of a company’s principal business activities.

² <https://www.cbinsights.com/research/report/fintech-250-startups-most-promising/>

Opportunities

As stated in the introduction, the chief (realized and potential) benefits of fintech include: the ability to offer a variety of financial services to consumers at a reduced cost, offering services to segments of the population who previously did not have access to banking services, innovation in the financial services space, and improving market efficiency in financial markets.

One of the biggest promises of the fintech industry has already started to be realized. According to Philippon (2019), the cost of services that provide financial intermediation in the United States has remained stubbornly high over the past 130 years or so. The average cost of such transactions has been about 2% of the asset value. Philippon also speculates that fintech firms can potentially offer financial intermediation services at a substantially lower cost, resulting in increased consumer surplus. They may be able to do this by using their technology to offer low-leverage solutions and because they are funded with much more equity than existing firms, which allows them to avoid high-leverage practices that are common for traditional financial services firms.

Fintech offers several value propositions that go beyond reducing the cost of financial services to consumers. First, fintech promises to provide a better overall consumer experience, key features of which are speed of use, increased access to credit, and clearer disclosures. This better consumer experience is possible partly because most consumers today have access to smartphones. This means that consumers that did not previously have access to financial services can potentially use such services as banking, borrowing, and lending. Chief beneficiaries would be lower-income households in wealthier countries and large chunks of the population in the developing world, including Uzbekistan.

As we stated earlier, a major feature distinguishing fintech from traditional firms is its use of big data and artificial intelligence. Using such enhanced data analytic techniques result in underwriting methods that more accurately predict defaults (relative to traditional firms' "soft" information and models), as well as cost effective customer sourcing and also enhanced access to credit.

The fintech sector has been and continues to be, a major source of innovation in the provision of financial services. Some recent innovations have happened in wealth management and personal investment, including robo-advising, peer-to-peer lending, business lending, mobile wallets, and electronic payment infrastructure.

Finally, fintech firms match borrowers and savers more directly, thus disintermediating traditional service providers such as banks. This, again, has meant that people have wider access to not just the stock market, but other asset classes such as real estate. This enhanced ability to allocate capital to its most productive use promotes the efficiency of financial markets.

Regulatory Challenges

While the benefits described in the previous section are potentially enormous, fintech does come with significant caveats for consumers and challenges for regulators. We go over the biggest challenges that have been identified in the literature next.

First and most obvious challenge for both consumers and regulators is that comes with the movement of data. With data being central to the operation of fintech firms, data privacy issues naturally emerge. The seemingly endless series of data breaches at major U.S. financial firms in recent years only reinforce the need to improve data privacy and security protocols. Furthermore, there is still lack of clarity on who owns consumers’ data, what can be shared with partners or sold, what are consumers’ rights when it comes to their personal information, and myriad related issues.

The second challenge has to do with potential bias that is inherent in artificial intelligence algorithms used by fintech firms. Research has shown that decision-making that relies on algorithms can reduce face-to-face discrimination, it is still susceptible to inadvertent bias.³

Finally, regulators must deal with market transparency issues, stemming partly from the fact that not all lenders currently report to credit reporting agencies. There are also issues related to the transparency of algorithms and underwriting models. For example, consumers do not always understand how their behaviors impact their creditworthiness. Regulators in most countries are still playing catch-up because the industry is so young, but we will likely see more systemic rules and regulations being developed and going into effect in the near future. The key to such regulations will be to find the balance among goals that include protecting consumers, fostering further innovation, and preserving the stability of the financial system.

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