POLICY REPORT

# THE FINTECH SECTOR IN LATVIA: OPPORTUNITIES, RISKS AND CHALLENGES FOR NATIONAL DEVELOPMENT

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MAY 2023

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# ABSTRACT

In recent years, the development of new financial technologies, or Fintech, has been regarded as one of the most disruptive and relevant phenomena not only for the financial sector but for the overall economy.

However, to date, most of the research on Fintech has focused on the opportunities and risks for firms and there is little research on the implications of Fintech for the development of national economies. Therefore, the current report aims to provide a critical assessment of the potential role of the expansion of the Fintech sector for Latvia. In doing so, the report answers the following question: How does the Fintech sector fit into Latvia's development strategy and what are its implications?

The report finds that, in its current form, the Fintech sector can be a useful means of facilitating development and innovation, but hardly a driver of development in itself. As policy recommendations, the report highlights the need to build regulatory expertise. The evidence shows that the risks posed by the Fintech sector are quantitatively and qualitatively different from those of traditional finance. Therefore, in order to contain risks and maximize benefits, a more proactive and tailored regulatory approach is required.

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# 1. INTRODUCTION

Since the restoration of independence more than 30 years ago, achieving sustainable social and economic development has remained one of the main challenges for the Republic of Latvia. To achieve this objective, the country has launched different initiatives, such as the "Sustainable Development Strategy of Latvia until 2030" project (referred to as "Latvija 2030") or the Smart Specialization Strategy for Research and Innovation (RIS3). In a nutshell, Latvija 2030 is a masterplan for long-term national development. It outlines 7 development priorities (development of culture space, long-term investment in human capital, change of paradigm in education, innovative and eco-efficient economy, nature as future capital, perspective of spatial development, innovative government and participation of the society) and 7 strategic indicators (natural population growth, the GINI coefficient, GDP per capita, the ecological footprint, the Human Development Index, the Global Competitiveness Index, dispersion of regional GDP per capita).[1] For its part, RIS3 is a research and innovation strategy aimed to articulate and promote economic transformation towards higher added value and international competitiveness. It defines 5 smart specialization areas with the greatest research and innovation potential: 1) Knowledge-intensive bio-economy; 2) Biomedicine, medical technologies and bio-pharmacy; 4) Smart materials, technologies and engineering systems; 5) Smart energy; 4) Information and communication technologies.[2]

One of the most disruptive and relevant phenomena in the contemporary world economy has been the development of the Fintech sector. By and large, Fintech has been regarded as a driver of change, not only in the traditional financial sector, but in the overall global economy. In line with these events, over the last years Latvian authorities have been preparing a development strategy for the Fintech sector (Latvijas finanšu tehnoloģiju nozares attīstības stratēģija).[3] Above all, this strategy intends to promote the creation of products with high added value and increase

[1]See Saeima of the Republic of Latvia: Sustainable Development Strategy of Latvia until 2030. Available online at: https://www.pkc.gov.lv/sites/default/files/inline-files/LIAS_2030_en_1.pdf.
[2]See Ministry of Education and Science, Republic of Latvia: Smart Specialisation Strategy (RIS3). Available online at: https://www.izm.gov.lv/en/smart-specialisation-strategy-ris3.
[3]See Ministry of Finance, Republic of Latvia: Vērtē Latvijas finanšu tehnoloģiju sektora attīstības stratēģiju. Available online at: https://www.fm.gov.lv/lv/jaunums/verte-latvijas-finansu-tehnologiju-sektora-attistibas-strategiju?utm_source=https%3A%2F%2Fwww.google.com%2F.

the competitiveness of the sector. The report sets out a vision for the country to become "*an important Fintech centre at the European Union (EU) level, where Fintech companies are promoters of innovation and competition in the financial sector, developing important, secure and internationally scalable business models*". [4]

However, to date, most of research on Fintech has focused on opportunities and risks for the firms and there is little research on the actual implications of Fintech for the development of national economies. Therefore, the current report aims to provide a critical assessment of the potential role of the expansion of the Fintech sector for Latvia. In doing so, it will answer the following question: How does the Fintech sector fit into Latvia's development strategy and what are its implications?

To achieve this objective, the report is structured as follows: Section 2 will introduce the main definitions of Fintech and the recent developments both globally and in Latvia. Subsequently, the following three sections (3, 4, and 5, respectively) will analyse the main opportunities, risks and challenges posed by the Fintech sector. Finally, section 6 presents the conclusions and draws the policy recommendations.

[4] Ibidem. Author´s translation.

# 2. FINTECH SECTOR OVERVIEW

Over the last decade, Fintech has become an increasingly relevant topic for a broad set of actors engaged in a number of fields, including the media, academia, investors and policy makers around the world. The new financial technologies have been argued to be a most disrupted event not only in finance but in the overall global economy. Thus, to address its significance, impact and perspectives, one first needs to define the concept.

To date, Fintech has been defined in various ways. For instance, in the Bali Fintech Agenda the IMF and the World Bank defined Fintech as the "*advances in technology that have the potential to transform the provision of financial services spurring the development of new business models, applications, processes, and products*" (IMF/World Bank 2019). In turn, BIS refers to Fintech as "*technology-enabled innovation in financial services*".[5] From the academic perspective, Liaw (2021) claims that Fintech is "*the use of financial technology to automate processes in financial services*", while Arner et al. (2015) state that "*Fintech refers to the application of technology to finance*." Finally, Vander Stichele (2023) defines Fintech as the "*digital provision of financial services by using innovative technologies, software, mobile devices, Internet and other novel digital or electronic technologies, right up to artificial intelligence and machine learning*". [6]

In summary, as the previous examples show, different actors have focused on particular aspects of Fintech to define the concept, according to their specific fields, interests and expertise. Thereby, in a comprehensive and inclusive definition, this report refers to Fintech as the use of new technologies to develop, provide and assist the provision of financial products and services. This, in turn, results in the development of new business models, applications, processes, and products that are transforming the financial sector as a whole.

In line with this approach, Fintech covers a broad range of sectors and activities. Thereby, in terms of business models, one can mention business-to-consumer (B2C), business-to-business (B2B), business-to-business-to-consumer (B2B2C), business-to-government/regulator (B2G),

[5]BIS, "Fintech and Innovation". Available online at: https://www.bis.org/topic/Fintech.htm#:~:text=Fintech%20refers%20to%20technology%2Denabled,monetary%20policy%20to%20financial%20regulation.
[6]For an exhaustive literature review and definitions see Giglio (2021).

platform-based business models, crowdfunding, digital banking and peer-to-peer (P2P) lending, among others. Similarly, the Fintech sector uses a broad range of technologies, such as cloud computing, big data, artificial intelligence (AI)/machine learning (ML), distributed ledger technologies (blockchain), the Internet of Things (IoT), quantum computing and augmented and virtual reality, among others. All in all, the development of these business models and the use of new technologies has had an impact in all sectors of the financial industry, ranging from retail and investment banking to trading, asset management, and insurance, among others.

Now, in order to understand how Fintech achieved this broad scope, the net section will summarize its origins and main developments.

## HISTORY AND EVOLUTION

The origins of Fintech can be traced back to the early 1970s. One of the most important milestones in Fintech development was the establishment of the "National Association of Stock Dealers Automated Stock Market Quotes (NASDAQ)" in 1971. The NASDAQ was the first electronic market to trade securities. Similarly, in 1973, the "Society for Worldwide Interbank Financial Telecommunication (SWIFT)" was established. SWIFT is a messaging network for making international payments.

The integration of new information and communication technologies in the financial sector continued in subsequent decades. The 1980s saw the rise of banking mainframes, while the 1990s ushered in a new era characterized by the advent of the internet and the birth of digital banking services, which gave connected customers the possibility to manage their money in different ways (TPA 2020). A good example from this period is PayPal, the first online payment system, created in 1998. For its part, the first decade of the 2000s led to a rapid rise in the Fintech sector, with the creation of new products and services, including payments, loans and insurance.

However, the expansion of the Fintech sector increased exponentially after the global financial crisis. On the one hand, the lack of confidence in the banks aligned with the regulatory change opened the market to new providers; on the other hand, the rapid adoption rate of smartphones created new sources for people to access the web and other financial services (Chishti and Barberis 2016). One of the symbols of the development of this era is the birth of Bitcoin in 2009, quickly followed by

other cryptocurrencies that used new technologies, such as blockchain.

Since then, Fintech products and services have been widely adopted, leading to further consolidation in the sector. Additionally, traditional financial institutions began to collaborate more closely with Fintech companies in order to introduce new financial services to the market. As a result of this, a whole new set of Fintech services has developed, such as "Robo-advisors", that use algorithms and automation to provide personalized investment advice and manage portfolios for individual investors, and “Digital Banking” that offers exclusively digital banking services.

Finally, the COVID-19 pandemic has given new momentum to the Fintech sector. Due to lockdowns imposed in most parts of the world, many customers have been forced to use digital financial services for the first time, which has accelerated Fintech expansion. This phase has been marked by the use of artificial intelligence (AI) and machine learning to improve financial services . In turn, several new products have emerged such as Digital insurance, referred to as “Insurtech”; “Proptech”, related to the real estate sector, or “Wealthtech”, focused on wealth management and investment.

## TYPES OF FINTECH FIRMS

In broad terms, Fintech firms can be categorized in three main groups:

**Large firms**: These are Fintech corporations whose shares are traded on public stock exchanges. Examples of this type of firms are Revolut, PayPal, Wise, among others.

**Unicorns**: These are non-listed startup companies with a value of over $1 billion. Unicorns are characterized by the involvement of venture capitalists and private investors.

**Startups**: these are companies in the first stages of operations. Startups generally have high costs and limited revenue, thereby, they usually rely on capital from a variety of sources such as venture capitalists, angel investors, private equity, etc.

Additionally, we must mention the **Bigtechs**. This term refers to the largest information technology companies such as Apple, Microsoft, Alphabet (Google), Amazon and Meta, among others. These are large multinational corporations with a global reach that are among the largest companies in the

world by market capitalization. While these companies were not originally involved in financial services, they have increasingly developed ties to the Fintech sector, including digital payment infrastructure services, apps, etc. (Fernandez et al. 2020).

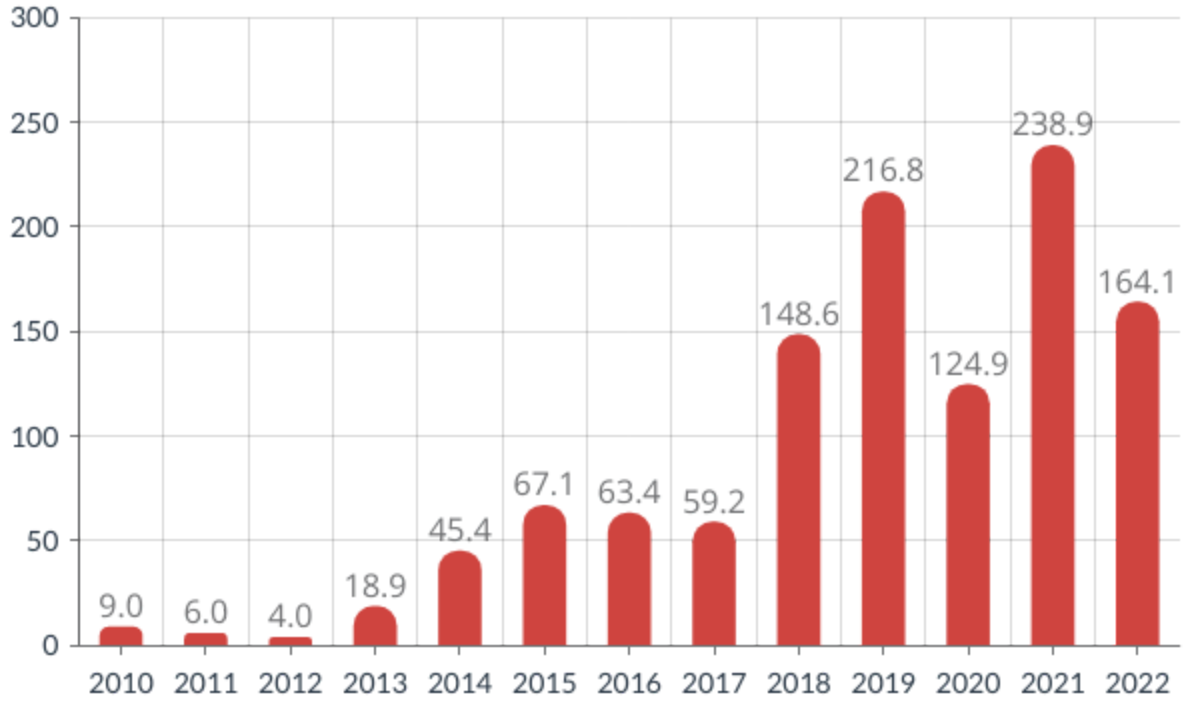
## GLOBAL TRENDS IN THE FINTECH SECTOR

As discussed in the previous section, the last few decades have seen an impressive expansion of the Fintech sector. However, this evolution is far from linear and has gone through several stages. A clear example of this is the performance of global investments.

As can be seen in figure 1, after the 2008-2009 crisis, investments in Fintech firms increased until 2015, then fell in 2016-2017, jumped substantially in 2018 and 2019 but were severely affected by the COVID crisis in 2020. Subsequently, after reaching a record high in 2021, investments suffered a significant decline in 2022.

FIGURE 1

**TOTAL VALUE OF GLOBAL INVESTMENTS INTO FINTECH COMPANIES, 2010-2022** (IN BILLIONS OF USD)




Source: Statista (2023)

In particular, 2022 showed a sharp contrast between the first and second semesters. In the first half of the year, investments amounted to US$ 119.2 billion. However, in the second half, Fintech investments fell to $44.9 billion (KPMG 2023a). In broad terms, the difference between the first and second half of the year highlights the volatility in investors' sentiment, in response to a context of uncertainty marked by high inflation and rising interest rates, rising geopolitical tensions, the lack of IPOs, downward pressure on valuations, and of course, the turmoil in the crypto markets. Furthermore, in line with this developments, it is important to note that new public Fintech companies decreased in value by 50% in 2022, while private ones gained 15% in the same period (Dealroom.co 2023).

In geographical terms, US was the dominant force for global Fintech investment, accounting for US$61.6 billion, that is about 40% of total Fintech investments globally. The Asia-Pacific region reached a new high of $50.5 billion, while the EMEA region attracted $44.9 billion (KPMG 2023b).

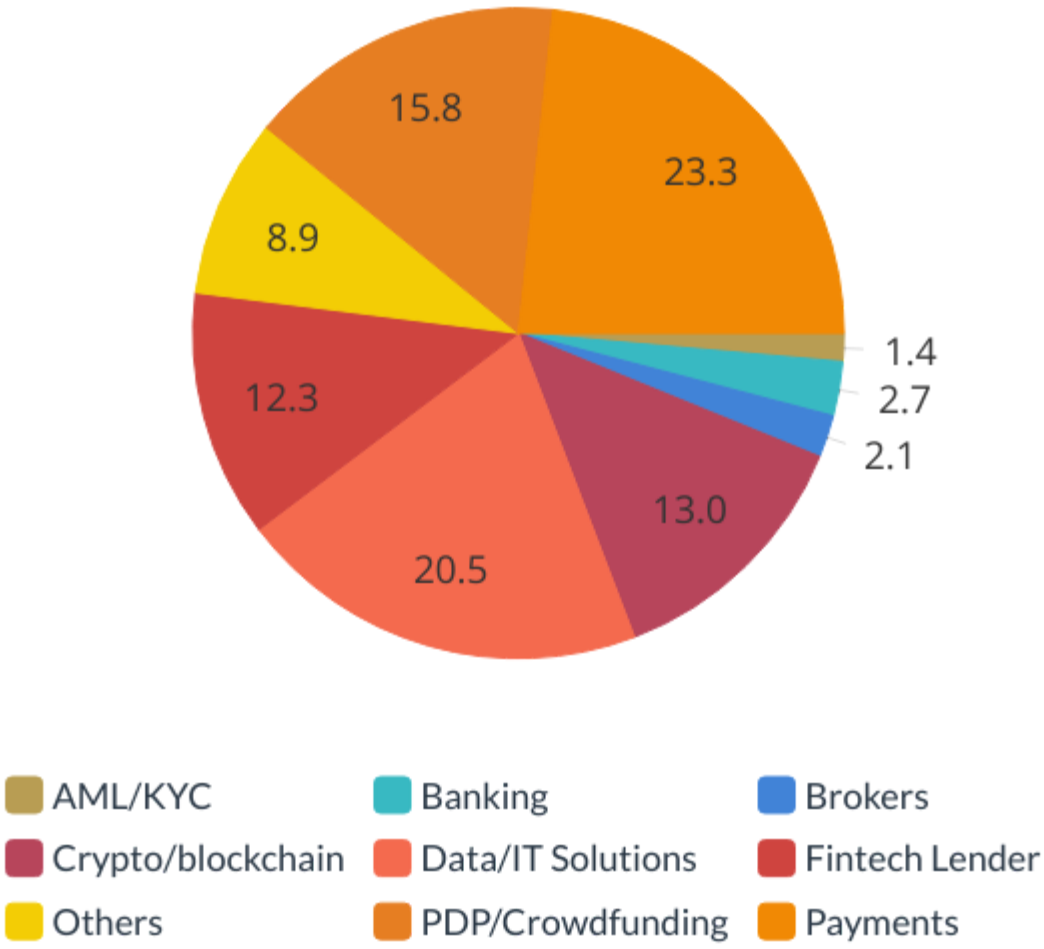
In terms of market segments, "payments" was the top recipient of funding in 2022, with US$53.1 billion, while investment in crypto and blockchain fell from US$30 billion in 2021 to US$23.1 billion. Interestingly, "Regtech" was one of the segments whose investment increased from US$11.8 billion in 2021 to US$18.6 billion in 2022 (Ibidem). Briefly, Regtech offers IT-driven regulatory solutions for the financial sector, primarily oriented to combat money laundering and other illegal activities.

## THE FINTECH SECTOR IN LATVIA

In recent years, the Fintech sector in Latvia has experienced a substantial growth. This is reflected in the number of firms, which increased from 66 in 2018 to 146 by the end of 2022 (Swedbank 2022; FLA 2023). Fintech companies in Latvia cover virtually all industry sectors. Currently, the most developed segment in Latvia is Payments, followed by IT/Data Solutions, P2P/Crowdfunding and Crypto/Blockchain (figure 2).

FIGURE 2

**MAIN BUSINESS SEGMENTS IN THE LATVIAN FINTECH SECTOR, AS OF 2022**
(IN %)



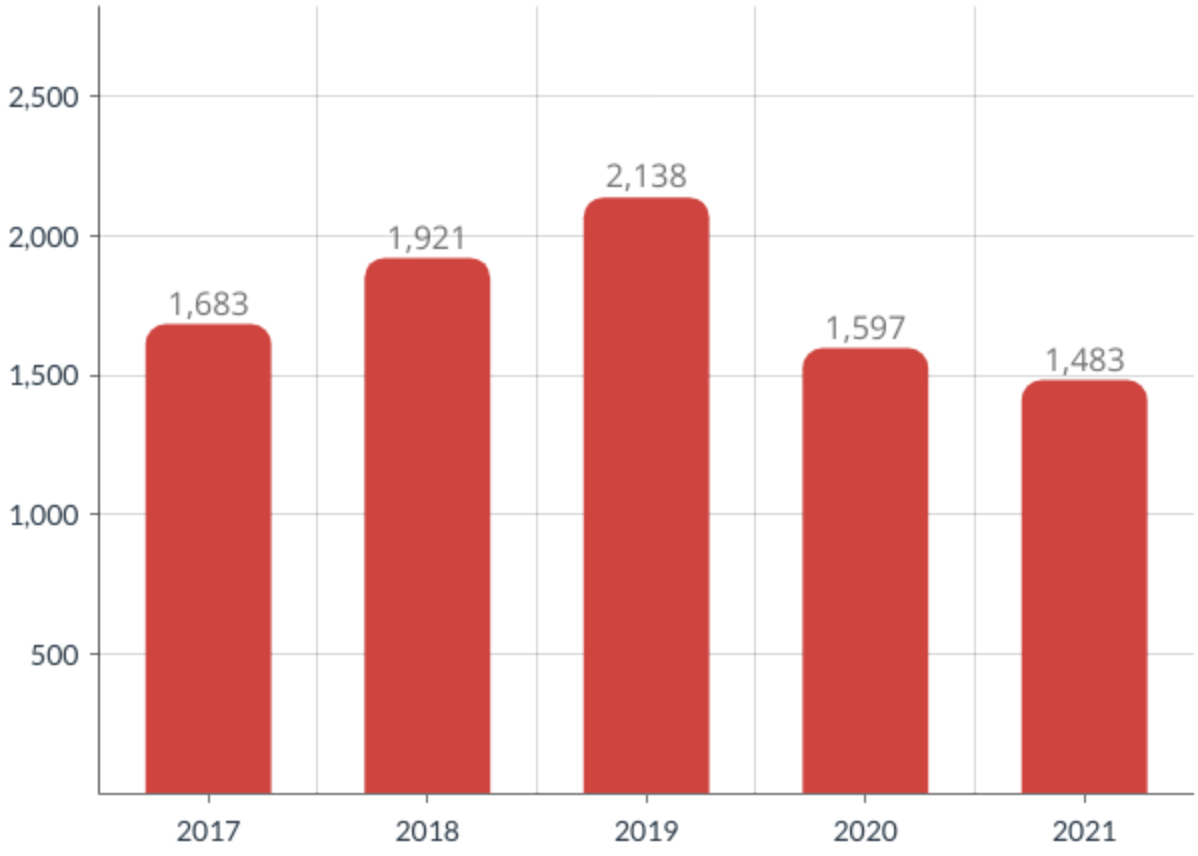

Source: FLA (2023)

The evolution of investment in the Latvian Fintech sector shows a similar trend to that of the rest of the world. Latvian Fintechs raised around €66 million in 2020 and €74 in 2021, with cumulative total funding reaching €307 million and €381 million respectively (FLA 2023). However, although data for 2022 was not yet available at the time of writing this report, the sector is expected to have suffered a major setback, in line with global developments. All in all, it is important to note that foreign investments play a key role for Fintechs in Latvia, especially in the startup segment, where they make up to 80% of total investments (LIAA 2020).

Regarding the number of people employed in the Latvian Fintech sector (figure 3), it can be seen that it increased until 2019, but then declined as a result of the COVID-19 pandemic. Accordingly, the latest available data for 2021 shows that the total number of people employed in the Latvian Fintech sector stands just under 1,500. As stated by Rupeika-Apoga and Wendt (2021), difficulties in attracting skilled labour is one of the main obstacles for Fintech firms' development in Latvia.

FIGURE 3

NUMBER OF EMPLOYEES IN THE LATVIAN FINTECH SECTOR, 2017-2021

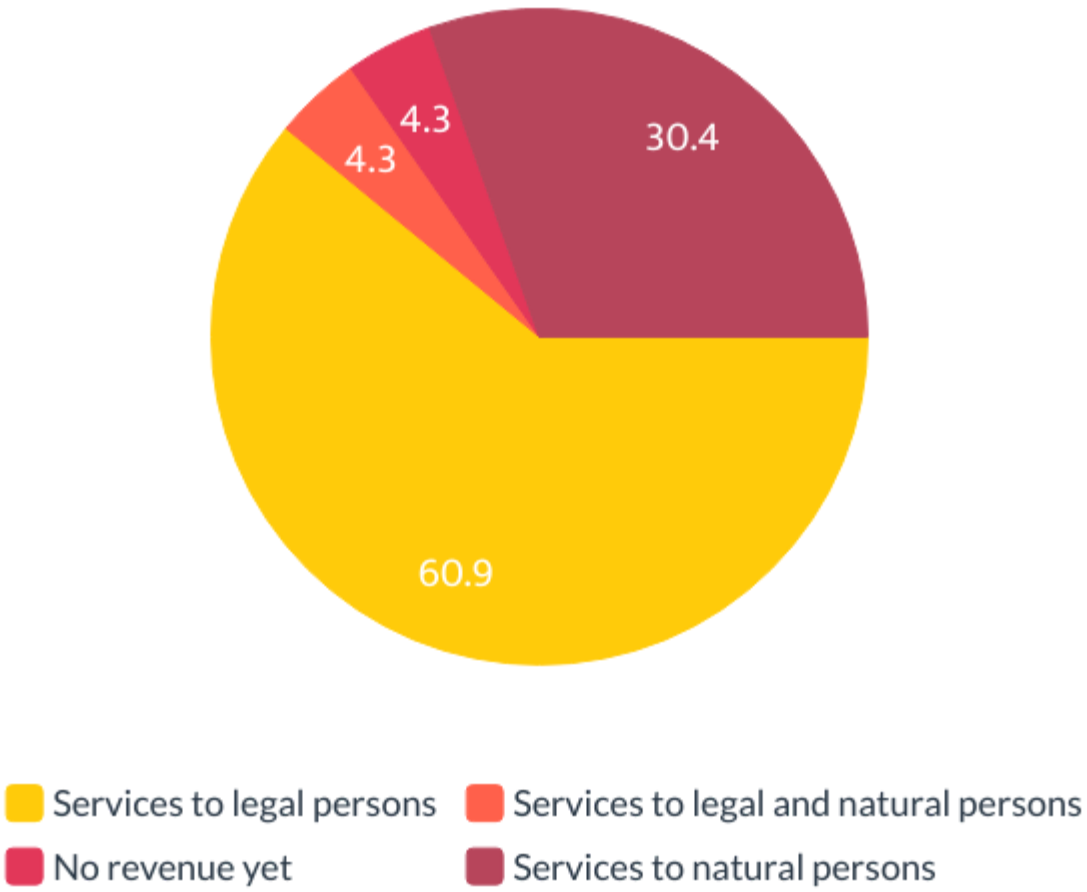



Source: Lursoft, as cited in FLA (2023).

In terms of revenue, services to legal entities make up the largest part of the income streams of Latvian Fintechs (figure 4). In turn, the absolute majority of Fintech companies are oriented towards international markets and have few ties to the local market. The most important target markets for Latvian Fintech companies remain in Europe, while few Latvian Fintechs target the North American and Asia-Pacific regions (FLA 2023). It is important to note that the companies with the highest income were linked to foreign capital and were part of a larger business group (Rupeika-Apoga et al. 2020).

FIGURE 4

**MAIN SOURCE OF REVENUE OF LATVIAN FINTECHS, AS OF 2022** (IN %)

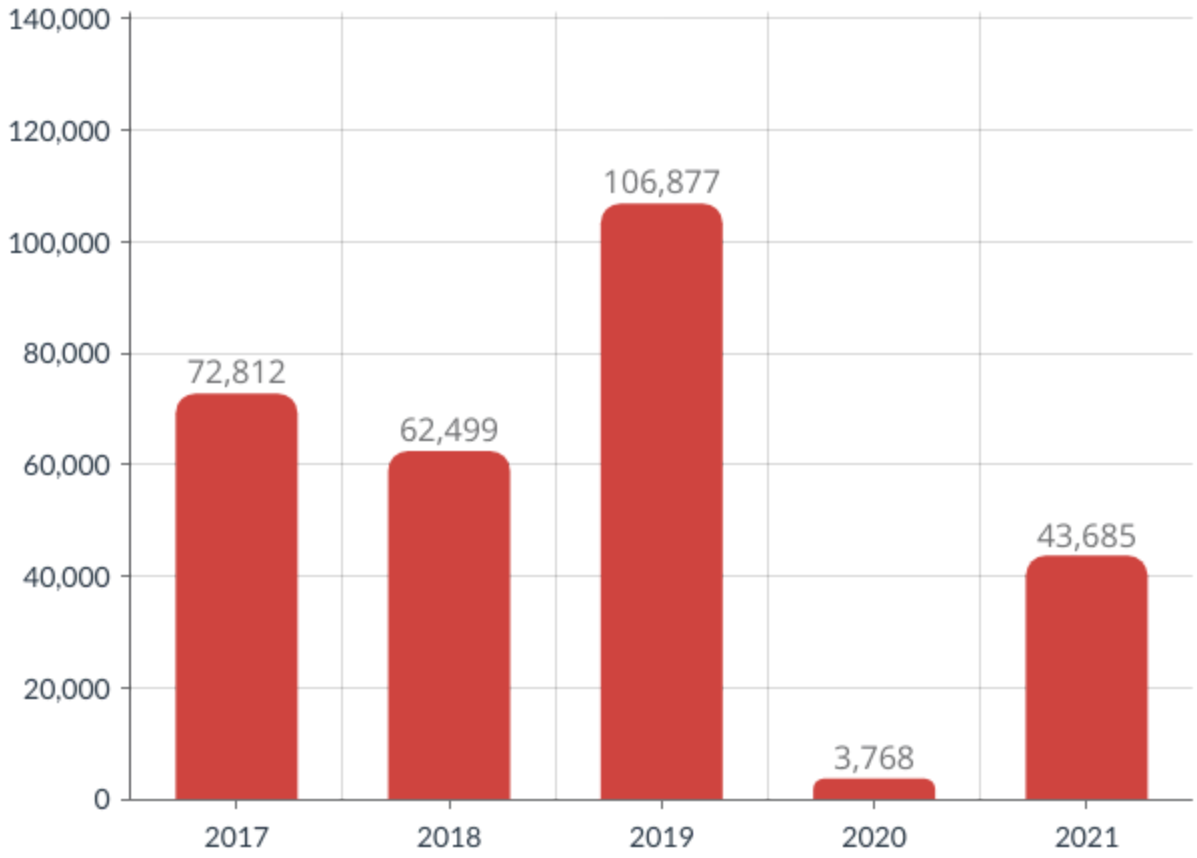



Source: FLA (2023)

Finally, the most recent data available shows that profits increased during 2019, however, due to the Covid-19 pandemic, the sector suffered a significant drop in 2020 and experienced a slight recovery in 2021 (figure 5). While the 2022 data is not publicly available yet, it is to be expected that the crypto crisis and declining revenue from crypto assets may have had a significant impact on Latvian Fintech revenues.

FIGURE 5

**EVOLUTION OF LATVIAN FINTECH PROFITS, 2017-2021** (IN THOUSANDS OF EUR)




Source: FLA (2023)

# 3. OPPORTUNITIES

The development of the Fintech sector can generate a series of positive effects. Accordingly, this section summarizes the main opportunities that new financial technologies can bring to the Latvian economy.

## EFFICIENCY

Fintech innovations can help significantly reduce costs and increase efficiency in the provision of financial services (WB 2023). Crucially, digitization can reduce friction at every link in the financial chain, from opening an account to conducting customer due diligence; transaction authentication; and the automation of other product-specific processes, such as creditworthiness assessment. In turn, the introduction of cloud-based infrastructure can reduce transaction costs by overcoming geographic access barriers; increase the speed, security and transparency of transactions; and enable more personalized financial services that better serve consumers.

In summary, the Fintech sector is characterized by low marginal costs and efficiencies of scale. The application of technological advances to the production of financial services eases fixed cost constraints as well as frictions related to transaction costs. In turn, the elimination of many fixed costs and the reduction of variable costs can make it economically viable for smaller providers such as domestic startups to enter the market and be competitive.

## FINANCIAL INCLUSION

Fintech apps offer the opportunity to provide access to financial services to people who are currently underserved, in particular payment services for people in rural areas or the informal economy, including people living in poverty, migrants and refugees. Over the last decade, 1.2 billion previously unbanked adults gained access to financial services, and the unbanked population fell by 35%, driven primarily by the increase in mobile money accounts (World Bank 2021). Currently, 1.7 billion adults around the world remain unbanked (Ibidem). Importantly, financial inclusion can be a means to achieve economic growth, as it can have multiplier effects.

Yet, financial inclusion is not without risks. For example, research has shown that some Fintech applications in microfinance to the poor still come with predatory interest rates, fees or practices (Bateman and Amorim Teixeira 2022). In addition, they made it easier for people and informal entrepreneurs to take on (multiple) small loans without adequate creditworthiness assessments, leading to high debt burdens. In summary, it is fundamental that regulators and policy makers prevent the so-called "exploitative inclusion" (see Sokol 2013) and guarantee that easy access to Fintech loans don't aggravate indebtedness and poverty.

## FOREIGN DIRECT INVESTMENT AND EXPORT OF FINANCIAL SERVICES

The development of the Fintech sector in Latvia could also become an important source of foreign direct investment. As previously mentioned, the share of foreign investment in startups amounts to more than 80%, with the main foreign investors being from the US, UK and the United Arab Emirates, among others (LIAA 2020). In line with these development, over the next years, the number of start-up visas is expected to increase as a result of growing demand (Swedbank 2021).

Overall, the arrival of foreign direct investment can bring a series of positive economic effects. First, it can create direct and indirect jobs, including skilled labor, which will result in more employment, higher wages, and higher consumption. Second, FDI can generate tax revenue for the state. Third, FDI can introduce new technologies, skills and knowledge, improving productivity, competitiveness and innovation capacity. Finally, as mentioned above, Fintech companies in Latvia are mainly focused on supplying foreign customers. This promotes the export of services, which helps stabilize the balance of payments. In this way, FDI in the Fintech sector can create spillover effects and positive linkages that stimulate efficiency and innovation, contributing to economic stability, growth and social welfare.

# 4. RISKS

While as previously shown the development of the Fintech sector can bring benefits to the Latvian economy, it also poses a number of significant and specific risks, which are detailed below.

## VULNERABILITY - DATA PROTECTION

By collecting information about customers' payments, receipts, loans, debts, savings, insurance, investments, etc., Fintech companies gain near-absolute insight into people's financial behaviour. This poses significant risks in the event of a leak or loss of personal privacy, privatization of personal data, or third-party access to an individual's online data.

Personal digital financial data is also spread through various Fintech applications without sufficient privacy protection. For example, if a Fintech application embeds payments and lending within the online operations of a nonfinancial business ("embedded finance"), it allows the business to access customer purchase and payment information to target those customers with additional products or services (Vander Stichele 2023). Similarly, when the financial industry acquires a Fintech startup, personal data collected by the Fintech startup may be transferred to the new owner without sufficient privacy protection.

For its part, the reliance of Fintech startups on venture capital creates additional sources of risk. Venture capital volatility may put further pressure on Fintech providers to be profitable, which may erode the integrity of their practices regarding the management of private data.

## VOLATILITY

Cryptocurrencies are a clear example of volatility in the Fintech sector. As of November 2022, more than 21,000 different cryptocurrencies have been created, of which more than half have not survived or are inactive (Howarth 2022). This adds to the enormous volatility that the value of cryptocurrencies has shown in recent years, as illustrated by the 70% drop in the value of Bitcoin between November 2021 and mid-December 2022.

However, volatility is not only limited to the crypto segment. The revenues and market capitalization of Fintech companies have fluctuated widely in recent years. Even Bigtech companies like Alphabet and Amazon have seen their market capitalization reduced by more than 40% and half, respectively, between November 2021 and December 2022. Even more spectacularly, Meta's market capitalization declined by more than 75% between August 2021 and November 2022. For comparison, during this period of turmoil, the S&P 500 index fluctuated by 20%.

All in all, many analysts have pointed to the ongoing evolution of the Fintech sector as an emerging bubble (e.g. CNBC 2021). If this is the case, the bursting of the Fintech bubble may pose direct risks to financial stability. The interlinkages and interdependencies established by Fintech companies can rapidly spread to other sectors of the financial system, as shown by the losses caused by the fall in the value of Bitcoin. By and large, all these facts add to the intrinsic risk of startups and the development of a new economic sector in a context of profound global uncertainty (World Bank 2023).

## CONCENTRATION

While the barriers to entry for new firms in the Fintech sector have so far been relatively low, one of the biggest risks is that of excessive concentration in a small number of large firms. For a long time, Fintech providers had access to cheap capital. However, in the current context of inflation, stagnation and rising interest rates, access to capital for new firms will become increasingly expensive. This opens the door for Fintech-related M&As. Since Bigtech and big finance already dominate many markets and have enormous financial resources, they can buy out existing companies and quickly enter a new Fintech market as dominators, displacing smaller rivals (World Bank 2023). These competitive dynamics may result in increasing horizontal and vertical concentration in national and international Fintech markets, or in particular Fintech segments. This could influence how Fintech startups and all financial services will operate. It would also increase the dependence of national economies, especially in small countries like Latvia, on a few large foreign companies and digital payment infrastructure providers for their financial operations.

## MONEY LAUNDERING & CYBERCRIME

The dominant business model of Latvian Fintechs, geared towards cross-border payments and serving legal entities, poses serious risks in terms of money laundering and illicit financial flows due to four main factors: first, customer onboarding and other business relationships are conducted mostly remotely, which is a traditional risk factor for ML/IFF; second, legal entities imply higher ML/IFF risks that natural persons; third, some of the firms are specifically focused on serving higher-risk customers, such as virtual asset service providers or gaming platforms, among others; fourth, AML systems and controls in Fintechs are less effective than in the traditional banking sector, while the rapid growth of sector makes it difficult for supervisors to conduct on-site inspections and external monitoring in a timely manner (Pataccini 2023). Moreover, these risks are amplified in the context of the War in Ukraine, as evidence suggests that Russian financial actors could use cryptocurrency and other financial technologies to circumvent sanctions and finance the military actions (Cox 2022, Chainalysis 2023).

In addition to AML, Fintech sector also faces risks related to cybercrime and fraudulent activities. Over the las few years, prominent Fintech firms have been involved a number of word-scale frauds that casted doubts over the entire sector. A key example of this is FTX, one of the largest cryptocurrency exchanges in the world, which filed for bankruptcy on November 11, 2022, after it was revealed that its CEO, Sam Bankman-Fried, had defrauded banks and other financial institutions for millions of dollars (AP 2022). Another prominent case is that of Wirecard, a defunct German payments company that was once valued at over $20 billion. In June 2020, the company collapsed in one of the biggest accounting scandals in European history. According to prosecutors, Wirecard managers used a complex scheme to inflate revenue and profits, creating fake income from payment processing services that never took place while also forging contracts with third-party companies.[7]

[7] See Financial Times “Inside Wirecard”, available at: https://www.ft.com/wirecard.

# 5. CHALLENGES

In this section we will highlight the main challenges related to the development of the Fintech sector in Latvia and beyond.

## CENTRAL BANK DIGITAL CURRENCIES

Currently, more than 60 central banks around the world are developing or have launched their own central bank digital currencies (CBDCs) to avoid the dominance of commercial money and Fintech-enabled cryptocurrencies (Vander Stichele 2023). Yet, CBDCs face great challenges. First, in terms of privacy, a key question is whether they will be able to guarantee the privacy of their users through programming, data, and non-tracking integrity. Second, avoiding dependence on bigtech (infrastructure) or commercial intermediaries is another major challenge. The choice of Amazon by the European Central Bank to participate in the test of the deployment of a digital euro in electronic commerce seems to confirm the relevance of this aspect (ECB 2022a). This adds to many other challenges, such as utility, costs, commercial uses, regulation, supervision, and the impact on the traditional financial sector.

## SUSTAINABILITY

The expansion of Fintech apps, the use of cloud computing and AI/ML, the integration of crypto-assets, CBDC, and other distributed ledger technologies will increase energy consumption, whether it is based on fossil or renewable fuels. For example, Bitcoin alone is estimated to consume 127 terawatt-hours (TWh) per year, more than many countries, including Norway (Forbes 2022). Similarly, in the United States, it is estimated that cryptocurrency activity emits between 25 and 50 million tons of CO2 each year, on par with the annual emissions from diesel fuel used by US railroads (White House 2022).

On the other hand, the growing demand for digital devices driven partly by Fintech expansion will continue to extract scarce mineral resources for hardware and batteries. In addition, the production of mobile devices with unsustainable resources will generate increasing amounts of highly polluting e-waste (EU Parliament 2020). Therefore, in an era marked by climate change and energy shortages, achieving sustainability is a key challenge to the development of the Fintech sector.

## CYBER SECURITY

In the context of rising geopolitical tensions, cyber security becomes a major concern, especially in a country like Latvia, which has been very vocal in its opposition to Russia and its invasion of Ukraine. This situation leads to the need to be extremely cautious in the choice of digital financial applications or infrastructures. Evidence shows that cyber-attacks, hacking, and disruption of digital transmissions and infrastructure can occur as acts of war or state competition (Baydakova 2022).

## CONSUMERS PROTECTION

Until now, the regulation of the Fintech sector has been fundamentally light-touch in order to promote innovation and competition. However, this approach can expose consumers and the general public to various risks. For example, Bigtech and other technology companies are not sufficiently regulated to ensure that they can pay customers in the event of bankruptcy or technical problems (Vander Stichele 2023). Similarly, the lack of appropriate regulations makes it difficult for authorities to protect consumers against the many criminal and fraudulent Fintech practices, and to prevent cross-border cybercrime and cryptocrime (Bateman and Amorim Teixeira 2022). In broad terms, the widespread collapse of the Fintech sector could result in the need for a public bailout, transferring costs directly to the wider society.

## REGULATORY MANDATES

The complex nature of Fintech may result in financial authorities not having the mandate to intervene adequately. On the one hand, Fintech involves several areas that go far beyond the scope of traditional financial supervisory authorities. This requires a new and adapted legislative and governance framework that is yet to be developed. On the other hand, the cross-border dynamics of Fintech, including data transfer, distributed ledger technology, and online access to multiple jurisdictions, make it difficult for national authorities to address some illegal online operations in their country. Therefore, the development of an appropriate framework for cross-border cooperation is an urgent challenge for regulators.

## CONCENTRATION

The authorities do not seem to have sufficiently acknowledged the risk of concentration in the Fintech sector. On the one hand, this could create a dependency on global oligopolies in areas as sensitive to the national economy as (digital) payment infrastructure. On the other hand, the concentration in the Fintech sector would deepen the already existing concentration in the financial sector. Therefore, developing new legislation to proactively prevent market concentration, for example, by improving mandates to block strategic mergers or acquisitions, is a major challenge for small economies that are widely integrated into the global financial system, such as Latvia.

## LACK OF REGULATORY EXPERTISE

To date, authorities lack the expertise, capacity, and resources to effectively monitor, regulate, and address risks in the rapidly evolving Fintech sector (Vander Stichele 2023). In this regard, it is worth noting that financial authorities use 'suptech', or supervisory technology, to monitor activities in the Fintech sector (ECB 2022b). However, if this is not developed independently, it can give rise to conflicts of interest and even incentivize potential moral hazards. Therefore, building comprehensive capacity and expertise capable of keeping up with innovations and even anticipating changes in the Fintech ecosystem is one of the biggest and most urgent challenges for authorities.

# 6. CONCLUSIONS

There is no doubt that the development of the Fintech sector can create a number of benefits and opportunities for a nation like Latvia to promote economic development and innovation. However, these benefits are not without considerations that are essential when planning an effective strategy to achieve these objectives.

The main conclusion of the report is that, in its current form, the Fintech sector can be a useful means of facilitating development and innovation, but hardly a driver of development in itself. To date, the Fintech sector shows three main characteristics that call into question its direct benefits for the Latvian economy: low employment, high foreignization and volatile income. As a result of these characteristics, the direct benefits generated by the Fintech sector will be highly concentrated in a few hands. Additionally, due to the high level of foreign ownership of the sector, these will not necessarily remain in the country, as previous experiences in the financial sector show.

The current characteristics of the development of the Fintech sector pose a significant number of risks and challenges. The dominant role of external players may displace local firms, which will not be in a position to compete. In turn, the lack of regulation increases the risks of over-indebtedness of vulnerable sectors, which could have systemic effects. Therefore, it is essential to develop an adequate regulatory framework that helps to channel the resources offered by Fintechs towards strategic sectors for the Latvian economy. After years of instability and crisis, and in view of long-term economic and social challenges, Latvia must focus on developing sectors that offer higher levels of employment, wages, and stability. Any move in another direction will simply contribute to deepening the imbalances and asymmetries in the Latvian economy.

At a global level, everything indicates that in the coming years the Fintech sector will undergo profound changes. In particular, the most relevant aspects to address are guaranteeing transparency, social utility and avoid excessive concentration. The unfettered expansion of the Fintech sector generates the risk of privatizing critical areas of the economy, such as the payment infrastructure and the currencies themselves, limiting the capacity of policymakers, and de-democratizing economic policy decisions. This is a fundamental aspect that must be urgently addressed, both by local and international authorities jointly.

In terms of policy recommendations, the most important point is to build supervisory expertise. The evidence shows that the risks presented by the Fintech sector are quantitatively and qualitatively different from those of the traditional financial sector. This requires developing specific capabilities to address these aspects in an efficient and timely manner. Likewise, it is important to create instruments that help channel fintech funds towards strategic sectors for national development. Otherwise, far from bringing benefits, the activities of the fintech sector can contribute to deepening the existing imbalances in the Latvian economy. Therefore, to contain risks and maximize benefits, a more proactive and tailored regulatory approach is essential.

To date, the gains that the Fintech sector has brought to the Latvian economy have been limited. However, given the interdependencies that it has developed in recent years, the eventual fall of the Fintech sector could spread to the rest of the economy with harsh socioeconomic effects. Therefore, the main objective of regulation must be to find a balance to minimize the costs and enhance the social role of the Fintech sector. In other words, the development of the Fintech sector should not be approached as an objective in itself, but as a means to achieve the socioeconomic development of the country, based on greater stability, equity, and sustainability.

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