

ANNUAL FINTECH REPORT

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IN COLLABORATION WITH:



European Bank
for Reconstruction and Development

Paysafe:

nexo

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2021

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FOREWORD

VALERY BELTCHEV
MINISTER OF FINANCE
OF THE REPUBLIC OF
BULGARIA



The new financial technologies are entering ever more widely in the modern life of citizens and businesses. Innovations in the area of financial services are linked to further possibilities but also to new risks for citizens, businesses and administration. Interaction between governments and NGOs in this area are therefore essential. The Ministry of Finance cooperates actively with fintech representatives, including with the Bulgarian Fintech Association. We are convinced that in the future this cooperation will not only continue but will be reinforced as well.

We welcome the efforts of businesses to unite and to speak in one voice before the government institutions. We will share two examples of a successful experience for cooperation between the Ministry and the Bulgarian Fintech Association.

In February 2021 the Council of Ministers adopted the National Financial Literacy Strategy and an Action Plan 2021–2025 thereto. Digitalisation issues are relevant for each of the priorities, with digital technologies being one of the key

channels of implementing activities aimed at enhancing the financial literacy of the various groups of society. In order to highlight this, there is a special section in the Strategy devoted to the link between digitalisation and financial literacy. The Action Plan also provides for specific measures aimed at developing educational content for digital financial services and products. The Bulgarian Fintech Association, in the capacity of a member of the inter-institutional working group on financial literacy set up by an order of the Minister of Finance, took active part in the elaboration and the consultation of the Strategy.

The Ministry of Finance leads and takes part in the process of negotiating the European legal framework on digital finance, the so-called “digital package”. It consists of legislative initiatives in two key areas:

operational sustainability of digital technologies and regulation on markets in crypto-assets. The proposal for a regulation on digital operational resilience for the financial

FOREWORD

VALERY BELTCHEV
MINISTER OF FINANCE
OF THE REPUBLIC OF
BULGARIA



sector covers all market players and aims to protect and limit the impact of any potential issues related to the new technologies. It also envisages supervision of service providers (including big data suppliers) offering cloud services to financial institutions. The legislative proposal on crypto-assets aims to benefit from the possibilities they provide while at the same time limiting the risk for investors and maintaining financial stability. In this regard, a comprehensive supervision framework for crypto asset providers across the EU is also being set up. The regulation will govern the crypto-assets which are not currently covered by EU legislation (including asset-referenced tokens). The Ministry of Finance has direct contact with all market players that have the possibility to share their views and to review and propose amendments to the legislative proposals through participation in the working group to the Ministry.

I wish good luck to the Bulgarian Fintech Association and to its activity and initiatives.

FOREWORD

The dynamic development of technology and digitalisation are beginning to gain an increasingly key role in the global economy. Bulgaria successfully falls in the scope of interest of foreign investors as a favourable environment for the development of innovative products both for end-users and for FinTech companies themselves.

The last year, marked by the Covid-19 pandemic, has not only changed our understanding of reality, but it imposed new rules and gave a strong impulse to the digital transformation in the non-banking financial sector. For the first months of 2020 our observations in the insurance, investment and pension insurance sectors show technological progress equal to what has been achieved in the last three years before. This is also a prerequisite for considering that digital finance will continue to evolve and will become standard consumer behaviour.

For the future the Financial Supervision Commission will continue to be fully committed to its main strategic objectives, namely: to protect consumers of financial services, to maintain the stability of the non-banking financial sector and to promote the development of the insurance, investment and pension insurance sectors.



PETAR DJELEPOV
MEMBER OF THE
FINANCIAL SUPERVISION
COMMISSION

In this regard, the challenges we face are the development of legislative and supervisory framework regulating financial innovation while facilitating the access of new players, ensuring security, consumer trust and compliance with personal data protection standards. Our goal is for more innovations to enter the insurance, investment and pension insurance sectors in Bulgaria, while the interests of consumers are maximally protected.

I believe that the future draws a picture in which we must all unleash our potential to create an environment for a digital world in which everything will happen with ease and security for every consumer.

PREFACE



FINTECH - THE NEW KID ON THE BLOCK

Some consider FinTech a buzzword, meaning nothing else but a small niche within financial services. Others believe it is a brand new sub-sector, limited to fast-growing technology advanced SMEs. In fact, FinTech is both the investment and the use of technology by traditional financial institutions, as well as the newly formed financial business models.

At BFA, we consider any company to be FinTech in which the core business is related to the creation or use of technologies enabling innovation; facilitating the provision, access, and/or usage of financial services, including technologies in payments, money transfers, insurance, digital lending, personal finance & savings, digital banking, investment, debt collection, and accounting.

If Bulgaria is to take the lead, not only as a regional but also as a global leader in financial services, then we must lead this technological revolution behind new FinTech businesses. This can undoubtedly, only happen with a well-developed internal market, highly efficient and effective public institutions, and a well-developed education system that maintains a rich talent pool able to answer to current business needs.

In this report, we take a holistic approach, presenting Bulgaria and its role on the European FinTech Map and diving deep into the challenges and solutions our market faces.

THE CLUSTER

What started as an association of some of the most prominent FinTech companies and professionals in the country, and with the help of the whole team and all our partners, has now evolved into a proper cluster organisation, uniting the key stakeholders in the region towards a higher goal - to improve the well-being of a nation through the development of an emerging industry.

At this point, I would like to congratulate BFA's team, FinTech's representatives, and all of those who have contributed their knowledge and expertise to this important report.

VALERI VALTCHEV
CHAIRMAN OF
BULGARIAN FINTECH
ASSOCIATION

THE ASSOCIATION



The Bulgarian Fintech Association is a non-governmental, for-impact organization uniting all interest parties in the sector of digital finance innovation. The association was established at the end of 2018 and has attracted 59 member organisations, among which Paynetics, Nuvei, Varengold Bank, Paysera, Paysafe, Klear Lending, Mastercard, Postbank, two universities - Sofia University and VUZF, and many others. As of November 2021, the Association represents more than 7300 employees in the Digital Finance sector in the region of SEE. Our ultimate goal is to establish Bulgaria as a leading Fintech Hub in the region.

THE FINTECH GURU

Deyan Radev, PhD is an Assistant Professor of Fintech and Banking at FEBA since 2020. Dr. Radev has 15 years of prior experience at Goethe University Frankfurt, University of Bonn and the European Central Bank. He is a member of the Digital Euro Association and a strong proponent of a programmable Euro. Aside from fintech, his expertise includes financial crises and systemic risk, bank resolution and banking regulation. At the Faculty of Economics and Business Administration, Dr. Radev teaches the course FinTech and E-Banking and courses in banking regulation and empirical finance.



DEYAN RADEV, PHD
ASSISTANT PROFESSOR OF
FINTECH AND BANKING
PETAR BERON FELLOW IN
ECONOMICS

EXECUTIVE SUMMARY

FINTECH LANDSCAPE

- In 2021, there are 135 FinTech companies in Bulgaria, of which 95% are SMEs, mostly located in Sofia, Varna and Plovdiv.
- The Covid-19 pandemic gave a boost to the creation of FinTech companies, which in 2020 reached 18.
- Despite the pandemic, the total operating revenue of the industry is increasing and peaked at, respectively, BGN 1.4 billion and BGN 1.063 billion in 2020.
- The Digital Payments segment is by far the largest contributor to the performance of the sector. In 2020, it represented 66% of the total operating revenue, followed by Alternative Credit and Data Analytics and Digital Asset Exchange FinTech companies.
- About half of the total Bulgarian FinTech revenue came in 2020 from the 2020 Top 5 FinTech companies. Three out of five of the best performing FinTech companies in the country are home-grown FinTech champions.
- The operating revenue of 2020's Top 5 Most Dynamic FinTech companies increased by a 29% average.

- The total expenses of the industry reflected the trend of an increasing operating revenue and reached a peak in 2020 of BGN 1,214 million.
- FinTech personnel hit an all-time high of 8665 in 2020. With an average 14% increase of workforce in FinTech, the Personnel costs in 2021 were BGN 435 million.
- The Bulgarian FinTech's operating revenue per employee continued to steadily grow in the period 2015-2018 by about 7% on an annual basis, achieving a peak of BGN 138.2 thousand in 2018.
- BFA analysis reveals that personnel costs in 2020 have increased more than 3.5 times, compared to 2015.

FINTECH WORKFORCE

- The amount of FinTech personnel hit an all-time high of 8665 in 2020. With an average 14% increase of workforce in FinTech, the Personnel costs in 2021 were BGN 435 million.
- A BFA study finds that the average gross monthly salary in the FinTech industry in 2021 is BGN 3,815 (EUR 1,950), more than 2.5 times bigger than the country average gross in 2021.

EXECUTIVE SUMMARY

➤ The specialists most in demand are software engineers, project and product managers, followed by data scientists.

WOMEN IN FINTECH

➤ In April 2021 BFA launched the inaugural edition of Women in FinTech Bulgaria Study 2021. The study was aimed at providing a current snapshot of gender equality in the FinTech industry in Bulgaria, as well as the challenges and opportunities facing the female talent in our ecosystem.

➤ BFA Women in FinTech survey 2021 shows that 44% of all employed in FinTech in Bulgaria are women and 62% of Fintech companies have at least one female member in the Board of Directors

➤ Bulgarian FinTech representatives believe FinTech is a driving force for change and a serious factor in increasing competitiveness within the traditional financial sector.

➤ 63% of Bulgarian Fintech companies take measures to seek diverse candidates when hiring.

➤ BFA Women in FinTech survey reveals that the top 3 measures to be taken to stimulate more female involvement are flexible working to allow more time with family, help with childcare, and better support for returners (from maternity leave)

FINTECH EDUCATION

➤ In 2021, BFA's FinTech educational initiatives reached more than 300 people and attracted 70+ participants to the FinTech hackathon.

➤ For a second consecutive year the Faculty of Economics and Business Administration at Sofia University "St. Kliment Ohridski" and BFA launched a "Finance, Investments and FinTech Master's degree program.

➤ The European Commission and the Organisation for Economic Co-operation and Development are working together to develop a financial competence framework for adults, followed by a framework for young people. It's about creating standards that are commonly used and recognised across the EU.

EXECUTIVE SUMMARY

- BFA enters VUZF to teach FinTech to reach the ambitious task of navigating and encouraging students in the world of financial technologies.
- Master's program "Digital Finance - FinTech" has been taught at the Faculty of Economics of SWU "Neofit Rilski" -Blagoevgrad since 2019. This year it will incorporate BFA and its member companies who will show real-life examples of FinTech.

BULGARIA - FINTECH DESTINATION

- Being the most cost-effective FinTech location in the world, Sofia has created a trustworthy environment for the ecosystem.
- InvestBulgaria Agency (IBA) and BFA formed a public-private partnership towards attracting FinTech FDIs, where IBA assists with governmental support and BFA, and with the most efficient introduction to the FinTech ecosystem. Thus, a dedicated team of investment experts and private sector representatives are always ready to help the development of the FinTech environment in Bulgaria.

FINTECH INVESTMENTS

- In the last two years, € 32.2 million has been invested in Bulgarian FinTech SMEs. More than €6 million came from 5 Bulgarian investors who saw the potential in more than 10 FinTech SMEs.
- A total of € 23.5 million came through funds from Germany, the Netherlands, and the US.

FINTECH REGULATION

- In the last three years, BFA has been an active part of the FinTech legislation process in Bulgaria. For this period, the Association submitted more than a dozen industry opinions to the Bulgarian authorities on laws and regulations relevant to the Bulgarian industry, such as the National Strategy for Financial Literacy, and Consumer Protection Law. On a European level; Digital Strategy for the EU - European Measures to Support Digital Finance in the Post-COVID-19 Context.
- BFA remains committed to the SEE FinTech community and will continue working towards achieving the goals of the ecosystem.

EXECUTIVE SUMMARY

- A 2021 BFA survey found that around half of Bulgarian FinTech representatives find the missing innovation infrastructure (innovation hubs, regulatory sandboxes, etc.), the lack of governmental support, and the lagging regulatory environment the leading challenges in Bulgaria.
- In 2021, the Financial Supervision Commission (FSC) in Bulgaria adopted a Strategy for monitoring financial innovation for the period 2021-2024. It builds on the previous strategy and outlines, in the long run, the direction in which FSC is committed to developing its supervisory activities and implementing the harmonisation of the national regulatory framework and practices in the field of financial innovation at the EU level.
- In addition to the existing Innovation Hub at the FSC, the new strategy provides preconditions for analysis of the need for developing a Sandbox. The possible introduction of this international practice will allow FinTech companies to test the products in a real and secure environment while the supervisory body will be monitoring this process in order to adapt its regulation/supervision to technological progress.
- The European Commission works with a digital finance strategy and legislative proposals on markets in crypto-assets (MICA), the DLT pilot, and on a digital operational resilience act (DORA), as well as a renewed strategy for modern and safe retail payments.
- The European Central Bank and the European Commission services are currently jointly reviewing, at a technical level, a broad range of policy, legal and technical questions emerging from the possible introduction of a digital Euro, taking into account their respective mandates and independence provided for by the Treaties.
- In June 2021, The European Bank for Reconstruction and Development, and the Bank of Greece launched a regulatory sandbox in Athens. This project builds on the existing work the Bank of Greece has already done through its Innovation Hub, and the sandbox will function as a live testing environment that can bring positive results, especially given the complexity of applying the Greek legal and regulatory framework surrounding financial services to technology-driven financial products.

EXECUTIVE SUMMARY

FINTECH TECHNOLOGIES

- In 2021, BFA conducted a survey on the FinTech technologies applied by the Fintech industry in the country.
- The study found that 3/4 of the Bulgarian FinTech ecosystem applies Big Data and Data Analytics, while Artificial intelligence and Machine learning are less popular, with only 43% of respondents using them.
- Bulgaria's FinTech industry is still relatively new and skeptical about the implementation of Blockchain and Robotic Process Automation.

BANKS AND FINTECH

- The technological urge and the COVID-19 pandemic have forced traditional financial institutions to transform their portfolios and come up with innovative FinTech solutions..
- In 2021, almost all Bulgarian banks offer digital solutions, amongst which are completely digital customer loans, mobile banking applications, instant digital payments through Apple Pay, and many more.

- Collaborations between FinTech SMEs and incumbents are still rarely seen on the market. However, there are some bright examples of partnerships, such as the e-wallet solution for Bulgarian American Credit Bank (BACB), provided with the help of Bulgaria-based payment service providers (PSPs) Paynetics and Phyre.

CHAPTER I

Bulgarian FinTech Landscape 2021

2021 ECOSYSTEM SNAPSHOT



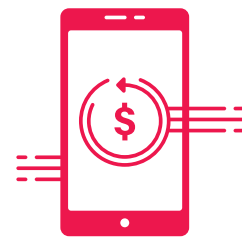
FINTECHS



135 FinTech
Companies



11 Payment
Institutions



8 E-money
Institutions

WORKFORCE



8,665 employed
in the industry



44% of employed
are women



€ 1,950 average
gross salary

EDUCATION



51 higher
educational
institutions



18 universities
teaching Informatics
and Computer Science



12,900 enrolled
in STEM
programmes

DIGITAL PAYMENTS

datecs pay winpos PetroffSoft payware EASYPAYMENT SERVICES

emerchantpay iCard payhawk PAYNETICS Paysafe:

sumup tixi TRANSACT SEPA POS LimePay

MyFin Easy Pay Settle. myWorld DIRECT CLUB BULGARIA ECONT rilla. VISA

PayVoo Paymentwall CASHWAVE DATECS ePay.bg

paySera phos XCOOL Reloyalty TICKET My Rewards nuvei

Checkout X BORICA Payslip STREAMFLOW EAD

immedis re:benefit

ENTERPRISE TECHNOLOGY PROVISIONING

ZOTAPAY Tarya taulia

PACGAS technologies PAIXSOFT LimeChain Dext

OpenPoud VSG Bulgaria FINOVATION

GATE2PAYMENTS WALLEK CUSTODY deepcfio

M&M Fintech

DIGITAL ASSET EXCHANGE

ThinkMarkets FXCM ACTIVTRADES

BONEX DEGIRO JARVIS webDEX

NoXex nexo TRADED JFID

VIRTUAL BROKER TRADERSOCIAL finrax

INSURETECH

eCollect eINS oli

Bolon insurify ABE XIO

ALTERNATIVE CREDIT & DATA ANALYTICS

MCQ 2iQ

experian. FACTSET

WEALTHTECH

tis Burgiss billbutler

charlie Colibra Pension.Care

CREDIPORT VENDOFIN move

Taxback Group

FINTECH SUPPORTING COMPANIES

QAMARE SimmaBC epam scalefocus

COMMERZBANK Digital Technology Centre in Bulgaria SAP

FRAM BC WEB sciant Devexperts

SOLUTIONS PENKOV-MARKOV & PARTNERS Varengold

VANGAVIS tek experts BRIGHT SmartIT

DIGITAL LENDING

moxo.bg CashCredit Cashlend

MFG newpay trans.card

credissimo EIVO klear

REINNO creditex HYPOPORT

ferratum money stikcredit afranga

BHocka Assefly

DIGITAL IDENTITY

evrotrust

DIGITAL CUSTODY

phyre

REGTECH

cleversoft

LogSentinel

DIGITAL BANKING

bunq IRIS

tide Bigbank

DIGITAL CAPITAL RAISING

paycentive Immo Fund

Leno PROSPERITY CLUB

Bulgarian Fintech Mapping 2021

ENTREPRENEURIAL ECOSYSTEM

DIGITAL AND INNOVATIVE CO-WORKING AND MAKER SPACES

betahaus Campus X co:share GROWING Member ISSIA Microsoft

puzl coworking resonator THIS WAY WORK & SHARE SOFIA LAB ENTRAX

ENTREPRENEURIAL ORGANIZATIONS

ABLE ELEVATOR BESCO ECONOMIC DEVELOPMENT VIA INNOVATING TECHNOLOGY (EDTBI) endevcon

eban MOVE.BG AIBEST

ACCELERATORS AND INCUBATORS

BlackPeak BRIGHTCAP eleven EMP.WEB CAPITAL INNOVATION LAUNCHUB NEO NV3 Roslyn

PostScriptum Vitosha

REGULATORS

COMMISSION FOR PROTECTION OF PERSONAL DATA

FINANCIAL REGULATORY COMMISSION

BULGARIAN NATIONAL BANK

EVENTS AND CONFERENCES

REGCONFERENCE Digital Tech Summit ANNUAL CLOUD SOFIA SUMMIT ANNUAL CYBERSECURITY AND DATA PROTECTION FORUM DEVS ALL IN ONE DEVFEST BULGARIA

Global Tech Summit CackConf 2021 Startup Investment Summit js.talks()

SEE GROWTH SUMMIT TEDx Sofia webit women tech network SUSTAIN IFA ANNUAL FINTECH HORIZON

SUPPORTING ORGANIZATIONS

ASSOCIATIONS, NGOs, FOUNDATIONS

GATE financial literacy.eu AIBULGARIA PARA BRANT EVIDENCE VASSCOM DEVAG AIBEST

IT SCHOOLS AND SOFTWARE ACADEMIES

Hack Bulgaria INFORMATION SERVICES TRAINING CENTRE IT ACADEMY SIFT Software University Telejob

MEDIA

Media Forbes Bloomberg COMPUTERSWORLD DevStyle.BG economidia FEDERAL MEDIA Housart

MUNICIPAL LEVEL AGENCIES

GIS Sofia

NATIONAL LEVEL AGENCIES

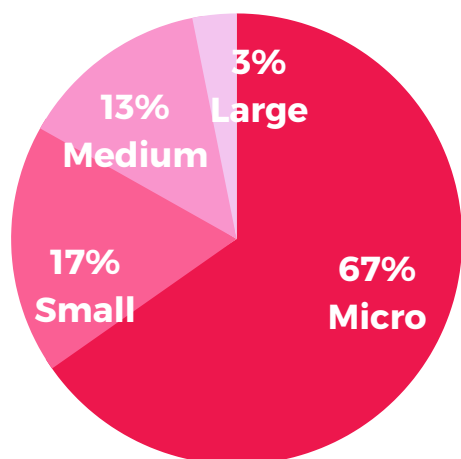
UNIVERSITIES

Mapping made by digital smart dynamic.

FINTECH MARKET ANALYSIS 2021

To investigate and showcase how the Bulgarian FinTech ecosystem has evolved throughout the years, we employ both qualitative and quantitative methods of research. For the former, we perform a financial analysis based on public data available in the Commercial Register of the Republic of Bulgaria. The qualitative research is conducted through an Annual Fintech Survey. Below you will find some of the key findings which will reveal the actual achievements of the industry and its life cycle.

FINTECH INDUSTRY COMPOSITION



2021 FinTechs in Bulgaria by size

Source: BFA Fintech Market Analysis 2021; Commercial Register

FINTECH BY SIZE

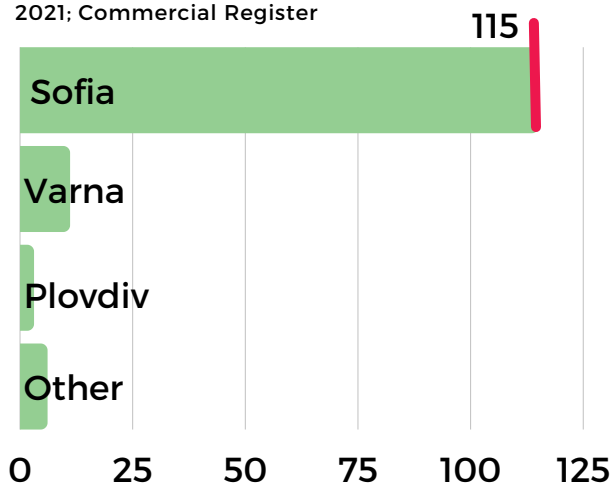
According to Taxonomy of FinTech of the University of Cambridge, as of 2021, there are 135 FinTech companies in Bulgaria. As shown on the pie chart above, more than 95% of them are SMEs, with less than 250 full-time employees and EUR 50 million turnover.

FINTECHS BY HEADQUARTER

Sofia remains the biggest FinTech cluster in Bulgaria, with 115 companies established in the capital of Bulgaria. Most of the remaining 20 companies are also concentrated in only 2 places - Varna and Plovdiv, the second and third biggest cities by population.

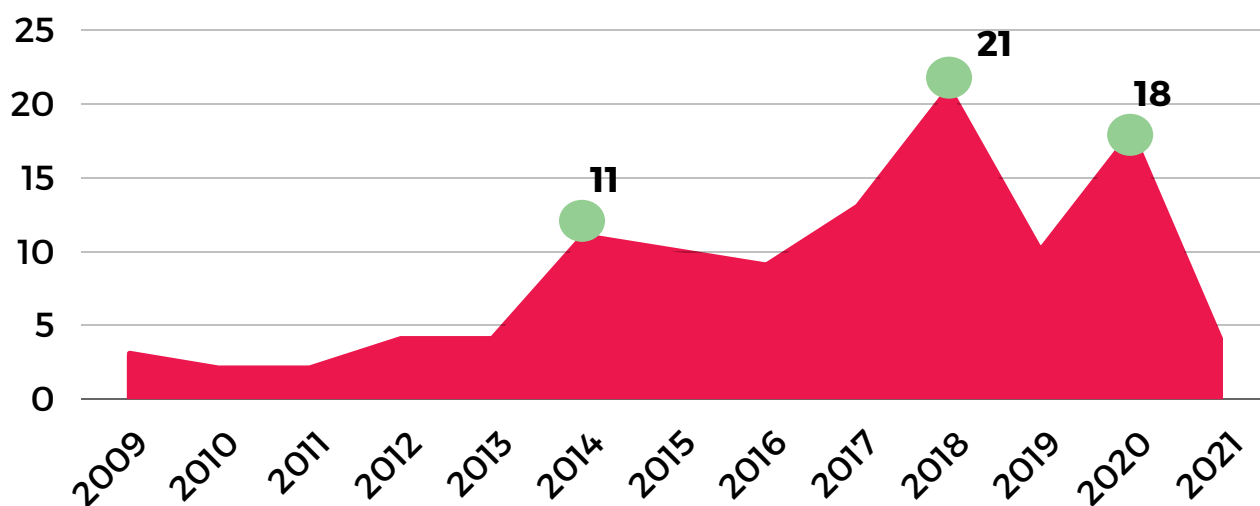
2021 FinTechs by headquarter

Source: BFA Fintech Market Analysis 2021; Commercial Register



FINTECH MARKET ANALYSIS 2021

FINTECH INDUSTRY COMPOSITION



Number of newly established FinTech companies in Bulgaria, 2009-2021

Source: BFA Fintech Market Analysis 2021; Commercial Register

FINTECH BY YEAR OF ESTABLISHMENT

In the last 12 years, the FinTech industry of Bulgaria has seen several peaks with an average increase of the number of companies of around 36%.

establishment of new FinTech firms in the country, quite the contrary - it gave a boost to the creation of FinTech companies which almost reached its all-time-highs.

As of November 2021, there are 4 new FinTechs in Bulgaria, for a total of 135 FinTechs.

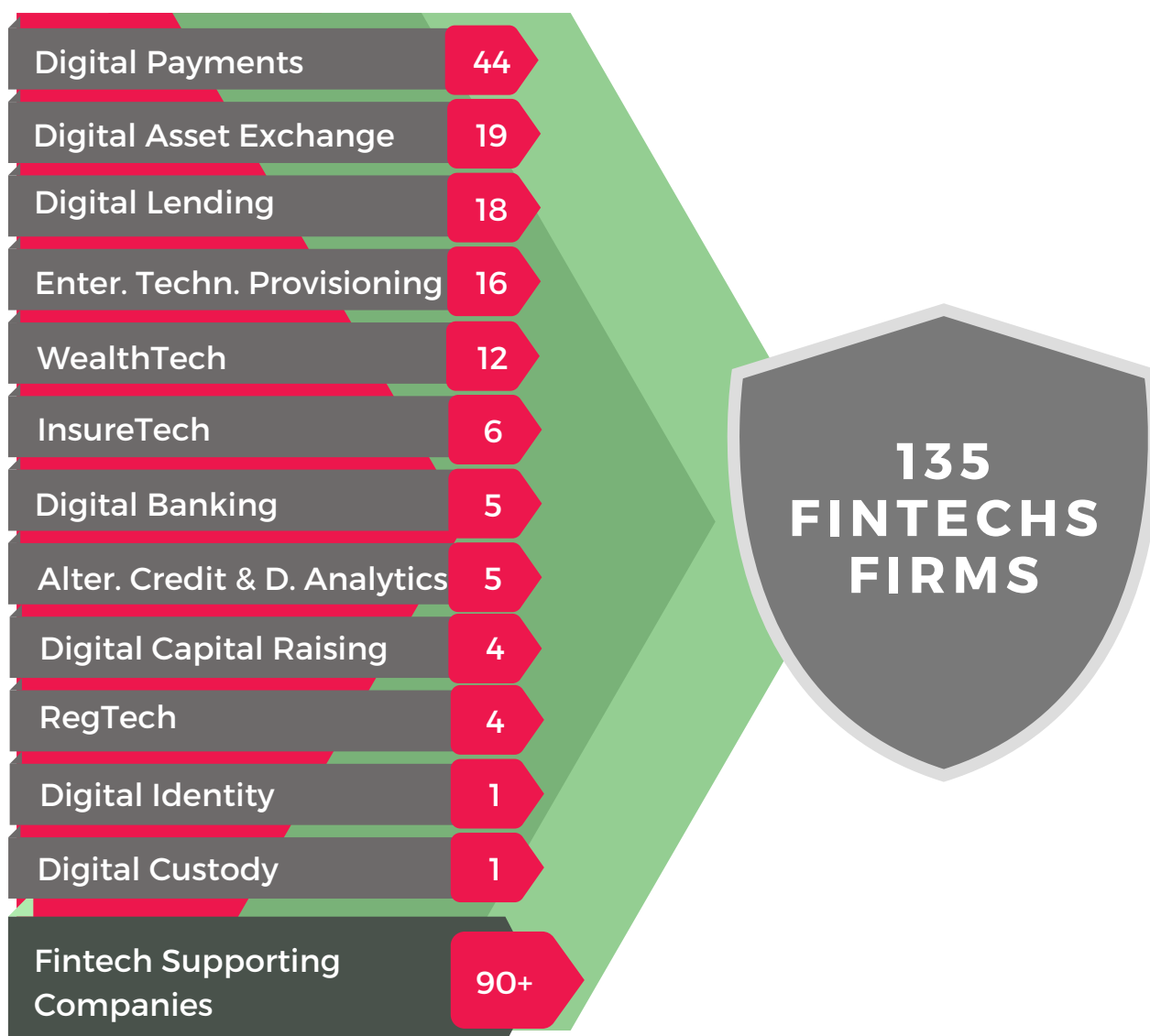
THE COVID-19 IMPLICATIONS

It is important to note that the COVID-19 pandemic, which started at the beginning of 2020, did not affect heavily the

We expect that with the higher vaccination rate and the reopening of many economies we will see an increased interest in FinTech services and therefore more FinTechs created in Bulgaria.

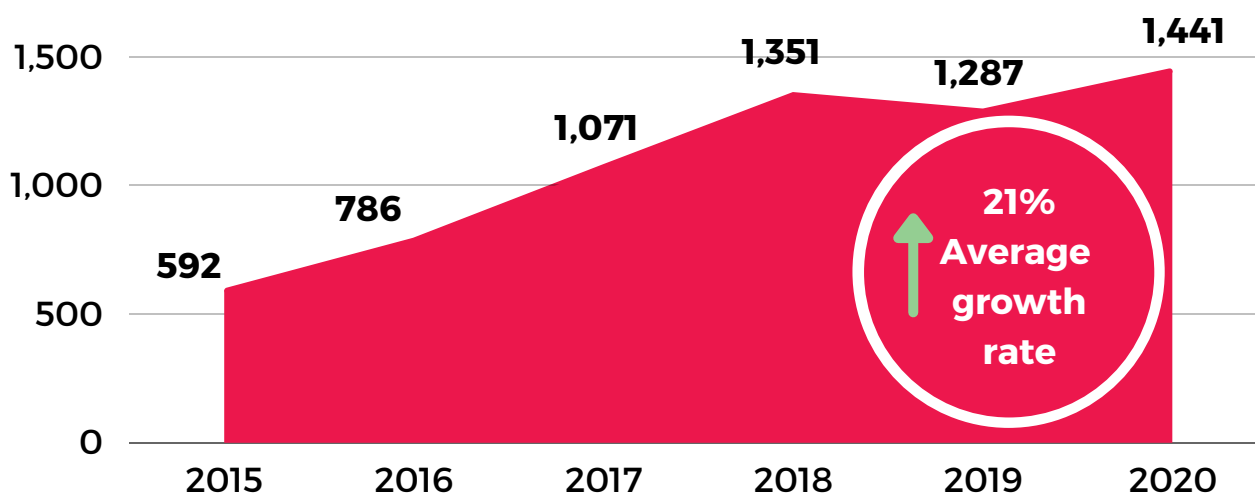
FINTECH MARKET ANALYSIS 2021

FINTECH INDUSTRY COMPOSITION



FINTECH MARKET ANALYSIS 2021

TOTAL REVENUE



Total revenue of the Bulgarian FinTech industry, in BGN million, 2015-2020

Source: BFA Fintech Market Analysis 2021; Commercial Register

THE ANALYSIS

As a starting point in the analysis of the market performance of the fintech ecosystem in Bulgaria, we take into consideration the University of Cambridge's FinTech Taxonomy, under which in 2021 in Bulgaria there are 135 fintech companies, listed in the 2021 Fintech Mapping. The BFA financial analysis excludes traditional financial institutions operating on the Bulgarian market, as well as the Fintech supporting companies and PropTech firms.

GROWTH RATE

When investigating the performance of Fintech companies throughout the

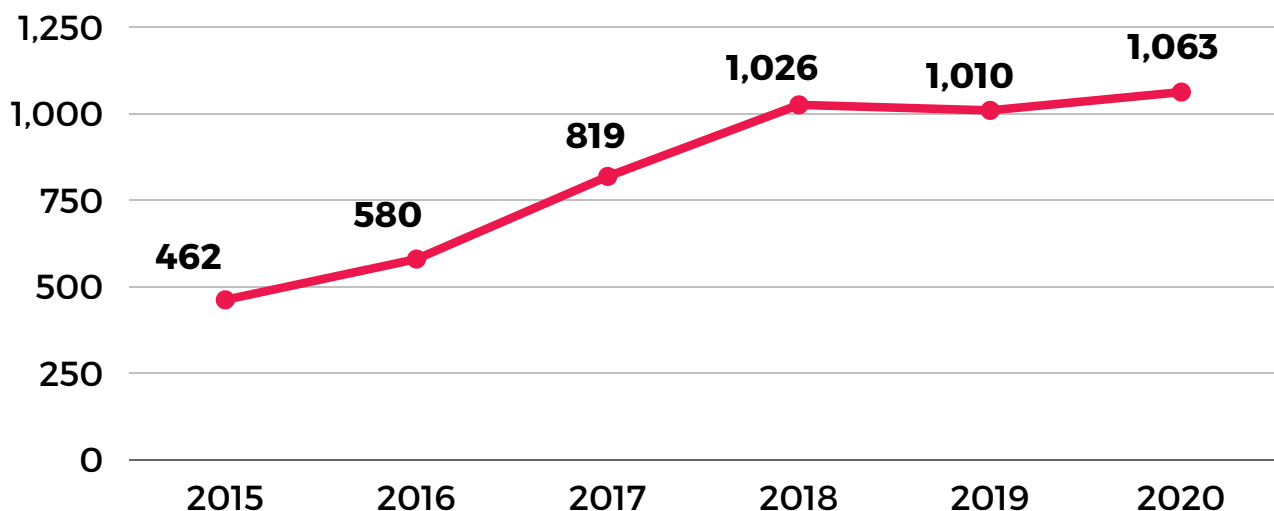
years, we find the astonishing 21% average annual growth rate in total revenue, which in 2020 reached its all-time high of BGN 1.4 billion, more than doubling the numbers in 2015.

THE COVID-19 IMPLICATIONS

As the graph above shows, the Covid-19 pandemic boosted the increasing trend of FinTech's total revenue and resulted in a historic peak in 2020. This trend could also be observed in the employment statistics discussed later on in this report.

FINTECH MARKET ANALYSIS 2021

OPERATING REVENUE



Operating revenue of fintech industry, in BGN million, 2015-2020

Source: BFA Fintech Market Analysis 2021; Commercial Register

OPERATING REVENUE - DOUBLED IN SIX YEARS

The rapid development of operating revenue the Bulgarian Fintech industry, which doubled in the last six years, matches the increasing number of established FinTech companies throughout the years and the skyrocketing total revenue trend mentioned in the previous pages.

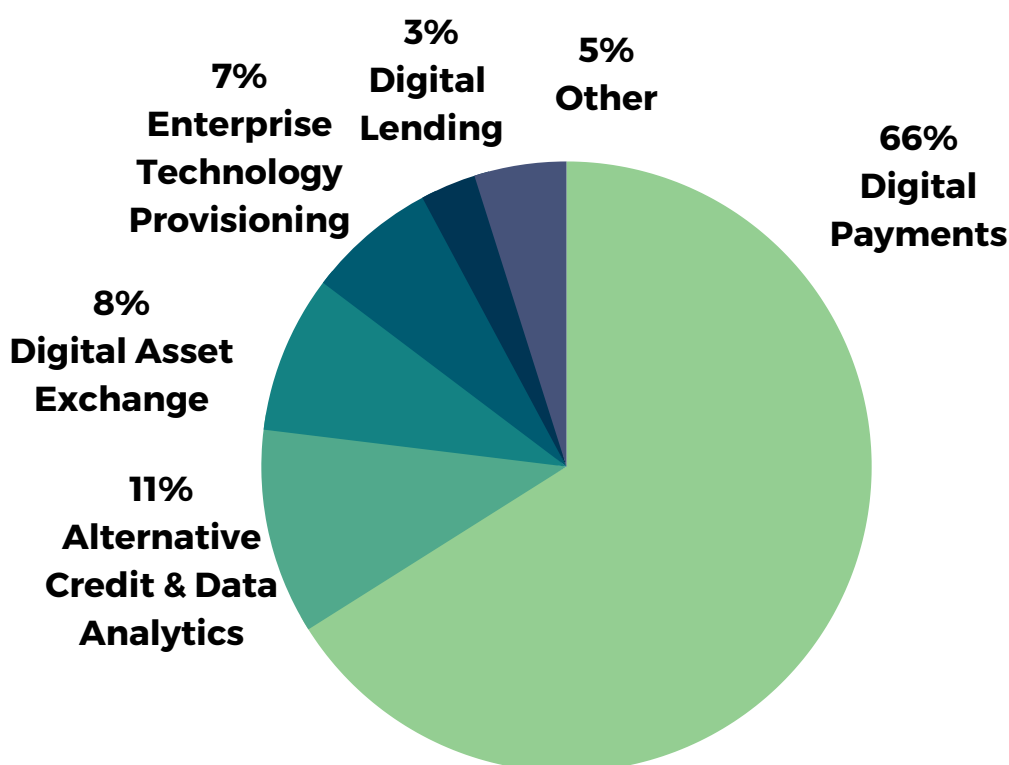
THE COVID-19 PANDEMIC BOOST

Similar to the total revenue trend mentioned previously, the operating revenue also increased at the beginning of the pandemic in 2020. What is more, in 2020, the industry's operating revenue reached an all-time high of BGN 1.063 million.

These numbers show that the industry is not only resilient to such global health and economic crises but also may be considered a beneficiary of the social distancing measures.

FINTECH MARKET ANALYSIS 2021

OPERATING REVENUE BY SEGMENT



2020 Operating FinTech revenue by segment

Source: BFA Fintech Market Analysis 2021; Commercial Register

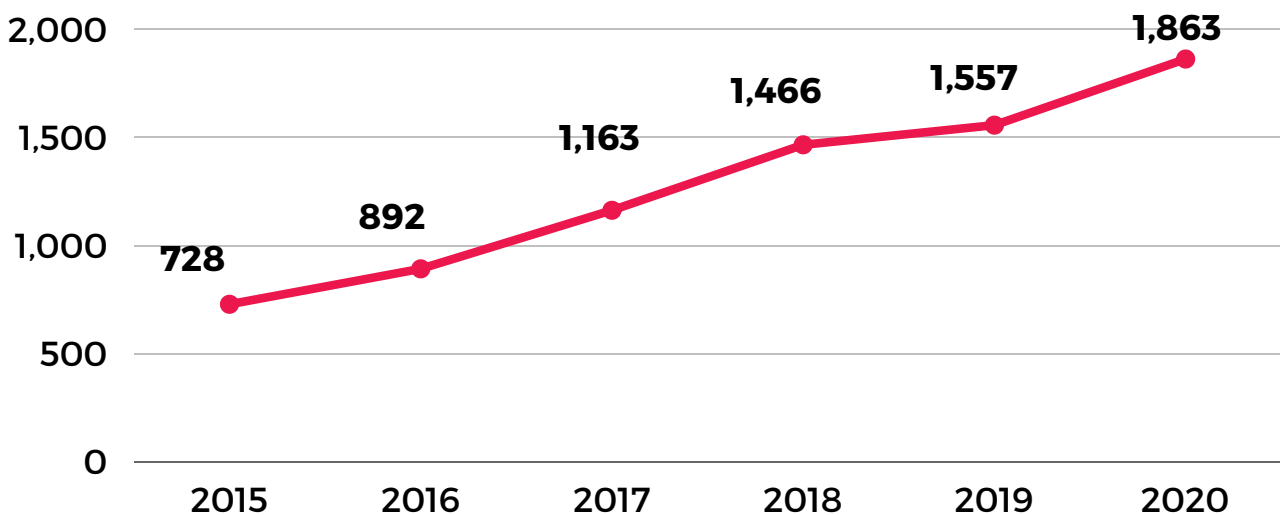
CONTRIBUTION BY SEGMENT

As shown in the pie chart above, with its 44 FinTech companies the Digital Payments segment is by far the largest contributor to the performance of the sector. In 2020, its share reached a peak of 66% of the total operating revenue. Within this segment are all eMoney issuers, payment aggregators, settlement and

clearing services providers. Examples of such foreign FinTechs in Bulgaria are Paysafe, Visa, Mastercard, as well as the Bulgarian FinTechs - Paynetics, Paysera Bulgaria, Borica, DatecsPay, etc. Despite the Alternative Credit and Data Analytics segment, which is dealing with credit scoring, having only a handful of representatives in Bulgaria, it is the second-largest contributor, followed by Digital Assets Exchange, Digital Lending, etc.

FINTECH MARKET ANALYSIS 2021

TOTAL ASSETS



Total assets of the FinTech industry, in BGN million, 2015-2020

Source: BFA Fintech Market Analysis 2021; Commercial Register

TOTAL ASSETS DOUBLES IN SIX YEARS

Similar to the FinTechs' operating and total revenues, the industry's total assets increased by more than 100% in the course of 2015-2020, reaching a peak of BGN 1.863 million in 2020.

THE COVID-19 PANDEMIC EFFECT

As with other metrics covered in this Report, and in contrast to many other

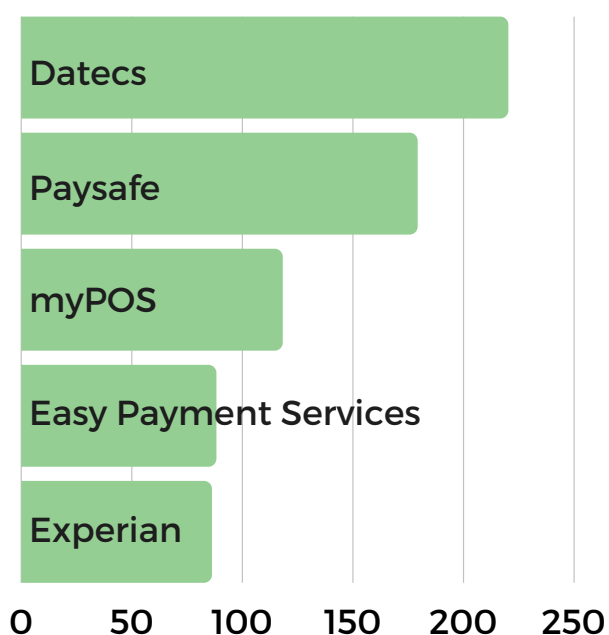
industries in the country, the FinTech industry's total assets saw a positive growth during the Covid-19 pandemic. Despite the health crisis, Fintechs in Bulgaria achieved a record of BGN 1,863 million in 2020, or about a 20% increase compared to 2019.

One explanation for this boost may be the increased number of real-time transactions that saw a growth of 41% in 2020, as reported by a number of media outlets.

In conclusion, despite its early stage of development, the Bulgarian Fintech industry is a much flexible and resilient to changes promising part of the Bulgarian economy.

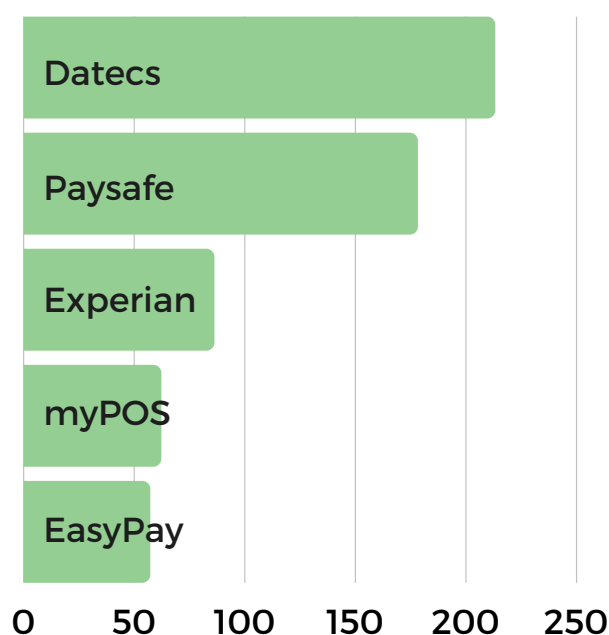
FINTECH MARKET ANALYSIS 2021

FINTECH INDUSTRY BEST PERFORMERS



Top 5 FinTech companies by total revenue, in BGN million, 2020

Source: BFA Fintech Market Analysis 2021;



Top 5 FinTech companies by operating rev., in BGN million, 2020

Source: BFA Fintech Market Analysis 2021;

TOP 5 BY TOTAL REVENUE

The 2020 TOP 5 FinTech companies' total revenue accounts for around 48% of Bulgarian FinTech's total revenue for the same year. Three out of five of the best performing FinTech companies in the country are home-raised FinTech champions.

BY OPERATING REVENUE

The top 5 FinTech performers by operating revenue are almost identical to the total revenue champions with a slight difference of a new actor - EasyPay, taking the place of Easy Payment Services. Furthermore, these 5 champions accumulate 56% of the total FinTech operating revenue in 2020.

FINTECH MARKET ANALYSIS 2021

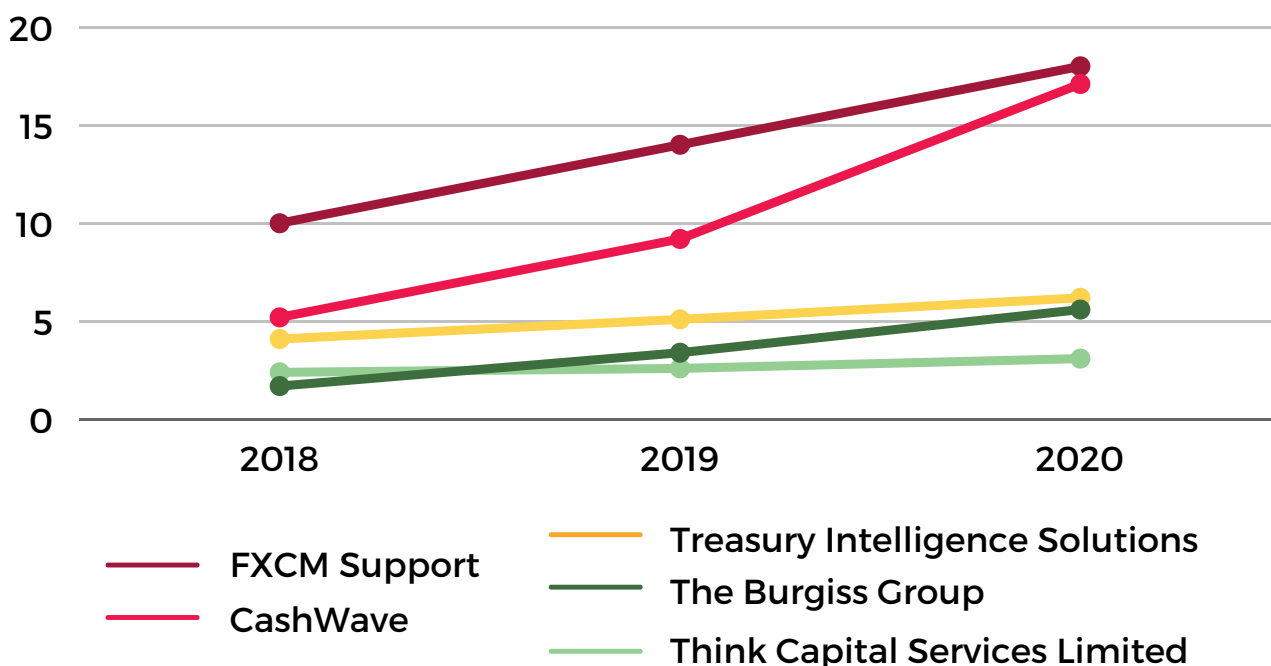
TOP 5 MOST DYNAMIC FINTECHS IN 2020

As shown in the graph below, in the last three years, the most dynamic FinTech companies are FXCM Support, CashWave, Treasury Intelligence Solutions (TIS), The Burgiss Group and Think Capital Services Limited. The average increase of their operating revenue is 29%, where CashWave, a digital payments company, reaches the best results with an operating revenue catapulting to BGN 17.1 million in

2020 from BGN 4.1 million in 2018. This positive trend is followed by FXCM Solutions, the Burgiss Group and Think Capital Services Ltd., leading forex providers, who achieved respectively 45%, 25% and 13% average growth rates in the last 3 years. The leading cloud platform for managing corporate payments and cash flows TIS achieved a 19% average growth rate, reaching BGN 6.2 million in 2020.

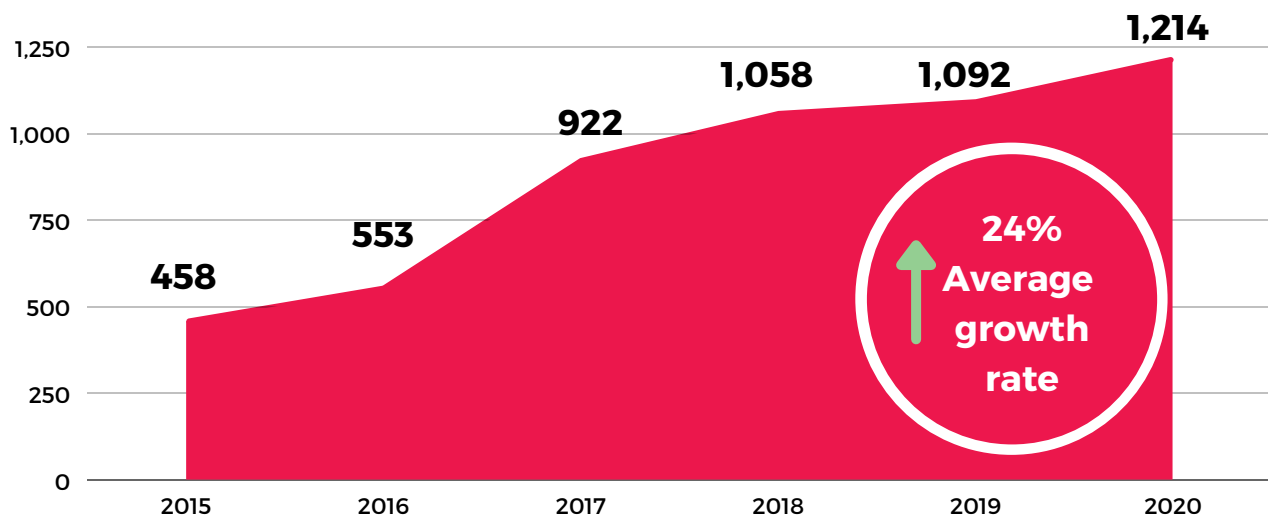
Operating revenue evolution of the Top 5 most dynamic FinTechs, in BGN million

Source: BFA Fintech Market Analysis 2021



FINTECH MARKET ANALYSIS 2021

TOTAL EXPENSES



Total expenses of FinTech industry, in BGN million, 2015-2020

Source: BFA Fintech Market Analysis 2021; Commercial Register

TOTAL EXPENSES - KEEPING THE PACE

With the growth of the industry, the total expenses reflected the trend and kept an average pace of a 24% increase per year, with the highest peak in 2020 of BGN 1,214 million.

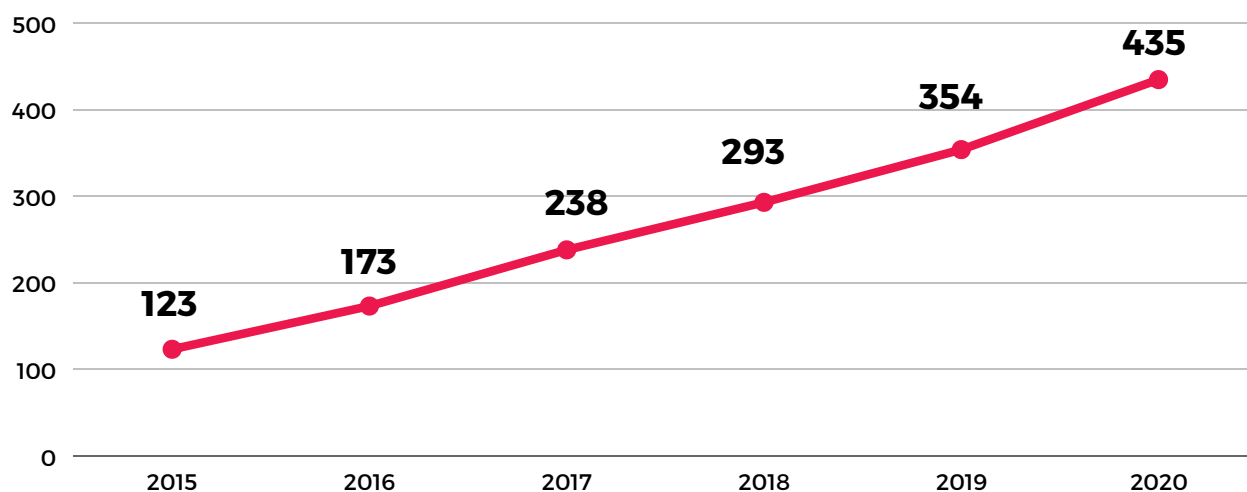
THE COVID-19 PANDEMIC EFFECT

During the pandemic, the expenses increased by about 11% compared to only 3% in 2019.

The trend reflects the expansion of the Fintech sector despite the pandemic and closely matches the 12% growth in total revenue in 2020 shown above. We can speculate that this peak may also be due to costs related to social distancing measures. Despite many offices being closed, the employees' costs continued to rise.

FINTECH MARKET ANALYSIS 2021

PERSONNEL COSTS



Total personnel costs of the FinTech industry, in BGN million, 2015-2020

Source: BFA Fintech Market Analysis 2021; Commercial Register

PERSONNEL COSTS - STEADY GROWTH

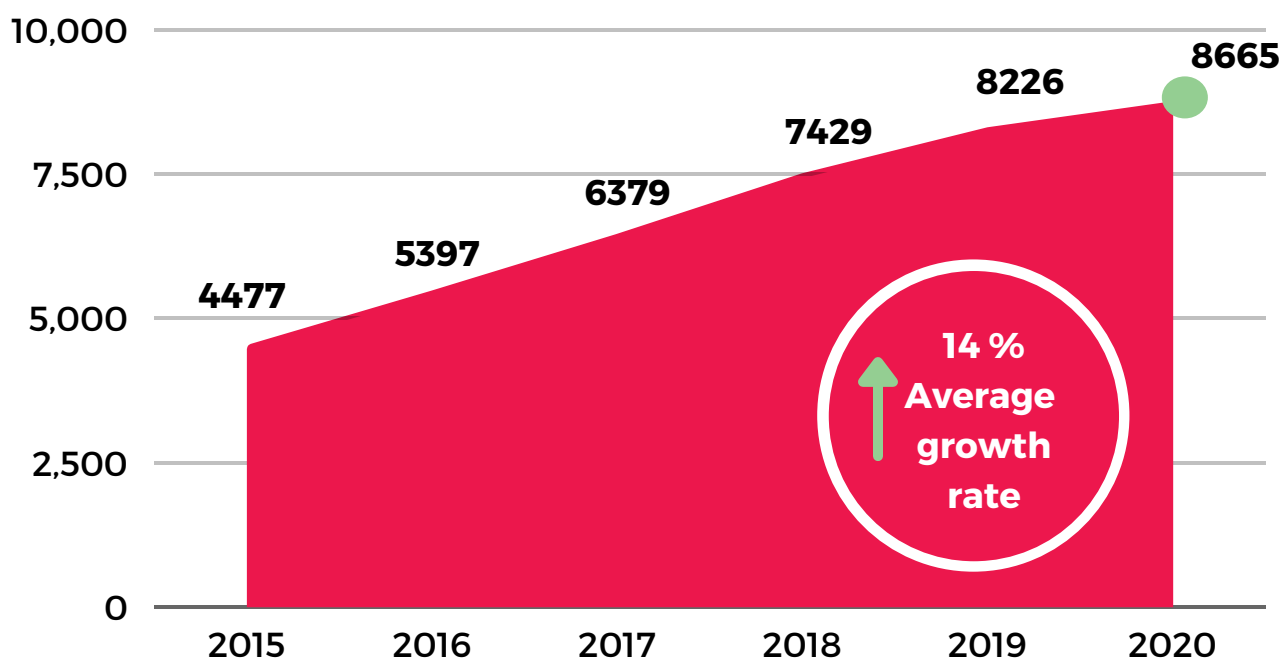
As the FinTech industry is rapidly growing year on year, the personnel costs are inevitably increasing. The analysis of the data from the Commercial Register reveals that personnel costs in 2020 have increased more than 3.5 times, compared to 2015.

SALARY - DOUBLE THE COUNTRY AVERAGE

The growth in personnel costs outpaces the growth of personnel as shown on the next page, which leads to a substantial increase in employee remuneration. According to the Annual Fintech Survey conducted by BFA in 2021, the average gross monthly salary is BGN 3,815, which is more than 2.5 times higher than the average for the country in 2021.

FINTECH MARKET ANALYSIS 2021

PERSONNEL



Employed in the FinTech industry of Bulgaria 2015-2020

Source: BFA Fintech Market Analysis 2021; Commercial Register

EVER-INCREASING DEMAND FOR TALENT

With the constant growth and creation of new FinTech business models and attracted FinTech FDIs in Bulgaria, we observe an ever-increasing demand for new employees. As shown in the graph above, in the last six years, there has been a steady growth in the number of employed in the industry, with an annual average of 14%.

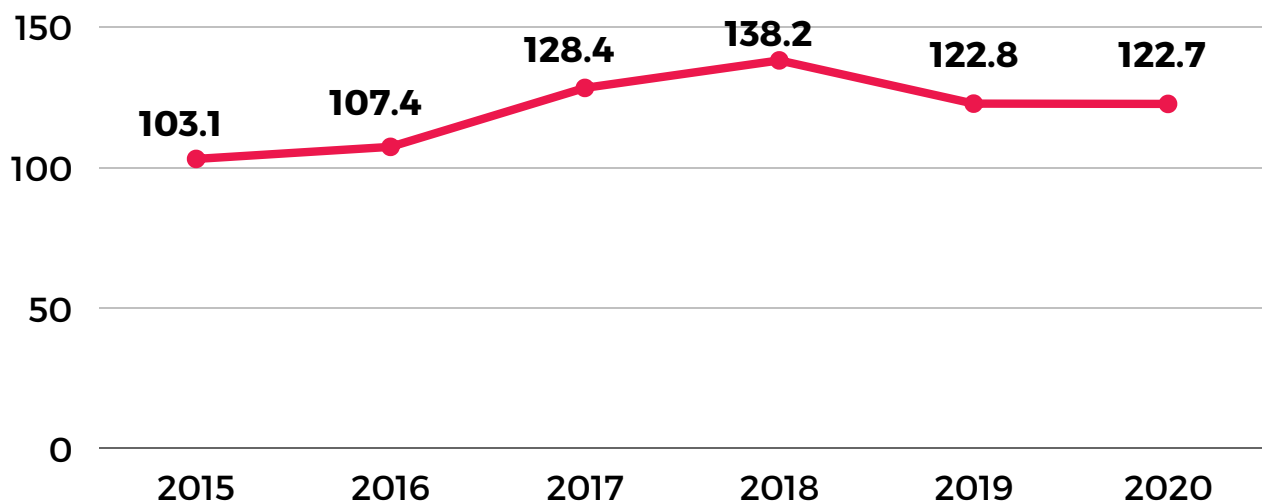
THE COVID-19 IMPLICATIONS ON PERSONNEL

It is important to note that in the last two years the employment pace in the FinTech industry slowed down by more than 50% - from 11% to 5%.

This negative tendency may reflect the need to limit costs throughout the pandemic and the times of uncertainty.

FINTECH MARKET ANALYSIS 2021

TOTAL REVENUE PER EMPLOYEE



Operating revenue per employee in the FinTech industry, in BGN, in thousand, 2015-2020

Source: BFA Fintech Market Analysis 2021; Commercial Register

FINTECH PRODUCTIVITY- A BUMPY ROAD

The Bulgarian FinTech industry operating revenue per employee continued to steadily grow in the period 2015-2018 by about 7% on an annual basis achieving a peak of BGN 138.2 thousand in 2018.

The following 2019 was the very first year when shrinkage of productivity was spotted. Fortunately it did not

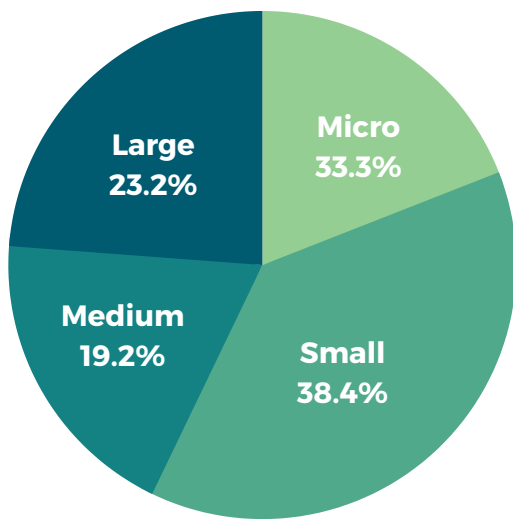
last much due to the boost in demand for FinTech services due to the COVID-19 pandemic. In 2020 the FinTech personnel is back on its positive trend with a slight increase, which has not lead to any additional decrease in operating revenue per employee.

Based on the growing digitalization of the finance sector, combined with increased demand for online FinTech solutions we can predict higher productivity of employees or improved systems' efficiency levels in the next few years.

MARKET RESEARCH - SURVEY 2021

The Bulgarian FinTech Association is a knowledge-sharing platform that constantly monitors the FinTech industry in the region of Southeastern Europe (SEE). Annually, we conduct a FinTech survey in Bulgaria to track the community's trends. Although the findings might not be considered wholly representative of the ecosystem, it is still a powerful tool to showcase the tendencies within the industry and some of its characteristics.

COMPOSITION-RESPONDENTS



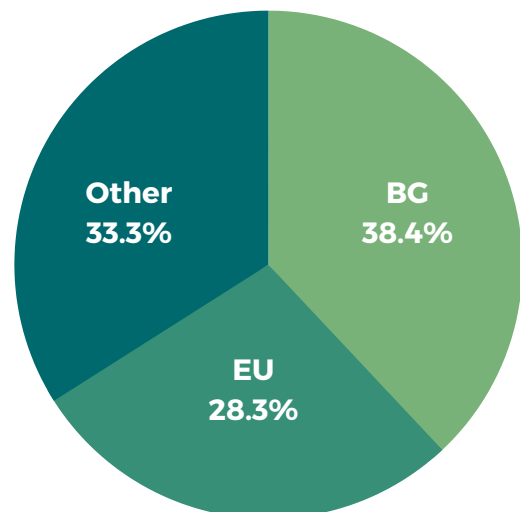
This year, 21 FinTech companies participated in the FinTech survey. The composition of the respondents shows that 76% of respondents are SMEs, compared to 93% found in this year's Market analysis.

The composition of FinTech entities in the region shows that the market is still emerging. The young structure of the ecosystem makes the industry flexible to changes but at the same time might signal a lack of experience.

TARGET MARKETS

An important characteristic of the FinTech companies in Bulgaria is that they are mainly focused on markets outside the country.

The ability to work in international markets drives companies towards higher levels of competitiveness, which in turn improves the overall productivity and performance of the Bulgarian economy.

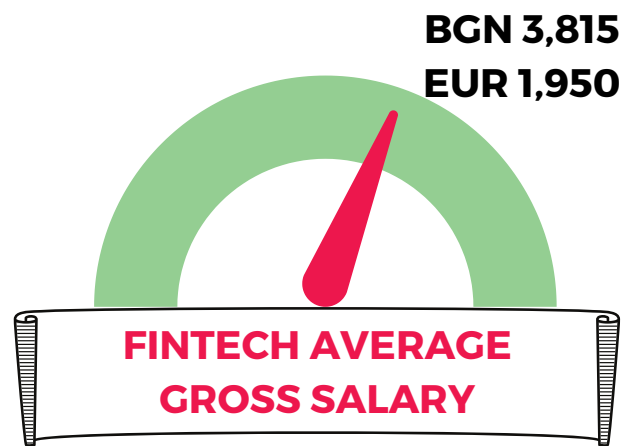


MARKET RESEARCH - SURVEY 2021

COMPENSATION

AVERAGE SALARY

According to the Annual FinTech Survey conducted by BFA in 2021, the average gross monthly salary of the respondents is BGN 3,815 (EUR 1,950), which is more than 2.5 times higher than the average for the country in 2021.



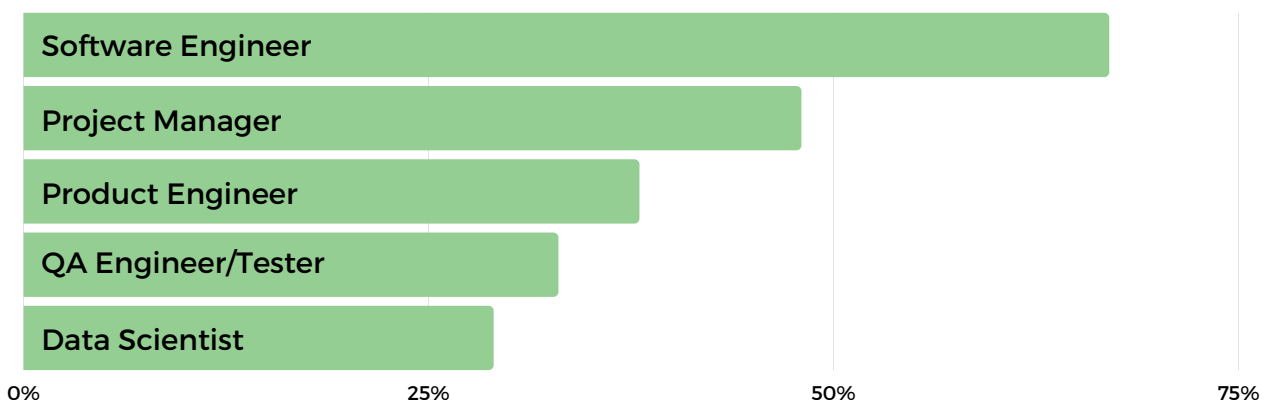
ENGINEERS NEEDED

The respondents in the Annual FinTech Survey state that the specialists most in demand are software engineers, project and product managers, followed by data scientists.



What specialists are most in demand?

Source: Annual FinTech Survey 2021



MARKET RESEARCH - SURVEY 2021



MAIN TOPICS

FUTURE OF THE FINANCIAL SECTOR

"FinTech companies will strengthen competitiveness in the traditional financial sector."

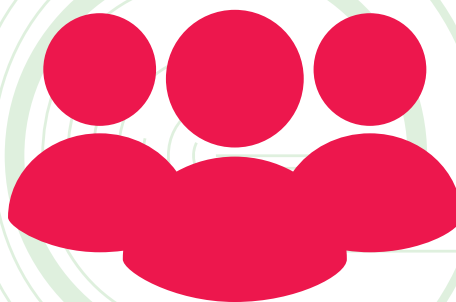
According to respondents, FinTech is a driving force for change and a serious factor in increasing competitiveness within the traditional financial sector.

"Investing in FinTech will give a strategic advantage to existing traditional financial institutions."

SUCCESSFUL FINTECH MODEL

Flexible business model - the recipe for FinTech success

Most of the surveyed agree that the most important ingredient for a FinTech's success is its flexible business model. Functions such as automation (for payments and savings), personalisation, and instant transfers are not only highly appreciated by the customers but also essential to one's sustainable FinTech business model.



CHAPTER II

Talent Pool



TALENT POOL- THE ROLE OF WOMEN IN FINTECH

YANINA YAKOVA

MARKETING ASSISTANT AND
WOMEN IN FINTECH LEAD AT
BULGARIAN FINTECH ASSOC.



At the beginning of 2021, we set a new goal for our ecosystem – to foster the role of women in FinTech in Bulgaria, thus embracing the full potential of Bulgarian society in our industry. At BFA, we aim to provide a program of regular events that will include learning development and community-building opportunities for talented women across the FinTech ecosystem.

Our main objectives:

- To make a real and tangible difference.
- To turn the dial, channelling more investment into female-led firms.
- To encourage more women to become investors and entrepreneurs.
- To educate both men and women to make sure this actually happens
- To focus on solutions and how to achieve them: bridging the gender gap, and through education.
- To identify negative practices, and at the same time highlight their solutions.

The first steps

In April 2021 we gathered 14 BFA company members into a work group and created the inaugural edition of Women in FinTech Bulgaria Study 2021. The study was aimed at providing a current snapshot of gender equality in the FinTech industry in our country, as well as the challenges and opportunities facing the female talent in our ecosystem.

The results

The survey reached more than 20 FinTech company representatives, collecting their opinions on questions such as the gender diversity and age structure of their company and the role of women within their organisation. All the results are summarised in the following pages and present the starting point of a long journey towards changing the Bulgarian environment for the better.

WOMEN IN FINTECH SURVEY 2021

FINTECH GENDER COMPOSITION

44%



Of all employed in the Bulgarian fintech industry are **women**

62%



FinTech companies with at least one female member in the Board of Directors

WOMEN'S ROLE IN FINTECH

BFA Women in FinTech survey 2021 shows a phenomenal representation of women in the Bulgarian Fintech industry, which is 50% higher than the FinTech female workforce in the UK, according to Innovate Finance.

FAIR SHARE OF MANAGEMENT

Undoubtedly, a diversified workplace leads to increased innovation and higher productivity.

More diversity in leadership roles creates an environment where a wider range of ideas are heard and welcomed.

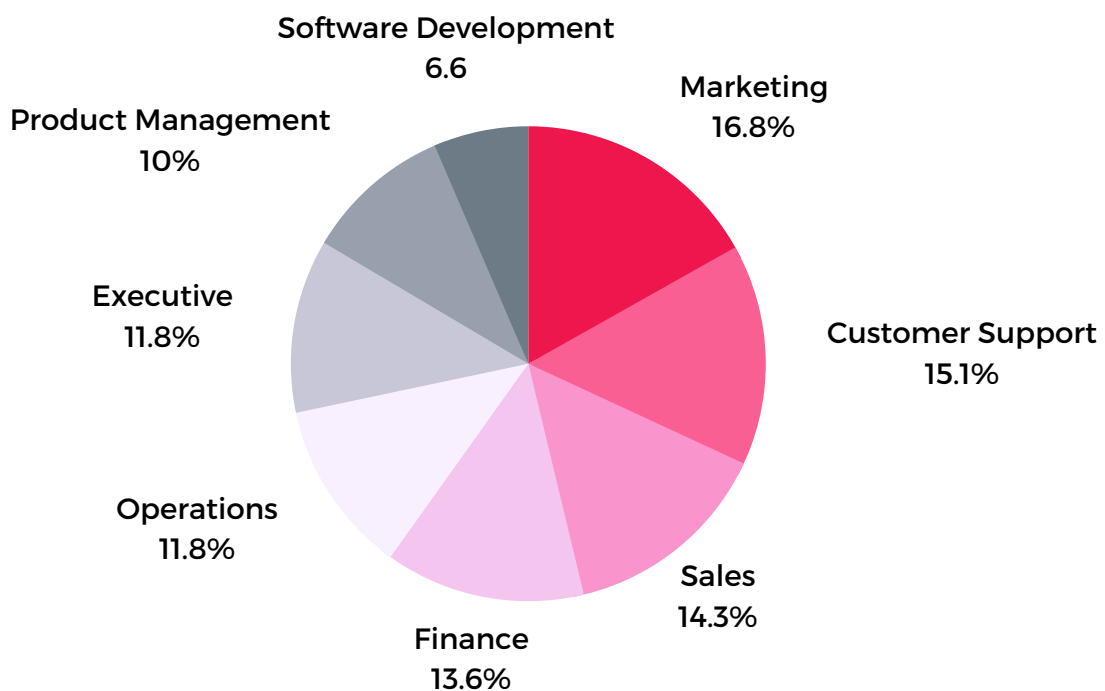
Challenge: Equal pay

30%

Less than 1/3 of respondents believe that the Bulgarian FinTech sector offers equal pay regardless of gender

WOMEN IN FINTECH SURVEY 2021

FINTECH GENDER COMPOSITION



What % of women are engaged in the activities above within your organisation?

Source: Women In Fintech - BFA Survey 2021

TO RULE SALES & MARKETING

The pie chart above clearly shows the well-diversified FinTech positions occupied by women. However, there is still a significant lack in software development. This indicates a weak spot in the system, revealed by respondents in answer to questions about measures needing to be taken.



63%

Of Bulgarian Fintech companies take measures to seek diverse candidates, when hiring

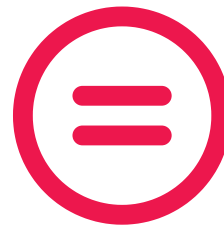
WOMEN IN FINTECH SURVEY 2021

FINTECH GENDER CULTURE IN BULGARIA



85%

Of respondents state that there is a clear career development path for all genders in their organisation



81%

Think that all employees get equal access to internal career opportunities

25%

Better than rest of the EU

Believe women in FinTech in Bulgaria are far better represented than in the rest of the EU

WOMEN IN FINTECH SURVEY 2021

FINTECH GENDER CULTURE IN BULGARIA



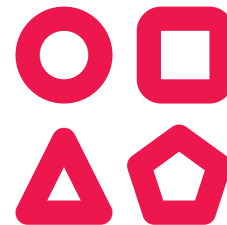
14%

Of those interviewed
respond that their
organisation has a diversity
policy

LACK OF DIVERSITY POLICY

According to BFA's study, diversity policies in FinTech companies in Bulgaria are rarely observed. In turn, this might affect the workplace culture environment, making it less inclusive, lowering the office's innovative spirit, and contributing to higher staff turnover.

Another worthwhile perspective is employer branding - employees that see diversity in the workplace around them have an overall more positive opinion of their company.



24%

State that their organisation
offers unconscious bias or
diversity training

TRAININGS MISSING

Unconscious bias, or implicit bias, are attitudes that are held subconsciously and affect the way individuals feel and think about others around them.

We can speculate that the lack of unconscious bias and diversity training is a consequence of the failure of Bulgarian FinTech firms to actually implement their diversity policy.

In the following pages, we discuss in detail how to address these challenges.

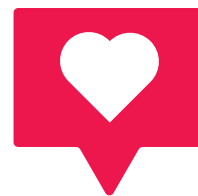
WOMEN IN FINTECH SURVEY 2021

WHAT TO BE DONE TO ENCOURAGE MORE WOMEN IN FINTECH



81%

Schools to encourage studies
in FinTech/technology/science
subjects at an early age



67%

Promote more female role
models, coaches and
mentors

TOP 3 Measures



Flexible working to allow more time with family - 67%

Of respondents state that FinTech companies should support childcare



Help with childcare - 62%

Of respondents state that FinTech companies should subsidise childcare costs



Better support for returners (from maternity leave) - 57%

Of respondents state that FinTech companies should offer greater assistance to mothers returning from maternity leave

WOMEN IN FINTECH

Interview with Vasilena Goranova, Manager Compliance Risk Assessments and Chapter Lead for Women@Paysafe Network for Bulgaria

Paysafe:



You are an international company with offices all over the world. How do you manage any differences between Bulgaria and other countries when it comes to diversity?

At Paysafe, Diversity & Inclusion is one of the four pillars of our corporate responsibility programme, and a crucial component of one of our key beliefs; doing business the right way. Our four global D&I networks represent Women@Paysafe, Black@Paysafe, LGBTQ+@Paysafe, and Families@Paysafe, and we're a truly international company, with offices all over the world. This gives us a really unique opportunity to listen to different points of view, different reactions, and see the different challenges that employees face that we try and deal with. For example, within Women@Paysafe, we have chapter leads in the UK

& Ireland, the DACH region, the USA, India and Bulgaria. As the chapter lead for Women@Paysafe in Bulgaria, I feel privileged to represent all female colleagues from our offices in Sofia and Varna and see it as a real pleasure.

But it's also my responsibility to listen to and raise topics for global discussion, as well as emphasize on challenges and best practice on a local level. With this approach, we have the opportunity to address issues not only for women in Bulgaria, but for women in Paysafe around the world who might be struggling with specific, local issues.

Recently I took part in a webinar where we were discussing how managers should react in different situations where there is tension between colleagues. In the webinar there were colleagues from around the world. On one of the questions with several possible answers, everyone answered differently, exactly because of the different cultural backgrounds we all have, which lead to different approaches. There was no right or wrong answer, it is simply how you can manage the situation in the best way considering all the circumstances in which you live.

And this is exactly how we are approaching our D&I programme;

Paysafe:

global, but diverse. Accessible to everyone. I truly believe that D&I is one of the keys of building a stronger company where people feel confident enough to show their full potential, which naturally leads to better results for the business.

What is Paysafe's approach toward diversity and inclusion?

It all starts with "tone from the top", which is the first and one of the most important steps on the D&I journey. I'm grateful to work for a company where this is well acknowledged, and leaders set the right tone, empowering us to make real effective and efficient change that works.

After you get the tone right, you have to look at applying the message in a practical way so that everyone can engage. At Women@Paysafe, we organize activities that bring women and allies together, and provide a safe space to speak and be heard. It doesn't matter whether it's about unconscious bias, health, career progression – we're trying to make sure everyone can get involved.

In addition to this, our global D&I leaders meet regularly to talk about upcoming campaigns, diversity data, and share updates between networks. This forum allows us to bring the discussions to the levels above us, feedback on the tone, and look at what more can be done to promote D&I at Paysafe.

In this regard what could a Fintech

company like Paysafe do to close the gender gap?

On one hand, this is a question on a company level connected to the established recruitment and hiring process. On the other hand, this is a question related to our cultural differences. If we look at the bigger picture the statistic is showing that female representation in the fintech industry is progressing slowly, with more females being promoted to senior positions. However, generally speaking, we are still very far away from equality.

I am proud to say that the statistics at Paysafe look a little bit different. Around 46% of our workforce is made up of women, with a 15% female presence in the executive team. And the results for Paysafe locally in Bulgaria are even higher, with 48% female employees.

I think D&I plays a huge part in why we have such a high percentage of women. Our hiring system is based on talent, and we seek the best talent in the market. But we ensure it's diverse from a gender standpoint. We also know that different people bring different perspectives, and value this from a company setting. It's a real asset to our operations.

To go further, we ensure this equal treatment continues past the hiring step by demonstrating a genuine commitment to D&I. Senior managers value different angles, our culture is

Paysafe:

about appreciating alternative perspectives, we want to see differences in the workforce, and we try to ensure there is equal opportunity for everyone to succeed. I believe that if the above elements are incorporated in a company, this will without doubt take the company one step forward by making a difference and setting an example.

As I said in the beginning, this is however not only a question on a company level, but also on a local cultural level. We have participated in the Women in Fintech research initiated by BFA among the Bulgarian Fintech Companies. The results coming up from this research are in strong favor of women in the workforce in the Fintech industry on a local level. The percentage is very high when it comes to equal access to career opportunities, a clear development path and diverse hiring. These results are very different from the results on a more global level. But when looking globally, we of course must factor in the aforementioned cultural specifics which may hinder women in succeeding in the workplace.

What do you think is the reason for such a big gender gap on a global level?

It's definitely a complex series of things. These can include what people perceive as the "right" professional path for men and women, stereotyping, the need to

build confidence in women, and the need to be aware of all of these issues at the same time.

When building a mature D&I framework, you need to be uncompromising with your values, and provide space for women within your company to find and follow their own path, whatever it may be. It's no secret that men often present with much more confidence in the workplace. Women usually say "My work speaks for itself, there is no need to present it. I am working hard, and everyone can see that." I disagree with this approach. You can't rely on someone to see what you're doing, how hard you're working. You need to put yourself forward, show off your work! There's a balancing act between competence and confidence, and there are too many women out there who are more than competent, who are extraordinary, but who are not confident enough to take their seat at the table and show off their strengths.

These are just some of the reasons why a gender gap still exists. I believe it's a mutual process of collaboration; employers and employees (or job candidates) coming together to show their support for women, actively lifting them up, building their confidence, and giving them the opportunities they need to succeed in the world of fintech.

VASILENA GORANOVA
CHAPTER LEAD FOR
WOMEN@PAYSAFE NETWORK
FOR BULGARIA

CHAPTER III

Financial Education and FinTech

AMERICA · AFRICA
ASIA · AUSTRALASIA

FINANCIAL EDUCATION & FINTECH



GEORGI PENEV

DIRECTOR AND HEAD OF
FINTECH EDUCATION AT BFA



Why financial literacy?

Financial literacy and education is a great part of BFA's efforts towards the development of the cluster and the Bulgarian nation as a whole. As part of these efforts, we educate in FinTech and about the contemporary financial landscape which we believe is crucial for a well-informed community to take the best financial decisions, ultimately increasing their well-being.

Our main objectives:

- Spread the word about new financial tools, solutions and companies
- Teach highest-level consumer protection and mitigation of emerging risks
- Encourage more youngsters to become investors or entrepreneurs in FinTech
- Campaign for greater political action towards promoting the development of digital financial services, both on national and supranational levels

The first steps

In 2021 BFA resourced and helped the creation and promotion of a FinTech Master's degree programme at Sofia University, organised the From Zero to FinTech hackathon, and taught FinTech in five of the largest higher education institutions in Bulgaria, as well as the Mathematical high school of Ruse "Baba Tonka".

The results

In 2021, BFA's FinTech educational initiatives reached more than 300 people and attracted 70+ participants to the FinTech hackathon. Our work was internationally recognised and BFA was promoted to Affiliate Member of the International Network on Financial Education (INFE), part of the Organisation for Economic Co-operation and Development (OECD).

In the following pages, we interview and present the most successful examples, plus our financial literacy partners and key stakeholders in Bulgaria and the EU.

FINANCIAL LITERACY & EDUCATION IN THE EUROPEAN UNION



LUDMILA ANDREEVA

POLICY OFFICER

DIGITAL FINANCE (FISMA B.5), EC

Financial literacy and education are important topics within the Bulgarian and European Fintech communities. What do financial literacy and education mean to the European Commission?

Financial literacy is essential for the financial well-being of individuals. It helps them make effective decisions in personal finance, such as buying a house, savings for retirement, raising children, carrying out a personal project, and making the most out of their savings. But a recent international survey carried out by the OECD reveals that a large of the EU adult population does not understand basic financial concepts well enough.

Financial literacy levels also vary significantly between groups of

population: the least financially literate groups - low-income groups, women, young people and older people - are also those that are particularly financially vulnerable.

Furthermore, the pandemic has put an additional strain on the most fragile, already struggling households. Financial literacy can help these individuals become more resilient to future economic shocks. On the other hand, the pandemic also saw other households' spendings fall and their savings rise. Those savers did not always know how to put their savings to work. Financial literacy can thus help individuals to save via capital markets at a better return, while increasing the funding available to EU companies for the recovery and fostering cross-border flow of capital.

For different reasons, both of these cases strengthen the need for better financial literacy.

In addition, the digitalisation of financial services and the growing offer of sustainable financial products and services offer new opportunities to consumers. But they also create new learning needs for individuals (particularly the least financially literate). Because anyone with a smartphone can access an extremely wide range of products and services. But at the same time, those without digital skills risk being left behind, particularly if services move online or locations like bank branches close, as we have seen in the pandemic.

Financial literacy is therefore needed to help all consumers take full advantage of the opportunities offered by the digitalisation of financial services and sustainable finance. We need to make sure that new market developments contribute to better financial inclusion rather than widening existing gaps in financial literacy and financial resilience.

Individuals are thus increasingly required to take responsibility for preparing for retirement. In this case, financial literacy is necessary for individuals to make efficient decisions in relation to their pension savings.

Society as a whole would benefit from financial literacy, which is a driver of inclusion and equality. Therefore, if

we want an EU economy that works for people, one that is inclusive, empowering and resilient, it is essential to invest into financial education.

For me, this is about making a real difference to people's lives - especially to the lives of those that are vulnerable.

European Commission and OECD are working on creating the first Financial Literacy Competence framework. How did it all start and what is the expected result?

The Commission and the OECD are working together on developing a financial competence framework for adults, followed by a framework for young people. It's about creating standards that are commonly used and recognised across the EU - similar to, for example, the European language competence framework where a complete beginner starts out with an A1 level, an intermediate learner can get to B1 or B2 and a fluent speaker has a C2 level.

In a similar way, the financial competence framework will outline the knowledge, skills and attitudes that someone needs to develop to support their financial well-being throughout their life. The new framework will aim to provide common EU terminology and a common reference framework.

That can inform financial literacy policies and programmes at EU and

and attitudes that someone needs to develop to support their financial well-being throughout their life. The new framework will aim to provide common EU terminology and a common reference framework.

That can inform financial literacy policies and programmes at EU and national level. It will be available for national governments or local councils, charities or educational organisations, businesses or banks, to help them develop policies and tools. The Commission and the OECD will help enable the use of the framework through working groups with Member States and stakeholders.

Government could use the framework to develop national financial literacy strategies. Government might want to use it to include financial education in the reform of national curriculums. At a different level, a charity could use it to develop a financial literacy programme for young people. And companies could offer seminars on financial education to employees and clients.

The added value of our framework will be common standards and definitions at the EU level. It's important that we agree at EU level on what it means to be financially literate today. That will allow European and national policymakers to act in a more coordinated way and it will increase the impact of financial literacy measures implemented by the EU, national governments or other groups.

Now we are not starting from scratch. The EU framework will build on the existing OECD frameworks. It will cover relevant financial competences, it will be updated to reflect the importance of digital and sustainable finance, and it will be adapted to the EU context.

Following the conclusions of the above feasibility assessment, together with the OECD-INFE (International Network for Financial Education) and the Member States, we are working on defining the competences that adults in the EU need to make efficient decisions in the area of personal finance.

This work will build on the existing frameworks developed by the OECD by updating them and adapting them to the EU. We will publish the financial competence framework for adults by end of 2021, and start facilitating its uptake in concrete policies and initiatives by Member States and stakeholders as of early 2022. In early 2022, we will start the development of a financial competence framework specifically dedicated to youth/children.

Talking about Financial Education in the Digital Era. What could a country do to ensure consistency and coordination of the work on digital financial literacy? What are the actions that our institutions should perform?

In the 2020 Capital Markets Union Action Plan, the European

Commission committed to two measures aiming to increase financial literacy levels of individuals in the EU:

(i) conduct by 2021 a feasibility assessment on the development of an EU financial competence framework;

Following the conclusions of the above feasibility assessment, together with the OECD-INFE (International Network for Financial Education) and the Member States (as part of a government expert group on financial literacy), we are working on defining the competences that adults in the EU need to make efficient decisions in the area of personal finance. This work will build on the existing frameworks developed by the OECD by updating them and adapting them to the EU. We will publish the financial competence framework for adults by end of 2021, and start facilitating its uptake in concrete policies and initiatives by Member States and stakeholders as of early 2022. In early 2022, we will start the development of a financial competence framework specifically dedicated to youth/children.

ii) subject to a positive impact assessment, table by 2022 a legislative proposal requiring Member States to promote learning measures that support the financial education of consumers, in particular in the context of retail investment.

In parallel, we are also going to work in 2022 on a tool to measure financial

literacy levels in all Member States (it does not currently exist).

Finally, a communication campaign recently launched by DG FISMA will span over the whole year of 2022: it will explain key financial literacy concepts to Europeans and will promote the Commission's work on financial literacy. The campaign includes videos, visuals, events, newsletter articles, a webpage with resources and Twitter Q&A's with Commissioner Mairead McGuinness.



LUDMILA ANDREEVA
POLICY OFFICER
DIGITAL FINANCE (FISMA B.5),
EUROPEAN COMMISSION

FINTECH EDUCATION



FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION



BOZHIDAR NEDEV, PHD
 CHIEF ASSISTANT PROFESSOR AT SOFIA UNIVERSITY ST. KLIMENT OHRIDSKI

For a second consecutive year FEBA at Sofia University “St. Kliment Ohridski” and BFA, launched a Master’s degree in Finance, investment, and fintech. Tell us how this Master’s started and where did the idea come from?

The previous year the program was called “Finance and Investments.” The idea arose between me and Assoc. Prof. Dr. Marcelin Yovogan, Head of the Department of Finance and Accounting at FEBA. We were considering the future of the master's program “Finance and Banking.” Our ideas for improvement were too many to fit into a single 3-semester program, which is why Assoc. Prof. Yovogan proposed to create a new specialization.

For whom is the program designed, and what do your students gain after completing it?

The program in “Finance, Investments and Fintech” is designed for both economists and non-economists – thus for people interested in deepening their previous economic and financial knowledge and for those wishing to enter a completely new area of specialization

The master's programme offers multidisciplinary education to better account for the contemporary requirements of the labour market. Thus, our graduates may choose between a career in the public financial sector, banking and non-banking financial institutions, fintech companies, corporations, and more.

How does the programme differ from any other programmes in the FEBA, and how is it different from last year’s programme?

The programme in “Finance, Investments and Fintech” is focused primarily on the analysis of financial instruments, including technical analysis and alternative investments, and fintech, including digital business models, crypto-currencies, and blockchain technologies. The latter two fields, the extension of the lecture hours in the course of Fintech and E-Banking and the creation of a

discipline in Business valuation, constitute the main amendments compared to the last year's programme.

How do you envision the future of this programme and the partnership between FEBA and BFA? What is the role of such a partnership in the long run?

FEBA highly values the partnership with BFA. It allows both institutions to achieve their goals in establishing a bridge between theory and expertise (practice) and thus to better prepare graduates for professional life. Such kind of symbiosis is what businesses and students are actually looking for. For a long time now, FEBA has been working to change the stereotypes regarding university education in Bulgaria and I think the outcomes are already visible. For the future, I expect that the programme in "Finance, Investments and Fintech" will continue to enrich its study plan (the list of disciplines) in coordination with BFA according to the developments in the financial sector. Currently, we are working on the course in Cryptocurrencies and Blockchain, which will start in late February 2022. I strongly believe that the cooperation between FEBA and BFA will continue to tighten. For example, next winter semester, a course in Fintech (again tutored by Ass. Prof. Deyan Radev) is expected to start in our English-taught bachelor's programme in Accounting, Finance and Digital Applications, which is

certified by the Institute of Chartered Financial Analysts (CFA) and the Institute of Chartered Accountants in England and Wales.

What is the future direction for Fintech, how flexible is the program to meet the dynamic changes of the sector? With so many online resources, what are the advantages of a complete Fintech master's degree program?

I think Fintech would become an even more interdisciplinary field, requiring professionals to have knowledge in economics, finance, securities, accounting, banking, big data, software products like R and Python, programming, and technologies. In the current study plan of the program, we have tried to offer our students such elective courses. In regard to the many online resources available, I think that opting for a master's program guarantees a check of the transmitted knowledge, its consistency, and detail.



FACULTY
OF ECONOMICS
AND BUSINESS
ADMINISTRATION

BOZHIDAR NEDEV, PHD
CHIEF ASSISTANT PROFESSOR
AT SOFIA UNIVERSITY
ST. KLIMENT OHRIDSKI

FINTECH EDUCATION

The logo of Sofia University St. Kliment Ohridski, featuring a circular emblem with a figure and text.

SOFIA
UNIVERSITY
ST. KLIMENT
OHRIDSKI
1868

FACULTY
OF ECONOMICS
AND BUSINESS
ADMINISTRATION



You recently came back from Germany, where you have been lecturing Finance in Goethe University Frankfurt and the University of Bonn. Why did you start lecturing a “Fintech and e-banking” course in Bulgaria and how is it different to what we have seen in Western Europe?

I came back to FEBA with a research project funded by the Ministry of Education and Science that aims to attract experienced Bulgarian researchers from abroad. For the project, I planned to connect with the FinTech sector, so the stars aligned after the call by Dr. Nedev to set up a new course supported by BFA. Believe it or not, Western Academia is very disconnected from the industry and in Bonn I wouldn't have had the freedom and support to develop a course with such a large impact.

Last year, together with BFA, you created and launched a Fintech Hackathon. Why is it special and what does it bring to the Fintech community in the region?

The idea emerged after I came by the hackathon “Hack the crisis in Bulgaria” in 2020. I thought my idea was crazy and will be disregarded, but I met extreme enthusiasm in the FinTech community. We, too, have social goals: 1) to provide a platform for cooperation among entrepreneurs to develop their own fintech ideas; and 2) to democratize finance by expanding the choice of financial services in Bulgaria.

Apart from giving practical and theoretical knowledge, is Fintech and E-Banking also a networking space? How important is it to keep in touch with promising students?

The course aims to connect like-minded people and to build trust and competences through group case studies, business plans, a Hackathon, get-togethers, and much more. An Alumni club of all past graduates and lecturers will keep them connected and exchanging ideas. Interaction of people with different backgrounds is at the core of Industry 4.0. Bulgarians are a warm and social nation and we should use this to our advantage in the digital age.

DEYAN RADEV, PHD
ASSISTANT PROFESSOR
OF FINTECH AND BANKING
P. BERON FELLOW IN
ECONOMICS

FINTECH EDUCATION



PROF. DANIELA BOBEVA PROFESSOR IN FINANCE AND INTERNATIONAL ECONOMY AT VUZF UNIVERSITY

Dear prof. Bobeva, you have been lecturing Finance for several years across different countries. Tell us about your experience in Bulgaria and is personal finance a well-known topic at the Bulgarian educational institutions? How do you find Bulgarians' financial literacy level?

I introduced the "Personal Finance" subject in five universities in Bulgaria in 2017. Compared with other countries I find that Bulgarian students have less knowledge and what is even more important is that

they have less experience in using financial services. What worries me is that Bulgarian students have little appetite for risk and fear to access the financial markets. We have a very specific traditional perception about finance and finance behavior is dominated by saving, opposing borrowing and fearing about investing. Those are the problems in teaching personal finance I have to combat. The most rewarding mission one professor could have is empowering students with knowledge and skills to overcome prejudices and become active players in financial markets and build their financial prosperity. Personal finance is something very personal and no one could better manage their finances than themselves. Students could and have to become finance ministers of their personal finance.

What does VUZF do in the direction of improving knowledge in Finance?

VUZF is a university specializing in finance and insurance with top lecturers who combine their academic careers with hands-on experience in top regulatory authorities, financial sector management, and government positions. Our team members are the CEO of Bulgarian Stock Exchange, former deputy prime minister, head of Banking Supervision, etc. While the revolution in financial technologies is advancing, we are trying and we are supposed to do that to incorporate in all our lectures across the entire academic courses in finance.

(corporate finance, public finance, etc.) the respective financial technologies. Moreover, teaching statistics, for example, you cannot avoid lecturing about big data and in public finance lectures, the topics of Regtech and Supotech should be compulsory. We are though convinced that there is a need to have an integral course of lectures applying Fintech in personal finance. We are trying to build the capacity of our students to cope with the challenges and take advantage of the opportunities which the financial sector offers.

How is Fintech incorporated in VUZF’s lectures?

I’m happy that we cooperate with the Fintech association in teaching this subject. Joining the academic education and practical training best fits this interesting and important subject. The students easily comprehend the Fintech Association lectures and the results are very encouraging. Most of them start using more services based on fintech and some start looking for a job in this sector. It seems that working with the Fintech association we could reach the ambitious task to navigate and encourage our students in the world of financial technologies.

Is Fintech an interesting topic to your students and why?

In the introductory lecture, I usually ask the students if they use financial technologies. Most of them answer “No” but when they learn what is

Fintech, they admit they use some. This is an example that they know little and there is something like a barrier which we demolish at the end of the course. It is not easy because most conservative lecturers in finance try to build fears about fintech. My approach is totally different: Fintech is the students’ present and future. You cannot escape from reality and you have to be in this real world because this is your world and your life. The best you could do is to learn about risks and opportunities and get there! Yes, you may lose, but if you would like to prosper definitely you are going also to lose. (Ask Warren Buffet how much he lost to create his fortune).

Still, we have a long way to go. The students’ attitudes towards Fintech are rather fragmented with huge differences between men and women, between students in the big and small cities, between the different professional backgrounds, etc. Let’s enlarge the teaching of Fintech together!



PROF. DANIELA BOBEVA
PROFESSOR IN FINANCE AND
INTERNATIONAL ECONOMY
AT VUZF UNIVERSITY

FINTECH EDUCATION



ELENA STAVROVA, PHD
ASSOCIATE PROFESSOR AT
SWU "N. RILSKI"-BLAGOEVGRAD



Digital Finance and FinTech is already part of The South-West University "Neofit Rilski" curriculum. How and when did the Master in Digital Finance start? Why is it important to your university?

The Students of the Master's program "Digital Finance - FinTech" have been studying at the Faculty of Economics of SWU "Neofit Rilski" -Blagoevgrad from 2019. We have been actively working on the curriculum for a long time, because such a program is taught in very few universities in Europe. The Programme is selected by those actively working in the financial sub-sectors, as well as graduates of the bachelor's program "Finance". This program is important for the university because as a relatively small faculty, the Faculty of Economics is program-mobile highly adaptive, with the possibility of a dynamic policy of admitting new students.

How do your students find this program? How exactly is it different from any other Finance programs?

Studies show that students find the program's content as knowledge saturated, innovative, promising, and extremely logically structured, the education and research - relevant, exciting and inspiring. This curriculum includes for the first time the subjects "Database Management and Cloud Services", Digital Insurance, Electronic Money and Cryptocurrencies, Venture Capital and Innovation Financing, Virtual Banks and Digital Payments, Blockchain Technologies, Information Security, Tax Control in digital supplies, Financial technology and taxation and others and many others.

What are the competencies your students acquire throughout their

studies in FinTech?

Students of the master's program "Digital Finance - FINTECH" are preparing for successful implementation in banking and nonbank financial intermediaries, platform trading, and insurance companies offering their financial products in the digital environment, for trading with cryptocurrencies and other digital assets, in institutions for the implementation of supervision and regulation of bank and non-bank financial intermediaries.

What is the future of Digital Finance at your university?

We are finding a systematically growing interest in this master's program. Our plans refer to its sustainable presence in the future development of SWU "Neofit Rilski" as an integral and important part of the Fintech ecosystem.

At the same time, we work on updating the curriculum in order to provide students with the latest knowledge. We are looking for contacts with companies in the digital finance sector to conduct practical training, research, and development.



ELENA STAVROVA, PHD
ASSOCIATE PROFESSOR AT
SWU "N. RILSKI"-
BLAGOEVGRAD

FINTECH EDUCATION THROUGH PRIVATE SECTOR LENSES

flatEX DEGIRO

STEPHAN SIMMANG

MANAGING DIRECTOR AND GROUP CTO AT FLATEXDEGIRO



Why is FinTech important to our contemporary society?

The FinTech industry has disrupted the old banking system by revolutionizing the way consumers access their finances. Customers now demand a safer and user-friendly banking experience while having more control over their financial decisions.

Applications and technologies such as Mobile banking, branchless banking, retail investment, Artificial Intelligence, Big data and robotics not only offer customers a wide range of possibilities and options when it comes to financial solutions and access to them, but they also contribute to financial inclusion. This rapid advancement of technology in the sector has allowed people of all ages across the globe to access secure financial tools at their

fingertips via their smartphones or computers. By giving easy access to complex systems, making them safe and focusing on correctly educating people towards financial responsibility, the FinTech industry also contributes to making investing accessible to everyone shaping their own financial future.

How is the development of the FinTech industry affecting the teaching Finance process in 2021 and what are the upcoming challenges?

In the brokerage industry, there is still a stigma around investing. While a bigger part of the population is already starting to invest, there is still misinformation and mistrust in the capital markets.

Retail investment has allowed more and more people to access the financial markets and take charge of

FINTECH EDUCATION THROUGH PRIVATE SECTOR LENSES

their financial future. As a positive consequence, financial literacy has grown amongst these consumers. However, this fast growth has also allowed consumers with less financial education to invest in complex products they don't understand. As companies in the FinTech industry, we need to educate our customers. Give them access to a wide range of quality products but also the knowledge of how to properly work with them. It will help even more people to responsibly take their financial independence into their hands and help demystify the risks within this industry.

flatexDEGIRO is today the leading European online broker with over 1.9 million customers in 18 countries. Your goal is to welcome 2 percent of the European population as customers of flatexDEGIRO. How can a Fintech like you help develop our European society?

Our mission is to 'retailise' investing, making it accessible to everyone who wants to shape their financial future by offering high-quality, cost-effective, user-friendly investment platforms & services. We work hard on our promise to our customers. We are proud to say that in our DEGIRO

product, European retail investors are already able to trade from zero commission without having to compromise on quality, service, security, product choice or place of execution.

We are growing very fast and thank our success to our team of more than 1000 professionals working hard to make investing accessible to everyone. We continuously seek talent in various business areas, mainly in IT.

flatex  **DEGIRO**

STEPHAN SIMMANG

MANAGING DIRECTOR AND
GROUP CTO AT FLATEXDEGIRO

CHAPTER IV

Bulgaria on the European FinTech Map

TOP FINTECH CITIES ACROSS EUROPE



GENCHO KEREZOV
 DEPUTY MAYOR
 SOFIA MUNICIPALITY



2021 has been a great year not only for Fintech in Bulgaria but for the entire world. Industries across the board are recognizing the impact of the digital revolution, as more players, consumers and end-users are entering the market. Let's take a look at 5 success stories from Europe.

Sofia has established itself as a city that attracts and creates true pioneers in the fintech industry. Being the most cost-effective fintech location in the world and amongst the leaders globally, Sofia created a trustworthy environment for the ecosystem. The companies are constantly benefitting from the improving conditions and the close relationship with the Municipality of Sofia's Digitalisation team which creates a unique thriving, safe and progressive environment for the sector. It's exciting to follow the rise of Sofia as the finest spot for fintech - surely, the best is yet to come and the

city's progress must be followed closely.

Berlin is home to nearly half of all the Fintech startups in Germany. And there is an important reason behind this: Berlin has a vibrant international community full of digital and tech-savvy people. The 'hip' image alone is a sharp contrast to the more traditional image of Frankfurt where bank HQs, European Central Bank and the stock market are based. Berlin is a growing tech and science hub with many universities and research associations, many of whom operate in fields like AI, Blockchain, Quantum Tech and so on. There are many opportunities for collaborations between Fintech and academia, and the city administration is also supportive of the Fintech ecosystem. Most notably, the Berlin State Senate, 30 science institutions and 280+ companies have come together under the Berlin Partner for Business and

TOP FINTECH CITIES ACROSS EUROPE



Technology public-private partnership, which aims to promote the city with campaigns such as ‘Brains of Berlin’.

The Dutch have a long-established history of pioneering, be it across the 7 seven seas or the Finance world. **Amsterdam** is a well-connected international city with an entrepreneurial spirit, a melting pot not only for the arts but for business and innovation as well. Here you will find the financial institutions, other market players and a strong startup sector, which is active in Banking software, Payment, e-Identity and Cybersecurity, among others. The city’s ‘StartupAmsterdam’ programme and ‘amsterdam inbusiness’ foreign investment agency work on multiple fronts to contribute to the economic development of the city and its innovative ecosystem. But by far what really makes Amsterdam stand out is its ability to bring people under one roof as the RAI Amsterdam Convention Center hosts important events such as Amsterdam Fintech Week, the IoT Tech Expo and AI and Money 20/20, one of the world’s most important Fintech conferences.

To the north in the Baltics we have **Vilnius** affirming its position as an

international startup hub. The city is a great example of how Eastern Europe is becoming more prominent as Vilnius not only fosters a healthy startup sector but also attracts large players such as Revolut, Shift4 Payments, etc. What makes Vilnius a strong contender on an international level is its favorable business environment, which is both cost-effective and supportive of companies, big and small. The Bank of Lithuania offers a regulatory sandbox for financial innovations, a newcomers programme guidance for startups, and electronic money & payment institution licenses within 3 months, outpacing EU jurisdiction up to 2-3 times. No wonder Vilnius Fintech has skyrocketed!

London has cemented its position as one of the leading Fintech cities in the world. Nearly half of the capital generated in 2020 was in London. Even the implications of Brexit have not phased Fintech in the financial capital of the world. The proximity to Britain’s financial institutions helps local startups usher in a new age of digital banking. The regulatory environment is to the benefit of Fintech companies, as the general attitude towards the sector is progressive and forward-thinking,

TOP FINTECH CITIES ACROSS EUROPE

with such plans for the future as new visa routes and a Central bank digital currency. Fintech companies are flourishing in London as evidenced by user bases growing by the millions for apps like Curve, Wise & most notably Revolut, which has become a household name here in Bulgaria.



GENCHO KEREZOV

DEPUTY MAYOR
SOFIA MUNICIPALITY



FINTECH IN THE SEE REGION GREECE

FINTECH COUNTRY PROFILE

Despite the COVID-19 pandemic, the Greek Fintech ecosystem has continued to thrive. As of 2021, the Hellenic Fintech ecosystem consists of 72 Fintech startups, 37 credit institutions, and 8 payment institutions. Some of the most prominent Fintech startups are Globel Money, Elorus, GX Blocks, Crowd Policy, and Viva Wallet. The latter is considered to be the Premier EU cloud-based Neo-bank incorporated Microsoft Azure that works in more than 20 EU countries.

There are several associations active in FinTech in the region: The federation of Hellenic Information Technology & Communications, Electronic Money Association, and Hellenic Bank Association. All three are closely interrelated and work daily to make Greece attractive for ICT projects and financial innovation.

INVEST TO SUCCEED

In recent years, Greek private and public sectors have invested heavily in fostering the growth of digital financial services. Headed by the Ministry of Digital Governance, which brings together all the critical IT and telecommunications structures related to the provision of electronic services to citizens and the wider digital transformation of the country.

In only a couple of years, Greece has created innovation facilitators in both the non-banking and banking financial sectors. For example, the Hellenic Capital Market Commission, the non-banking regulator, runs an Innovation Hub aimed at supporting companies introducing innovative financial products or services. It helps FinTech SMEs to understand the applicability of the relevant regulatory framework and the compliance requirements. Furthermore, this structure is given an objective to identify any need for clarification or amendment in the

FINTECH IN THE SEE REGION GREECE

the existing regulatory framework, meaning that it has been given the capability of a regulatory initiative.

A similar Innovation Hub has been operating in the banking sector under the governance of the Bank of Greece, running for 2 years now. Its main purpose is to facilitate the smooth introduction of innovative products and services in the Greek market, to the benefit of both users and businesses. Just in the last year, the Hub has received 30 enquiries from Fintech companies, 83% of which were not authorised by a competent authority at the time of the enquiry's submission.

In addition to that, all Greek-based companies could benefit from a regulatory sandbox launched in June 2021. In a nutshell, "Regulatory Sandbox", is a live testing environment that is created to help the establishment and development of innovative digital financial services and products. The Greek Sandbox is expected to help Fintechs, by giving them the ability to test innovative solutions as to their conformity with the applicable regulatory

requirements, without risk to financial stability. The initiative was implemented together with the European Bank for Reconstruction and Development (EBRD) and was funded by the European Union (via the DG REFORM of the European Commission).

SHOOT FOR THE STARS

All the above-mentioned put Greece at the forefront of FinTech, turning the country into an attractive FinTech location and a competitive new FinTech hub, with whom the rest of the EU countries will have to march.

FINTECH IN THE SEE REGION ROMANIA

FINTECH COUNTRY PROFILE

In recent years, we have observed a significant increase in the FinTech industry in Romania, boosted by both the public and private sectors, who have contributed to the formation of 10 payment institutions and 2 e-money licensed institutions operating in Romania in 2021.

The most active private sector players remain the Romanian Association (RAB) of Banks and the Romanian Fintech Association - RoFin.Tech. RAB is currently involved in an online security initiative, an awareness campaign initiated together with the Romanian Police and the Romanian national cyber security and incident response team - Directoratul Național de Securitate Cibernetică (DNSC). While RoFin.Tech focuses on growing the interest in FinTech, helping FinTechs with internationalisation, education, and expansion of the market and community of entrepreneurs and professionals working in FinTech.

PUBLIC SECTOR IN HELP

The Romanian public sector not only shows interest in FinTech but also takes concrete actions towards the development of the industry. To improve the regulatory framework in the country the National Bank of Romania (NBR) implemented an Innovation hub in 2019. Its main objective is to be a platform for dialogue with companies developing innovative public interest solutions in the area of payment and financial services.

NBR has not settled with the Innovation Hub but is now exploring the possibility of implementing a regulatory sandbox in the country. In 2020, a virtual two-day workshop was organised together with the European Fund for Southeast Europe.

Undoubtedly, all these efforts are about to seriously boost the FinTech ecosystem in the next few months and years, and provide the country with another opportunity to catch up with the Western European economies.

FINTECH IN THE SEE REGION SERBIA

FINTECH COUNTRY PROFILE

When exploring FinTech in Serbia, we found an interesting phenomenon - although there is still no formal FinTech association, the FinTech idea is well-spread across the thriving IT sector. There are 13 payments and 4 e-money licensed institutions. The ecosystem consists of both large foreign Tech firms such as Microsoft and Google, as well as FinTech like Payoneer, Serbian FinTech startup TradeCore, etc.

The most active private sector players in the Serbian FinTech space are the Association of Serbian Banks, Digital Serbia Initiative, and Foreign Investors Council (FIC). The bank's association established a Banking Training Centre, where at the end of 2020 they started teaching an e-course in payments in Digital Finance. In parallel, FIC published a document with an overview of all regulatory measures, which could still be implemented in order to enable further digitalisation of Financial Services in the country. This document could be considered the

cornerstone of the communication between the public and private sectors towards the development of the FinTech industry in Serbia.

ALL WORK TOGETHER

Once the FIC report document was presented to the Central bank - National Bank of Serbia (NBS) and representatives of the Prime Minister Office, all key stakeholders agreed on 6 priority topics that will be implemented in 2021. Initiatives such as a pilot project on cash credit via an e-Gov platform, a cloud solution for remote-qualified signatures, a project regarding the acceptance of proof of electronic transaction by the Ministry of the Interior, etc. were embraced and dialogue continued.

Still, there are many initiatives missing in the country, including innovation infrastructure.



FINTECH IN THE SEE REGION NORTH MACEDONIA

FINTECH COUNTRY PROFILE

Innovation in finance and FinTech has always been a part of the financial sector in North Macedonia. However, it is in the last 3 years, that we have seen the FinTech topic becoming more and more popular, both in the public and private sectors. It all started with a workshop on FinTech between the European Fund for Southeast Europe and the senior staff of the National Bank of the Republic of North Macedonia (NBRNM). Over the years, this initiative has grown, and the discussion on FinTech has broadened its audience - including all other relevant financial regulators in the country.

2020 marked a peak when a thorough FinTech ecosystem research and mapping were released. The conducted study identified more than 160 different stakeholders in the country including financial institutions, regulators, government bodies, financial service providers, incubators and tech start-ups.

PROMOTING FINTECH INNOVATION

At the end of 2019, NBRNM launched an Innovation Gateway with the sole purpose of facilitating, encouraging, and supporting innovation in financial services, by providing information to all companies willing to pursue innovative business activities. It acts partially as a regulatory sandbox and an innovation hub that we see all over Europe - it allows fintech firms to engage with the National Bank outside of the formal regulator/firm engagement processes. At the same time, by offering legally non-binding guidance and navigation through the regulatory landscape, the National Bank is willing to consider the need for a possible change in regulation and to remove barriers for entry into new innovative businesses, while protecting the integrity of the financial sector and preventing an excessive accumulation of risks. The initiative was widely embraced by the industry and in 2020 received 24 queries, 7 of which were from foreign stakeholders.



FINTECH IN THE SEE REGION NORTH MACEDONIA

INNOVATION AT ALL LEVELS

The Strategic Plan of the National Bank for 2022 - 2024 has set nine strategic objectives which are aimed at providing conditions for efficient, innovative, and reliable financial services.

As of 2021, the National Bank of North Macedonia supports various initiatives in the country including the harmonisation of the financial services regulations with the set of laws (electronic documents, electronic identification, and trusted services) and amendments to the Law on AML/CFT. What is more, recently the National bank started an information campaign on crypto assets.

FINANCIAL EDUCATION

The Bank's efforts towards the development of the financial sector do not end with better regulation and innovation infrastructure, but also include a Strategy for Financial

Education and Financial Inclusion 2021-2025. The Strategy is created to contribute to strengthening coordination and cooperation between the financial regulators, the private financial sector, and the non-government sector, as well as to the systematic approach of all involved entities in order to strengthen the financial literacy of the population, improve the level of financial inclusion, and at the same time to provide adequate consumer protection.

THE BEST IS YET TO COME

In July 2021, the National Bank of the Republic of North Macedonia, together with the European Fund for Southeast Europe, announced their work in the FinTech industry. As they continue, the next steps are to support the development of the National FinTech strategy; with the purpose of providing regulatory certainty to all incumbent and potential players in the market, including banks, start-ups, and accelerators, and to create closer ties between the different stakeholders and the regulator.

SOFIA - THE FINTECH HUB OF SOUTHEAST EUROPE



INVESTBULGARIA
 AGENCY

STAMEN YANEV
 EXECUTIVE DIRECTOR
 INVESTBULGARIA AGENCY



Several media outlets such as Forbes, Financial Times, DW, FDI Intelligence, etc, pronounce Bulgaria a top location for establishing a Fintech business. What is the reason behind this statement?

Undoubtedly, it is very difficult to point one, two, or more reasons for Bulgaria to turn into the Fintech hub of Southeastern Europe (SEE). However, we could easily distinguish two main specifics that differentiate us not only from our neighboring countries but also from the rest of the world - quality and quantity of IT personnel and fintech education.

Firstly, Bulgaria has been ranked first in IT-certified specialists per capita in the EU, and 12th among the countries with the best developers in the world.

How did we achieve one of the best IT communities both quality and quantity-wise - education. According to data from the Ministry of Education and Science of the Republic of Bulgaria in 50+ higher educational institutions, there are more than 180 000 university students every year, out of which 8 000+ are majoring in Computer sciences and twice as many majoring in Economics and Finance. Each year more than 2,000 Computer science and about 5 000 Economics and Finance graduates enter the market.

What is more, thanks to public-private partnerships, between the academia and the Fintech ecosystem in Bulgaria, we now have several Fintech programmes, combining both Finance/Economics and Computer

SOFIA - THE FINTECH HUB OF SOUTHEAST EUROPE

sciences. As part of these programmes topics such as blockchain, data science, AI and cybersecurity for fintech are being taught, and real-life fintech use cases introduced by private sector representatives. As a result, we have an ever-increasing knowledgeable fintech talent pool with incredible potential that is being recognized globally.

We are proud to say that fintech companies such as Paysafe, Bunq, Sumup, Crypto.com, Uber Finance, Experian, Nuvei, Degiro, Taxback Group (Transfermate), etc. did not only open offices across the country and benefiting from the conditions but are also an active part of all of the above mentioned.

What does your organization do towards attracting Fintech FDIs in Bulgaria?

Invest Bulgaria Agency (IBA) is a governmental institution under the authority of the Ministry of the economy of the Republic of Bulgaria. The Agency's main goal is to facilitate potential and existing direct investors with the implementation and establishment of their investment projects in Bulgaria. This process

takes place in the form of individualized administrative services and, in principle, is divided into three stages: 1. Exchange of information 2. Site selection 3. Decision making. Furthermore, IBA and Bulgarian Fintech Association formed a public-private partnership towards attracting fintech FDIs where IBA assists with governmental support and BFA with the most efficient introduction to the ecosystem. Thus, a dedicated team of investment experts and private sector representatives are always ready to help the development of the Fintech environment in our country.



INVESTBULGARIA
AGENCY

STAMEN YANEV
EXECUTIVE DIRECTOR
INVESTBULGARIA AGENCY

GOVERNMENTAL SUPPORT TO ATTRACT FDIS



TEODOR TZVETKOV
 CHIEF EXPERT
 INVESTBULGARIA AGENCY



Are there governmental incentives towards Fintech and what are they?

During the epidemic situation and in connection with the restriction of the distribution of COVID - 19, IBA continues its activities and mission, holding online meetings to support potential and existing investors. Against the background of the dynamically changing global economic environment, companies have changed their visions and prospects. In this situation, the goal of IBA is to stay close to investors to find the best way to stimulate them, to continue their development, to assist in the restructuring of their business, or establishment of a new one in the Republic of Bulgaria.

From a fiscal policy perspective, and

in addition to the applicable 10% flat corporate tax rate and 5% dividend tax, IBA facilitates the attraction of foreign investments in the country by conducting and screening the compliance procedure related to the regional state aid in the form of retained corporate tax for initial investment projects implemented in areas with the high unemployment rate. The specific incentive measure allows up to 50% of the planned CAPEX in new investment projects to be funded with the forecasted corporate income tax of the company.

On a further note based on the applicable Investments Promotion Act (IPA), the following incentive measures are the base of our investment support:

1. Information service and shortened

GOVERNMENTAL SUPPORT TO ATTRACT FDIS



- administrative terms;
2. Individual administrative service, during the whole procedure for certification of the investment project and even after that throughout the implementation of the project.
 3. Financial support for professional training of employees for the needs of the investment project;
 4. Financial support for the construction of technical infrastructure elements to the borders of the site;
 5. Financial support for partial reimbursement of the obligatory social security contributions made by the investor for newly appointed employees;
 6. Establishment of special public-private partnership for larger investment projects in the manufacturing, R&D, or academic sectors;
 7. Cash grant for larger investment projects in the manufacturing, R&D, or academic sectors.

The implementation of the incentives is done by certifying projects, which could be divided into priority Class investment projects, investment project Class A or Class B. The certification of projects for investment class is performed at different financial thresholds, depending on the size and the sector in which the

investment is realized. For a Class B certificate, the minimum certification threshold is EUR 1 M for investment in high-tech production facilities. The minimum investment for obtaining a class A certificate is EUR 2 M. When the investment is in the high-tech and fintech services sector, the thresholds are reduced to EUR 0.5 M for Class B and EUR 1 M for Class A, respectively. For priority investment projects, the minimum certification threshold is EUR 50 M for manufacturing economic activities and approximately EUR 10 M for high-tech and knowledge-intensive sectors, which are encouraged by an additional package of measures, such as institutional support or public-private partnerships and cash grants, but are subject to certain conditions and assessment methodologies. Another alternative to applying for certification could be through the stimulation of employment by creating a pre-determined number of new jobs. This combination of incentive measures provided by the state is our key approach for attracting and supporting potential and established direct investments.

TEODOR TZVETKOV
CHIEF EXPERT
INVESTBULGARIA AGENCY

WHY BULGARIA? FINTECH SUCCESS STORY



ALEXANDER POCHINKOV
VP OF ENGINEERING @ NEXO



Nexo has been a world-leading lending institution since 2018. They were a few very disruptive years. How did that affect you?

Nexo was born in a bid to tackle the challenge of how to use your crypto in a cash-dominated world without sacrificing its potential. Three years on, we give worldwide access to fast, cost-effective, and tax-efficient funding, processing over \$30+ billion for 2,500,000+ users across more than 200 jurisdictions. Now, we are an established leader with over \$13 billion assets under management. Having become the first crypto lender to publicly open its books through a real-time audit in partnership with Armanino LLP – one of the 25 largest public accounting firms in the U.S. – we forge the path to limitless finance and lead by example.

Why did you choose Bulgaria as your headquarters? What does Bulgaria give you more?

What started as a handful of enthusiasts three years ago is now a vibrant family of over 300 world-class experts growing by the day. At least 50% of us come from TradFi and traditional tech companies. In the latter case, a vast majority of us came from internet-native consumer businesses with significant fintech inclinations. What speaks volumes is that over 23% of our team returned to Bulgaria specifically to work at Nexo, seeing the potential of our idea – our colleagues come from CERN, Bank of America to join Nexo after long years abroad. Working against the brain drain and being an innovation nucleus is a mission we hold dear to our hearts. Our firm belief is that Bulgaria has everything it needs to be a world-class tech leader, not a mere outsourcing destination. That

WHY BULGARIA? FINTECH SUCCESS STORY

happens with product companies like ours.

What role is Bulgaria playing in the success of Nexo?

The many years of financial commotion in Bulgaria have in many ways made us the underdog of the entire continent. This gives us a unique sense of empathy. Without empathy, you cannot understand your users' needs and stay relevant in the fastest developing industry the world has ever seen. We recognise the need for a new financial system which works for everyone. Crypto was invented by the people for the people with the intention to help them regain control over their own financial future – to unlock the power of their true economic empowerment. Today more than ever, we see ordinary people operate freely with complex financial terms and it is all thanks to the freedom crypto gives us. Cryptocurrencies are paving the way to a truly democratic financial system. We attribute a great deal of our success at Nexo to the ability to recognise the true needs of our users and unlock the power of their digital assets.

What is missing in Bulgaria for a fintech startup unicorn to be created?

Every day we prove that you do not need a passport to come up with ideas or create successful products, and you do not need to be in California to make the world listen. All you need to achieve global success is resourcefulness, determination, persistence and grit. This is not to say that success comes easy. On the contrary, it is the result of long hours, hard work and tears. The way to achieve it is to recognise that what you do, here and now, changes the lives of millions for the better. When success is the only option, borders lose their meaning. Just like the Skype effect, a Bulgarian unicorn is just a matter of time.



ALEXANDER POCHINKOV
VP OF ENGINEERING @ NEXO

INTERNATIONALISATION OF BULGARIAN FINTECH



BOYKO TAKOV, PHD
EXECUTIVE DIRECTOR, BSMEPA



What is the role of Bulgarian Small and Medium Enterprises Promotion Agency (BSMEPA) in the field of internationalisation of Bulgarian SMEs?

The Bulgarian Small and Medium Enterprises Promotion Agency (BSMEPA) is an administrative structure with the Minister of Economy, which implements the state policy for promoting entrepreneurship, development and internationalization of SMEs.

BSMEPA's main goal is to provide support to Bulgarian enterprises for their stable development, successful integration into the European and world economy and expanding their presence on target markets.

In September 2021, BSMEPA organised a support program for the participation of small and medium-

sized enterprises in the conference and expo Money 20/20. How did this happen and why was it important for the Fintech community in Bulgaria?

Money 20/20 is by far the biggest and most important European fintech event in 2021. With its expo and conference, it gathers in one place more than 1,250 companies providing countless opportunities for growth to fintech SMEs. Among the C-level speakers and attendees of this year's event were Temenos, Plaid, Mambu, Deutsche Bank, Trustly, JP Morgan, etc, as well as many governmental bodies and structures such as the Netherland National Bank, European Banking Authority, etc.

For the first time in the history of the biggest Fintech event in Europe, Bulgaria had its own place to present its most prominent Fintech SMEs. The governmental support and the



Bulgarian representatives of BSMEPA supported SMEs on Money 20/20 Europe, Amsterdam, the Netherlands, 2021

partnership between BSMEPA, Invest Bulgaria Agency, and BFA contributed to bringing awareness before the Fintech world for the best Fintech use cases from our country and acquaint the audience with the Fintech business climate in Bulgaria.

It is worth mentioning that our country was positioned in the most competitive area of the venue and to attract investments had to compete with Fintech ecosystems such as Estonia, the Netherlands, France, Poland, etc. In practice, Bulgaria was be placed next to the most developed Fintech countries and was given the chance to harden once again its place as the Fintech hub of Southeastern Europe

What is the future holding for Bulgarian Fintech SMEs and BSMEPA?

We express readiness to continue helping the thriving Fintech ecosystem and provide them with tools to access foreign markets, including but not limited to:

- National participations at international exhibitions within the country and abroad
- Business delegations accompanying official visits abroad
- Provision of market and marketing information and consultancy services for the business



BOYKO TAKOV, PHD
EXECUTIVE DIRECTOR, BSMEPA

CHAPTER V

Investments in FinTech

FINTECH INVESTMENTS MARKET ANALYSIS



€ 32.2 million

Invested in Bulgarian FinTech firms in 2020-2021



5 investors

From Bulgaria active in the FinTech industry



€ 6.05 million

Invested from Bulgarian investors to Bulgarian FinTech firms in 2020

GAINING TRACTION

FinTech is becoming a popular topic among investors in Bulgaria and it looks like this interest is not going away anytime soon. In the last two years, € 32.2 million were invested in Bulgarian FinTech SMEs. More than € 6 million came from 5 Bulgarian investors who saw the potential in more than 10 FinTech SMEs. The total investment of € 32.2 million was diversified in 8 different FinTech segments, but 81% of the funds went to Digital Payments business models. Thus, we might expect further development of the segment.

ATTRACTING FOREIGN INTEREST

It is important to note that the Bulgarian FinTech industry is not only interesting to the local investors but also to foreign ones. In the last two years, we saw a total of € 23.5 million coming from funds from Germany, the Netherlands, and the US. As more foreign attention is brought to our ecosystem and country we can expect a serious boost in foreign investment both in the short and long term perspectives.

DATA PROVIDED BY:



COLLABORATING WITH FINTECH STARTUPS VC'S PERSPECTIVE

**Visa
Innovation
Program**

VISA | eleven

VESELINA MARKOVA

**FINTECH LEAD AT ELEVEN
VENTURES AND VISA
INNOVATION PROGRAM**

Eleven is one of the most active VC funds in Fintech in Bulgaria. Where does this interest come from?

For almost 5 years we have been actively developing our fintech vertical and expanding our portfolio with promising companies from Southeast Europe, because we see that the intersection between finance and technology creates incredible opportunities for growth and innovation, giving value not only to the entrepreneurs and the end-users but also to more traditional market players such as corporations and financial institutions. Back in 2018, in partnership with Visa, we created a program for FinTech innovations - Visa Innovation Program - which naturally became a magnet for the best entrepreneurs in the region. We engage a serious pool of



contributors - design thinking professionals from Eleven's Design Studio, international mentors, senior advisors, VCs, and top fintech experts from Visa who work side by side with the startups and support them with product pivots, market access, fundraising, and networking, to help them grow and scale faster.

How easy is it for a Bulgarian company to find investors?

It is much easier than those from Western Europe or the US, for example. Our ecosystem is smaller, with fewer funds, but this is an advantage for the entrepreneurs who have faster and easier access to active investors in the region - through referrals, networking events, office hours, etc. Our fund manifesto has

COLLABORATING WITH FINTECH STARTUPS IN SEE REGION - VC'S PERSPECTIVE

always been to give more than money - to stay open to meetings and discussions with companies of all sizes and even when we are not a leading investor or have no direct interest in a deal, to help them with intros to appropriate funds from Europe and Silicon Valley, as well as to corporations with investment arm or angel investors.

How did you find investing during a pandemic? What are the challenges and opportunities?

Covid-19 redefined the way people operate overall, speeding up processes, making them more efficient and inclusive. We've always been part of a very vibrant, fast-paced, interconnected global network, and we couldn't think of doing things faster. Well, our industry accelerated as well - I think the time "from intro to term sheet" now is significantly reduced and it happens that we invest in teams without even meeting them in person.

This boosts productivity but affects our "one of 11" approach where the personal - family-type - relationship is fundamental. Luckily we see positive signs for recovery and can't wait to welcome our new family members.

What are Eleven's next steps in Fintech in SEE?

We've just announced the first closing of our most recent EUR 60 m fund with a focus on pre-seed and seed investments for startups with their roots coming from South-Eastern Europe. Fintech is one of our priority verticals and we are very actively recruiting companies both for our portfolio and for the Visa Innovation Program. The latter proved to be instrumental for nurturing the fintech ecosystem during the past 4 years and to create serious business momentum. Our interest in fintech is expanding, so does the local ecosystem. Despite being still young, it's very promising. We are very happy that one of the most notable examples with a pan-European presence and growing ambitions - Payhawk - is part of our portfolio and Visa Innovation Program alumnus. I believe these are exciting times for fintech in our region and I'm looking forward to witnessing its progress and future success.

VESELINA MARKOVA

**FINTECH LEAD AT ELEVEN
VENTURES AND VISA
INNOVATION PROGRAM**

CHAPTER VI

FinTech Regulation

REGULATING FINTECH INNOVATION



SVETOSLAV DIMITROV

SECRETARY AND FINTECH
REGULATION LEAD AT
BULGARIAN FINTECH ASSOC.



The Bulgarian Fintech Association (BFA) is a non-governmental, for-impact organisation uniting all interested parties in the sector of digital finance within the region of Southeastern Europe (SEE). Our mission is to bring together large FinTechs, SMEs, supporting industries, the respective authorities and academia to create a favourable environment, including an innovative regulatory framework that supports the development of digital finance solutions. In 2019, BFA became one of the co-founders of the European Digital Finance Association - the largest FinTech organisation, representing more than 13 European countries and more than 1,000 FinTechs.

In a similar vein, from the very first days of its establishment, the Bulgarian Fintech Association has been the leading player in discussions for the development of a FinTech regulatory framework, both on a national and supranational level.

The results

So far we have submitted more than a dozen industry opinions to the Bulgarian authorities on laws and regulations relevant to our industry, such as the National Strategy for Financial Literacy, Consumer Protection Law and Bulgarian VAT law. And on a European level; Digital Strategy for the EU - European Measures to Support Digital Finance in the Post-COVID-19 Context.

What's next

At BFA, we clearly understand that working on shaping EU and Bulgarian regulation is a lengthy, highly complex process of which the positive results can be achieved only with the participation of numerous players, both from the public and private sectors. BFA remains committed to the SEE FinTech community and will continue working towards achieving the goals of the ecosystem.

MARKET RESEARCH - SURVEY 2021

MARKET CONDITIONS

COMPETITIVE BUSINESS CONDITIONS

Almost every respondent considers the economic business climate in Bulgaria very attractive and the fintech ecosystem relatively well-developed.

However, it is having access to a diverse talent pool that is the most important prerequisite for the FinTech companies that have chosen Bulgaria for their headquarters.

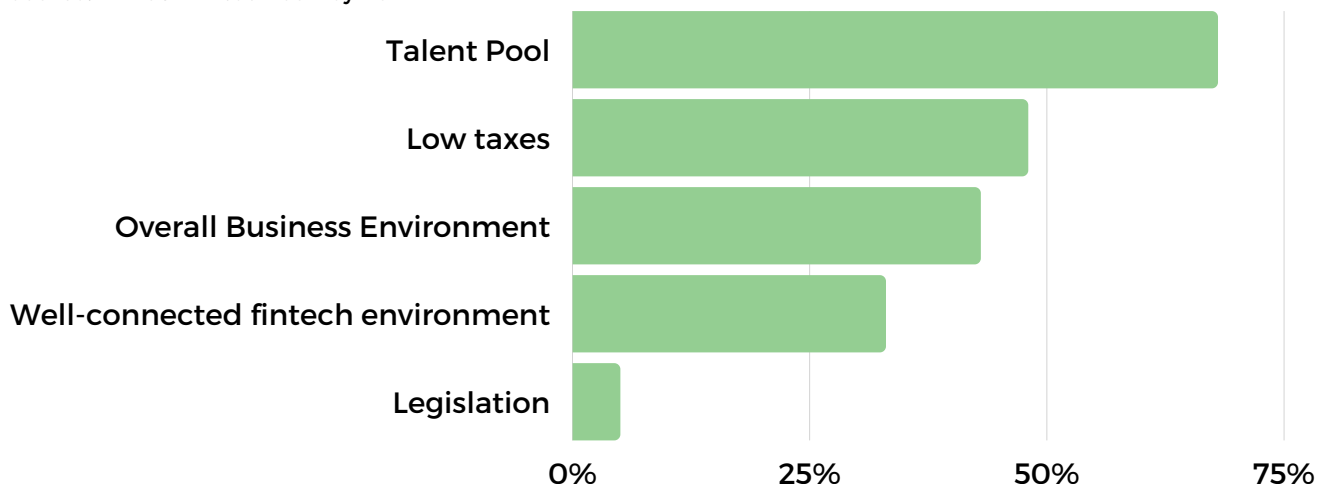
LEGISLATION - STILL TO CATCH-UP

The Bulgarian FinTech community recognises the legislative framework as the least attractive characteristic of the environment.

The question most often raised within the 2021 survey was related to the missing or incomplete innovation infrastructure both in the banking and non-banking financial sectors.

What are the biggest opportunities for a FinTech in Bulgaria?

Source: Annual Fintech Survey 2021



2021 MARKET SURVEY CHALLENGES

As shown in the figure, around half of Bulgarian FinTech representatives find the missing innovation infrastructure (innovation hubs, regulatory sandboxes, etc.), the lack of governmental support, and the lagging regulatory environment the leading challenges in our region. These shortages are a crucial part of BFA's short and long-term strategies and in the following pages, we show how we are addressing them with the help of all respective authorities in Bulgaria.

It should be pointed out that a higher level of education and expertise is considered a deficiency of the ecosystem by less than 30% of respondents. It is most likely this same reason that attracted so many global FinTech companies to choose Bulgaria for their R&D centres.

Another positive finding of this survey is that less than one in three believe it is hard to access financial resources in our region. This shows that despite all challenges, investors are positive about the development of the industry in Bulgaria.

In conclusion, we believe that against the strong push of the private sector and the ever-increasing interest in FinTech, the Bulgarian FinTech industry is predestined for a bright future.

What are the main challenges for FinTech in Bulgaria?

Source: Annual Fintech Survey 2021



INNOVATION INFRASTRUCTURE

52%



GOVERNMENTAL SUPPORT

48%



REGULATIONS

43%



HIGHER LEVEL OF EDUCATION AND EXPERTISE

29%



ACCESS TO FINANCIAL RESOURCES

29%

REGULATE FINTECH: MISSION POSSIBLE

PETAR DJELEPOV

MEMBER OF THE
FINANCIAL SUPERVISION
COMMISSION

In the background of the constantly offered innovative opportunities, we should not ignore the risks they carry. That is the reason why the Financial Supervision Commission (FSC), as a regulator, should find a balance between promoting innovation and protecting consumers from the negative aspects and business disruptions.

In order to keep up with the new digital environment and expectations of both participants and end-users, we must constantly assess and, where necessary, adjust the regulatory framework to adequately deal with changed risks and business models. In order to ensure and adequately evaluate the new product and business models, we conduct regular surveys on how innovations work and how they are applied and accepted among the companies supervised by the FSC. FSC, as part of the European System of Financial Supervision, is participating in numerous initiatives at European level aimed at monitoring, analysing and developing



new regulatory framework and tools in the constantly evolving field of digital finance. Additionally, the FSC organises and conducts educational programs aimed at increasing the financial literacy of consumers of financial services.

In line with the consistent policy pursued by the FSC with regard to innovation and in response to the digital finance package adopted by the European Commission, the FSC adopted a Strategy for monitoring financial innovation for the period 2021-2024. It builds on the previous strategy and outlines, in the long run, the direction in which FSC would be committed to developing its supervisory activities and implementing the harmonisation of the national regulatory framework and practices in the field of financial innovation at the EU level. The strategy outlines the main approaches of action - monitoring of FinTech development, assessing the possible risks for the market and for the consumers, and potential actions

REGULATE FINTECH: MISSION POSSIBLE



PETAR DJELEPOV
MEMBER OF THE
FINANCIAL SUPERVISION
COMMISSION

and measures to minimise them in order to maximise the benefits of growing interest in innovative financial products and/or technologies in compliance with regulatory requirements.

In addition to the existing Innovation Hub, which contributes to reducing the response time of the Financial Supervision Commission to questions and issues raised by companies of innovative products with regard to the regulatory and legal status and the possibility of easy and fast access to information, the new Strategy provides preconditions for analysis of the need for developing a Sandbox. The possible introduction of this international practice will allow FinTech companies to test the products in a real and secure environment while the supervisory body will be monitoring this process in order to adapt its regulation/supervision to the technological progress.

In conclusion, regulating insurance, investment and pension insurance sectors is a multilayered, complicated task, possible only if the digital transformation of this sector is closely guided with initiatives for promotion by the respective authorities.

BULGARIAN FINTECH REGULATORY LANDSCAPE

 paySera

MARTIN BOGDANOV
CHAIRMAN OF THE
BOARD OF DIRECTORS,
PAYSERA



Paysera is providing financial services globally. Your company has achieved a lot. What are your new goals?

Paysera Group is a global company that provides payment services across the World. 2020 was very successful, despite the Covid-19 pandemic: total revenue reached 12.9 mil EUR with EBIDTA of 4.8 mil EUR, 6.5 mil transfers, amounting to 6 billion EUR. The year 2021 also started in a positive attitude, as new partner countries started operations – Spain, Kosovo, Albania, Ukraine.

Paysera Bulgaria started 2021 with some strategic projects, like establishing a subsidiary in Romania, which should utilise Bulgarian market experience and boost Paysera business in neighbouring countries. Also, in March

2021, Paysera Bulgaria started the application process to be licensed as an electronic money institution by the Bulgarian National bank. Additionally, we continue with our product/service developments in Bulgaria: offering accumulative accounts for starters of new businesses; providing physical POS-terminals via partners; linking vPOS to a new payment type called Open Banking (in compliance with PSD2) by adding all Bulgarian banks, Revolut; selling online Gold.

In summary, we are prepared to provide our customers with any payment services offered by a digital bank – we aim to become a fully viable replacement option to traditional banking.

What regulatory support do you need to achieve these goals?

Well, at the forefront of a payment service provider (PSP) like Paysera, there are a few issues to consider:

- Each PSP needs a sponsor bank to get access to payment infrastructure and to provide its services. Our FinTech community is united around the opinion that PSP should directly access the country's payment infrastructure – this will be a win-win situation for both FinTechs and banks because this will relieve banks of the KYC/AML processes of PSP customers.
- Recognition and unification of KYC identifications between all PSPs in payment infrastructure. Currently, not all banks accept KYC identification made via EMI, and it differs as a process across different countries in the EU.
- Change how customer funds within EMI are treated – to liberalise and provide the ability to invest part of customer funds in high liquidity assets.
- Equalizing legal requirements between card payments and cash on delivery in e-trading – still, due to unequal treatment, cash on delivery is used, in some cases, as a grey zone, which could be used by fraudsters. At the same time, the state loses taxes from undeclared turnover.

If the regulator solves these rebuses via implementation of the best European

practices, banks and EMIs will work on a fairer platform, and as partners.

You operate in 180 countries around the world. Which countries have the best regulatory landscape, and which practices do you suggest we implement in Bulgaria?

There are many good examples of the regulatory landscape being designed to support and fasten the digitalization of payments. This is how we might fight efficiently against the grey economy and AML.

A great example in that direction was in China, where the local government was initially sponsoring each digital payment via Alipay with 5 CNY. Now we see that even small street retailers accept payments via QR codes rather than cash, which is amazing in terms of an achieved scale.

Such an approach in the EU would be inappropriate, where the landscape is usually overregulated. But the EU does have the ability (based on best practices in different countries) to implement changes using the harmonisation of legislation to the benefit of all – it would be enough if, in 2nd question issues, if it were implemented as soon as possible in the forthcoming EU regulation review.



MARTIN BOGDANOV

**CHAIRMAN OF THE
BOARD OF DIRECTORS, PAYSERA**

PROMOTION OF DIGITAL FINANCE IN THE EUROPEAN UNION



JAN CEYSSENS

HEAD OF UNIT
DIGITAL FINANCE (FISMA B.5), EC

On 24 September 2020, the European Commission adopted a Digital Finance Package. What is it all about - how did it all start and how did the Commission create this Strategy?

The Digital finance package is based on broad public consultations and digital finance outreach. It includes a digital finance strategy and legislative proposals on markets in crypto-assets (MICA), the DLT pilot, and on a digital operational resilience act (DORA), as well as a renewed strategy for modern and safe retail payments. The objective of this package is a competitive EU financial sector that gives consumers access to innovative financial products while ensuring consumer protection and financial stability. We want to make sure that

our financial regulation and supervision are adjusted to ensure that all risks are properly covered along the ‘same activity, same risks, same rules’ principle.

Embracing digital finance would unleash European innovation and create opportunities to develop better financial products for consumers, including for people currently unable to access financial services. It also unlocks new ways of channeling funding to EU businesses, in particular SMEs.

On 3 June 2021, the European Commission proposed a framework for a European digital identity for use for citizens, residents, and businesses in the EU. What are the

benefits for the financial sector and how the new trust services under the proposal will strengthen the EU framework for cross-border electronic identification?

The financial sector is extremely dynamic - digital payments are growing at an estimated 12.7% on an annual base and are forecast to reach 726 billion transactions annually by end of 2020. Sectors that have strong requirements regarding customer identification and in particular the banking and finance could benefit extensively from private and public trusted digital identity solutions. As currently, it is not the case, the result is that business opportunities remain untapped and secure identification costs for the operators in the financial sector remain overly excessive.

Digital identity is more and more acknowledged as an essential ingredient of successful customer onboarding at financial institutions. Customers are increasingly overwhelmed with the proliferation of paper-based documents needed to digitally activate new financial services. Once on-boarded, then the customers complain about the different passwords' management, the data privacy and are concerned about data breaches.

The vision of eIDAS was to build a network to connect electronic identity schemes created at the national level. The system was slow to establish - after 6 years since adoption, only 14 out of 27 Member

States are connected and only 7 Member States offer mobile identification schemes. In addition, the system in practice works only for public sector applications, but this is only a small part of our internet use. The cross-border private sector use cases are very limited. Indeed, trusted eIDs cannot yet be used widely and conveniently in private transactions and market-based identity solutions are not currently supported by eIDAS Regulation.

Let me summarize Commission's vision for a European Digital Identity in three lines:

- We want to offer trusted digital identification to all European citizens and businesses.
- We would like to make this European Digital identification work across the internet, recognized by service providers public or private.
- Finally, we want to create a framework that allows for the protection of personal data and privacy.

Regarding the challenges we have to tackle together, I will be brief: the main challenge is time. We need to swiftly provide a clear technical landing point for the Member States and private providers to align their systems and ensure that the ecosystem can function in a seamless way. This future system will be built together with the Member States and the Member States will remain the trust anchor affirming the identity of a person,

Earlier this spring the European Commission adopted a proposal for a regulation laying down harmonised rules on artificial intelligence (Artificial Intelligence Act). What will be the impact on the financial sector?

The Commission recently presented an Artificial Intelligence package, which included a proposal for a regulatory framework for Artificial Intelligence. The proposal for a proportionate, risk-based regulatory framework is aimed at ensuring that Europeans can trust what AI has to offer and creating a level playing field for the placing of AI systems in the EU. The proposal significantly strengthens the EU role in promoting global standards and rules for human-centric AI.

The first review of the Coordinated AI Plan was published together with the legal framework on 21 April. The 2021 review puts forward four key sets of proposals:

1. Set enabling conditions for AI development and uptake in the EU
2. Make the EU the place where excellence thrives from the lab to the market.
3. Ensure that AI works for people and is a force for good in society
4. Build strategic leadership in high-impact sectors

It defines concrete action and funding possibilities on how the Commission together with Member States and private players can accelerate, act and align to seize

opportunities of AI technologies and to facilitate the European approach to AI that is human-centric, sustainable, secure, inclusive and trustworthy.

Let me summarize Commission's vision for a European Digital Identity in three lines:

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The European Central Bank (ECB) and the European Commission services are jointly reviewing at a technical level a broad range of policy, legal and technical questions emerging from a possible introduction of a digital euro. What

will the introduction of a digital euro change? What to expect?

A digital euro could be a new form of the euro, a complement to cash, offering new payment opportunities for retail users and for autonomous machine-to-machine payments. It would be an electronic form of money that is credit risk-free just like cash.

A digital euro could contribute to (i) supporting the digitalisation of the European economy; (ii) further enhancing retail payments in euro; (iii) the continued supply of public money in digital forms in the face of the declining use of cash as a means of payment; (iv) protecting Europe’s open strategic autonomy against foreign central bank digital currencies and private foreign digital means of payment in the euro area and (v) increase the international role of the euro. The degree to which these objectives can and will be achieved with the introduction of a digital euro depends to some extent on its key design features.

The ECB and the European Commission services are currently jointly reviewing at a technical level a broad range of policy, legal and technical questions emerging from a possible introduction of a digital euro, taking into account their respective mandates and independence provided for in the Treaties.

What could a Member state do to promote the development of digital finance? What are the concrete

steps?

The Commission's objective for digital finance for the next years is for the European financial sector to fully embrace and drive the digital revolution in finance. To succeed, we need to ensure that consumers and businesses can fully benefit from new technologies. Europe must take full advantage of this in its recovery strategy to help repair the social and economic damage brought by the pandemic.

The digital revolution concerns not only regulated entities but is relevant also for national authorities. On the one hand RegTech solutions help regulated entities to comply more effectively and efficiently with supervisory obligations and the Commission is committed to supporting the uptake of innovative tools to facilitate supervisory reporting by regulated entities. On the other hand, SubTech solutions help national regulators cope with the challenges of supervising new investment products. Small regulators have especially a lot to gain from SubTech solutions because they can optimise their supervisory capacity and help improve the use of resources.

In addition, the Commission, together with the European Supervisory Authorities, plans to develop a strategy on supervisory data to help ensure that:

- supervisory reporting

requirements

- full use is made of available international standards and identifiers including the Legal Entity Identifier, and supervisory data is reported in machine-readable electronic formats and is easy to combine and process.

This will facilitate the use of RegTech tools for reporting and SupTech tools for data analysis by authorities.

The work on digital finance is broad and horizontal, it covers many areas like retail investments, artificial intelligence, links with other sectoral legislation, and interconnects with sustainable finance. The Digital Finance Strategy also involves work related to data, as in access, storage, use, reuse and availability of data, like the European financial dataspace, the European digital platform and an open finance framework.



JAN CEYSSENS

HEAD OF UNIT

DIGITAL FINANCE (FISMA B.5), EC

SUPRANATIONAL FINTECH SUPPORT



European Bank
for Reconstruction and Development

JACEK KUBAS

ASSOCIATE DIRECTOR, CAPITAL
MARKETS DEVELOPMENT, EBRD

In recent years, EBRD has been actively promoting innovative technologies across Europe. How is the Bank supporting Fintech across the EU?

The EBRD is committed to supporting our countries of operations in the EU through the creation of an efficient, enabling environment for fintech, driven by a combination of investments, legal reforms and policy engagement.

We facilitate innovation by implementing regulatory sandboxes in Greece, Poland and Estonia and directly support accelerators in the Baltics, where we partnered with Startup Wise Guys and ROCKIT. We have observer status in the Global Financial Innovation Network and have an active dialogue on fintech



matters with the European Commission, the European Banking Authority, the European Forum for Innovation Facilitators, pioneer fintechs and other stakeholders.

In parallel, financial investment and development projects with a clear transition impact are at the heart of what we do. The EBRD is supporting the development of the venture capital asset class through investments in early stage technology companies via the €100m Venture Capital Investment Programme and investing as a Limited Partner in VC funds. We continue to remain focused on providing active leadership in the development of technology and venture financing ecosystem.

EBRD is also working towards promoting Fintech initiatives in the region of Southeastern Europe (SEE). Why is it important for the Bank to focus on the financial sector of the region and how is EBRD helping Fintech companies and initiatives of

Southeastern Europe?

Fintech represents a true power of change in the financial sector, by affecting how customers interact with their banks to positively contribute to financial inclusion and enabling access to finance for businesses. SME banking in particular has been typically underserved by banks, and fintech would expand access to finance for viable businesses who would otherwise be closed out from the formal financial sector. Furthermore, approximately 40% of the SEE region population is unbanked (people who do not have a bank account) which represents another crucial area for fintech to achieve substantial progress in.

Now more than ever, the COVID-19 pandemic and its economic consequences render it necessary to accelerate the pace of engagement of all stakeholders and step up the actions in Fintech. This is particularly important in order to prevent the creation of a digital divide within and between the countries and their societies.

The EBRD's Star Venture programme provides advisory and other support to incubators and accelerators in the Western Balkans, with the aim of allowing some of their start-ups to raise additional funding from investors and advance with the development of their technology-driven products and services. Overall, the EBRD remains actively keen to carry on supporting the Southeastern

Europe region in leveraging the benefits of the digital transition.

Helping private sector initiatives and companies is relatively easy but how is EBRD supporting governments in the SEE region to improve their Fintech regulatory landscape? Tell us more about the regulatory sandbox in Greece.

The EBRD regularly works with governments and authorities in countries of operation to create a supportive regulatory framework, build regulatory sandboxes and design roadmaps for the creation of a Fintech ecosystem. Fostering this huge potential is an increasingly important part of the Bank's work – as an investor, a policy adviser and a cooperation partner.

We recently worked with the Bank of Greece in launching its regulatory sandbox in Athens in June 2021. One of the challenges that Greece has to tackle is the slow digital transformation of its economy where it lags behind its peers. This project builds on the existing work the Bank of Greece has already done through its Innovation Hub, and the sandbox will function as a live testing environment that can bring positive results, especially given the complexity of applying the Greek legal and regulatory framework surrounding financial services on technology-driven financial products. Customised guidance and active dialog will be offered to participants through this sandbox. The sandbox is

open to prospective applicants on an ongoing basis throughout the year, with applications reviewed against the eligibility criteria by the Bank of Greece. Aspects of the proposed service to be tested in the sandbox will need to leverage emerging or existing technology in an innovative way, to provide services or products or improve an existing financial activity within the Greek financial services market. Ultimately, the new framework places Greece among the pioneer countries in the EU that have ventured into regulatory sandboxes in order to foster innovation.

What is the future of Fintech in the SEE region?

We are very much looking forward to the continued rise and participation of Fintech in the SEE region. Digitalisation was already a major trend pre-Covid-19, affecting the future of work and indeed all sectors in which the EBRD operates. Accelerating the digital transition is a priority area under the EBRD's Strategic and Capital Framework from 2021 - 2025, and we believe that technology can be a key enabler of transition progress within our countries of operations.

There is no sector untouched by these technology disruptions, albeit with different levels of intensity, opportunity and risks. Technology - especially digital technology - is opening opportunities to drive competitiveness, inclusion, integration and resilience. At the

same time, technology is also disrupting the way sectors, businesses and consumers function and interact. The EBRD currently invests approximately €500m per year in the Financial Institutions sector within the SEE region, and we hope to see a growing proportion of this amount going towards viable fintechs in the future.



European Bank
for Reconstruction and Development

JACEK KUBAS

ASSOCIATE DIRECTOR, CAPITAL
MARKETS DEVELOPMENT, EBRD

CHAPTER VII

Technologies in FinTech

TECHNOLOGIES - SURVEY 2021

In the following section, we outline some of the key findings of the FinTech survey conducted within the Bulgarian FinTech ecosystem in 2021. Specifically, the data below focuses on the technologies Bulgarian FinTechs apply on a daily basis.

Although the analysis might not be considered representative for the whole ecosystem, it does shed light on the challenges and opportunities faced within the adoption of contemporary FinTech technologies.

BIG DATA AND DATA ANALYTICS

Big Data and Data Analytics are being applied by almost 3/4 of the Bulgarian FinTech ecosystem. As technologies, they are powerful tools for creating a more personalised customer experience and providing customers with more relevant content. Furthermore, they allow us to predict future behaviour and are often used in fraud detection systems for spotting unusual transactions.



71%



43%

AI & MACHINE LEARNING

Less than half of Bulgarian Fintech companies state that they use Artificial Intelligence and Machine learning. The most likely reason for this fact is that these technologies are still relatively new, and their application for financial solutions is to be further developed.

TECHNOLOGIES - SURVEY 2021



20%

BLOCKCHAIN

Nowadays, most people relate the use of Blockchain with Crypto and Distributed Ledger Technology. However, it has numerous applications ranging from cybersecurity, digital identity solutions to investing and lending. BFA survey shows that Bulgaria's FinTech industry is still relatively new and skeptical about its implementation in finance.



ROBOTIC PROCESS AUTOMATION

Robotic process automation (RPA) is a tool to automate routine and repetitive processes. It is usually a software bot that performs activities such as data entry, data extraction, and invoice processing. RPA transforms workflow and organisations by making them more profitable, flexible, and responsive.

RPA IN BULGARIAN FINTECHS

Only one in five Bulgarian fintech companies apply RPA in their daily work. This might signify that Bulgarian fintechs' processes are mainly processes that require more human intervention and RPA is almost impossible to be implemented.



20%

WHAT'S NEW IN BANKING - FINTECH BANKS' INITIATIVES

When people talk about innovation and technology in finance, the term "FinTech" has become synonymous with new business processes, services and products that completely change people's understanding of financial and banking services. However, we have to point out that FinTech started in traditional financial institutions where technological progress was implemented.

Nowadays, the very same technological urge force traditional financial institutions to transform their way of working and come up with innovative FinTech solutions. Combined with the COVID-19 pandemic and the social distancing measures all banks have taken bold steps to digitalise their services.

BULGARIAN BANKS AND FINTECH

In 2021 we see almost all of the Bulgarian banks offer loans acquired 100% digitally, mobile applications to make instant payments, digital identity solutions, virtual POS terminals for retailers and many more.

DIGITAL IDENTITY

The most notable example in Bulgaria are **Mastercard** and **Visa's** token services that further accelerate the digitization revolution with a full

range of token management tools and risk control tools to protect mobile and digital transactions.

Another example is **Central Cooperative Bank** which introduced biometric data confirmation instead of the previously used SMS code method. In a similar vein, **D Commerce Bank** has introduced Mastercards' two-factor biometric authentication for online transactions again as a step towards more secure online payments.

The same feature was introduced by **International Asset Bank** allowing cardholders using **Mastercard Identity Check** to perform quicker, secure and easier online transactions. **Municipal Bank AD** has also followed suit and introduced its Mastercard

WHAT'S NEW IN BANKING - FINTECH BANKS' INITIATIVES

cardholders a free two-factor method of authentication as a combination of static and dynamic passwords.

Recently **United Bulgarian Bank** introduced 3D static and dynamic secret codes to authorize online payments. UBB's electronic services portal UPAY provides registered and unregistered users the opportunity to pay utility bills, taxes and credit obligations once again accelerating the implementation of secure online payments.

MOBILE WALLET & APPS

Investbank launched the mobile application Ibank Mobile which helps customers easily find the nearest ATM location or financial center as well as fast-tracking of exchange rates, bank rates and interest rates.

ONE wallet by **Postbank** is the latest service in the rich portfolio of digital solutions that Postbank is developing for its customers. The mobile wallet is a last-generation high-tech application that is in line with the strategic framework for the development of the ecosystem of the

financial institution's digital banking channels.

The bank's customers can use ONE wallet by Postbank for payments in all retail outlets in Bulgaria and abroad wherever contactless POS terminals are available.

The Digital Wallet is an integrated functionality in Bulbank Mobile the digital wallet of **Unicredit Bulbank** which makes it possible for customers of the bank who have mobile phones with Android OS to digitise their Visa or Mastercard cards and then to make contactless payments with their mobile phone.

Bulgaria-based payment service providers (PSPs) Paynetics and phyre have joined forces to launch an e-wallet solution for **Bulgarian American Credit Bank (BACB)**. Bank customers using B@CB Pay can now access features like Tap to Pay, faster P2P transactions, bank transfers and digitalised loyalty cards, vouchers and tailored offers. They will also benefit from additional features like lending, utility payments and business accounts, in the coming months.

TECHNOLOGIES IN FINTECH



ASSIA MARINOVA,
CHIEF MARKETING
& SALES OFFICER

Bright Consulting, you are a consulting company in the field of AI and ML. These are still new technologies. What are the challenges when implementing them?

Many companies struggle with the time and cost it takes to adopt AI, the lack of data science expertise and trust in the accuracy of business predictions. We are seeing a lot of companies still experimenting with AI & ML with no clear roadmap on how to achieve visible results across all areas of the business. Yet they know they need to act fast to gain a competitive advantage.

It often takes many months for the realization of an AI project due to the manual development of ML models for solving business problems. Lastly comes the question of whether the predictions can be trusted by the people as many AI/ML solutions are third-party black boxes with no business explanation of what stands



behind the model.

What are some of the ways to address these challenges?

The development of ML algorithms can be a time-consuming and expensive process, so we were looking for a way to automate the journey so we can get faster to real business results. Through automation, we make machine learning accessible to business analysts and business professionals and allow data scientists to accomplish more in less time. In our projects we partner with the pioneer in automated machine learning Datarobot. In our latest ML project with Econt, we have managed to decrease the time to build predictive models that unlock value in data from 6 months to just 40 days.

The right approach is to focus on the value that your data brings, find the right opportunities to make a business impact from all deployed models and increase the accuracy of

TECHNOLOGIES IN FINTECH

the predictions.

What are the most common uses of these technologies in Fintech, and in which segments are most commonly used?

Some of the most common use cases to gain business value are credit scoring & loan approval, marketing optimization with Predictive Product Recommendation, customer lifetime value, Fraud & AML (financial crimes).

What opportunities are they creating for businesses?

Every organization (and this applies not only to Fintech) is looking for the same thing: RESULTS. The big advantage of adopting AI innovative technologies is to solve complex problems fast and make accurate predictions to drive better business results. In all corners of Fintech – from payments, investing, lending, digital wealth, personal finance, capital markets – firms are looking to leverage AI and predictive modeling to increase revenues, grow their customer base, improve efficiency, and manage risk.

What is the role of consultants in Fintech nowadays?

We see the consultant as a partner to the organization creating jointly a strategy to unlock business value from the data. We consider that the role of the consultant is to make AI technologies more accessible, to reduce the time required for their implementation, and to increase the productivity of technical teams by enabling them to develop and test a much larger number of models in a much shorter time.



ASSIA MARINOVA,
CHIEF MARKETING
& SALES OFFICER

FINTECH TRENDS OF THE DECADE

VANGAVIS

KALOYAN RATCHEV

FOUNDER OF VANGAVIS,
CO-FOUNDER OF THE AI
CLUSTER BULGARIA AND THE
BULGARIAN FINTECH
ASSOCIATION.



The banking sector has seen a lot of changes in recent years. Which ones do you find the most significant?

The most significant changes in the banking sector are the consequences of a general and global digitalization process, followed by an unbundling process and the rise of fintech startups. Fintech often cuts a specific piece of the traditional banking services, and optimizes it for a better user experience. In that sense, open banking became a significant game-changer. When you add technologies like Artificial Intelligence, data analyticity or blockchain to this setup, you are able to analyze, score, personalize, manage and even predict specific customer behaviors. In addition, a significant amount of investment money faced the market, which led to a boom in the sector.

Is Fintech on the way to replacing traditional banking?

The fundamental basis of banking and finance is trust. Therefore, traditional banks still have a solid argument against upcoming fintech startups, but a smooth switch to Gen Z customers will be challenging. Traditional banks have a chance to survive if they can adapt to the changes. Fintech is already all over the place, they dominate payments, e-commerce, lending, digital currencies, asset tokenization, plus sectors like insurance, health, trading and even green finance. In the future, banks will still have their role in the market, however, there is a risk of them being seen only as a provider of specific infrastructure without direct access to the customer.

Fintech can handle issues like security, cybercrimes, confidentiality, and digital fraud. But what are the challenges Fintech faces in this sector?

FINTECH TRENDS OF THE DECADE

Cybercrime, privacy issues and digital fraud will still remain relevant challenges for the financial sector in our decade. Artificial Intelligence can be used as a threat and a problem solver. The technology itself is neutral. Additional future challenges for Fintech will include the development of green finance solutions, regulation of crypto, and market manipulations in the trading sector.



VANGAVIS

KALOYAN RATCHEV

FOUNDER OF VANGAVIS
CO-FOUNDER OF THE AI
CLUSTER BULGARIA AND THE
BULGARIAN FINTECH
ASSOCIATION.

HOW FINTECH REVOLUTIONISE E-COMMERCE



DIMITER GURDJILOV
CHIEF COMMERCIAL OFFICER
SETTLE



What is the future of e-commerce?

The future is already here with the mobile commerce share in global e-commerce expected to reach 72.9% by the end of 2021, growing at such a rate that hasn't been seen before. 1,3 bln people are predicted to use a mobile payment app worldwide by 2023 and 39% of them claim they would use mobile payments more often if more shops are allowing it. Marketers are now expecting m-commerce to be the main channel for online shopping, with as much as 87% of shoppers engaging in online product search before buying. The trends are clear and there is hardly going back, so we at Settle offer a top-notch solution for both customers and e-commerce businesses.

How do instant payments help customer experience?

Just think of how many times each of us has dropped their shopping during the checkout process only because of clumsy payment procedures - being redirected to suspicious vpos and asked to enter sensitive card details, then go through a 3DS verification trying to get all static and dynamic passwords correct, struggling with OTPs. With apps like Settle this whole journey is substituted with a simple swipe. The app also allows you to choose which funding source (card, account or a credit line) you want to use for a particular transaction. All this - completely secure as no sensitive payment details are shared with the merchant or other third party.

HOW FINTECH REVOLUTIONISE E-COMMERCE

On the other hand cash-on-delivery, regular VPOS payments, or bank transfers take time for accounting and even more time to refund when needed. In the best case, the customer will receive their funds within 14 days after the returned article is received back in the warehouse. With mobile payments, the refund takes just a few seconds and the accounting process is as easy as the transaction itself. Last but not least is the one-click check-out option which will very soon be available. This will provide customers with an even smoother and faster shopping experience by allowing them to opt-in for sharing some of their personal details such as preferred delivery address or t-shirt size and save themselves precious time from filling-in forms.

For whom is an instant payment created?

For every contemporary person that values their time, seeks a rewarding shopping experience, and cares about security.



DIMITER GURDJILOV
CHIEF COMMERCIAL OFFICER
SETTLE

FUTURE OF FINTECH - EMBEDDED FINANCE



IVO GEORGIEV

CO-FOUNDER/EXECUTIVE
CHAIRMAN OF PAYNETICS

Embedded finance is about making every company a fintech and providing retailers, telcos, etc. with banking-like services offered by nonbanks. How does embedded finance help to retain customers and increase their lifetime value?

The beauty of embedded finance is that you do not really need to be a fintech to offer fintech services. This is all taken care of by the providers of these services. This is what makes the trend so powerful. At Paynetics we design, build and operate these products so that companies can focus on their core business whilst benefiting from cutting-edge financial products.

Embedded finance allows businesses to invigorate their proposition and build a competitive advantage. By offering a payment service, they entice their clients to stay within their ecosystem, which reduces churn and



grows loyalty. Companies can also improve their communication with their customers as they harvest a wealth of transaction data. Finally, they become part of the value chain of payments, reducing costs and creating new revenue streams.

What impact will new services have on consumer expectations?

It is a self-reinforcing loop - on one side the growth of embedded finance is driven predominantly by the change of consumer expectations, on the other, as more is offered consumers get more demanding.

Today customers are requiring a seamless experience. For them, finance is not about the product, it is part of an experience. Consumer loyalty is also changing - their brand loyalty is mostly with non-financial brands, they are not loyal to the banks and they would probably not

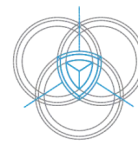
FUTURE OF FINTECH - EMBEDDED FINANCE

like to visit one ever. And as the new generations are with digital DNA, everything needs to be on mobile. Finally, the consumer also wants a more relevant relationship with the merchants, service provider, etc. Embedded finance weaves the transactions data into another context, creating a vast number of possibilities, as it is really the first time where payment data can be properly used.

As Finance as a service is getting more traction, who are the winners and losers?

The biggest winners will be the non-financial companies who can embed the finance solution into the existing proposition, leveraging their customer base. A prime example is large-scale platforms, connecting consumers with merchants. Fintechs and newcomers are next in line to benefit as they have at their disposal off-the-shelf products to incorporate in their business model, saving time and money.

The big losers will be the traditional banks institution because part of the value chain is being taken away from them and customer loyalty shifts to brands and experiences.



PAYNETICS

IVO GEORGIEV

CO-FOUNDER/EXECUTIVE CHAIRMAN OF PAYNETICS

WHAT'S NEW IN FINTECH



MAXIM KOCHNEV CEO OF MYPOS

MyPOS is one of the biggest and most prominent companies in Bulgaria. What are the challenges you have been facing lately?

COVID-19 posed big challenges to many business owners and it wasn't different for our clients. Many had to close due to the restrictions and some had a hard time bringing in revenue. myPOS responded with two products that help merchants: myPOS Glass and myPOS Online. myPOS Glass turns any Android smartphone, which supports NFC technology, into a POS terminal. myPOS Online, on the other hand, is a service that helps SMEs launch free online stores paying only a small transaction fee when they make a sale.

What are the opportunities when serving more than 30 markets in Europe, including Switzerland and the UK?

Serving many markets, we clearly see that COVID changed the way people make payments and we have an

opportunity to help merchants respond to these changes. MyPOS differs significantly from traditional payment solutions on the European market, so we have the opportunity to expand our market share. What sets us apart is that, in addition to a business account, card and terminals without monthly fees, we also offer value-added services that SMEs need on a daily basis. MyPOS is the first platform to give merchants a chance to accept card payments and receive their money immediately, no matter if the transaction was performed during business hours or on a weekend, and behind our success is not only an innovative product, but also a team of over 300 highly qualified professionals in the Netherlands, UK, Austria, Portugal, Italy, France, Belgium, Romania and Bulgaria.

Where is MyPOS headed? What are your plans for growth?

Our plan is to continue providing SMEs with new useful solutions that are currently available only to the large players. We are also planning to expand into new markets outside Europe.

METHODOLOGY

Main terminology and definitions

FinTech firms are enterprises whose core business is related to the creation or use of technologies, enabling innovations, facilitating the supply, access and/or usage of financial or insurance services, including technologies in payments, money transfer, insurance, digital lending, personal finance and savings, digital banking, investing, debt collection, accounting, capital markets, credit scores and analytics, mobile wallets, and payroll and benefits. In 2021, we have identified a total of 135 companies operating in the FinTech industry in Bulgaria. They were collected through desktop research from various sources, including the Commercial Register, part of Registry Agency of the Republic of Bulgaria and the Register of non-profit legal entities, Crunchbase, Dev.bg, news portals, BFA, and external databases. We estimate that the companies included in the report represent more than 95% of all Fintechs operating in Bulgaria, which provides for reliable, comparable, comprehensive and independent data about the market stakeholders.

For the analysis of the industry, we applied the Taxonomy of FinTech of the Centre for Alternative Finance at the University of Cambridge University. Following this taxonomy, we divided FinTech business models and therefore all FinTech companies into 13th categories, which cover the whole range of products and services developed by the companies in the industry:

1. **Digital Lending** - Platforms, individuals or institutional funders, providing loans directly to a business borrower or consumer. Individuals and/or institutional funders purchase debt-based securities, unsecured bonds, or invoices and receivables from a business at discount.
2. **Digital Capital Raising** - Individuals or institutional funders purchasing or providing equity, shares or debt.
3. **Digital Banking** - Banking and non-banking enterprises providing exclusively digital banking services.
4. **Digital Savings** - Companies for fundraising and saving opportunities.
5. **Digital Payments** - Providers of remittances services, digital means of payments, digital means of payments, Issuers of electronic funds, facilitator of transfers through a mobile device, providing hardware or software for capturing payments.
6. **Digital Asset Exchange** - Platforms for Order-book, peer-to-peer exchange, trading and clearing, brokerage services.
7. **Digital Custody** - Software and Hardware Wallet, vault services, key management services.
8. **InsurTech** - innovative technologies and data analytics for the insurance business as well as (re)insurers selling policies digitally, excluding standard insurance corporates.
9. **WealthTech** - investment and wealth management platforms and analytics tools.
10. **RegTech** - innovative technologies, which address regulatory challenges in financial services, including audit, risk, and regulatory compliance software.
11. **Alternative Credit & Data Analytics** - Alternative Credit Rating Agency, Credit Scoring, Psychometric Analytics, Sociometric Analytics, Biometric Analytics
12. **Digital Identity** - Security & Biometrics, KYC Solutions, Fraud Prevention & Risk Management
13. **Enterprise Technology Provisioning** - API Management, Cloud Computing, AI/ML/NLP, Enterprise Blockchain, Financial Management and Business Intelligence, Digital Accounting, Electronic Invoicing

Bulgaria's FinTech Mapping 2021

The mapping was developed in collaboration with Innovative Sofia and represents FinTech community of Bulgaria as of October 2021. All rights reserved. The report was prepared in July-October 2021.

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We are very thankful to the representatives from the Fintech industry that took part in our Annual Fintech Survey 2021 and Women in Fintech Survey, and contributed to this Report. Receiving insights on the success stories, development areas and challenges from the Fintech community is crucial for an adequate analysis that benefits everyone in the industry. We believe that as the industry grows, this brings a better financial future for our country.

Thanks to all participants in the Annual FinTech Survey 2021:



Thanks to all participants in the Women in FinTech Survey 2021!

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