

CEE Fintech Atlas 2018

Exclusive insights into 19 fintech ecosystems in Central and Eastern Europe



Dear readers and interested people of the fintech ecosystem,

If you think of European fintech centres, then London, Berlin and Stockholm are probably the first places that come to mind. And if you look eastwards you might also consider the Baltic States. But did you know that there is a very lively fintech scene in Bulgaria or that Belarus is making great efforts to take a leading role in the field of cryptocurrencies? And did you know that the digital penetration rate in the Czech Republic, Slovakia, Poland, Slovenia, Croatia and Russia is close to or greater than the rate in global emerging markets such as China or Turkey? These and many more nuggets of information can be found in this brand new “CEE Fintech Atlas” that we have produced to offer you a useful overview of the state of fintech ecosystems across the CEE Region.

Please bear in mind that, as CEE is a geographical umbrella term for a very heterogeneous region, it is worth looking at each country individually. Some CEE countries already have very well developed fintech ecosystems whereas others are still in the starting blocks. At Raiffeisen Bank International (RBI) we play a very active role in fostering these ecosystems. In 2017 we launched “Elevator Lab”, the largest fintech partnership program in the CEE Region, in order to meet current and future trends in the banking industry and to satisfy the evolving digital needs of consumers in cooperation with fintechs. In 2018 we founded “Elevator Ventures” as a logical complement to Elevator Lab. In its role as RBI’s corporate venture capital entity Elevator Ventures focuses on strategic direct investments in later-stage fintechs, co-investments with partner investors and investments in VC funds – all in close cooperation with Elevator Lab.

As RBI has always seen itself as a builder of bridges to the CEE Region, such activities are part of our company DNA. When the Iron Curtain fell thirty years ago, we played a pioneering role in building a modern banking system and transforming planned economies into market economies. In 2019 we are playing the role of bridge builder again by, for example, bringing together Western European fintechs and CEE banks, and vice versa. But the market and, hence, this role is very different today. The CEE Region has caught up enormously over the past three decades and has a well-educated, digitally sophisticated population. Our current role is therefore less about development than about helping our clients and partners to overcome local regulatory, linguistic and cultural barriers. To quote Mark Twain: History does not repeat itself, but it rhymes.

I wish you an interesting read!



Johann Strobl
CEO, Raiffeisen Bank International

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Table of contents

Albania	7
Austria	8
Baltic States	10
Belarus	16
Bosnia and Herzegovina	17
Bulgaria	18
Croatia	21
Czech Republic	22
Elevator Lab in CEE	24
Hungary	26
Kosovo	29
Poland	30
Romania	32
Russia	34
Serbia	37
Slovakia	38
Turkey	40
Ukraine	42
Digital leaders	44
About Raiffeisen Bank International	47

All figures in this report displayed in Euro (€).
For transactions quoted in other currencies, conversion rates at the time of announcement were used.

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Skanderbeg monument and Albanian flag at Skanderbeg square, Albania

Spotlight Albania

Although there is a developing and innovative startup scene in Albania most of the country's fintechs are still at the early, seed financing stage. However, there are also a small number of more advanced startups, particularly in the payment sector. The development of these and future fintech startups is expected to be encouraged over the medium term by the incorporation of PSD2 into Albanian law by the Central Bank. The highlights for the fintech sector in 2018 included a number of innovation festivals and the local Elevator Lab Challenge, the fintech program of Raiffeisen Bank.

The biggest hurdle facing the sector is the lack of financing. In the absence of more advanced tools most current fintech startups have been financed either (privately) by their founders or via corporate loans. There are also some private VC funds of which SC Ventures is one of the more prominent.

A fragmented series of state initiatives is seeking to support the innovation and startup scene. For example, software

development companies have been eligible for tax relief since January 2019. (Co-)funded incubator programs (Oficina) for early stage startups including fintechs have been established by a number of institutions such as the Harry Fultz Institute in Tirana. Albania's universities, on the other hand, have yet to become directly involved in such initiatives.

The principal fintech transactions carried out during 2018 involved joint projects between banks and fintechs related to the launch of a range of products or services on the market. These included Raiffeisen's cooperation with MPay – whose mobile app KUIK offers an instant payment solution – and with Symmetric, the winner of the local Elevator Lab Challenge.

As an emerging economy with a young population, Albania clearly faces a series of challenges – but it also offers enormous potential for development in such innovative areas as the fintech sector.



Country data

Population (M)	2.9
GDP total (€ Bn)	14
GDP per capita (€, at PPP)	11,425
GDP growth (%)	4.0
Official currency	ALL

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	10
Total bank assets / GDP (%)	93
Account ownership (% of population)	40
Debit card ownership (% of population)	27
Internet usage (% of population)	66
Usage of internet to pay bills (% of population)	2
Send/received digital payments (% of population)	29

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



View of Vienna financial district cityscape with Danube river, Austria

Spotlight **Austria**

Austria's fintech scene has been enjoying increasing recognition over the past few years. The most significant developments in 2018 were unquestionably the growth in the level of financing available to fintech companies during funding rounds and the greater degree of cooperation between players. In April 2018 The Federal Ministry of Finance convened a Fintech Advisory Board whose role is to promote 'growth through regulation' as a means of safeguarding standards on the emerging markets for digitised financial services, ICOs and cryptocurrencies.

The Financial Market Authority (FMA) has established a fintech contact point with a view to creating transparency and clarity as well as fostering growth in the sector. Recently published plans for the creation of a fintech regulatory sandbox have been and are another positive sign of a fintech-friendly regulatory environment.

One of the biggest boosts to the fintech ecosystem came from the announcement by the UNIQA Group, Speedinvest and RBI of a total investment of up to €50M in Europe's fintech growth phase. The objective of this is to support promising growth in the late seed phase and by 'Series A' companies.

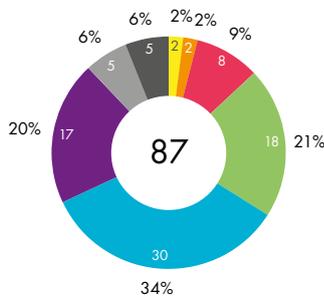
Universities are also devoting more attention to the fintech sector. Vienna University of Economics and Business established a new Research Institute for Cryptoeconomics in 2018. And co-working spaces – such as weXelerate and Talent Garden in Vienna and Tabakfabrik in Linz – have been established across the country as a means of bringing together startups and established companies.

The numerous Austrian fintechs that successfully expanded their business internationally and raised new rounds of venture capital in 2018 included Bluecode and cashpresso.

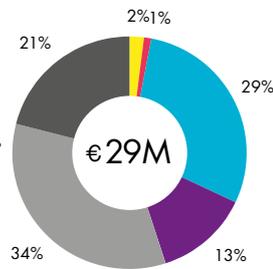


Size

of active local fintechs



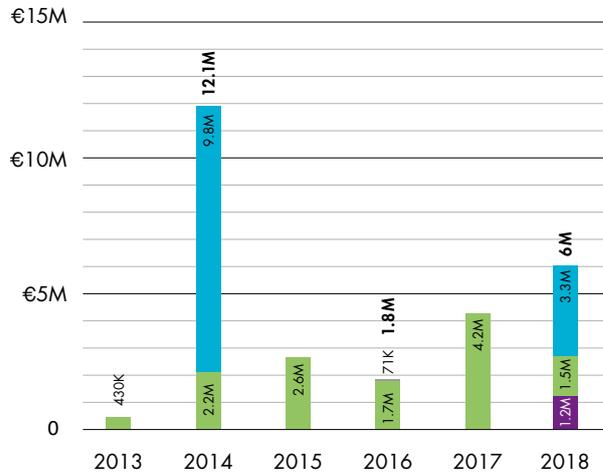
Cumulative funding 2008-2018



■ Insurance ■ Corporate Banking ■ Capital Markets ■ Technology
■ Retail Banking ■ SME Banking ■ Wealth Management ■ Support



Funding trends



■ Debt ■ Seed/Angel ■ Series A ■ Not disclosed



Top VC investors

Investor	# of investment
Speedinvest	7
Livag GmbH	4
AC & Friends GmbH	4
Floor13	3
Reimann Investors	3
DvH Ventures	2
Arax Capital Partners	2
i5invest	2
Lang & Schwarz	2
AWS Double Equity	2

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.

Sources: Tables include fintechs headquartered in Austria. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Top fintech companies

Company	Description	Funding (€)
wikifolio	Austria-based online platform for investment strategies	7.6M
Kompany	Global RegTech platform for audit-proof KYC & UBO	6.2M
Cashpresso	Offers a mobile first, revolving line of credit	6M
Smart Engine	Customer loyalty and retention programs from Smart Engine	3.2M
DaoPay	Offers micropayment solutions	1.9M
Finnest	Loan platform for SMEs and is currently active in the DACH region	1M
PrimeCROWD	Startup-investor network that matches high-profile investors with selected startups	970K
bsurance GmbH	InsurTech startup	554K
Conda	Crowdfunding platform for start-ups and SME	526K



Country data

Population (M)	8.8
GDP total (€ Bn)	386
GDP per capita (€, at PPP)	44,221
GDP growth (%)	2.7
Official currency	EUR

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH Data for 2018, estimates

Total bank assets (€ Bn)	849
Total bank assets / GDP (%)	219
Account ownership (% of population)	98
Debit card ownership (% of population)	90
Internet usage (% of population)	87
Usage of internet to pay bills (% of population)	52
Send/received digital payments (% of population)	96

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Modern business financial district, Tallinn, Estonia

Spotlight **Baltic States**

The ideal environment for young fintech companies combines a dynamic fintech scene with a digitally open society. This applies to all the Baltic States.

Lithuania is making major strides towards its goal to be Europe's most fintech-friendly country. The regulatory sandbox set up by the Financial Conduct Authority in 2017 allows startups to test innovative products in a protected environment. The Central Bank's newcomer-friendly policies include a remote e-licensing system that reduces the duration of the application process for e-money and payment institution licenses to less than three months (e.g. Revolut). For those looking to grow their network, the 2018 FinTech Inn Conference attracted over 1,300 delegates, with this year's turnout expected to be even larger. Finally, according to Vilius Šapoka, Minister of Finance of Lithuania, the fintech sector also benefits from tax holidays for startups and corporate tax deductions equal to three times R&D spending.

The Estonian government's support of fintechs should ensure that the founders of TransferWise are soon joined by further Estonians founding global fintech flagships.

Startup Estonia provides training for startups and seeks to both attract foreign investors and educate local ones while an e-residency program launched in 2014 aims to register ten million e-residents by 2025. The country also intended to issue the first cryptocurrency, although plans for the Estcoin were put on hold in mid-2018. Despite this, however, Estonia remains a hotbed for ICOs with the €323M raised in the first six months of 2018 putting the country 7th in the global ICO league table. And Estonia has also started an ICO Expert Forum designed to improve regulation.

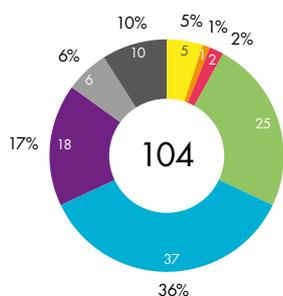
The strength of Latvia's financial sector means that the expanding fintech scene has enormous growth potential in the country and is also starting to establish an international reputation. The Latvian Ministry of Economy has also defined fintech as a priority sector and the country has a number of incubators and accelerators. The most important, Buildit, has already funded 70 firms.

Estonia

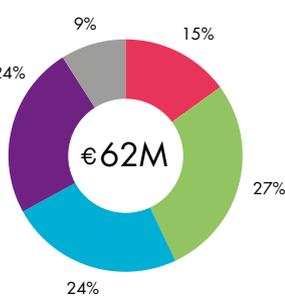


Size

of active local fintechs



Cumulative funding 2008-2018



Funding trends



Top VC investors

Investor	# of investment
Startup Wise Guys	2
3TS Capital Partners	2
NFX	1
Self	1
Y Combinator	1
Ace Ventures	1
Mosaic Ventures	1
SV Angel	1
Karma Ventures	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.



Top fintech companies

Company	Description	Funding (€)
Aasa global	Credit solutions to consumers and businesses	12.1M
Megion Research & Development	Designs and creates solutions for bitcoin infrastructure	9.9M
Funderbeam	Global startup rating, tracking and funding platform	9.3M
Fortumo	Helps to monetize virtual goods and premium features in apps	7.6M
Veriff	Online identity verification	6.7M
Bondora	Global platform for cross-border investors and borrowers	5.8M
Katana MRP	Manufacturing MRP System	2.1M
Raison	AI platform for investment and personal finance	876K
SigmaCapital OU	Loans, Guarantees & Leasing	489K
EstateGuru	Cross-border marketplace for short- and mid-term property loans	298K

Sources: Tables include fintechs headquartered in Estonia. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Country data

Population (M)	1.3
GDP total (€ Bn)	25
GDP per capita (€, at PPP)	24,760
GDP growth (%)	3.5
Official currency	EUR

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	26
Total bank assets / GDP (%)	108
Account ownership (% of population)	98
Debit card ownership (% of population)	92
Internet usage (% of population)	88
Usage of internet to pay bills (% of population)	72
Send/received digital payments (% of population)	95

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



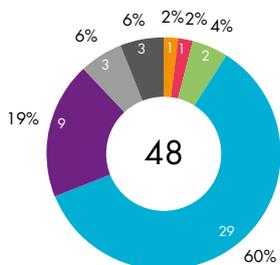
Quay of Daugava River in Riga, Latvia

Latvia



Size

of active local fintechs



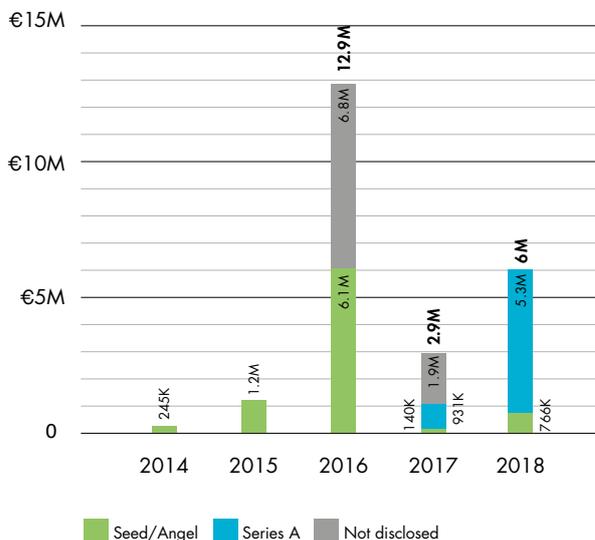
Cumulative funding 2008-2018



- Insurance
- Corporate Banking
- Capital Markets
- Technology
- Retail Banking
- SME Banking
- Wealth Management
- Support



Funding trends



Top VC investors

Investor	# of investment
TrustPay	2
Skillion Ventures	2
FinHub Global	2
Forgamer	2
Inventure	1
Seedcamp	1
Tinkoff Bank	1
Change Ventures	1
Alfa Finance Group	1
Nordea Startup Accelerator	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.

Sources: Tables include fintechs headquartered in Latvia. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Top fintech companies

Company	Description	Funding (€)
4finance	Online and mobile consumer lending group	643.7M
Mogo Finance	Non-bank car financing	23.2M
Mintos	Online loan marketplace	7.7M
Twino	Peer-to-peer lending marketplace	7.7M
Monify	Unsecured online business loans	4.8M
CloudPayments	Advanced payment service	3M
DoFinance	Peer-to-peer lending platform - ROI 9%	2.1M
Mobilily	Transactions for Smart Cities	1.1M
Nordigen	Transaction analytics tools for banks and lenders	882K
Monea	Micropayment application	811K



Country data

Population (M)	1.9
GDP total (€ Bn)	29
GDP per capita (€, at PPP)	21,500
GDP growth (%)	4.7
Official currency	EUR

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	22
Total bank assets / GDP (%)	51
Account ownership (% of population)	93
Debit card ownership (% of population)	86
Internet usage (% of population)	78
Usage of internet to pay bills (% of population)	58
Send/received digital payments (% of population)	84

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



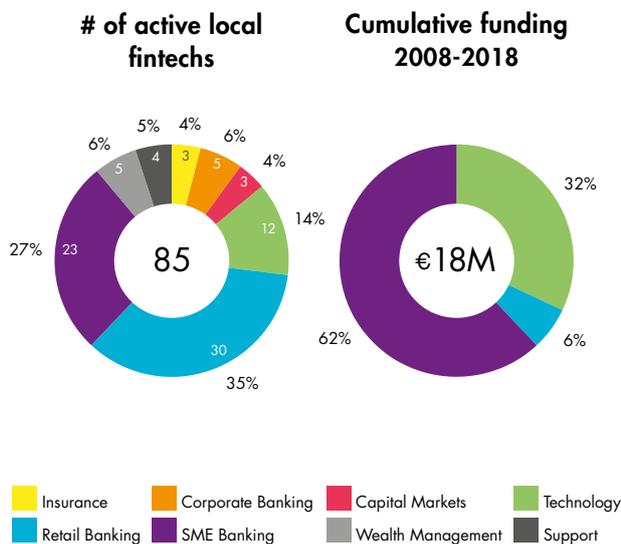
Gediminas Tower in Vilnius city center, Lithuania



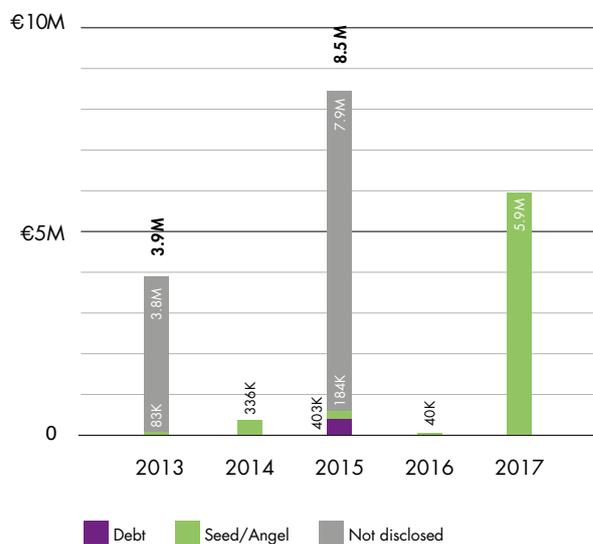
Lithuania



Size



Funding trends



Top VC investors

Investor	# of investment
Entrée Capital	2
Blumberg Capital	1
Sequoia Capital	1
Route 66 Ventures	1
EIT Digital	1
Startupbootcamp	1
Wellington Management Group	1
ApexFree	1
Nextury Ventures	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.



Top fintech companies

Company	Description	Funding (€)
Alternative Payments	Payment options for e-commerce	11.7M
Universa Blockchain Platform	Blockchain platform	6M
Worapay	Mobile payments system	883K
Dealoyal.com	Cash back offer marketplace	104K
Spectro Coin	All in one solution for virtual currencies	84K
Cflow	E-accounting	63K
Claims Control	B2B insurance claims collaboration platform	41K
Welltrado	Alternative to the traditional banking system	21K

Sources: Tables include fintechs headquartered in Lithuania. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Country data

Population (M)	2.8
GDP total (€ Bn)	45
GDP per capita (€, at PPP)	24,920
GDP growth (%)	3.6
Official currency	EUR

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	19
Total bank assets / GDP (%)	64
Account ownership (% of population)	83
Debit card ownership (% of population)	56
Internet usage (% of population)	81
Usage of internet to pay bills (% of population)	50
Send/received digital payments (% of population)	66

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Cityscape of Minsk, Belarus

Spotlight Belarus

2018 saw a number of important developments in the fintech scene in Belarus. Belgazprombank launched a startup accelerator program (FTh.by) while a number of banks (VTB Bank, Moscow-Minsk Bank, Belagroprombank, Belarusbank, Belgazprombank, BPS Sberbank, BSB Bank and MTBank) introduced Samsung Pay. Several major conferences, hackathons and other events also took place in Minsk, including the Global Fintech Hackathon, Elevator Lab Challenge Belarus, SmartTaler, BankIT, Blockchain & Bitcoin Conference Belarus and Venture Day, etc.

According to bel.biz, fintechs represent 13.5% of all startups. The challenges facing the sector include fundraising, a lack of tax incentives and the modest size of the home market as a result of which most projects are initially aimed at international clients. Another hurdle is the requirement for companies to have an intermediary represented by a bank in order to have a payment infrastructure and conduct transactions. Plans from The National Bank of the Republic of Belarus (NBRB) to implement ISO 20022 (universal financial industry

message scheme) and a real-time payment system and to regulate payment services and systems should open up new opportunities for fintechs.

In 2018 the NBRB proposed allowing banks to make smart contracts using blockchain technology. This policy will be implemented in the presidential decree "On the Development of Digital Banking Technologies". This will also allow financial institutions to make electronic deals using software and hardware tools and technologies (including biometrics) without digital signatures. Furthermore, the decree "On the Development of the Digital Economy" of December 2017 included measures to relax the rules for conducting business in the high-tech field.

Belarus' fintech hubs include Imaguru Startup Hub, Blockchain Technology Association Belarus and the FTH Fintech & Banking accelerator. In March 2018 the Belarusian National Technical University launched a retraining program specialising in "cryptocurrencies and derivatives" that also covers blockchain technology and ICOs.



Country data

Population (M)	9.4
GDP total (€ Bn)	51
GDP per capita (€, at PPP)	14,300
GDP growth (%)	3.0
Official currency	BYN

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	28
Total bank assets / GDP (%)	63
Account ownership (% of population)	81
Debit card ownership (% of population)	71
Internet usage (% of population)	74
Usage of internet to pay bills (% of population)	42
Send/received digital payments (% of population)	79

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



The Old Bridge over the Neretva River in Mostar, Bosnia and Herzegovina

Spotlight **Bosnia and Herzegovina**

The mood on the fintech scene in Bosnia and Herzegovina in 2018 was one of cautious optimism. The grounds for this include the banking industry's entrepreneurial spirit, local knowledge and proactive approach towards the updating of the legal framework. Raiffeisen Bank is pushing a series of initiatives aimed at improving the digital environment in order to allow the market to achieve its full potential.

Practical progress in the sector has, however, been limited. The legal obstacles facing fintechs include the absence of an electronic signature law. Similarly, the introduction of ID and verification technology is being hampered by strict data protection legislation and other obstacles created by the country's complex political system.

In comparison with other markets the startup scene in Bosnia and Herzegovina receives little government support and tends to rely on the country's entrepreneurial spirit. Despite this, however, the high quality and relatively low cost of IT labour mean that there is a healthy fintech

product development scene and a strong market in solutions such as chat bots, P2P payments, mobile banking apps and other tools designed to meet the demand for digital transformation. Given the current limited local potential, these products are mostly sold on international markets, where there is demand for cutting edge solutions that respond to the latest digital banking trends.

Sarajevo School of Science and Technology (SSST), the Faculty of Economics and Business of the University of Sarajevo and other institutions work proactively to create new fintech talent through such initiatives as co-organising fintech conferences. The SECO startup fund and ICBL incubator are currently trying to boost the fintech industry in the country. In 2018, however, Bosnia and Herzegovina failed to record a significant fintech transaction.



Country data

Population (M)	3.5
GDP total (€ Bn)	17
GDP per capita (€, at PPP)	8,800
GDP growth (%)	2.8
Official currency	BAM

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	14
Total bank assets / GDP (%)	90
Account ownership (% of population)	59
Debit card ownership (% of population)	40
Internet usage (% of population)	69
Usage of internet to pay bills (% of population)	8
Send/received digital payments (% of population)	50

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Financial district in the city of Sofia, Bulgaria

Spotlight **Bulgaria**

The Bulgarian capital Sofia is one of the fast growing fintech destinations in the CEE Region and has a critical mass of startups and financial and technological service providers. One reason for the rapid development of digital technology is the fact that Bulgaria is second only to South Korea in terms of the speed of broadband Internet. According to the Global Innovation Index 2017 Bulgaria is also the world's second most innovative upper-middle income country and number one in the SEE Region in terms of innovation efficiency and achievement.

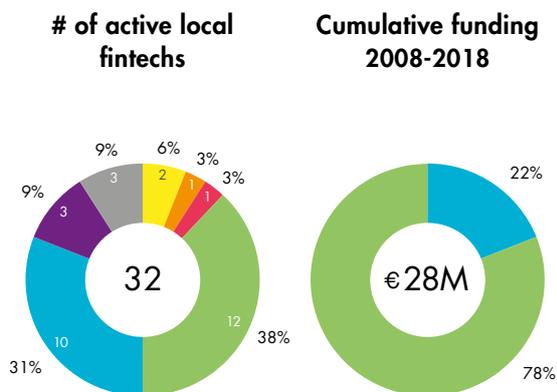
The Bulgarian fintech market generally follows the lead of larger CEE countries. Digital payment has the largest share of this market, which is predicted to grow this year by around 21%. The most promising services include mobile payments, peer-to-peer payments and lending and digital commerce transactions.

The two most prominent seed-stage VC funds from Bulgaria, whose role is to finance startups and innovative SMEs, are ELEVEN (which, according to the 2017 European Accelerator Report, is one of Europe's top ten investing accelerators and venture funds) and LAUNCHub. Both companies are very active in Bulgaria, where the number of local and foreign angel investors is growing.

The dynamic development of the fintech sector led to the recent creation of the Bulgarian Fintech Association. This non-profit organisation brings together the country's leading fintech companies and aims to provide all parties in Bulgaria interested in fintech with a platform for communication and exchange. Bulgaria's first FinTech Conference took place in May 2018 with the aim of demonstrating how fintechs are reshaping financial services in the CEE Region. The conference, which is planned to become an annual event, gathered more than 300 CEOs and decision makers from the financial sector.



Size



Insurance Corporate Banking Capital Markets Technology
Retail Banking SME Banking Wealth Management



Funding trends



Top VC investors

Investor	# of investment
LAUNCHub Ventures	2
TMT Investments	2
NEVEQ	1
Black Peak Capital	1
Microsoft	1
Delta Partners Capital Limited	1
PostScriptum Ventures	1
Eleven Accelerator Venture Fund	1
Altair Capital	1
Kickstart Accelerator	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.

Sources: Tables include fintechs headquartered in Bulgaria. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Top fintech companies

Company	Description	Funding (€)
Cash Credit	Financial services for the unbanked	18.9M
Software Group	Helps financial service providers digitize their business	5.2M
Klear	P2P lending and financial education platform	2.8M
Fabric Token	Easy Access to blockchain technology and smart contracts	800K
Yatrus Analytics	Analytics platform	83K
Reloyalty	Mobile app that recognizes, returns and respects loyalty	44K
Sensika Technologies	Cloud-based, single-access-point information intelligence platform	31K
Transmetrics	Software for transport network optimization	30K
Tickey	Mobile ticketing app for smart cities	27K
getix	POS solutions for small and medium outlets	22K



Country data

Population (M)	7.1
GDP total (€ Bn)	54
GDP per capita (€, at PPP)	13,900
GDP growth (%)	3.3
Official currency	BGN

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH Data for 2018, estimates

Total bank assets (€ Bn)	50
Total bank assets / GDP (%)	99
Account ownership (% of population)	72
Debit card ownership (% of population)	69
Internet usage (% of population)	63
Usage of internet to pay bills (% of population)	13
Send/received digital payments (% of population)	65

Latest available data as of 2017/2018 Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH

The FINTECH Partnership Program

powered by



Raiffeisen Bank
International





Skyline of Zagreb, Croatia

Spotlight Croatia

The most important developments in the fintech scene in Croatia in 2018 were undoubtedly the broader acknowledgment of the sector and its companies and the organisation of two fintech conferences at the end of the year, Future of FinTech and Shift Money. This was the first time that the entire regional fintech sector, including players from neighbouring Slovenia and Serbia, was present in Zagreb.

Around 15 fintechs are headquartered in Croatia and most of these provide software and platforms for financial institutions. In 2018 banks also started to promote the fact that they were developing their own financial technology rather than working with global fintechs. However, only the five to ten biggest banks have truly focused on digital transformation.

The biggest challenge for fintechs in Croatia is the war for technical talent. This is being driven by both the growth of technology companies such as Infobip and Rimac Automobili and the digital transformation of

traditional companies, which has reduced the amount of talent on the market. Most fintechs are based in Zagreb because the capital city has the largest pool of specialist employees. There are no local incentives for the fintech ecosystem or fintech hubs. In addition to this, research by the IT Section of the Croatian Chamber of Commerce shows that Croatia lags far behind the EU average in terms of government support for the IT sector in general.

Early-stage startups are mostly financed by accelerators and incubators. ABC accelerator, FRCM Accelerator, Start-up Factory Zagreb, Zip Incubator and BIOS Incubator Osijek are amongst the examples of investors based in the country. The most important fintech transaction in terms of financing in Croatia in 2018 was a €5.2M investment in PhotoMath, a math app developed by the fintech company Microblink as a means of showcasing its technology.

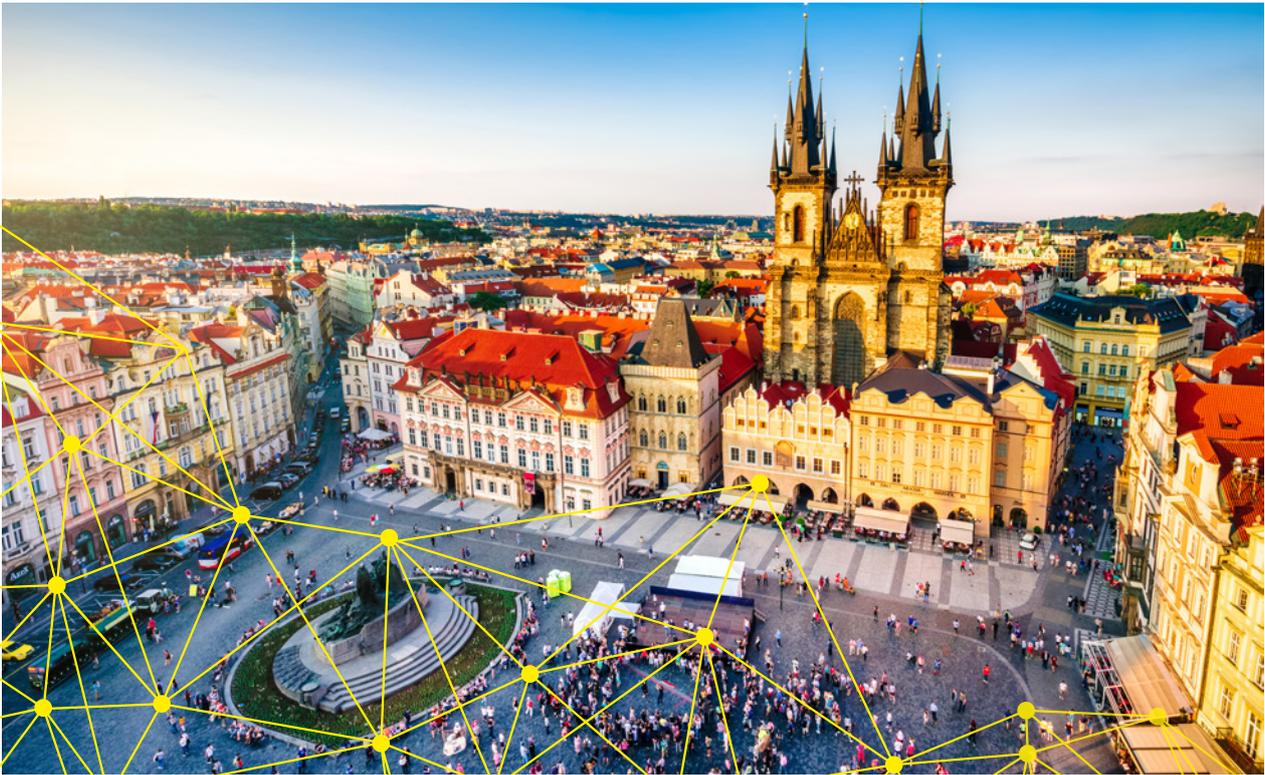
Country data

Population (M)	4.1
GDP total (€ Bn)	51
GDP per capita (€, at PPP)	17,700
GDP growth (%)	2.6
Official currency	HRK

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	53
Total bank assets / GDP (%)	110
Account ownership (% of population)	86
Debit card ownership (% of population)	68
Internet usage (% of population)	67
Usage of internet to pay bills (% of population)	45
Send/received digital payments (% of population)	83

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Old town square in Prague, Czech Republic

Spotlight **Czech Republic**

2018 saw a series of major developments in the Czech Republic, where fintechs are regulated in line with EU legislation. The crucial PSD2 EU directive was implemented, Banka Creditas introduced the first multi-banking app Richee (with other innovation-oriented banks expected to follow) and Spendee became the first fintech to acquire a PSD2 licence.

The Finance Ministry takes a more proactive and innovative approach to regulation than the more cautious Czech National Bank (CNB). Indeed, following the public consultation on fintechs published by the European Commission in 2017 the CNB stated that fintech regulation was not a priority. As a result, fintechs tend to try to accelerate the process by contacting banks directly regarding their APIs.

The desire for simplification led to the creation of the Czech Fintech Association. This aims to act as a go-between, a single point of contact for innovators, investors, regulators, policy makers and commercial partners. In 2018 the work of the association led the Czech Government to show serious interest in the

fintech scene for the first time via the Blockchain Republic initiative. The signed memorandum of this official cooperation between fintechs and the state covers such activities as attracting investment and talent, modernising bureaucracy and creating an innovation hub.

Another government initiative is the project Sonia. Here, major banks and the state will work together to increase use of the digital state portal through simplified access based on banking verification. Changes in the system and, hence, the fintech environment are accelerating.

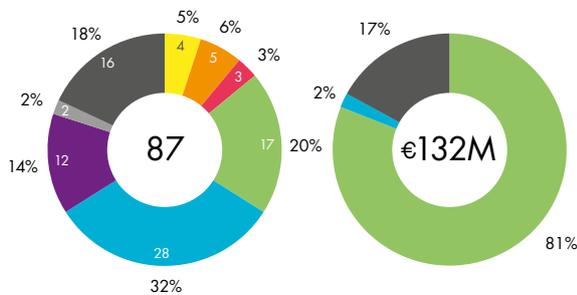
This approach, which seeks to optimise synergies with both EU regulations and the emerging private fintech market, has the potential to create a transparent, efficient, cooperative and, therefore, successful system.

The country has 52 incubators and accelerators including Rockaway, Creative Dock and StartupYard, the most active, which has invested €9M in around 50 companies.



Size

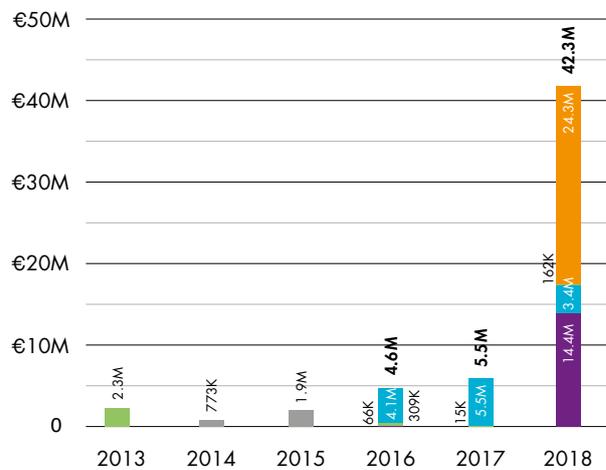
of active local fintechs



Cumulative funding 2008-2018



Funding trends



Top VC investors

Investor	# of investment
ENERN Investments	5
Slevomat	4
StartupYard	3
Credo Ventures	3
Talis Capital	3
Miton	2
Reflex Capital	1
Bain & Company	1
Digital+ Partners	1
Uniqa	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.

Sources: Tables include fintechs headquartered in Czech Republic. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Top fintech companies

Company	Description	Funding (€)
Avast Software	Mobile and PC security software	75.2M
Price f(x)	SaaS-based pricing and optimization tools	32M
Twisto	Makes daily payments invisible and stress free	22.7M
Netbrokers Holding	Online comparison portals	2.3M
BudgetBakers	Personal finance platform with financial management suite	291K
ClaimAir	Global flight and baggage claim service	167K
Fragments	Decentralized micro-tasks platform	163K
CleverAnalytics	Combines different data through their location on the map	15K

Country data

Population (M)	10.6
GDP total (€ Bn)	206
GDP per capita (€, at PPP)	28,347
GDP growth (%)	3.0
Official currency	CZK

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	277
Total bank assets / GDP (%)	140
Account ownership (% of population)	81
Debit card ownership (% of population)	75
Internet usage (% of population)	79
Usage of internet to pay bills (% of population)	57
Send/received digital payments (% of population)	80

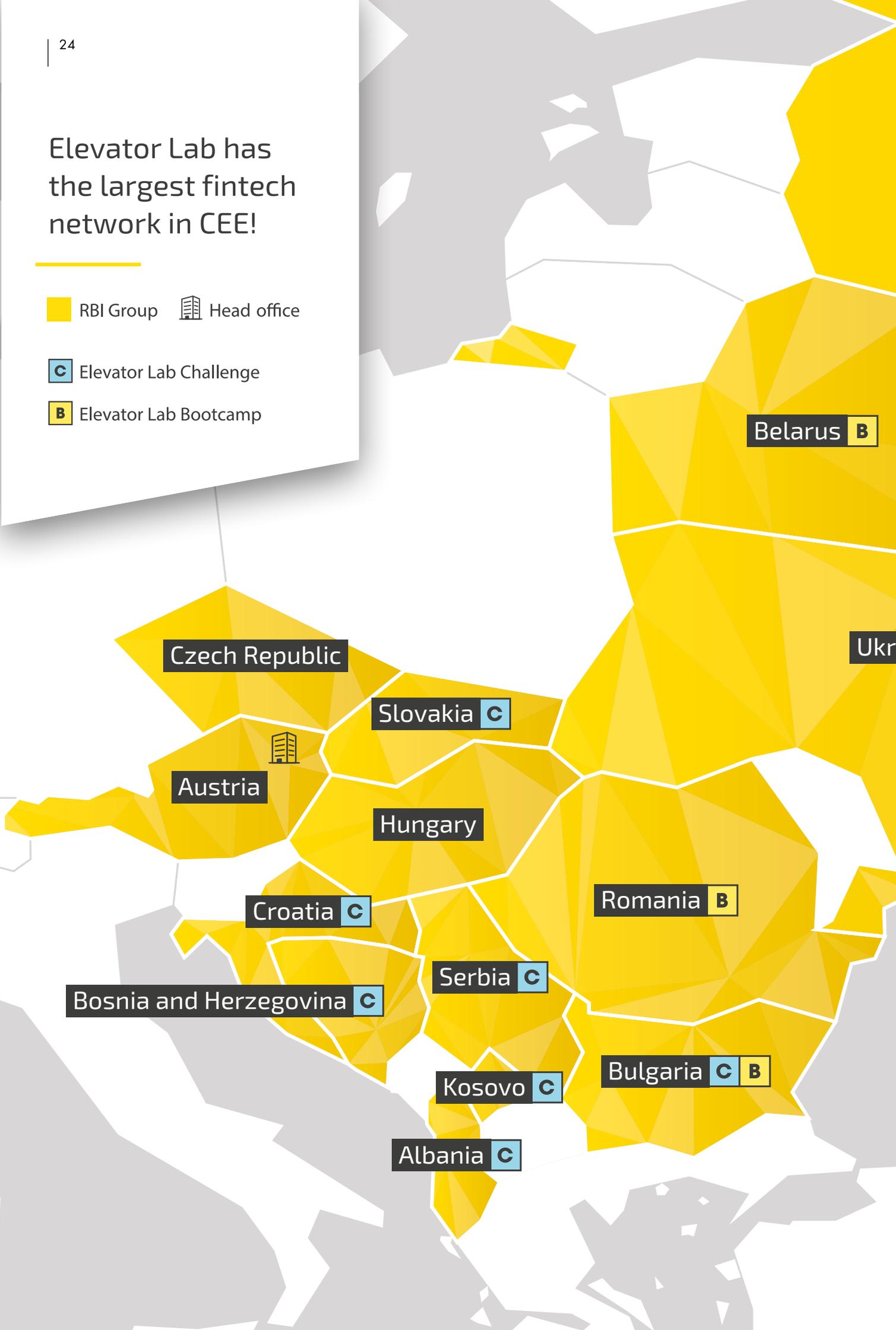
Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH

Elevator Lab has the largest fintech network in CEE!

 RBI Group  Head office

 Elevator Lab Challenge

 Elevator Lab Bootcamp



ELEVATOR^{LAB}

Elevator Lab has the largest fintech network in CEE!

Elevator Lab is a leading fintech partnership program powered by Raiffeisen Bank International to jointly develop scalable business cases and enable international growth. With our strong footprint in CEE (14 markets including Austria, 16.1 million customers) we are a strong partner for every fintech which wants to expand to this region.

Have a look at our fintech initiatives across the CEE Region in 2019:

Elevator Lab Partnership Program:

Selected fintechs from around the world get the opportunity to work together with international leading experts on a four month proof of concept in order to improve their business solution. After the program, the fintechs will have the chance to be selected for a strategic partnership with RBI Group.

Elevator Lab Challenges

Single country program for local later-stage fintechs to cooperate with RBI's local banks.

The winner will receive a wild card to the semi-finals of Elevator Lab Partnership Program.

Elevator Lab Bootcamps

Single country program focusing on early-stage startups with stimulating new ideas and concepts.

The bootcamps are designed to help early-stage entrepreneurs to grow and to work further on their ideas.

The winners will participate in the two-week Digital Entrepreneurship Summer Program 2019 in Vienna.

For more information please visit: www.elevator-lab.com

Elevator Lab cooperates closely with RBI's corporate venture capital entity

ELEVATOR
VENTURES



Parliament building in Budapest, Hungary

Spotlight Hungary

According to the Hungarian National Bank, the local fintech scene has a receptive domestic audience. 15 to 20% of the country's population is interested in fintech solutions and around one million consumers are open to actively using fintech innovations. The solutions already available in Hungary cover a range of areas including personal finance management, payment solutions, community lending, robo advisory and blockchain.

Based on the same survey, one obstacle to the growth of fintechs in Hungary is the concern about data protection, especially in connection with robo advisory services. Most customers would not use a service that is not subject to legal safeguards, despite its clear benefits. In addition to this, only 15% of the public believe that bank branches will disappear to the extent that such robo advisory services become necessary.

The Hungarian National Bank was one of the first in the region to support innovation in the financial sector in the shape of its regulatory sandbox. This provides an isolated test environment for financial innovation at the national level in which financial institutions and fintechs can test new services under regulatory control by temporarily lifting certain regulatory obligations.

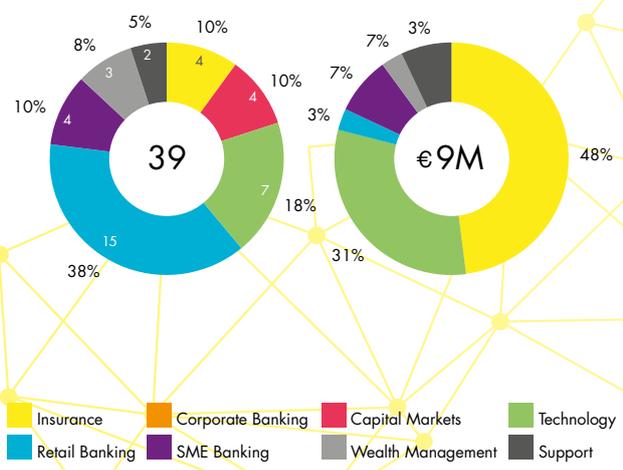
In Hungary a number of investors such as FinTechZone, MKB Fintechlab, BnL Start Partners and the Hungarian National Bank itself are actively involved in the fintech solutions market. MKB Fintechlab, for example, has invested through its incubation program in a variety of fintech solutions ranging from the automated asset manager Blueopes to the payment solution provider Pago. OTP (OTPLab) and KH (Start it @KH) also operate accelerator programs and provide incubation opportunities for fintech startups.

One of Hungary's largest educational institutions, Corvinus University, offers specialist courses in its Fintech Center. These lead to a series of qualifications including undergraduate and postgraduate degrees.

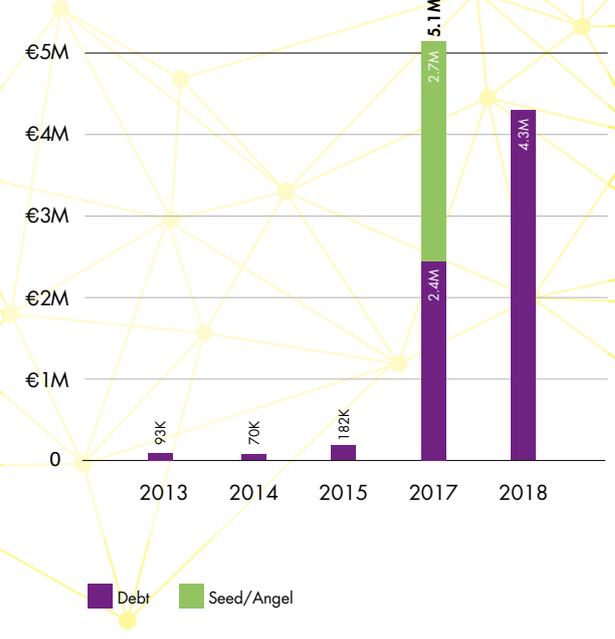


Size

of active local fintechs Cumulative funding 2008-2018



Funding trends



Top VC investors

Investor	# of investment
Hiventures	5
Fiedler Capital	3
Y Combinator	2
Open Ocean Capital	1
Uniqa	1
PortfoLion	1
Euroventures Capital	1
MKB Fintechlab	1
BnL Start Partners	1
Home Credit Group	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.



Top fintech companies

Company	Description	Funding (€)
Cherrisk	Insurtech startup	4.3M
bitrise	Mobile continuous integration and delivery platform	3M
Credit4sales	Intelligent cloud based B2B credit management solution	757K
Multipass Solutions	IT solutions for extracting and processing printed or handwritten data	727K
TrustChain Systems	Digital contracting with financial solutions	389K
Koin	Personal finance management application	233K
Blueopes	Wealth management service provider	221K
MNG International Investments	Investment company	94K
Shinrai	Enables the buying of Bitcoins via SEPA / SWIFT	71K

Sources: Tables include fintechs headquartered in Hungary. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Country data

Population (M)	9.8
GDP total (€ Bn)	130
GDP per capita (€, at PPP)	23,646
GDP growth (%)	4.8
Official currency	HUF

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	120
Total bank assets / GDP (%)	97
Account ownership (% of population)	75
Debit card ownership (% of population)	69
Internet usage (% of population)	77
Usage of internet to pay bills (% of population)	30
Send/received digital payments (% of population)	71

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH





Skyline of Pristina with the National Library, Kosovo

Spotlight Kosovo

The past few years have seen not only significant growth in the number of fintech startups in Kosovo but also the creation of two hubs, Gjirafa Lab and the Innovation Center Kosovo (ICK). This intense activity culminated in 2018 when ICK partnered with Raiffeisen Bank Kosovo in the staging of the Elevator Lab.

Both the Government of Kosovo and several foreign governments provide grants to stimulate innovation and the startup community in the country. Tax rates are among the lowest in Europe, (e.g. 10% corporate and 0 to 10% personal taxes) and the environment is business-friendly. Bureaucracy is minimal and companies can be set up online in just three working days.

Kosovo's fintech community can point to a number of success stories – both domestic and international. Trekandi and AR Vision, who occupied the top two places in the Elevator Lab Challenge, have developed strongly and are already offering their services abroad. Trekandi,

a startup from Gjirafa Lab, is an online platform on which consumers and small businesses can save time on, for example, unnecessary bank visits by transparently researching and comparing financial products such as loans. AR Vision, which emerged from the ICK, works with augmented and virtual reality and, as well as expanding to Scandinavia, is currently working on a proof of concept with Raiffeisen Bank Kosovo. The fintech sector is not yet established within the education system. No university runs courses on the subject.

Kosovo, a landlocked country in the heart of the Balkans, has an average GDP growth of 4.1%. The country, 42% of the population of which is under 25, is seeing a significant increase in both the number of IT-related jobs and the export of IT services. Kosovo's fintech scene meets most of its limited funding needs from foreign VCs.



Country data

Population (M)	1.8
GDP total (€ Bn)	7
GDP per capita (€, at PPP)	7,900
GDP growth (%)	4.2
Official currency	EUR

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	4
Total bank assets / GDP (%)	62
Account ownership (% of population)	52
Debit card ownership (% of population)	37
Internet usage (% of population)	80
Usage of internet to pay bills (% of population)	7
Send/received digital payments (% of population)	39

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Skyline of Warsaw, Poland

Spotlight Poland

Poland is a European leader in the implementation of modern banking solutions such as contactless payment, and sector-wide tools such as the BLIK mobile payment service.

The strength of the fintech scene in 2018 is demonstrated by the level of innovation of many Polish banks, including Bank Pekao, ING Bank, BZ WBK, BNP Paribas and PKO Bank Polski. For example, ING Bank Śląski has introduced imoje, Poland's first bank payment gateway and E-paragon, Visa's Innovation Incubator, is working on a project to eradicate paper receipts.

The main challenges facing the sector include the relatively low level of VC and equity funding activity and the lack of a single comprehensive support system for startups. A further hurdle is the gap in understanding between officialdom and the fintech scene as exemplified by the ban on initial coin offerings imposed by the regulator KNF.

State support for fintechs includes the Special Task Force for Financial Innovation and the regulatory sandbox of the KNF, which aim to improve regulation. The KNF has also set up an innovation hub program for both startups and established companies with innovative IT-based products or services. And the StartInPoland umbrella program covers both the startup investments of the Polish Development Fund and the expanding accelerator programs of the Polish Agency for Developing Entrepreneurship.

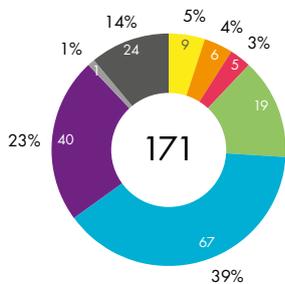
Companies with fintech hubs in Poland include ING Bank Śląski, mBank, Pekao SA, PKO BP, Credit Suisse, Citi, UBS, Liber Finance Group, Roche and Google, whose Warsaw Campus, opened in 2015, was its first in the CEE Region and fifth worldwide. Early-stage startups are usually funded via bootstrapping or with support from the EU or traditional VC or PE firms such as SpeedUp Venture Capital Group or Data Ventures.

A highlight of 2018 was the sale of Dotpay/eCard (Dotcard) to Nets for €73M.

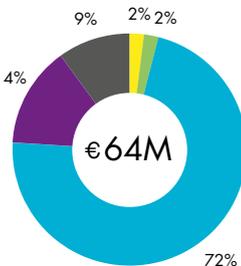


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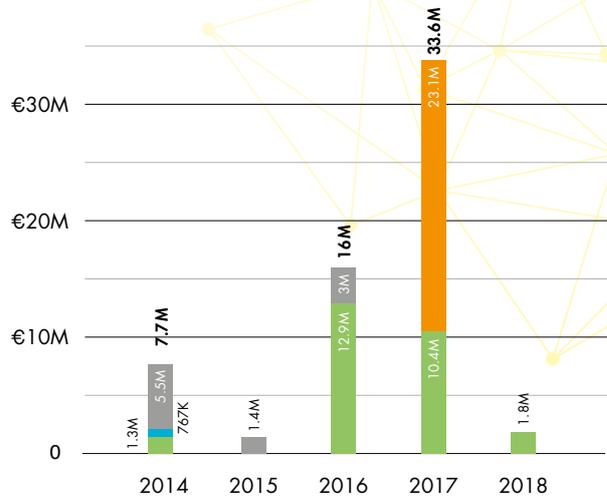
of active local fintechs



Cumulative funding 2008-2018



Funding trends



Top VC investors

Investor	# of investment
Flint Capital	2
SpeedUp Venture Capital Group	2
Techstars	2
Barclays Accelerator (Powered by Techstars)	1
OPOKA Ventures	1
Data Ventures	1
Capitec Bank	1
Pragma	1
LUXNOVA	1
BlueYard Capital	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.



Top fintech companies

Company	Description	Funding (€)
Creamfinance	Financial Services Company	29.1M
MAM	Reduce monthly utility bill payments	5.9M
SALESmanago	Cloud based online marketing automation platform	5.5M
CashDirector	Virtual CFO & real-time accounting platform	3.3M
FinAi	Fintech platform driven by big data	2.6M
BitStar	Online bitcoin exchange platform	2.5M
Liber Finance Group	AI-driven marketplaces for consumer finance	2.2M
Akredo	Alternative Loan Provider	2.2M
LeaseLink	Online leasing transactions	2.1M
Kredytmarket	Online loan granting	1.5M

Sources: Tables include fintechs headquartered in Poland. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



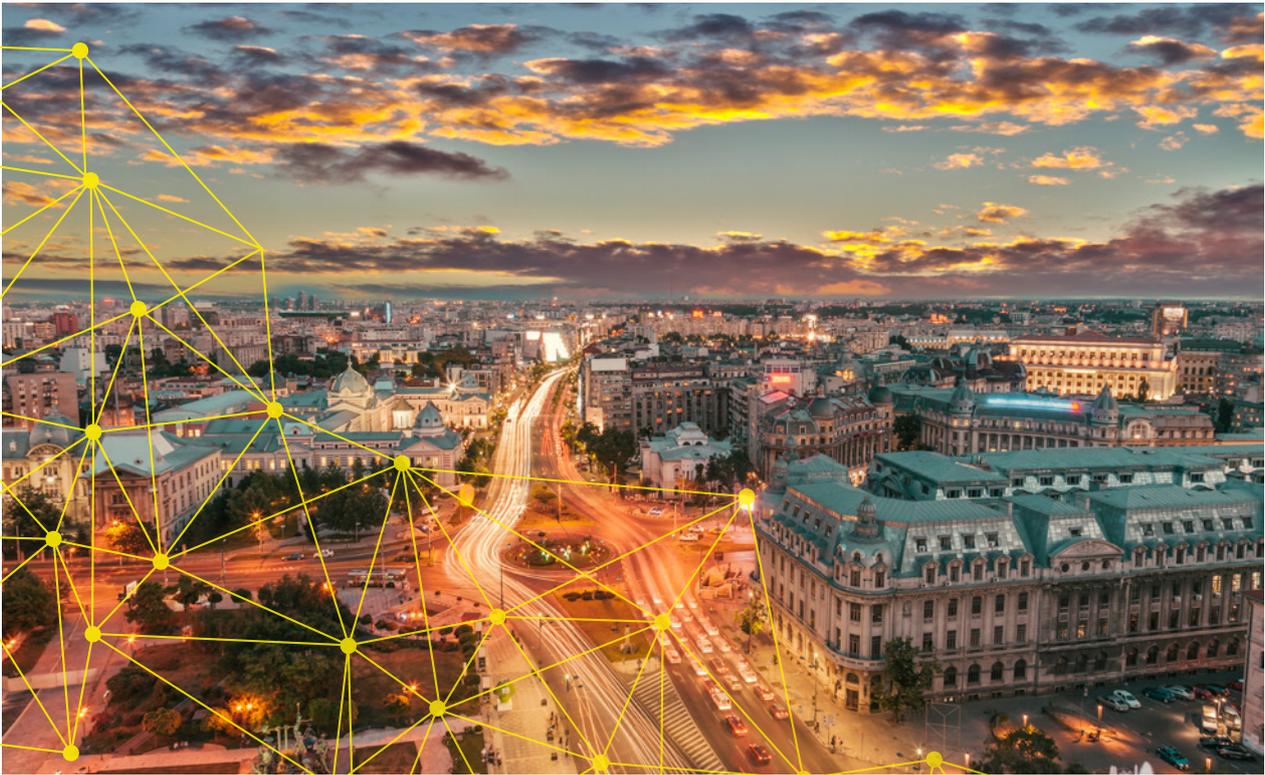
Country data

Population (M)	38.0
GDP total (€ Bn)	496
GDP per capita (€, at PPP)	21,900
GDP growth (%)	5.1
Official currency	PLN

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH Data for 2018, estimates

Total bank assets (€ Bn)	427
Total bank assets / GDP (%)	92
Account ownership (% of population)	87
Debit card ownership (% of population)	79
Internet usage (% of population)	76
Usage of internet to pay bills (% of population)	51
Send/received digital payments (% of population)	82

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Center of the capital city of Romania, Bucharest

Spotlight **Romania**

There are two particularly interesting aspects to the Romanian fintech scene: the development of local startups and the entry of foreign fintechs. The local market is relatively young but already notably dynamic. Raiffeisen Bank aims at growing the local fintech market and in 2019 the bank is developing an educational program for early-stage companies or single founders who plan to establish a tech startup, Elevator Lab Bootcamp.

Some of the most notable early-stage fintechs in Romania are Argentum, Confidas, Fintech OS, Instant Factoring, Minutizer, SymphoPay, ThinkOut, Smart Bill. Of the foreign fintechs that have entered Romania, the most active one is Revolut. Orange launched its own service, Orange Money, in 2018, but Romanians also use services provided by other fintechs, which have yet to technically establish local subsidiaries: Monese, TransferWise, N26, Monzo and PayPal.

Raiffeisen Bank is an active contributor on the Romanian fintech landscape, creating a series of events and supporting the fintech startups community, through its collaboration with TechHub Bucharest like The Fintech Month.

There are many actors in the Romanian startup scene. Universities provide talent for the startup ecosystem and the state has developed Start-Up Nation. The state program finances yearly around 10,000 SMEs, fintechs are fully eligible to apply.

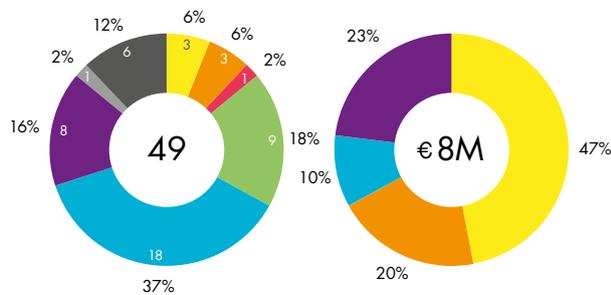
In terms of investments & development, the Romanian startup ecosystem also includes a number of VC's (Gapminder, Early Game Ventures, Gecad Ventures, etc.), accelerators (Techcelerator, Spherik Accelerator, Innovation Labs, Risky Business, etc.) and business angels (www.techangels.ro).

According to Tech.eu, the appetite for developing tech companies is rather strong considering that the investments on the Romanian tech market have grown starting with 2016 on a tremendous pace from €3.6M to €48.4M (2017) and €114.1M (2018).

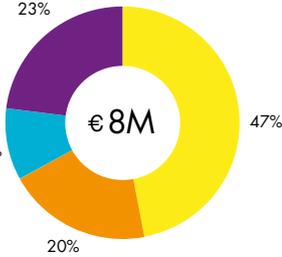


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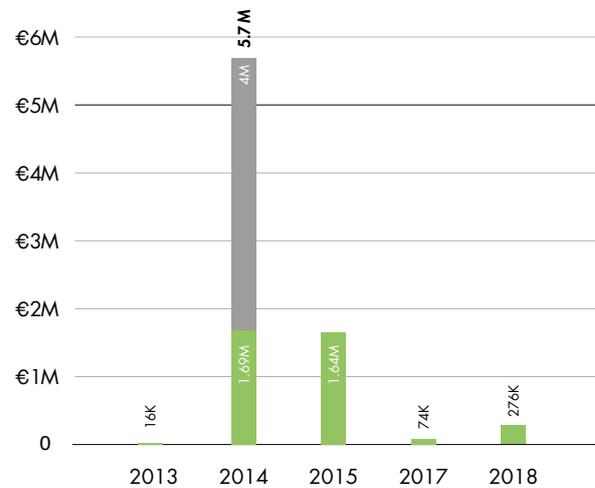
of active local fintechs



Cumulative funding 2008-2018



Funding trends



Top VC investors

Investor	# of investment
Gecad Ventures	2
Sequoia Capital India	1
Catalyst Romania	1
Risky Business	1
DMG Information	1
3TS Capital Partners	1
Greycroft Partners	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.

Sources: Tables include fintechs headquartered in Romania. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Top fintech companies

Company	Description	Funding (€)
Otto Broker	Insurance brokerage services	4M
NETOPIA Systems	Online marketing and payment processing solutions	1.7M
Smart Bill	Invoice software for small businesses	1.1M
VirtualCards	All-in-one loyalty cards app	847K
SymphoPay	POS solution	536K
Ebriza	Virtual cash register	350K
Minutizer	Pay-per-minute payment system for audio and video calls	16K

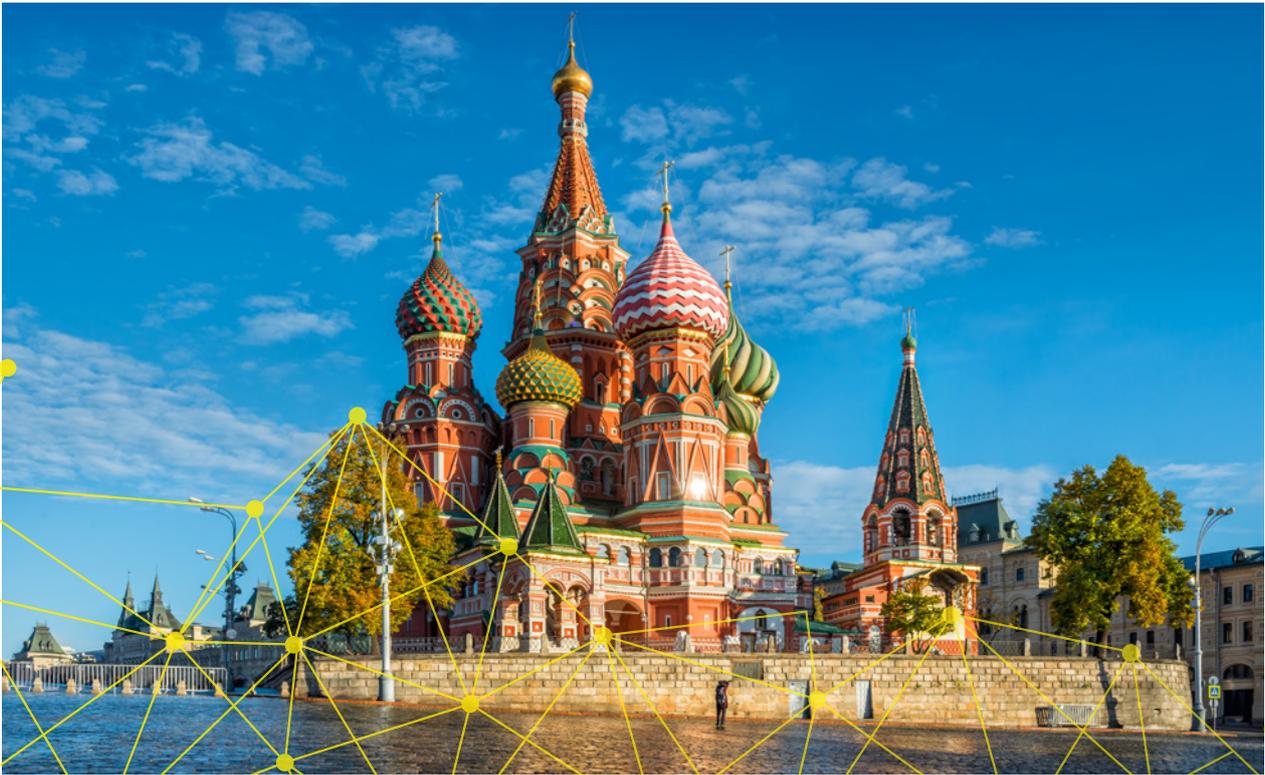
Country data

Population (M)	19.5
GDP total (€ Bn)	204
GDP per capita (€, at PPP)	19,834
GDP growth (%)	4.1
Official currency	RON

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	98
Total bank assets / GDP (%)	54
Account ownership (% of population)	58
Debit card ownership (% of population)	49
Internet usage (% of population)	64
Usage of internet to pay bills (% of population)	12
Send/received digital payments (% of population)	47

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



St. Basil's Cathedral in Moscow's Red Square, Russia

Spotlight **Russia**

The Russian fintech market has been growing significantly for the past two years in terms of both the number of deals and the volume of investment. The market has several particularities: Russia is a leading global supplier of IT specialists and some areas such as P2P lending, crowd investment and cryptocurrencies have yet to be regulated.

According to some fintechs the key hurdles facing the Russian market include the low interest of external investors, the low spending power of the public, geopolitical risk and the inflexibility of the tax authorities. In 2018 the Russian Central Bank created a regulatory sandbox in order to encourage new financial services and technologies such as a system of fast payments, a unified system of biometric identification and a financial supermarket. Accelerators such as FRIL accelerator and HSE incubator regularly support the development of fintech startups.

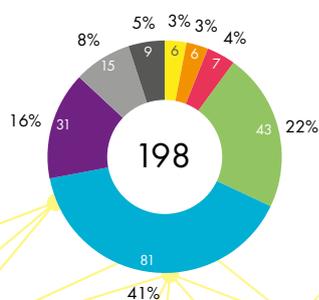
Fintech partnership programs designed to help early-stage startups to meet market needs were set up in 2018 by Sberbank, Raiffeisenbank, Tinkoff and Alfa Bank. Several banks also acquired startups in the field of loyalty and payments, including Alfa Bank (Cardsmobile) and Tinkoff (Cloudpayments). The UK fintech unicorn Revolut also entered Russia in 2018 via a licensing deal with Qiwi Bank.

Russia's Central Bank has launched a Fintech Association and a sandbox designed to support further development. The FinoPolis fintech forum also strengthens the fintech ecosystem. Cryptocurrencies and tokens are legal but discouraged as a means of payment while ICOs and crowdfunding have gained popularity as alternative sources of capital. Accelerators and incubators such as Russia Fintech Lab, Huobi, Digital Horizon and Digital October are active in Russia as are 70+ VC firms, who invested a total of over €212M in 2017.

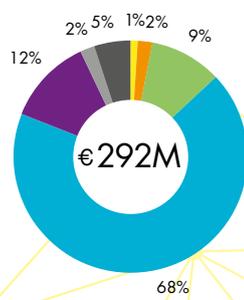


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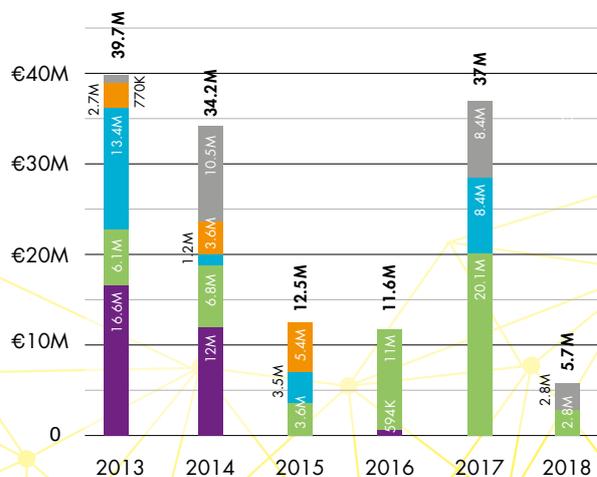
of active local fintechs



Cumulative funding 2008-2018



Funding trends



Top VC investors

Investor	# of investment
Life.Sreda	7
inVenture Partners	7
QIWI Venture	5
Prostor Capital	4
Flint Capital	4
Vostok Emerging Finance	4
Target Global	3
Runa Capital	3
Da Vinci Capital	3
Finam Global	3

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.



Top fintech companies

Company	Description	Funding (€)
Tinkoff Bank	High-tech branchless banking	47.2M
Bistrodengi	Microfinance and other financial services	44.9M
Biglion	Discounts and promotions platform	23.4M
TOT Money	Mobile payment processor	12.0M
Viva Dengi	Microfinance	11.3M
Zhuk	SME advisory services	9.7M
CarMoney	Loans secured on motor vehicles	8.5M
Comino	Cryptocurrency mining device	8.4M
2can	Transforms smartphones into mobile POS terminals	7.8M
MoneyMan	Online consumer lending	7.7M

Sources: Tables include fintechs headquartered in Russia. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Country data

Population (M)	146.3
GDP total (€ Bn)	1,400
GDP per capita (€, at PPP)	17,600
GDP growth (%)	2.3
Official currency	RUB

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	1237
Total bank assets / GDP (%)	93
Account ownership (% of population)	76
Debit card ownership (% of population)	57
Internet usage (% of population)	76
Usage of internet to pay bills (% of population)	35
Send/received digital payments (% of population)	71

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH





Saint Sava Temple in Belgrade, Serbia

Spotlight **Serbia**

There is a growing startup ecosystem in Serbia and the country is home to a large number of startups in both the B2C and B2B segments. Annual export growth in the ICT sector exceeds 20% and the government is committed to supporting this growth and encouraging further development through a range of measures in areas from infrastructure to education. Local subsidiaries of global companies are on the lookout for innovation opportunities in the country, as exemplified by the global telecom operator Telenor, that chose to pilot its mobile banking app in Serbia.

Serbia has a network of VC funds, accelerators and incubators that provide funding and support to fintech startups. Examples include Razlivaliste, StartLabs and the Novi Sad Business Incubator. Serbia's largest economics and business faculty Technical Faculties Belgrade L.L.C. has also established its own incubator called Business Technology Incubator, whose objective is to directly support technological innovations developed by members of the university.

A number of highly successful global fintech startups have been founded by Serbians. TradeCore's key product is Broker IQ, a leading innovative cloud-based solution that helps both startup and established brokers to operate and grow their brokerage. Broker IQ benefitted from a €2.4M investment in 2018. Penta provides fast and easy business banking services, which are used by more than 4,000 clients in Germany. More recently founded companies such as Cube Team and TruckTrack focus their activities on the SME and corporate banking space and involve little equity funding.

In addition to these, several global fintech companies have research and development centres in Serbia. These include NCR, a global leader in developing transformational transaction technologies, FIS, an international provider of financial services technology and outsourcing services, and eFront, a software solutions provider dedicated to the alternative investment industry.



Country data

Population (M)	7.0
GDP total (€ Bn)	44
GDP per capita (€, at PPP)	11,300
GDP growth (%)	4.0
Official currency	RSD

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	30
Total bank assets / GDP (%)	81
Account ownership (% of population)	71
Debit card ownership (% of population)	60
Internet usage (% of population)	70
Usage of internet to pay bills (% of population)	12
Send/received digital payments (% of population)	66

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Skyline of Bratislava, Slovakia

Spotlight Slovakia

Innovation in Slovakia is not exclusively focussed on the fintech sector. This is due to both the highly regulated environment and the innovativeness of local banks in other areas. An early significant move by these banks towards encouraging innovation was the establishment of co-working centres designed to enhance the creative environment. The most advanced of these is Tatra banka's Elevator Lab, which has become a special vehicle that is used by the bank for rapid prototyping and bringing together innovative out-of-the-box ideas and the traditional banking world as well as for providing a wide range of support to creative ideas from outside.

The Slovakian Ministry of Finance has also established a special organisational unit, the Centre for Financial Innovation, whose objective is to provide a platform for the regular exchange of information and experience between relevant public sector stakeholders, market participants and other organisations. The ministry is also analysing the detailed functioning of the new digital tax in order to ensure that digital business activities are taxed in the country in which they are used.

The Ministry of the Interior has created an API designed to facilitate the automation of know-your-customer processes. Tatra banka's digital account opening process makes use of this API as a result of which new clients of the bank are able to open a current account within minutes.

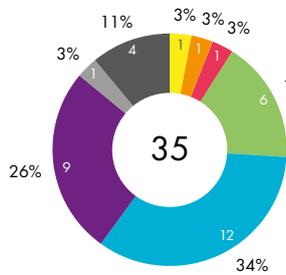
The technology company Minit is the champion in terms of attracting equity funding. Slovakia has a range of local and foreign VCs including the National Holding Fund, Earlybird Venture and Neulogy, whose focus is early-stage financing, as well as VCs who specialise in growth financing such as Limerock Fund.

Slovak-based startup Finax, which develops smart investing solutions, gained a €1.5M investment from venture capital fund Growws in March 2019. It will use the new funding to expand to other CEE markets this year and improve its technology. Finax offers a robo advisor for passive investing via ETF index funds.

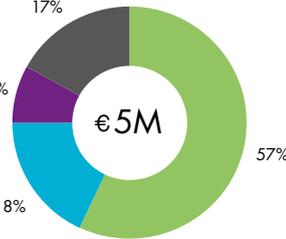


Size

of active local fintechs



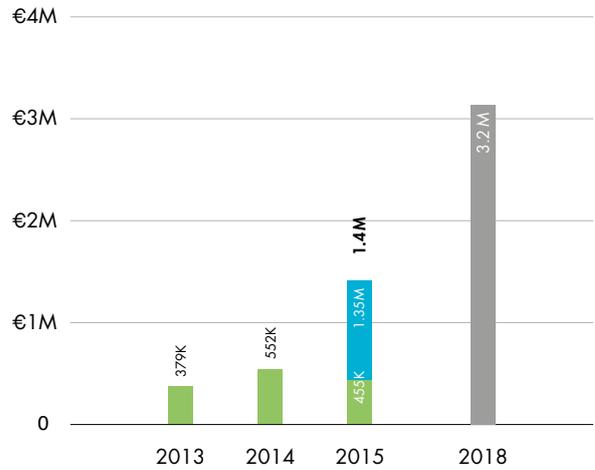
Cumulative funding 2008-2018



- Insurance
- Corporate Banking
- Capital Markets
- Technology
- Retail Banking
- SME Banking
- Wealth Management
- Support



Funding trends



- Seed/Angel
- Series A
- Not disclosed



Top VC investors

Investor	# of investment
Wayra	2
Earlybird Venture Capital	1
OTB Ventures	1
Innovations and Technologies Fund	1
J&T VENTURES	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.

Sources: Tables include fintechs headquartered in Slovakia. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Top fintech companies

Company	Description	Funding (€)
Minit	Payment cards and supporting technologies	3.2M
Zlty Melon	P2P lending	1M
Datamolino	Invoice processing	597K
Business Box	Online invoicing and accounting services	456K
Keepi	E-accounting	336K



Country data

Population (M)	5.4
GDP total (€ Bn)	90
GDP per capita (€, at PPP)	24,705
GDP growth (%)	4.1
Official currency	EUR

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	75
Total bank assets / GDP (%)	89
Account ownership (% of population)	84
Debit card ownership (% of population)	76
Internet usage (% of population)	82
Usage of internet to pay bills (% of population)	53
Send/received digital payments (% of population)	82

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Blue Mosque in Istanbul, Turkey

Spotlight **Turkey**

The Turkish fintech scene has become increasingly attractive to both local and international investors in recent years. These investors are aware of the significant growth potential of the fintech companies serving Turkey's strong financial sector and of the fact that returns are potentially much higher than those offered by saturated markets in the US and Europe. Foreign VCs investing in the Turkish ICT sector include Earlybird and Speedinvest.

One hurdle faced by fintechs in Turkey is that the relative infancy of the sector compared with more developed economies means that regulation is also embryonic. The key regulatory milestone to date was the introduction of the "Law on Payment and Security Settlement Systems, Payment Services and Electronic Money Institutions" in 2013. The Turkish Central Bank has also demonstrated its proactive approach to fintechs by launching its Fintech Task Force.

The first fintech hub was established via a partnership between Bosphorus University and the Istanbul Stock Exchange. Another key step was the launch of Finberg, an investment and fintech venture, by Fibabanka and Ozyegin University in April 2018. The total of €493K invested by the platform to date includes investments in Garaj Sepeti and Bizim Hesap. All these initiatives are expected to support the fintech ecosystem and ensure efficient coordination with regulatory bodies as fintechs prosper in step with the digital transformation of the financial sector.

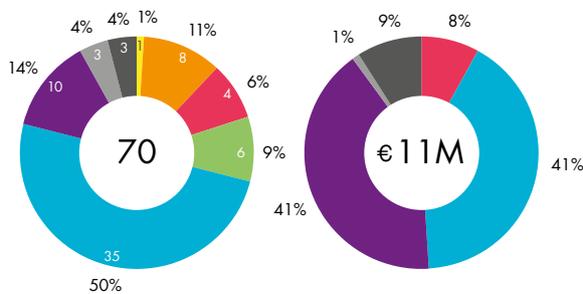
2018 saw a number of significant transactions. The Sancak Family, which is well-known in Turkey as an investor in a wide range of sectors, acquired a 54% share of Cardtek, the provider of end-to-end payment solutions, for an undisclosed sum. And Iyzico, another well-known Turkish player in the payment solutions market, received funding from a series of international investors including Vostok Emerging Finance, IFC and Amadeus Capital as well as the Turkey-based early-stage VC firm 212 Capital Partners.



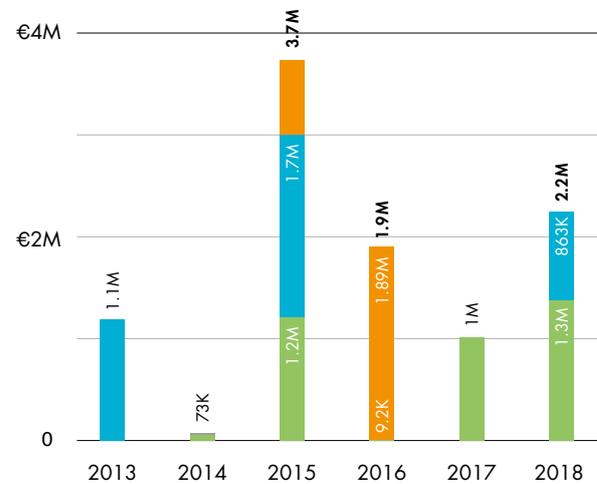
Size

of active local
fintechs

Cumulative funding
2008-2018



Funding trends



Top VC investors

Investor	# of investment
Aslanoba Capital	5
Revo Capital	5
R2 International GmbH	2
StartersHub	2
Collective Spark	2
Wamda Capital	1
Galata Business Angels	1
Istanbul Startup Angels	1
500 Startups	1
Diffusion Capital Partners	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.



Top fintech companies

Company	Description	Funding (€)
Parasut	Financial management software	3.7M
Ininal	Payment platform	2M
iyzi payments	Payment system management platform	1.2M
Tarfin	Digital platform for farmers	1.1M
Jetract	Procurement and contract software	1M
SmartPulse Technology Inc.	SaaS solution for energy stakeholders	880K
Merkez Factoring	B2B factoring business	619K
Enuygun	Finance and insurance product comparison	210K
Fulle Gitsin	Mobile app for automatic fuel payment	95K
NKolayOfis	Cloud-based ERP platform for SMEs	86K

Sources: Tables include fintechs headquartered in Turkey. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Country data

Population (M)	80.8
GDP total (€ Bn)	646
GDP per capita (€, at PPP)	20,100
GDP growth (%)	3.0
Official currency	TRY

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	720
Total bank assets / GDP (%)	103
Account ownership (% of population)	69
Debit card ownership (% of population)	63
Internet usage (% of population)	65
Usage of internet to pay bills (% of population)	33
Send/received digital payments (% of population)	64

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH



Independence Square in Kiev, Ukraine

Spotlight **Ukraine**

The fintech scene in Ukraine is in its formative phase and comprises over 80 companies at different stages of development. Over a third of these are involved in B2B payments while many others provide infrastructure or loan services. Many Ukrainian fintechs focus on the European rather than the domestic market.

According to the Ukrainian National Bank, by the end of 2018, Ukraine had taken the 4th place in the world by the amount of NFC transactions. A majority of Ukrainian banks and retailers have developed their own payment wallets and have also set up cooperations with tech giants (Google Pay, Apple Pay).

The strong growth of the sector in 2018 is continuing in 2019, helped by the high level of mobile penetration and largely well-educated and technologically literate population. Fintech solutions aimed at financial inclusiveness and the mass market offer the best growth potential for 2019. There is an ongoing process of harmonisation of Ukrainian legislation with EU directives in such areas as e-money, remote account registration, multilevel client identification, PSD2 and open API.

According to fintech representatives, a key hurdle in Ukraine is the outdated legislative and regulatory environment. Welcome reforms would include tax breaks for innovators, a simpler and more transparent process for establishing startups and the easing of banking regulations to authorise open API and give fintechs better access to financing. A further challenge is the loss of talented Ukrainians to more advanced markets.

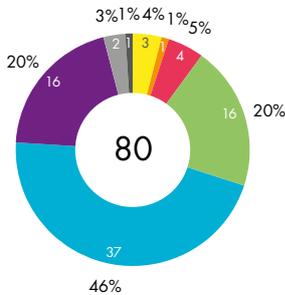
The many initiatives of the National Bank of Ukraine to support fintechs include its program for upgrading the country's financial sector by 2020. This involves such reforms as the move towards a cashless economy, the adoption of ISO 20022 (universal financial industry message scheme), the use of e-documents, e-signatures and remote customer identification and the strengthening of both financial literacy and the rights of the users of financial services.

Progress is also being made in improving the startup environment. Recent advances in the investment landscape have included the launches of VC funds, incubators, accelerators and alternative sources of funding.

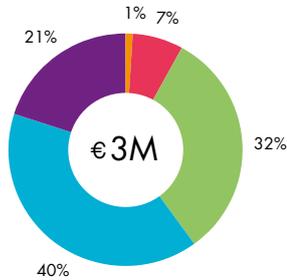


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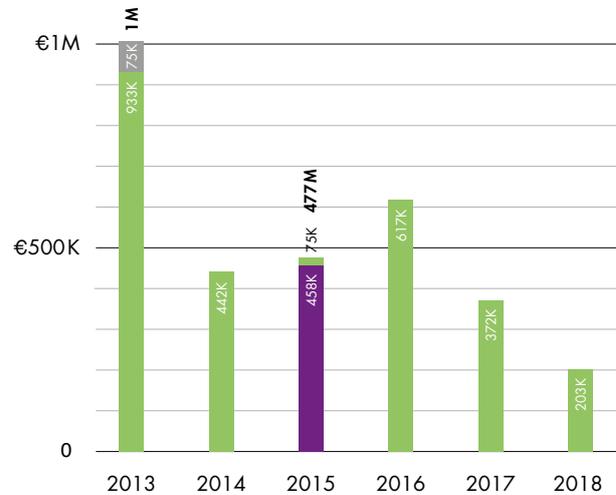
of active local fintechs



Cumulative funding 2008-2018



Funding trends



Top VC investors

Investor	# of investment
Udata Partners	1
Starta Accelerator	1
Investor Growth Capital	1
Starta Capital	1
Found Fair Ventures	1
Imperious Group	1

Selected Top VC investors ranked by number of investment in local fintechs from 2008-2018. Lowest category ranked by date of investments.

Sources: Tables include fintechs headquartered in Ukraine. Funding rounds and amounts are relative to the period 2008-2018 and exclude M&A and IPO deals, but include debt. Source: BCG FinTech Control Tower



Top fintech companies

Company	Description	Funding (€)
Moneyveo	Online, instant short term loan solution	1.1M
bNesis	API for mobile and desktop applications	1M
LendingStar	A P2P lending online marketplace	526K
Plato Trade	Automated trading service	204K
Kaznachey	Cloud payments platform	145K
OOO uGift	Online and offline gift card services	75K
Payment plugin	Payments and analytics company	23K
Moresise Bank	Personal finance management and online payments	19K

Country data

Population (M)	42.8
GDP total (€ Bn)	111
GDP per capita (€, at PPP)	6,600
GDP growth (%)	3.3
Official currency	UAH

Source: Eurostat, IMF, European Commission, RBI/Raiffeisen RESEARCH
Data for 2018, estimates

Total bank assets (€ Bn)	40
Total bank assets / GDP (%)	45
Account ownership (% of population)	63
Debit card ownership (% of population)	49
Internet usage (% of population)	53
Usage of internet to pay bills (% of population)	23
Send/received digital payments (% of population)	61

Latest available data as of 2017/2018
Source: ECB, national sources, World Bank, RBI/Raiffeisen RESEARCH

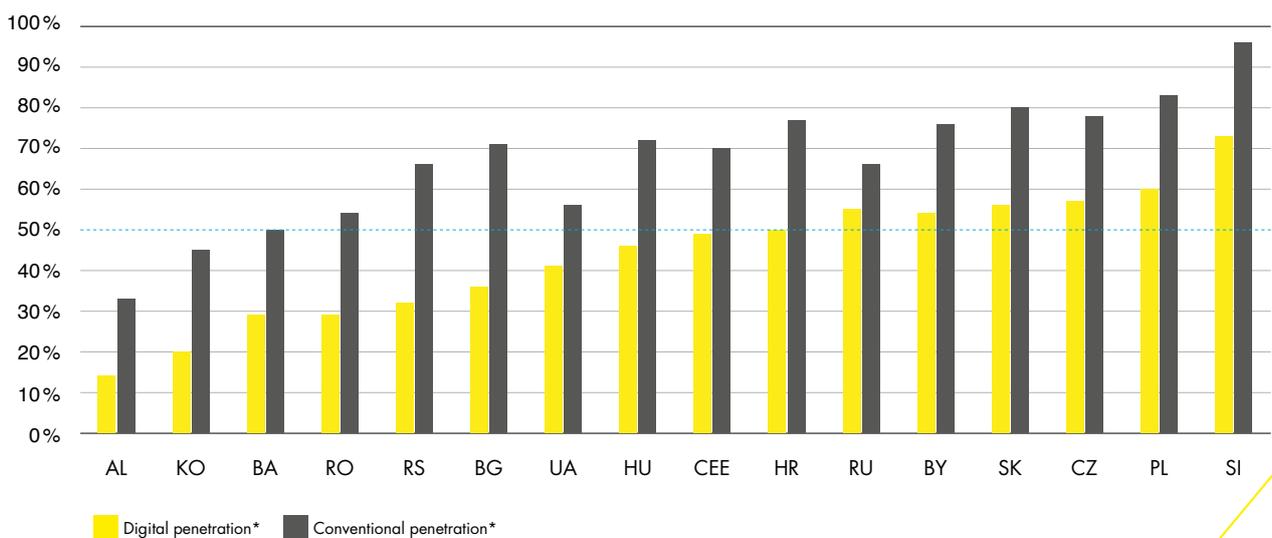
Digital leaders & catch-up candidates in CEE

In order to assess the digital maturity of CEE banking markets we applied several indicators such as the use of the internet for settling invoices, shopping or receiving digital payments. The result showed that more than 50% of the population is “digitally penetrated” in 7 of 15 markets: the Czech Republic, Slovakia, Poland, Slovenia, Croatia, Russia and Belarus. In these countries, digital penetration is close to or above the levels in global emerging markets (e.g. China, Turkey) but 30 percentage points (pp) lower than in leading digital markets in Western Europe. The above list shows that digital leaders are clustered in Central (CE) and Eastern Europe (EE), while Southeastern Europe (SEE), with a penetration level of 34%, offers the greatest untapped digital banking potential. Furthermore, the level of digital penetration in the CEE Region remains 25 pp below that of conventional banking (around 70%). The gap is larger in the SEE Region whereas in Western Europe, where digital/conventional penetration levels are higher, it is still 15 to 20 pp. Even in leading digital markets (e.g. Estonia, China, USA) there is a visible gap between these indicators (around 10 pp) and there is also, interestingly, a very small penetration gap in Russia. Going forward, we assume that rates of conventional and digital penetration in the CEE Region will rise, particularly in the digital space. As incomes grow, penetration levels of conventional banking should follow and this is usually the entry point to digital services.

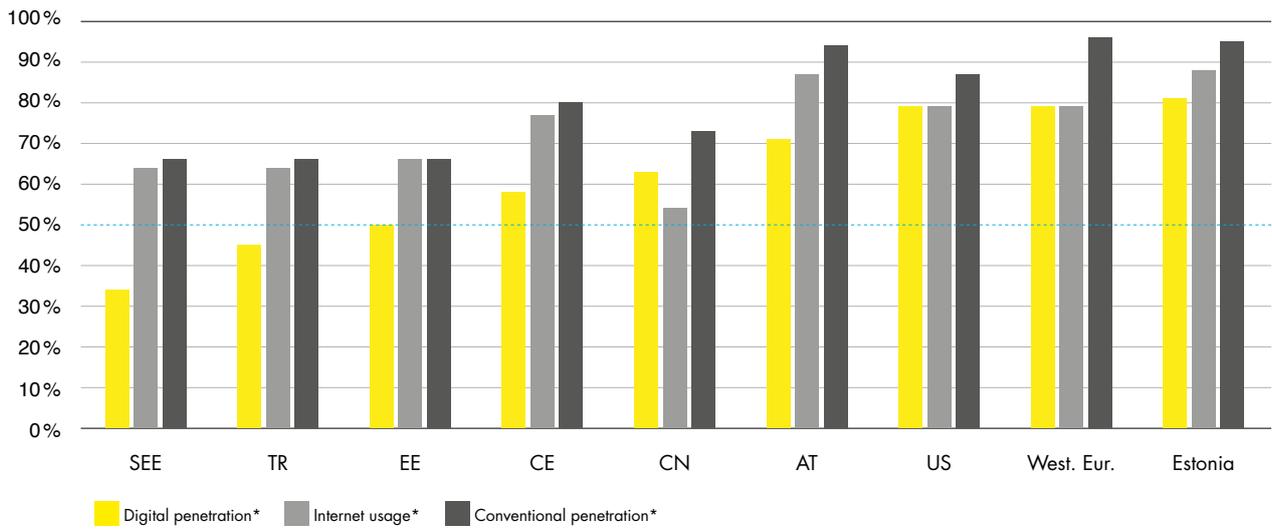
Converting penetration rates into users, 200 million people in the CEE Region are classic bank clients and 150 million are digital customers. Russia accounts for the lion’s share of these (over 50%) with around 78 million digital customers, while the country accounts for 46% of the region’s conventional banking customers. The Russian market is also characterised by a high affinity of young people to digital solutions, which is a feature of attractive digital markets (e.g. Estonia, China, USA). Russia also offers the largest profit pool and best short-term digital opportunities in the CEE Region. However, this mature market is already penetrated by established players (with Moscow being one of the leading fintech places globally). Six other countries – the Czech Republic, Hungary, Poland, Romania, Ukraine and Belarus – also offer at least 5 million digital users. In terms of digital maturity, Ukraine and Belarus can be regarded as “hidden champions”. Turning away from the trends in larger CEE markets, it is also interesting to look for less obvious digital champions. In some ways, Croatia can be regarded as a rather mature digital market while other SEE economies (Albania, Kosovo, Bosnia and Herzegovina as well as Serbia) are characterised by the high affinity of young people to digital services – which is a powerful indicator of future potential.

Recent numbers suggest that the outlook for CEE markets remains promising. The proportion of the population using digital payments has risen by 10 to 15 pp over three years. Growth rates are similar to those in “fashionable” digital markets such as China and Turkey. And it should also not be forgotten that the penetration of conventional banking has increased by 10 to 15 pp in the last 7 to 10 years in the CEE Region alone. Overall, we expect the number of digitally active bank customers in the CEE Region to grow by 20 million (to 170 million) in the coming years, despite a slight fall in population. To summarise, we tried to break down 15 CEE countries into groups in terms of current digital penetration in banking and the gap between conventional and digital penetration rates. The Czech Republic, Russia, Slovakia, Poland and Slovenia compare favourably with “true digital champions” (such as

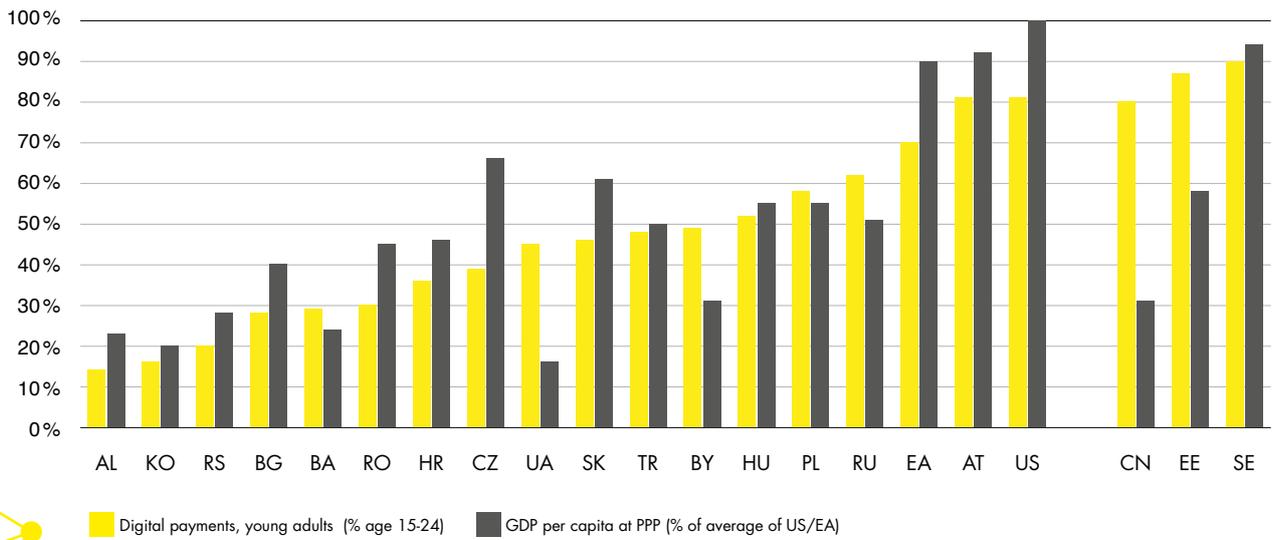
China and Estonia). CE countries plus Ukraine, Belarus and Croatia tend to be “regional digital flagship countries”, while Albania, Kosovo, Romania, Serbia and Bulgaria are “digital catch-up countries”. In other words: Some countries can compete with leading international digital (emerging) markets while others offer a lot of catch-up potential. Some CEE countries are characterised by levels of digital maturity below those of other emerging markets. These countries could be interesting to players already offering digital solutions in these markets. Here, the digitisation of the financial sector is more a question of financial inclusion and institutional advancement whereas, in other CEE markets, digitisation is about the use of cutting-edge technology. And finally, there are opportunities for leveraging the customer experience gained in leading CEE markets in other countries or using technology and product lifecycles transnationally.



*Digital: used the internet to pay bills, to shop online, received digital payments (% of population 15+), dotted line shows CEE average; conventional: account, debit card ownership (% of population 15+); correlation coefficient between both variables at 0.93; source: World Bank, RBI/Raiffeisen RESEARCH



*Digital: used the internet to pay bills, to shop online, received digital payments (% of population 15+); conventional: account, debit card ownership (% of population 15+); internet usage (% of total population)
 source: World Bank, Eurostat, RBI/Raiffeisen RESEARCH



Correlation coefficient between both variables at 0.66; source: World Bank, Eurostat, RBI/Raiffeisen RESEARCH

About Raiffeisen Bank International

RBI regards Austria, where it is a leading corporate and investment bank, as well as CEE as its home market. Subsidiary banks cover 13 markets across the region. In addition, the Group includes numerous other financial service providers active in areas such as leasing, asset management and M&A.

In total, 47,000 RBI employees serve 16.1 million customers in more than 2,100 business outlets, the vast majority of which are in CEE. RBI AG shares have been listed on the Vienna Stock Exchange since 2005.

At year-end 2018, RBI's total assets stood at €140Bn. The Regional Raiffeisen Banks hold approximately 58.8% of RBI shares, with the remaining approximately 41.2% in free float.

The consistent quality approach of the RBI Group is reflected in numerous local and international awards, in particular from leading financial publications. Amongst other awards, RBI was selected as the 'Best Bank in Central and Eastern Europe' by "EMEA Finance", „The Banker“ and "Global Finance" in 2018.

You can find the digital version of the CEE Fintech Atlas 2018 at:

www.fintechatlas.com

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Legal notice

Owner, editor, publisher:

Raiffeisen Bank International AG

Registered Office: Am Stadtpark 9, 1030 Vienna, Austria | Postal address: 1010 Vienna POB 50, Austria

www.rbinternational.com

Purpose of publication:

- Description of the fintech ecosystem in CEE (19 countries)
- Presentation of Elevator Lab, the Partnership Program of Raiffeisen Bank International AG

For further information please visit:

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