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## Equity Crowdfunding in the Eurasian Economic Union (EAEU)

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### ABSTRACT

The **aim** of this article is to provide a comprehensive research and analysis about fundraising through equity crowdfunding or crowdfunding compared to venture capital and other forms of equity financing in the Eurasian Economic Union member countries. The relevance of the research is conditioned with the fact that equity crowdfunding is one of the fastest growing capital raising platforms and has become a popular financing option for start-ups and early-stage companies. Analyzing generally accepted **methods** for evaluating early-stage companies, the authors propose to use the venture capital method combined with scenario analysis for determining the value of companies in order to raise funds on equity crowdfunding platforms. The statistical data of the EAEU countries were researched on macroeconomic development, stock markets, fintech, etc. This market is expected to grow year by year, but **results** show that for now it is still underdeveloped in the Eurasian Economic Union member states. The **conclusion** is that several regulatory and institutional reforms can enable the growth of equity crowdfunding, thereby diversifying potential sources of equity financing for start-ups and early-stage companies. The suggested approach can be applied by regulators.

**Keywords:** finance technologies; equity crowdfunding; crowdfunding; EAEU; early stage financing; raising capital; venture capital; private equity; investors; crowdfunding platforms

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## INTRODUCTION

Finance technologies (FinTech) are among the fastest-growing markets. They beat many other industries by the pace of development both in terms of financial performance and the number of end-consumers.

The financial services industry is being transformed by insurgent startups very quickly, each year more companies are becoming unicorns, getting higher equity funding, and exiting through IPO. The need to raise capital is one of the largest financial services subsectors, where equity crowdfunding platforms are utilizing the power of technology to create a new source of funding start-ups.

Equity crowdfunding is a platform where startups or early-stage unlisted private companies raise capital from the crowd by selling the securities (shares, convertible note, debt, revenue share, etc.) to investors. Unlike in traditional crowdfunding platforms, investors in equity crowdfunding expect to make a profit if the company which they chose for investment grows. In traditional crowdfunding campaigns, companies raise capital by selling their products and once investor receives the product, the sides have no obligations against each other. Equity crowdfunding provides investors partial ownership of a company where investment was made [1, 2].

There are many scientific publications covering equity crowdfunding from different perspectives and scientific aims, from emphasizing the role of policy implementation and regulation for equity crowdfunding [3, 4] to researching the operational side and outreach factors in developing countries via collecting and analyzing the data from different stakeholders of an ecosystem through surveys [5–7]. Other scholars are looking at the equity crowdfunding through the prism of how it influence and strengthen the entrepreneurial finance ecosystem [8–10]. The capital structure and rates of returns for crowdfunding ventures and portfolios is another area of the recent research [11–13]. All these scholars to some extent agree that equity crowdfunding can become a useful complement to the start-up ecosystem and serve to the interests and demands of different stakeholders from business angels and investment community to start-ups.

To achieve its aim, the rest of this paper is organized as follows: Section 2 presents equity market overview of the EAEU (Eurasian Economic Union) member states. Section 3 describes the state of the global crowdfunding industry and how platforms operate in a sample of one of the leading platforms – Seedrs. Section 4 analysis the crowdfunding industry

in the EAEU member states. Section 5 discusses the valuation of early stage ventures for equity crowdfunding campaigns. Section 6 summarizes the key challenges, opportunities, and the future of the equity crowdfunding industry in the EAEU member states. Finally, Section 7 concludes this work, lists the key findings and results.

## EQUITY MARKET OVERVIEW OF THE EAEU (EURASIAN ECONOMIC UNION) MEMBER STATES

The Eurasian Economic Union (further refers to: EAEU) is an international organization for regional economic integration providing for free movement of goods, services, capital, and labor, pursues coordinated, harmonized and single policy in the sectors determined by the Treaty and international agreements within the Union, including creation of a single services market and protocol of financial services. The member-states of the Eurasian Economic Union are the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation<sup>1</sup>.

Some macroeconomic indicators determining the sustainability of the economic development of the EAEU member states, 2018 (*Table 1*).

The macroeconomic indicators shows there are divergences in both life standard (Russia and Kazakhstan are 7 times higher in GDP per capita than Kyrgyzstan) and fiscal policy (Armenia and Kyrgyzstan have deficit, while other the EUEA states have surplus, Armenia and Kyrgyzstan have 5 to 6 times higher government debt to GDP ratio compare with Russia).

This difference imposes additional challenge for the union in the pursuit of further integration of institutions and markets.

Russia is the highlighted leader in FinTech industry, where Kazakhstan is trying to catch-up, while other states, being comparably small economies, are still far from creating competition (*Table 2*)<sup>2</sup>.

Equity markets in the EAEU countries are still behind debt markets in total volumes (*Table 3*).

Russia has the most developed equity market among the EAEU states. The equity markets consists of public equity and private equity, mainly PE & VC funds (*Table 4*).

<sup>1</sup> Eurasian Economic Union. URL: <http://www.eaeunion.org/?lang=en#about> (accessed on 14.02.2020).

<sup>2</sup> Center DCR. Private FinTech as a tool for sustainable business development in Russia and Kazakhstan.

Table 1

**Macroeconomic indicators of the EAEU member states**

Indicator	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
Surplus / deficit of the consolidated budget general government, as a percentage of GDP	-1.6	3.8	2.8	-0.3	2.9
General government debt, % of GDP	55.63	37.21	25.81	55.98	9.97
Inflation rate (consumer price index), %	2.5	4.9	6.0	1.5	2.9
Gross Domestic Product, growth/decline	5.2	3.0	4.1	3.5	2.3
GDP per capita PPP, USD	10,343	19,995	27,880	3,885	27,147

Source: compiled by the authors based on the data of the Eurasian Economic Commission. URL: [http://www.eurasiancommission.org/ru/act/integr\\_i\\_makroec/dep\\_stat/econstat/Pages/statpub.aspx](http://www.eurasiancommission.org/ru/act/integr_i_makroec/dep_stat/econstat/Pages/statpub.aspx) (accessed on 16.02.2020).

Table 2

**A snapshot of the EAEU FinTech market 2018**

Indicator	Russia	Kazakhstan
Fintech market size, USD million	780	44
Total M&A value, USD million	289	n/a
1Consumer sentiment index	0.43	0.08
Number of employed in FinTech industry	3,652	1,675
The average number of B2C clients	102,000	58,000
The average number of employees in FinTech companies	15	42
FinTech Company average age	3	5
The average number of B2B clients	352	370
The number of transactions	17	n/a

Source: compiled by the authors based on the research data of Deloitte CIS Research Center. URL: <https://www2.deloitte.com/content/dam/Deloitte/ru/Documents/research-center/FinTech-Market-Trends%202018-en.pdf> (accessed on 19.02.2020).

Total trade volumes of stock exchanges of the EAEU member states, excluding Russia are just 2.5% of the volume of the Russian market.

PE and VC funds combined are about 11% of the Russian public equity market (stock market) in 2018,

while PE funds volume was about 81% and VC funds volume was the remaining 19% of the private market. Share of the state capital was about 30% and private capital was 70% of the total volume of PE funds. As of 2018, there were 71 PE and 189 VC funds in Russia.

Table 3

## Trading volume on major stock exchanges (million USD) of the EAEU member states

		2014	2015	2016	2017	2018	2019
Total trade volumes	Armenia	14,439	2,086	129	181	192	153
	Belarus	31,600	19,914	14,327	12,709	13,693	17,709
	Kazakhstan	245,695	270,936	237,100	457,071	334,883	307,548
	Kyrgyzstan	28	2,010	1,453	1,377	1,748	87
	Russia	9,156,413	9,126,721	14,017,831	14,851,290	12,127,116	13,041,049
<i>Incl.</i>							
Government securities	Armenia	70.5	25.0	95.3	134.5	117.9	103.5
	Belarus	1,097.9	855.7	1,278.3	1,443.6	2,109.4	1,388.3
	Kazakhstan	5,637.0	1,269.3	1,668.0	5,994.4	4,323.9	4,784.3
	Kyrgyzstan	6.1	0.2	1.1	0.0	0.0	0.1
	Russia	78,203.8	60,083.9	100,448.6	152,604.6	217,746.8	247,341.6
Corporate Debt Securities	Armenia	2.4	0.9	3.9	5.4	46.1	21.1
	Belarus	2,377.7	2,161.2	1,737.1	939.6	1,637.0	1,799.1
	Kazakhstan	2,726.6	3,619.2	1,522.7	3,483.1	6,069.3	7,124.1
	Kyrgyzstan	0.0	3.6	5.6	10.0	8.6	14.9
	Russia	110,293.1	93,018.6	140,512.1	302,747.5	211,801.8	208,498.2
Stock Market	Armenia	60.6	2.6	13.6	24.9	4.4	5.0
	Belarus	40.5	10.9	25.9	42.7	44.3	16.2
	Kazakhstan	882.9	2,650.0	752.3	814.9	1,419.4	536.3
	Kyrgyzstan	21.6	49.0	137.4	57.5	48.1	72.2
	Russia	182,778.8	128,941.4	152,937.1	159,469.2	155,893.3	201,001.1
Derivatives market	Armenia	0.0	0.0	0.0	0.0	0.0	0.0
	Belarus	5.1	0.9	0.0	0.0	0.0	0.0
	Kazakhstan	7.2	0.0	0.0	66.7	n/a	n/a
	Kyrgyzstan	n/a	n/a	n/a	n/a	n/a	n/a
	Russia	1,089,895.0	1,285,810.6	1,900,376.2	1,466,951.8	1,284,903.3	1,330,575.2
Foreign exchange market (excluding Repos)	Armenia	648.2	308.0	3.8	9.3	0.0	n/a
	Belarus	25,992.6	14,528.3	9,411.0	8,688.4	7,674.1	8,133.9
	Kazakhstan	185,194.4	195,016.6	108,390.5	223,959.4	123,827.7	105,313.0
	Kyrgyzstan	n/a	1,526.9	1,244.0	1,158.5	1,242.8	n/a
	Russia	4,062,434.0	4,264,893.0	5,439,683.9	6,035,931.0	5,014,610.5	4,979,170.1
REPO transactions (secondary market)	Armenia	13,657.3	1,749.7	12.0	7.3	23.1	23.7
	Belarus	2,085.9	2,357.0	1,874.8	1,595.0	2,228.5	6,371.5
	Kazakhstan	51,247.1	68,381.3	124,766.3	222,752.1	199,243.0	189,789.8
	Kyrgyzstan	n/a	430.1	65.3	151.5	448.2	n/a
	Russia	3,632,808.7	3,293,973.9	6,283,873.2	6,733,586.2	5,242,160.0	6,074,462.5

Source: compiled by the authors based on the data of Eurasian Economic Commission. URL: [http://www.eurasiancommission.org/ru/act/integr\\_i\\_makroec/dep\\_stat/fin\\_stat/time\\_series/Pages/stocks.aspx](http://www.eurasiancommission.org/ru/act/integr_i_makroec/dep_stat/fin_stat/time_series/Pages/stocks.aspx) (accessed on 21.02.2020).

Table 4

## Total volume of PE and VC funds in Russia

Volume of funds, million USD	2013	2014	2015	2016	2017	2018
<b>Volume of PE and VC funds</b>	<b>26,251</b>	<b>25,991</b>	<b>22,386</b>	<b>19,566</b>	<b>20,398</b>	<b>22,065</b>
<b>Volume of PE funds</b>	<b>21,616</b>	<b>21,633</b>	<b>18,539</b>	<b>15,772</b>	<b>16,549</b>	<b>17,892</b>
<i>Share of state capital in the total volume of PE funds</i>	23.01%	20.47%	14.09%	15.71%	26.23%	29.99%
<i>Share of private capital in the total volume of PE funds</i>	76.99%	79.53%	85.91%	84.29%	73.77%	65.11%
<b>Volume of VC funds</b>	<b>4,635</b>	<b>4,358</b>	<b>3,848</b>	<b>3,794</b>	<b>3,849</b>	<b>4,173</b>
<i>incl.</i>						
<i>Seed stage capital</i>	498	536	423	404	428	446
<i>Non-seed stage capital</i>	4,137	3,822	3,425	3,390	3,358	3,665
<i>Share of state capital in the total volume of PE funds</i>	37.55%	35.33%	27.82%	23.47%	21.88%	27.68%
<i>Share of private capital in the total volume of PE funds</i>	62.45%	64.67%	72.18%	76.53%	78.12%	72.32%
<b>Number of PE and VC funds</b>	260	264	263	247	253	260
<b>Number of PE funds</b>	94	89	82	73	71	71
<i>Number of PE funds with state capital</i>	5	5	5	6	8	10
<i>Number of PE funds with private capital</i>	89	84	77	67	63	59
<b>Number of VC funds</b>	166	175	181	174	182	189
<i>incl.</i>						
<i>Number of seed capital funds</i>	28	35	34	32	35	36
<i>Number of non-seed capital funds</i>	138	140	147	142	145	149
<i>Number of VC funds with state capital</i>	49	52	56	52	50	51
<i>Number of VC funds with private capital</i>	117	123	125	122	132	138

Source: compiled by the authors based on the yearbook data of Russian Venture Capital Association (RVCA). URL: <http://www.rvca.ru/rus/resource/library/rvca-yearbook/> (accessed on 11.03.2020).

In 2018, the volume of PE and VC investments dropped to USD863 million, from that of USD1,492 million in 2017. The major stake, USD801 million, of 2018 investment went to the expansion stage PE and VC investments, USD16 million was Seed and Start-up stage investments, USD26 million — to early growth and another USD16 million — to later-stage investments (Table 5).

It is worth mentioning that in 2018, invested capital was a tiny fraction of committed capital of the

funds, which is an indication of both weak demand from early and later-stage start-ups and scale-ups for institutional private funding and underdeveloped ecosystem for entrepreneurial finance.

There were exits of the total amount of USD76 million in 2018 in the Russian private equity market, of which USD73 million were sales to financial investors and USD2 million MBOs. The number of PE exits were 10, while VC exists were 20 (Table 6).

Table 5

## Volume of PE and VC investments in Russia

Volume of funds, million USD	2013	2014	2015	2016	2017	2018
<b>Volume of PE and VC investments</b>	<b>2,645</b>	<b>879</b>	<b>1,043</b>	<b>818</b>	<b>1,492</b>	<b>863</b>
incl.						
<i>Seed and Startup</i>	74	41	23	15	22	16
<i>Early growth</i>	169	80	36	28	316	26
<i>Expansion</i>	1,193	647	720	639	984	801
<i>Restructuring</i>	40	0	64	0	0	0
<i>Later stage</i>	1,168	107	182	132	167	16
<i>Share of state capital in the total volume of PE &amp; VC investments</i>	33.32%	26.13%	59.53%	65.34%	56.29%	65.79%
<i>Share of private capital in the total volume of PE &amp; VC investments</i>	66.68%	73.87%	40.47%	34.66%	43.71%	34.21%
<b>Volume of PE investments</b>	<b>2360</b>	<b>726</b>	<b>893</b>	<b>687</b>	<b>1359</b>	<b>691</b>
incl.						
<i>Seed and Startup</i>	0	0	0	0	0	0
<i>Early growth</i>	0	0	0	0	275	0
<i>Expansion</i>	1152	619	633	555	917	675
<i>Restructuring</i>	40	0	64	0	0	0
<i>Later stage</i>	1168	107	182	132	167	16
<b>Volume of VC investments</b>	<b>285</b>	<b>153</b>	<b>150</b>	<b>130</b>	<b>133</b>	<b>172</b>
incl.						
<i>Seed and Startup</i>	74	41	23	15	22	16
<i>Early growth</i>	169	80	36	28	41	26
<i>Expansion</i>	41	28	87	84	67	125
<i>Restructuring</i>	0	0	0	0	0	0
<i>Later stage</i>	0	0	0	0	0	0
<b>Number of PE and VC investments</b>	<b>218</b>	<b>256</b>	<b>203</b>	<b>212</b>	<b>196</b>	<b>203</b>
<b>Number of PE investments</b>	<b>30</b>	<b>26</b>	<b>13</b>	<b>7</b>	<b>15</b>	<b>18</b>
incl.						
<i>Early growth</i>	0	0	0	0	1	0
<i>Expansion</i>	23	24	7	6	13	17
<i>Restructuring</i>	2	0	2	0	0	0
<i>Later stage</i>	5	2	3	1	1	1
<b>Number of VC investments</b>	<b>188</b>	<b>230</b>	<b>190</b>	<b>205</b>	<b>181</b>	<b>185</b>
incl.						
<i>Seed and Startup</i>	103	171	113	120	91	94
<i>Early growth</i>	72	40	49	48	55	30
<i>Expansion</i>	13	18	22	35	32	35

Source: compiled by the authors based on the yearbook data of Russian Venture Capital Association (RVCA). URL: <http://www.rvca.ru/rus/resource/library/rvca-yearbook/> (accessed on 11.03.2020).

Table 6

**Volume of PE and VC funds exits in Russia**

Volume of funds, million USD	2013	2014	2015	2016	2017	2018
Volume of Exits of PE and VC funds	4,800	3,763	1,927	601	52	76
IPO	1,087	952	0	0	0	0
SPO	95	0	265	0	0	0
Stock trading	472	361	382	0	0	0
Sale to strategic investor	800	207	26	110	23	0
Sale to financial investor	1,346	1,640	1,240	480	29	73
MBO	0	0	0	0	0	2
Write-off	0	0	0	0	0	0
Share buyback	1,000	0	0	0	0	0
Full/part asset sale	0	1	0	0	0	0
Other/Unknown	0	602	14	11	0	1
incl.						
Volume of Exits of PE funds	4,794	3,735	718	535	0	55
Volume of Exits of VC funds	6	78	1209	66	52	21
Number of Exits of PE and VC funds	20	41	50	50	23	30
incl.						
Number of Exits of PE funds	8	20	16	5	2	10
Number of Exits of VC funds	12	23	34	45	21	20

Source: compiled by the authors based on the yearbook data of Russian Venture Capital Association (RVCA). URL: <http://www.rvca.ru/rus/resource/library/rvca-yearbook/> (accessed on 11.03.2020).

Table 7

**Volume of PE and VC funds in Kazakhstan**

Volume of funds, million USD	2013	2014	2015	2016	2017	2018	2019
Volume of PE & VC funds	1,850	2,240	2,240	2,240	2,330	2,330	2,570
Volume of committed PE & VC investments	580	840	840	840	930	930	1120
Number of funds	8	11	12	12	13	13	15

Source: compiled by the authors. URL: <https://home.kpmg/kz/ru/home/insights/2019/09/private-equity-report.html> (accessed on 24.02.2020).

The volume of Kazakhstan's PE & VC funds<sup>3</sup> is about 12% of Russia's funds as of 2019 (Table 7).

Granatus Ventures, HIVE are technology venture capital firms in Armenia, currently managing portfolios of about 20–25 high-tech startups that have together attracted over \$100m from VC firms.

It is expected to launch Armenia's National Venture Fund in 2020, which will manage as much as \$100 million by 2027<sup>4</sup>.

The Russian-Belarusian venture investment fund RBF Ventures was established in December

<sup>3</sup> Private Equity Market in Kazakhstan. KPMG; 2019.

<sup>4</sup> Armbanks. URL: <http://www.armbanks.am/en/2019/12/18/126079/> (accessed on 03.03.2020).



Table 8

## The Venture Capital &amp; Private Equity Country Attractiveness Index 2018

EAEU member state	Rank	Score
Armenia	77	48.1
Belarus	97	33.9
Kazakhstan	57	56.3
Kyrgyzstan	94	36.8
Russia	39	63.5

Source: compiled by the author based on the IESE Business School data. URL: <https://blog.iese.edu/vcpeindex/ranking/> (accessed on 24.02.2020).

2016, which provides investments in the amount of 25 million roubles for projects in the early stages and up to 140 million roubles for companies in the growth stage. Its total size is 1.4 billion roubles. The investors of the fund are the Belarusian Innovation Fund (Belinfond), RVC and RVC Infrafund that at the first stage invested 50%, 49%, and 1% respectively<sup>5</sup>.

The development of the venture capital ecosystem in the EAEU is not rapid. Unlike the leading countries in this area (such as China, USA, and UK), the EAEU and particularly Russia's venture funds have recently started making deals in the acquiring markets. However, every year, more and more venture deals are made, new funds are formed, and ventures get their desired investments. As for 2018, among the EAEU countries, Russia has the most attractive VC and PE market according to "The Venture Capital & Private Equity Country Attractiveness Index" (Table 8).

There are no available public data regarding the private equity returns of the EAEU member states PE and VC funds. Bain & Company in its recent report found that over the past 30 years, US buyouts have generated average net returns of 13.1%, compared with 8.1% for an alternative private-market performance benchmark, based on the Long-Nickels public market equivalent (PME) method and using the S&P 500 as the proxy. While a narrower look, just after the 2009 recession shows that the US public equity returns (IRR) matched the buyouts (later stage PE funds) returns at around 15% [14].

<sup>5</sup> RBF Ventures. URL: <https://rbf.vc/news-en/325/> (accessed on 18.02.2020).

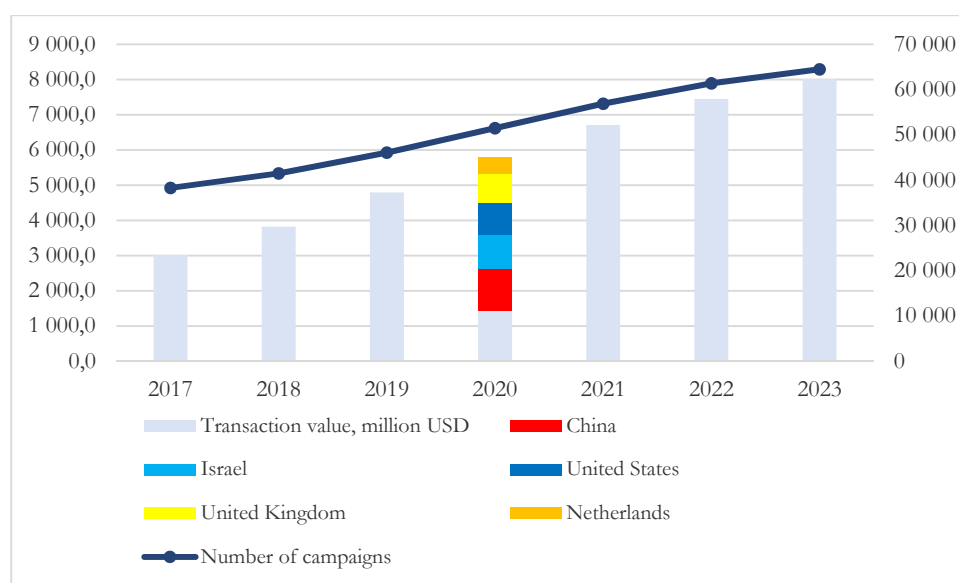
### STATE OF THE GLOBAL CROWDFUNDING INDUSTRY AND HOW PLATFORMS OPERATE

Broadly speaking, crowdfunding can be divided into four main categories:

- Donation: funders as philanthropists that don't expect any direct return for their donations (e.g., GoFundMe, Kickstarter).
- Rewards-based: funders are expecting to get rewards/compensations in the form of final products, services (e.g. Indiegogo).
- Lending: funds are offered as a loan, with the expectation of some rate of return on capital invested (e.g., Lending Club, Funding Circle).
  - P2P lending: investors and borrowers are individuals.
  - P2B lending: investor is an individual, borrower is an entity.
  - B2B lending: investors and borrowers are entities.
- Equity: funders are treated as investors, having participation in the projects (e.g., SEEDRS, CrowdCube, AngelList, CircleUp, OurCrowd) [15].

The term equity-based crowdfunding or crowdinvesting defines a variety of transactions where an unspecified number of investors come together in order to invest in a well-defined purpose. The following segment exclusively considers equity-based crowdfunding: investments in equity shares or profit-related returns (for example, royalties or convertible loans). Crowdinvesting has become a popular financing option for start-ups and is considered as a part of venture capital financing. Well-known platforms in this area are EquityNet, CrowdCube and Seedrs.





**Fig. 1. Transaction value and number of campaigns**

Source: compiled by the authors based on the data provided by Statista. URL: <https://www.statista.com/outlook/377/100/crowdfunding/worldwide> (accessed on 02.28.2020).

Global equity crowdfunding (crowdfunding) data:

- Transaction value in the crowdfunding segment amounts to USD5,800.2 million in 2020.
- Transaction value is expected to show the annual growth rate (CAGR2020–2023) of 11.4% resulting in the total amount of USD8,014.6 million by 2023.
- The average funding per campaign in the crowdfunding segment amounts to USD112,615 in 2020.
- In terms of global comparison, it is shown that the highest transaction value is reached in China (USD1,209 million in 2020)<sup>6</sup>.

As shown in Fig. 1, equity crowdfunding global market is expected to grow year by year. It is expected that in 2020 top 5 equity crowdfunding markets China, Israel, United States, United Kingdom and Netherlands collectively will generate about 75% of the global crowdfunding transaction value.

Equity crowdfunding global market transaction value and a number of campaigns (Fig. 1).

Seedrs is one of the leading platforms in the UK and comparably is one of the leaders in terms of the amount raised in the platform globally. It is a platform for investing in the equity of fast-growing startups and scale-ups.

The fundraising procedure at Seedrs consists of the following steps:

1. Submit a campaign — The detailed process of submission is explained below.

2. Create a video and marketing plan — The campaign video is one of the most important tools to engage the crowd by showcasing the business, team and current investors. At the same time prepare a marketing plan for warming up the investors.

3. Private launch — Shareholders, consumers and your network have the exclusive opportunity to invest before anyone else when the campaign launches privately.

4. Public launch — If the campaign demonstrates traction during the private launch, they will publish it for all to see on Seedrs. Campaigns run for up to 40 days. Once public, it's important that you get as many potential investors to see the campaign as possible.

5. Campaign hits 100% — After hitting the target, the campaign can stay open to take advantage of overfunding. After closing a round, Seedrs performs legal due diligence on the company and prepares documentation.

6. Receive all funds — Once that's all completed, the amount raised in the fundraising campaign is transferred, less Seedrs fee<sup>7</sup>.

The process of submitting a campaign at Seedrs consists of 4 steps:

- Campaign submission — Entrepreneur submits the campaign copy to Seedrs.
- Initial screening — Campaign is reviewed to ensure it is viable, appropriate and engaging.

<sup>6</sup> Statista. URL: <https://www.statista.com/outlook/377/100/crowdfunding/worldwide> (accessed on 02.28.2020).

<sup>7</sup> SEEDRS website. URL: <https://www.seedrs.com/raise> (accessed on 02.03.2020).



Fig. 2. Map of the Russian crowdfunding market

Source: compiled by the authors. Data source: DOMBASE. URL: <https://rb.ru/opinion/rabotaet-li-kraudfanding-v-rossii/> (accessed on 12.03.2020).

- Detailed verification — Each statement is reviewed, and initial due diligence is performed.
- Campaign live — Once campaign meets the standards; it's approved and becomes available for investment.
- Quick facts about Seedrs:
  - sector agnostic with investments raised for more than 17 different sectors;
  - GBP 650 m + invested on the platform;
  - 860 + deals funded;
  - 9,700 + investor exits;
  - 74% funding success rate<sup>8</sup>.

Seedrs' latest Portfolio Update (2012–2017) shows that “on a fair value basis, early-stage and growth equity investing on Seedrs has produced outstanding annualized rates of return (IRRs)”.

Platform-wide IRR 12.02% exceeds that of most asset classes, and it increases to 26.42% when impacts of SEIS and EIS tax reliefs are taken into account.

Top decile (10%) of investors who have made 10+ investments have achieved outstanding average IRRs of 47.90% (62.45% when tax-adjusted); top quartile (25%) of these investors have average IRRs of 31.34% (46.74% tax-adjusted) [15].

<sup>8</sup> SEEDRS website. URL: <https://www.seedrs.com/raise> (accessed on 02.03.2020).

There is a general optimism towards equity crowdfunding and there is a strong intuition, that it democratizes entrepreneurial finance. One research found that equity crowdfunding opens a diverse investor base, democratizing capital access for entrepreneurs [16]. Other studies found that equity crowdfunding mitigates market frictions in geography [17], entrepreneur gender [18], venture scale and sector<sup>9</sup>.

Further, in large campaigns, angels take the lead, with the crowd following and filling their funding gaps, while in small campaigns, crowd plays a more pivotal role in campaign success while angels generally lack the interest.

In another recent interesting research conducted by Hellmann, Mostipan and Vulkan the following conclusions have been made: i) fundraising goal is highly important, ii) experienced teams (entrepreneurial experience & education) are asking for more, are more likely to be successful and raise more money, iii) female teams (especially all-female teams) ask for less, are equally successful and raise less money (but hold out for longer) [19].

## CROWDFUNDING INDUSTRY IN THE EAEU MEMBER STATES

In the first nine months of 2019, the volume of the Russian crowdfunding market (the total volume of

<sup>9</sup> UKBAA B. The UK Business Angel Market. 2017.

Table 9

**Crowdfunding platforms in the EAEU member states (excl. Russia)**

EAEU member states	Crowdfunding platforms
Armenia	Boostbloom, OneArmenia – rewards/donation crowdfunding platforms
Belarus	Ulej – rewards/donation crowdfunding platform
Kazakhstan	Start-time – rewards/donation crowdfunding platform
Kyrgyzstan	Hope – donation crowdfunding platform

Source: compiled by the authors based on the research data for the other EAEU member states.

Table 10

**Scenarios and assigned probabilities**

Base case scenario cash flows, 4% growth	25%
Base case scenario cash flows, 2% growth	25%
50% cash flows*, 4% growth	10%
50% cash flows, 2% growth	10%
Total bust**	30%

Source: assumptions based on industry practices, compiled by the authors.

\* This scenario means that the cash flows forecasted in the base case scenario are halved due to the uncertainty and over-optimistic expectations.

\*\* Given the high risk of a venture, there is probability of total write-off of the firm.

transactions in all segments) amounted to USD76 million, decreasing by almost 42% compared to the same period of 2018.

In 2019, the Russian B2B FinTech lending market registered the largest drop of 80.5% (USD12.5 million in 2019 compared to USD64 million in 2018). The declining trend was observed for more than a year — in 2017, the volume of this segment amounted to USD92 million.

The volume of the Russian P2P lending market in 2019 decreased by 70% (from USD3.9 million to USD1.2 million) compared to the previous year.

However, the largest crowdfunding segment — P2B lending — on the contrary, grew by 2.5% in the first nine months of 2019 compared with the same period of the previous year and reached USD59.8 million. The growth was not as explosive as a year earlier, when the volume of the segment in annual terms increased by 4.4 times.

The rewards-based segment also grew slightly by 2.3% up to USD1.93 million in 2019<sup>10</sup>.

The main reason for the reduction of the crowd-lending market in Russia is competition among banks.

Equity crowdfunding or crowdfunding is still underdeveloped in Russia and the other EAEU mem-

ber states. There are few equity crowdfunding platforms in Russia, e.g. StartTrack and Simex, while in the rest EAEU member states such platforms either do not exist or are in the stage of early formation (Fig. 2).

The EAEU member states (excl. Russia) mainly have rewards and donation crowdfunding platforms, with an underdeveloped crowdlending and crowdfunding markets (Table 9).

There are no public data regarding the returns for the early-stage ventures, who raised funding equity crowdfunding campaigns in the EAEU.

### VALUATION OF EARLY STAGE VENTURES FOR EQUITY CROWDFUNDING CAMPAIGNS

Obviously, the early stage ventures are highly risky investments and the valuation for such investments can be approached similarly with the early stage VC valuation techniques.

Despite that valuation is often looked at as art, rather than science, there are three widely used techniques for the early stage valuation:

- discounted cash flow (DCF) approach;
- scenario analysis (multi DCF);
- “venture capital” method [20].

<sup>10</sup> URL: <https://www.rbc.ru/finances/18/11/2019/5dcd55c19a794751a1a5c3ca> (accessed on 12.03.2020).

*Discounted cash flow (DCF) approach*

$$PV = \frac{TV}{(1+r)^t} + \sum_{h=1}^t \frac{CF_h}{(1+r)^h},$$

$$TV = (\text{final forecast cash flow}) \times \frac{(1+g)}{(r-g)},$$

where:

$r$  — is the rate of discount;

$g$  — is the growth rate;

$t$  — is time to exit;

$TV$  — is the terminal value.

*Scenario analysis (multi DCF)*

Multi DCF techniques also use the same DCF equations for calculating present value of future cash flows of the firm. The difference is, that there is one base-case scenario in the DCF technique, which could be over-optimistic and/or not represent main outcomes of potential scenarios.

For example, a venture can have several scenarios and assigned probabilities to them (*Table 10*).

Both DCF and scenario analysis (multi DCF) techniques are highly sensitive to the terminal value and to the discounting rate. Given that the early-stage venture's cash flows are not highly predictable, then for partially mitigating the uncertainty with the terminal value the scenario analysis (multi DCF) technique has a higher accuracy rate compared to the DCF technique.

Furthermore, the terminal values' share in the present value of the discounted future cash flows of the venture frequently counts somewhere between 70% to 90%, which shows high subjectivity of the assumptions underlying the DCF approach. The multi DCF approach can partially bypass this problem by assigning weights to the different scenarios regarding the future of a venture.

*"Venture capital" method*

The venture capital method (sometimes also known as First Chicago Method) is a technique which blends both multiples-based valuation and DCF approaches.

The formula for VC method is:

$$\text{Venture's Value} = E_t \times \frac{(P/E \text{ ratio})}{(1+r)^t},$$

where:

$E_t$  — is earnings (income) at the time of exit;

$P/E$  ratio — is the price to earnings ratio for similar ventures (or estimated);

$r$  — is the required rate of return;

$t$  — is the time of exit.

Earnings (income) at the time of exit is a highly subjective prediction, but given relevant market data regarding exits of similar firms in the industry, it can be based not so much on the optimistic views of the founders regarding their ventures, but more on the relevant market data. The calculations of ratios for similar ventures are still challenging given the lack of sufficient market information in the EAEU member states.

The rate of return, used in all three early-stage valuation techniques, as already mentioned is highly sensitive regarding the value of a firm and is considered as a black box for many entrepreneurs.

There is a common practice in the Silicon Valley ecosystem to apply discount rates in the range of 50% to 70% for early-stage start-ups.

Applied discount rates for an early stage ventures can be explained by the modified capital asset pricing model (CAPM) [21], with the additional risk premiums associated with the early-stage ventures.

The formula is:

$$CAPM(r) = R_{rf} + \beta \times (\text{market risk premium}) + R_l + R_{va} + R_{cf},$$

where:

$R_{rf}$  — is the base rate of return for the risk-free investment;

$\beta \times (\text{market risk premium})$  — is the systematic risk premium, for the sensitivity of the return on the stock to the return on the market as a whole;

$R_l$  — is the liquidity premium, for investing in the private company, which compared to the investment in the public company stock is characterized by illiquidity, defined as the inability to convert the holding to cash at their full value in a reasonable period of time;

$R_{va}$  — is the value-added by a venture capitalist, who is an active investor and mentor to the firm they invest in. They usually engage in the process of high-level decision making regarding the strategy, C-level executive team hiring and firing;

$R_{cf}$  — is the cash flow adjustment premium. Given that the nature of a start-up venture requires reinvestment of generated cash flows, there are highly limited options for an investor to get some cash inflows during the period prior to the full or partial exit of a firm.

The beta and market risk premium could be calculated based on the Russian stock market data and be used for the other EAEU member states through

the country and currency risk adjustments<sup>11</sup>. The premium for the liquidity and cash flow adjustment to some extent can also be calculated based on comparison with more liquid investments, while the value-added premium is highly subjective.

The venture capital method can be deployed with the scenario analysis approach for testing to what extent the discount rate and the assumption regarding earnings (income) at the time of exit are affecting the outcome of the value of a venture.

### CHALLENGES, OPPORTUNITIES, AND THE FUTURE OF THE EQUITY CROWDFUNDING INDUSTRY IN THE EAEU MEMBER STATES

The equity crowdfunding industry in Russia and the other EAEU member states face some challenges, but also, there are opportunities for a potential entrant (further referred to as Platform), which is intending to dominate the EAEU market [22].

**Supply and demand-side economies of scale:** the platform should gain enough projects, as well as attention from the crowd quickly to benefit both from an economy of scale and gain its market presence. There are significant costs of branding and marketing, as well as operational costs for a platform, which can be breakeven if a critical mass of projects and the crowd gathers around it. Demand-related projects have very limited time to raise funds, if the platform is a waste of time, they will better directly go to VC funds and angel investors.

**Customers switching costs:** from a perspective of funding alternatives, there are no major switching costs from a platform to a VC or an Angel investor as soon as the project has its pitch deck and valuations. Although in the process of already launched crowdfunding campaigns, the switching costs are relatively high, since the platform will already or in accordance with the conditions charge a project fee for listing.

**Capital requirements:** the launch of a new equity crowdfunding platform requires significant costs of marketing and branding; the development of the platform requires a business model and solid algorithms.

**Incumbent advantages independent of size:** track records in the industry are critical for gaining new projects to be listed at the platform, while an

innovative business model can disrupt the status quo of incumbent players and the market.

**Bargaining power of suppliers:** in the majority cases, platforms are operating peer to peer without any intermediary organizations and individuals. While advisory firms can be treated as suppliers of valuations and management advisory services, which can affect the decision-making process and value chain of the fundraising at the platforms.

**Bargaining power of investors:** the information regarding listed projects at the platforms is very limited, it is practically impossible for an investor to conduct due diligence of a project, and campaigns are open to unsophisticated investors. The sequential nature of crowdfunding may include pledge herding, abstention herding, and information cascades, which affects the rationality of investment decisions and/or investors' actions.

**Threat of substitute funding sources:** VC & PE funds, alongside Angel Investors, are dominating the equity funding industry. On the flip side, the picture is changing in developed countries, especially in the UK, where the share of equity crowdfunding is growing rapidly in comparison to the growth rates of PE & VC funds. Thus, this innovative financing alternative could gain even faster penetration in the EAEU if the infrastructure, ecosystem, and regulation play in favor of this FinTech area.

**Impact of new legislation:** for boosting equity crowdfunding industry in the EAEU states, new legislative reforms are required, particularly addressing the following issues:

- tax incentives;
- procedures for ensuring that the public understands the basics of investing in start-ups (e.g. investors self-certification after tutorial and quiz);
- regulatory focus on disclosures on investors' side;
- standardization of valuation, adoption of industry-standard International Private Equity Valuation (IPEV) Guidelines.

**Rivalry among existing competitors:** at the first stage, the competition will be wider, the platform should compete with existing VC & PE funds, which will be tough and intense competition. As the case with the Russian crowdlending shows, the peer-to-peer lending market dropped significantly in 2019 due to the intense competition from the Russian banks softening the process of SME lending.

In the second stage, after the formation of the equity crowdfunding industry and gaining a solid market share of equity capital allocation, the

<sup>11</sup> One of the open sources for such analysis is the Aswath Damodaran's calculations. URL: <http://pages.stern.nyu.edu/~adamodar/> (accessed on 12.03.2020).



competition will switch more between the platforms. The more agile, innovative, better positioned from the branding and marketing perspective, user-friendly platforms will have the potential to gain a competitive advantage from enabled capabilities of the industry and the business model particularly.

### CONCLUSION

Finance technologies markets are growing rapidly. Among them equity crowdfunding is one of the fastest growing capital raising platforms worldwide. Crowdinvesting has become a popular financing option for early-stage ventures and is considered as a substitute to the traditional venture capital financing and Angel investment. The popular global crowdfunding platforms are EquityNet, CrowdCube, Seedrs, AngelList, CircleUp, OurCrowd. Top 5 countries with developed equity crowdfunding markets in the world are China, Is-

rael, United States, United Kingdom and Netherlands.

Equity crowdfunding is still underdeveloped in the EAEU member states, and there is no dominant player in the market. Among 5 EAEU countries, only Russia has a few equity crowdfunding platforms. The rest of the EAEU countries have mostly rewards and donation crowdfunding platforms. The valuations of projects on the crowdfunding platforms can be conducted by deploying three widely used techniques: DCF, scenario analysis (multi DCF) and the venture capital method, while we suggest using the latter with the blend with the scenario analysis approach using the modified CAPM formula discussed in this article. Furthermore, legislative reforms are required for boosting the equity crowdfunding industry in the EAEU member states and for enhancing competitiveness of this form of funding and consequently diversifying the spectrum of funding sources and instruments for start-ups and early-stage companies.

### REFERENCES

1. Marks H. What is equity crowdfunding? Forbes. Dec. 19, 2018. URL: <https://www.forbes.com/sites/howardmarks/2018/12/19/what-is-equity-crowdfunding/#4eb26ee43b5d>
2. Gerber E. M., Hui J. S., Kuo P.-Y. Crowdfunding: Why people are motivated to post and fund projects on crowdfunding platforms. In: Proc. int. workshop on design, influence, and social technologies: Techniques, impacts and ethics. 2012;2:11. URL: [https://www.academia.edu/33633234/Crowdfunding\\_Why\\_People\\_Are\\_Motivated\\_to\\_Post\\_and\\_Fund\\_Projects\\_on\\_Crowdfunding\\_Platforms](https://www.academia.edu/33633234/Crowdfunding_Why_People_Are_Motivated_to_Post_and_Fund_Projects_on_Crowdfunding_Platforms)
3. Tuomi K., Harrison R. T. A comparison of equity crowdfunding in four countries: Implications for business angels. *Strategic Change*. 2017;26(6):609–615. DOI: 10.1002/jsc.2172
4. Ryabova A. Emerging FinTech market: Types and features of new financial technologies. *Journal of Economics and Social Sciences*. 2015;(7). URL: <http://jess.esrae.ru/pdf/2015/7/176.pdf>
5. Samarah W.E.A.R., Alkhatib S.F.S. Crowdfunding operations: Outreach factors in developing economies. *Journal of Public Affairs*. 2020;20(1): e1988. DOI: 10.1002/pa.1988
6. Rau P.R. Law, trust, and the development of crowdfunding. 2017. URL: <https://pdfs.semanticscholar.org/f912/9cf19372a43e3253a846bdd482cb0d86a699.pdf>
7. MacMillan I.C., Siegel R., Narasimha P. S. Criteria used by venture capitalists to evaluate new venture proposals. *Journal of Business Venturing*. 1985;1(1):119–128. DOI: 10.1016/0883–9026(85)90011–4
8. Harrison R. Crossing the chasm: The role of co-investment funds in strengthening the regional business angel ecosystem. *Small Enterprise Research*. 2018;25(1):3–22. DOI: 10.1080/13215906.2018.1428910
9. Pollack J. M., Maula M., Allison T. H., Renko M., Günther C. C. Making a contribution to entrepreneurship research by studying crowd-funded entrepreneurial opportunities. *Entrepreneurship Theory and Practice*. 2019. DOI: 10.1177/1042258719888640
10. Signori A., Vismara S. Does success bring success? The post-offering lives of equity-crowdfunded firms. *Journal of Corporate Finance*. 2018;50:575–591. DOI: 10.1016/j.jcorpfin.2017.10.018
11. Samuelsson M., Söderblom A., McKelvie A. Path dependence in new ventures' capital structures. *Entrepreneurship Theory and Practice*. 2020. DOI: 10.1177/1042258720901717
12. Vroomen P., Desa S. Rates of return for crowdfunding portfolios: Theoretical derivation and implications. *Venture Capital*. 2018;20(3):261–283. DOI: 10.1080/13691066.2018.1480265
13. Gregson G., Bock A. J., Harrison R. T. A review and simulation of business angel investment returns. *Venture Capital*. 2017;19(4):285–311. DOI: 10.1080/13691066.2017.1332546
14. MacArthur H. et al. Global private equity report 2020. Boston, MA: Bain & Company, Inc.; 2020. 96 p. URL: [https://www.bain.com/globalassets/noindex/2020/bain\\_report\\_private\\_equity\\_report\\_2020.pdf](https://www.bain.com/globalassets/noindex/2020/bain_report_private_equity_report_2020.pdf)

15. Vulkan N., Åstebro T., Sierra M.F. Equity crowdfunding: A new phenomena. *Journal of Business Venturing Insights*. 2016;5:37–49. DOI: 10.1016/j.jbvi.2016.02.001
16. Pekmezovic A., Walker G. The global significance of crowdfunding: Solving the SME funding problem and democratizing access to capital. *William & Mary Business Law Review*. 2016;7(2). URL: <https://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1109&context=wmbler>
17. Agarwal A., Catalini C., Goldfarb A. The geography of crowdfunding. NBER Working Paper. 2011;(16820). URL: <https://www.nber.org/papers/w16820.pdf>
18. Mollick E., Robb A. Democratizing innovation and capital access: The role of crowdfunding. *California Management Review*. 2016;58(2):72–87. DOI: 10.1525/cmr.2016.58.2.72
19. Hellmann T., Mostipan I., Vulkan N. Be careful what you ask for: Fundraising strategies in equity crowdfunding. NBER Working Paper. 2019;(26275). URL: <https://www.nber.org/papers/w26275.pdf>
20. Sahlman W.A., Scherlis D.R. A method for valuing high-risk, long-term investments: The “venture capital method”. Boston, MA: Harvard Business School Publ.; 1987. 61 p. (Harvard Business School Background Note. 1987;(288–006).
21. Fama E.F., French K.R. The capital asset pricing model: Theory and evidence. *Journal of Economic Perspectives*. 2004;18(3):25–46. DOI: 10.1257/0895330042162430
22. Porter M.E. The five competitive forces that shape strategy. *Harvard Business Review*. 2008;86(1):78–93.

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