

7-31-2022

Covid-19 for Crowdfunding: Catalyst or Deterrent? Evidence from Russia

Evgeny Torkanovskiy

Russian Academy of Sciences Institute of Economics, Russia, torkanovsky@gmail.com

Alexander Voinov

Moscow State Institute of International Relations, Russia

Follow this and additional works at: <https://scholarhub.ui.ac.id/icmr>



Part of the [Finance and Financial Management Commons](#)

Recommended Citation

Torkanovskiy, Evgeny and Voinov, Alexander (2022) "Covid-19 for Crowdfunding: Catalyst or Deterrent? Evidence from Russia," *The Indonesian Capital Market Review*. Vol. 14: No. 2, Article 3.

DOI: 10.21002/icmr.v14i2.1151

Available at: <https://scholarhub.ui.ac.id/icmr/vol14/iss2/3>

This Article is brought to you for free and open access by the Faculty of Economics & Business at UI Scholars Hub. It has been accepted for inclusion in The Indonesian Capital Market Review by an authorized editor of UI Scholars Hub.

INDONESIAN CAPITAL MARKET REVIEW

Covid-19 for Crowdfunding: Catalyst or Deterrent? Evidence from Russia

Evgeny Torkanovskiy^{1*} and Alexander Voinov²

¹ Russian Academy of Sciences Institute of Economics, Russia

² Moscow State Institute of International Relations (MGIMO University), Russia

(Received: March 2022/ Revised: July 2022 / Accepted: November 2022 / Available Online: December 2022)

This paper explores the impact of the COVID-19 pandemic on crowdfunding by analyzing a 2-year sample of 7,024 rewards-based crowdfunding campaigns on the two major Russian platforms. The study employs a digital methods approach to demand and supply and multiple regression analysis. The findings show that COVID-19 and the associated lockdown had no immediate and straightforward effect on the crowdfunding sector, neither on backers nor on campaigns' initiators. Thus, the crowdfunding sector unlike some other investment classes remains resilient to the global pandemic. Beyond that, empirical analysis revealed the undescribed phenomenon of sponsors' readiness to finance projects being highly seasonal and depending on the month in which the project starts. The nearer to year end, the more backers are willing to put into crowdfunding projects.

Keywords: COVID-19; Lockdown; Entrepreneurial Finance; Crowdfunding; Financial Economics; Emerging Markets; Russia

JEL Classification: G32

Declarations

Funding: No funding was received to assist with the preparation of this manuscript

Conflicts of interest/Competing interests: The authors have no conflicts of interest or competing interests to declare that are relevant to the content of this paper.

Availability of data and material: The data that support the findings of this study are available from Boomstarter and Planeta.ru, but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the corresponding author upon reasonable request and with permission of Boomstarter and Planeta.ru.

Authors' contributions: All of the authors contributed equally to the conceptualization and design of the manuscript. ET was responsible for drafting the manuscript. AV analyzed and interpreted the current state of crowdfunding in Russia and the world. ET conducted all data analyses and was involved in the data collection process. All authors made substantial contributions to the interpretation of data for the work and revised the manuscript critically for important intellectual content. Together the authors had final approval of the version to be published and agreed to be accountable for all aspects of the work in ensuring that any questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The corresponding author attests that all listed authors meet the authorship criteria and that no others meeting the criteria have been omitted.

* Corresponding author's email: torkanovsky@gmail.com

Introduction

The global COVID-19 pandemic unexpectedly made obsolete or strongly hindered traditional means and ways of activities in almost every sphere of life and called into existence or made popular new forms and methods of social and business interaction. The technological changes that could have otherwise taken decades to occur in pre-COVID-19 times were implemented within months and even weeks.

Crowdfunding, especially its financial returns-oriented formats, was long hailed as a precursor of disintermediation and a source of increased returns for investors and diminished interest payments and shorter time to money for investees. Its alternative character helped to attract investments in industries and enterprises which otherwise presented restricted access to the traditional sources of financing. The rise of the Internet has also served as a catalyst for raising initial capital and operating funds outside of the banking and government sectors (Belleflamme et al., 2014). Crowdfunding and especially its crowdlending format were expected to disrupt incumbent players in banking and finance (World Economic Forum, 2015; Deloitte, 2017). In this study, the authors distinguish crowdfunding aimed at financial (equity-crowdinvesting and loan-crowdlending) and non-financial (donation and reward-based) returns.

The COVID-19 pandemic brought into the limelight another facet of the alternative character of crowdfunding, namely its capacity to quickly remedy the market and government failures associated with low preparedness or unforeseen consequences of a pandemic of this scale. The number of campaigns aimed at resolving specific health and health-associated issues grew significantly worldwide. The COVID-19 pandemic also led to a surge in the donation- and reward-based crowdfunding campaigns aimed at supporting the population affected by the worldwide pandemic. These crowdfunding campaigns offer easy accessibility to vast networks of potential backers and help non-profit organizations raise funds in a shorter time frame than through traditional fundraising.

In this respect, COVID-19 may have acted as a catalyst for crowdfunding activity. For example, in April 2020, crowdfunding platforms in India raised almost US\$15 million equivalent to financially support people in need. The campaigns were aimed to help migrants stranded abroad and out of home states, daily wage laborers, transgender communities, circus artists, Uber drivers, restaurant food delivery personnel, rural artisans, dancers, and other freelance workers who lost their sources of revenues during the pandemic.

Furthermore, the unfolding situation led social media to compete against traditional crowdfunding platforms. For instance, in April 2020, Facebook launched Facebook Fundraiser, a platform on which people could raise funds for charity to help others during a pandemic.

On the other hand, COVID-19 led to a standstill in many sectors around the globe. Thus, it would be natural to expect the pace of financing of new projects through crowdfunding to slow down significantly due to both the lack or postponement of new projects and the reduced sponsorship capacity of individual backers, as their disposable income may have shrunk due to the pandemic and related economic downturn.

The research aims to test whether COVID-19 acted as a hindrance or catalyst to crowdfunding and if this exceptional situation pushed crowdfunding activity in different directions. In this article, the authors investigate whether crowdfunding activity was resilient or not to COVID-19, if it has accelerated or decreased, and the specific features crowdfunding has displayed during COVID-19.

For this study, we chose to examine Russian crowdfunding activity during the COVID-19 pandemic due to several factors. First, Russian crowdfunding plays an integral part of global crowdfunding. During its rapid development, it displayed trends similar to those of its overseas counterparts. We assume that the conclusions drawn from our study will make sense globally. Second, reward-based crowdfunding in Russia is quite transparent and properly documented, thus offering good empirical data for this research. Third, COVID-19 restrictions in Russia

had clear boundaries, thus facilitating the use of statistical analysis.

This paper is structured as follows. Section 2 reviews the current literature on crowdfunding and the impact of shock events, particularly COVID-19, on this type of activity. It also contains an overview of Russian legal, social, and business customs related to crowdfunding and compares it to the world crowdfunding trends. Section 3 discusses the data and methodology and specifies our research questions. The authors use a digital-methods approach and statistical analysis to test the developed hypotheses. Section 4 reports the results, and the last section concludes the study.

Literature Review

Crowdfunding-like practices precede the Internet; instead of the platform, the primary medium of crowdfunding was (and in many places around the globe still is) conducted through a collection plate or box, offertory, newsletter, or flyer, which are all media forms that have proven conducive to financial contributions. Russian law on collection boxes used for donations was approved in April 2020 at the height of COVID-19 pandemic. These off-line fundraising endeavors traditionally concern the welfare of those in need, often taking the place of government support and response in times of health crisis. Since early times, society has tended to organize alternative financing schemes in times of crisis (for more detailed discussion, see for example Manetti et al., 2017; Jones, 2010).

The authors define crowdfunding as a form of collective investment aggregated through the Internet of multiple small-value transaction contracts. These transactions take place between, on the one hand, individuals and groups seeking to fund their ventures and/or themselves and, on the other hand, individual sponsors or backers seeking financial and non-financial returns on their limited investments. Such aggregation may pass through innovative intermediaries (platforms) playing the role of ventures' marketplaces and offering additional services. In line with Cumming and Hornuf (2018), crowdlending resembles bank financ-

ing/bond issuance with multiple lenders and a single borrower. In the same way, equity-based crowdfunding is similar to angel/venture capital finance/IPO placement if we allow concessions for the size of individual transactions and share value. In many respects, reward-based crowdfunding resembles supply chain finance. Donations crowdfunding has extended beyond charity, disposing of intermediaries through this evolution. By limiting the amount of risk for individual backers (similarly to diversification), crowdfunding allows funders to finance riskier ventures. It is also noteworthy that crowdfunding often involves a manifestation of wisdom or madness of crowds, thus offering valuable information both to founders and funders through the aggregation of individual preferences that may not be accessible through traditional sources of finance. Several works of literature (e.g., Mollick 2014) are dedicated to success factors of crowdfunding.

The estimates of global crowdfunding volume differ significantly, largely due to the differences in crowdfunding definition (See Fig 1). If crowdinvesting and crowdlending are included in these aspects, global crowdfunding easily reaches US\$124 billion over the next four years (starting 2020), with a compounded annual growth rate of 18 percent (Global Newswire 2020). Similarly, in 2019, the EY forecast put global crowdfunding volume at US\$114 billion by 2021 (Daviddi et al., 2019).

However, if we exclude crowdlending and crowdinvesting, two financial-returns oriented formats, the global volume of non-financial returns-oriented crowdfunding is significantly lower, amounting to just US\$14.2 billion in 2019 and expected to reach US\$28.8 billion in 2025 (Global Crowdfunding Market Research Report, 2020).

As crowdfunding has the potential to foster innovation by offering new sources of capital and thereby reducing the funding gap for innovative start-ups, it is growing globally and quickly. There has been a considerable upsurge in the number of reward-based crowdfunding campaigns launched during COVID-19 by a wide variety of people and institutions (e.g., citizens, business organizations, foundations,

Table 1. Characteristics of Crowdfunding in Russia

| Type of crowdfunding | Collections 2018, US\$ 000 | Collections 2019, US\$ 000 | Collections 2020, US\$ 000 | Regulation | Data availability |
|---------------------------|----------------------------|----------------------------|----------------------------|-------------|-------------------|
| Crowdlending | 140 000 | 110 000 | 70 000 | Federal Law | Limited |
| Crowdinvesting | 600 | 300 | 100 | Federal Law | Sparse |
| Reward-based crowdfunding | 1 000 | 1 000 | 2 000 | None | Transparent |
| Donations crowdfunding | 2 000 | 3 500 | 5 000 | Partial | Sparse |

Source: CBR, authors' own estimates

charities, and trusts) across the European continent (Crowdfunding Market, 2021)

As noted earlier, the hypotheses on whether COVID-19 may be a hindrance or catalyst for crowdfunding are based on several directions of research. Some researchers have already explored the idea that access to bank financing (and similarly to crowdfunding) becomes more problematic for innovative firms during global crises related to changes in the business environment (e.g., Cowling et al., 2012; Demirgüç-Kunt et al., 2020; Lee et al., 2015), while others have focused attention on how such shock events may influence inflows of funds from venture capitalists and business angels into innovative SMEs (e.g., Block & Sandner, 2009; Hall & Lerner, 2010; Mason & Harrison, 2015; Conti et al., 2019). Yet another important aspect explored was the impact of COVID-19 on investors' behavior (e.g., Kiruba & Vasantha 2021).

Many researchers around the globe are eager to understand the trajectory crowdfunding has taken during the COVID-19 crisis and the new features crowdfunding exhibits in difficult times. A certain number of papers are focusing on how crowdfunding interactions and success factors have changed during the pandemic (ECN 2020). Recent research also explores how extreme uncertainty caused by the pandemic affects the levels and dynamics of entrepreneurial finance and the availability of entrepreneurial sources of finance for start-ups and small- and medium-sized enterprises (e.g., Brown et al., 2020; Brown & Rocha, 2020; Wenzel et al., 2021; Baker et al., 2020). Some studies also suggest that the sudden upsurge of uncertainty has become debilitating for entrepreneurs, banks, and investors (e.g., McMullen & Shepherd, 2006; Block & Sandner, 2009; Packard et

al., 2017; Conti et al., 2019).

Crowdfunding in Russia follows global trends in all important respects. In line with other national markets, the bulk of crowdfunding activity takes place on the platforms positioned as P2P/P2B/B2B lending or funding through platforms oriented to financial returns. However, the Russian share of global crowdfunding is smaller than expected, given Russia's share in the global GDP; the share does not exceed 0.1%, and if crowdlending and crowdinvesting are excluded, the nation's share plummets to 0.01%.

Nevertheless, Russian crowdfunding is thoroughly integrated into international crowdfunding. Many Russian ventures raise money on international crowdfunding platforms, and Russian backers sponsor international crowdfunding companies (according to Data Insight and Yandex, the amount of money Russians contributed to international Kickstarter and Russian Boomstarter were equivalent in 2018, reaching US\$6.35 million each), and two major Russian crowdlending platforms are owned and financed by international investors through bonds' issues on European markets. Given the fact that the Russian market contributes a part of the global crowdfunding market, it enables us to draw conclusions that may be valid for global crowdfunding with certain limitations due to national specificity. In Table 1, the comparative characteristics of different types of crowdfunding in Russia are presented.

According to the estimates of the Central Bank of Russia, the amount of national crowdlending in 2019 amounted to RUR 6.9 billion (US\$110 million equivalent) compared to RUR 8.9 billion (US\$140 million equivalent) for 2018. This sharp decline was led by a collapse in business-to-business crowdfunding,

down 80% to just RUR 0.86 billion (US\$13.5 million equivalent) due to the enactment of new, more stringent regulations as crowdfunding activity has attracted the attention of the Russian government that introduced special regulations. P2B crowdlending, though, continued its accelerated development in 2019, totaling RUR 5.5 billion, up from four billion in 2018.

A law regulating crowdfunding in Russia entered into force on January 1, 2020. It contained, among others, the requirement that already existing investment platforms must be compliant with the law by July 1, 2020. This legislative initiative was intended to put Russia on the global crowdfunding map along with Europe, where in 2020 the European Commission finally approved pan-European harmonized crowdfunding rules. The European regulation entity, called the European Crowdfunding Service Provider (ECSP), gives the industry uniform standards across Europe and is expected to provide new impetus for growth, as platforms are now allowed to finance companies and solicit investors across the whole European Union. Importantly, issuers will raise up to €5 million across all member states.

The Russian crowdfunding regulation law introduced several requirements for crowdfunding platforms, including the requirement to be registered in Russia as a Russian legal entity, thus limiting the possibilities of foreign platforms to operate in Russia. Individual investors are capped to investing RUR 600 thousand (US\$8 thousand equivalent) per calendar year unless they are registered as qualified investors or entrepreneurs. This limit does not apply to legal entities. However, there is a limit of RUR 1 million (US\$ 13 thousand equivalent) on investments on a platform per calendar year if it's not the investment into acquiring digital rights from a public joint-stock company. This 2020 law regulates crowdlending, crowdinvesting, and the purchase of utility digital rights.

In August 2020, the Russian financial authority – the Central Bank of Russia – issued its report on the development of alternative financing mechanisms including crowdfunding (Bank of Russia, 2020). The report submitted for public discussion resulted in the setup of an advisory

board authorized to develop a roadmap for private equity and venture finance in Russia (Voinov 2018a, b). Crowdfunding is thus officially considered an auxiliary function of venture capital and private equity finance. Nevertheless, while this association with venture capital and private equity finance may be true for crowdlending and crowdinvesting, reward-based crowdfunding and donations crowdfunding remain outside the scope of regulatory activity.

However, in February 2021, just 3 out of 31 crowdlending and crowdinvesting platforms that existed prior to law adoption were entered in the Bank of Russia's registry (Bank of Russia 2021) and thus were legally authorized to function as crowdfunding platforms. According to media reports and the Russian association of platform operators, at least 20 investment platforms including the largest ones submitted their files for registration during 2020 but are still not registered. This means that they are not authorized to enter into new business from July 1, 2020, though they can still continue to fulfill the existing transactions. Evidently, this legal hassle, together with the COVID-19 pandemic, consequent economic crisis, and reduction in the number of SMEs, had a significant impact on the results of financial-returns-oriented crowdfunding in 2020. In 2021, the tide changed, and the Bank of Russia registered 43 platforms by May 2021.

One of the possible explanations for such a delay may be the unwillingness of the Russian financial authorities to let the incumbents – traditional banks – lose their retail clients and deposits. This decision coincided with the gradual reduction of the Central Bank's discount rate and similar reduction in bank deposit rates and growing interest of retail investors in shares and other instruments beyond bank deposits. The number of individuals who have brokerage accounts with Moscow Exchange grew by 5 million in 2020 and reached 8.8 million (Rossiyskaya Gazeta, 2021). Despite the COVID-19 pandemic, major financial institutions' interest margin increased (NCR, 2020). This means that, on the one hand, companies face high borrowing costs, especially small and medium compa-

nies. On the other hand, savers and investors, especially households, have restricted access to alternative investment products and obtain historically low interest rates for their deposits. Given that the credit rates remain high, it is no wonder that 2020 became a very profitable year for Russian banks. In this environment, crowdlending and crowdinvesting could have become significant competitors for banking and worsen the banks' financial situation.

In summary, in this scenario with a high interest margin which reduces the performance of deposits, the relatively high volatility of stocks, the scarcity of safe assets resulting in high demand and reduced interest rates, and the effect on small investors or households with few investment alternatives, crowdfunding platforms could become significant players in financial markets. However, the introduction of these innovative practices remains slow, and the opportunity may only be beginning to use the crisis to improve Russian financial markets making use of innovation and entrepreneurship, which could have a democratizing and humanizing effect on finance. This may be the sign of untapped potential for crowdfunding in Russia on the one hand and, on the other, a current lack of general public participation and unpreparedness of Russian socio-economic and cultural environment for crowdfunding with government regulation outpacing the market developments.

The meaningful research of crowdlending and crowdinvesting in Russia is further hampered by the continuing opacity of the market and unwillingness of platform operators to disclose detailed operations results unless so required by law. This was already underlined by several researchers (e.g., Torkanovskiy, 2016). At the same time, this problem of meaningful quantitative analysis of crowdlending and crowdinvesting has universal character and is in no way unique to Russia (e.g., Shneor & Vik, 2020).

Another feature of the Russian crowdfunding landscape is that donation crowdfunding takes place mainly outside the crowdfunding platforms. Campaigns use social media and own sites. For instance, Predanie charity fundraises

about RUR 70 million (US\$1 million) annually and spends the money on different programs that benefit the handicapped and disabled, children, and church construction, for example (Predanie 2015). To combat the consequences of the COVID-19 outbreak, non-profit organizations have been providing financial support through social media and websites supplying PPE and medical gear to medical workers and volunteers at the front line of COVID-19 across Russia.

Separate campaigns initiated by the interested and civic activists aimed at helping a particular cause or individual in dire situation raised up to RUR 150 million (US\$ 2 million) through social media. Their social media ads and reposts typically include the bank account number linked to the phone number on which the donors could make transfers. Fundraisers are obligated to market themselves, appealing to the emotions of potential donors with well-composed stories of personal crises (Berliner & Kenworthy 2017). Campaigners seek to craft tearjerker descriptions to make their campaign stand out from the crowd. This style of crowdfunding has been described in the scholarly literature as affective in contrast to reward based (Gehring 2016).

The campaigners post the results of campaigns on social media to assure donors that their money was spent on the advertised cause. The trust necessary for such campaigns' success is usually built by exposing medical documentation as well as support of public figures and popular bloggers. The rising influence of social media is strengthening this donations' movement growth. Furthermore, since YouTube and Facebook recently launched their donation crowdfunding features, they are also used to increase engagement with the campaign audiences. Thus, the need for special crowdfunding platforms for donations in Russia similar to GoFundMe is circumvented.

These peculiarities of Russian crowdfunding landscape leave the only viable option for meaningful analysis, that is, reward-based crowdfunding. An important feature of reward-based crowdfunding in Russia is that, in contrast to other crowdfunding activities in the

country, it's quite transparent and offers access to the data necessary for research. At the same time, it is the least government-regulated sector and thus provides a clear view of the interplay between the market forces unhampered by any form of government control; this is also very important for the research.

Reward-based crowdfunding campaigns provide useful tools that entrepreneurs can use to elicit funds for new consumer prototypes and services, offering perks such as pre-sales and branded merchandise to financial contributors and supporters. We posit that any reward-based crowdfunding project has three main objectives. 1) The test of concept. Many crowd-funded projects that have attracted the interest of crowdfunding sponsors were later financed at a larger scale by more traditional investors like banks and venture capitalists. A successful crowdfunding campaign serves as proof of a concept without major investments otherwise required for a more traditional market test. 2) Pre-sales. For established campaigners as well as some new ventures, pre-sales allow a significant reduction in the working capital requirements that otherwise would have been difficult or even impossible to finance. 3) Advertising. The crowdfunding campaign enables fundraisers to contact new potential users and consumers, raise brand recognition, and confirm brand adherence of existing users and consumers.

In this paper the authors focus on the Boomstarter and Planeta reward-based crowdfunding platforms, both of which have traditionally served to host financial appeals from individuals and groups for reward-based crowdfunding. Crowdfunding through these platforms offers a way for the donor-consumers to provide feedback and valuable information on the development and demand for the new product as well as support entertainment industries traditionally underserved by banks. Consequently, crowdfunding campaigns on Planeta and Boomstarter are gaining traction among individuals and companies to promote an idea, gauge audience interest, and pre-sell a product. In 2019, reward-based crowdfunding in Russia raised RUR 64 million (US\$ 1 million equivalent) on non-financial returns-oriented platforms. In

2020, amid the pandemic, the amount of money almost doubled, exceeding RUR 120 million (US\$ 2 million equivalent).

It may be assumed that crowdfunding campaigns on Planeta and Boomstarter could provide insight into the social anxieties and economic precarity resulting from the COVID-19 crisis. Many individuals and groups directly unaffected by COVID-19 launched crowdfunding campaigns exhibiting compassion and willingness to help those in need. In other words, the data shows that COVID-19-associated campaigns are often altruistic endeavors. One possible explanation is that such campaigns are launched by those who see the greatest and most obvious needs in their own surroundings and media space. The importance of community fundraising translates into resolution of issues of local concern through crowdfunding.

Research Methods

Through a digital-methods (Elmer et al. 2012; Rogers 2013; Snee et al. 2016; Marres 2017) approach to studying Web-based interactions, this paper aims to determine the impact of COVID-19 on the results of crowdfunding campaigns as well as the evolution of crowdfunding during the pandemic. Digital methods include the use of online and digital technologies to collect and analyze research data. A digital-methods approach enables us to determine how the capacities of crowdfunding platforms accompanying social media and the Internet produce possibilities and constraints for online practices and forms of reward-based crowdfunding. In particular, the authors explore the financial appeals that campaigns are seeking to remediate or fund during the COVID-19 pandemic compared to the previous year. What are the most popular categories that attract significantly more sponsors in 2020 than in 2019? Are business, technology, and social entrepreneurship as popular as they were previously? Through an analysis of 7,024 campaigns, this paper investigates the goals, success probabilities, and monthly distribution of the campaigns. This article explores what the recently launched campaigns can tell us about the financial chal-

lenges faced by individuals, workplaces, communications, and nation-states during the COVID-19 crisis. Of particular interest is determining the intent of such campaigns and identifying common areas of financial precarity.

More broadly, the question may be raised what crowdfunding can communicate about the current social anxieties and economic precarities (and the coping strategies) exacerbated by the COVID-19 pandemic? What gaps in and failures of government are exposed by such appeals? While the research sample is relatively small (7,024), it nevertheless produces distinct findings. Such findings furthermore shed light on the growing fundraising sector during a time when government and business resources are being seriously challenged by COVID-19 and severely constrained by the impact of austerity cuts.

The research methodology is based on statistical analysis and in particular multiple regression analysis. Multiple regression analysis describes the relationship between a dependent variable and several independent variables and studies the simultaneous effects that independent variables have on the dependent variable.

The objective of this paper is to identify new trends in crowdfunding associated with COVID-19. In contrast to previous works, the authors decided to explore both the demand and supply side of crowdfunding equilibrium in one study. Demand in this context means the demand from funders to invest their resources in new ventures, whereas supply refers to the inflow of new projects on the platforms.

First, the research looked for evidence that demand from backers of crowdfunding campaigns was or was not significantly impacted by COVID-19. Many papers analyzing the impact of COVID-19 on financial markets offer evidence that the pandemic has changed the asset distribution in investors' portfolios, substituting riskier and alternative investments with safer and more traditional instruments (e.g., Ortmann et al., 2020; Baker et al., 2020; Bu et al., 2020; Bansal et al., 2020). Such a change in the retail investors' behavior, if it were uniform across all asset classes, would have translated into the outflow of funds from crowdfunding as an al-

ternative asset class. Amid the uncertainty associated with the COVID-19 pandemic, it would be natural for investors to reduce their engagement with alternative investment classes like crowdfunding. Also, as noted earlier, reward-based crowdfunding is similar in many respects to supply chain finance, and its trajectory may be expected to mimic that of the manufacturing industry severely hit by the crisis. On the other hand, as discussed earlier, the alternative character of crowdfunding may suggest that its use should grow due to the increased unavailability of traditional intermediaries and newly opened market gaps.

Accordingly, the first research hypothesis is that crowdfunding should experience the influence of COVID-19 as a systemic increase or decrease of amounts raised. This helps formulate the research question as follows:

H1: Has the COVID-19 pandemic modified the amounts raised in crowdfunding campaigns in a significant and consistent manner?

The hypothesis test is divided in two. The COVID-19 pandemic started in December 2019, but before February 2020, its influence in Russia was minimal. According to the official information, the virus was confirmed to have spread to Russia on 31 January 2020, when two Chinese citizens in Tyumen and Chita tested positive for the virus. Early prevention measures included travel restrictions. After the start of the pandemic in Europe, Russian authorities tried to impose additional measures such as cancelling events and closing schools, theaters, and museums. Finally, on March 25, 2020, a lockdown was imposed in Russia. It was deemed the non-working period and, after two extensions, lasted until 11 May 2020. On the one hand, the social distancing and lockdown increased usage of the Internet usage as well as that of social media (e.g., OECD, 2020; World Bank, 2020) along with online retailers' turnover, and this may have had a positive effect on the crowdfunding campaign success. On the other hand, the growing uncertainty of the economic environment and stranded revenues (i.e., World Bank, 2020; IMF, 2020; ECB,

2020) could have modified the investment strategies of the crowd by increasing its risk-aversion (i.e., ECB, 2020; OECD, 2020; Baker et al., 2020). Thus, researchers asked whether the pandemic had a significant and consistent effect on crowdfunding from February 2020 to December 2020 and whether the strict lockdown from March 2020 to May 2020 had a significant and consistent effect on crowdfunding.

The second hypothesis relates to the supply side of crowdfunding. The hypothesis is that, due to the COVID-19 pandemic, the number of financial instruments available to venture founders was reduced and could have translated into the increased popularity of crowdfunding as an additional source of capital. With this in mind, this paper explores whether the number of campaigns initiated by venture founders (both successful and unsuccessful) and the targeted amounts changed significantly due to COVID-19. Again, the period of the pandemic and that of the complete lockdown are highlighted, and research questions are formulated as follows.

H2: Has the COVID-19 pandemic impacted the number of crowdfunding campaigns in a consistent and significant manner?

H3: Has the COVID-19 pandemic impacted the targeted amounts of crowdfunding campaigns in a consistent and significant manner?

Logically, the research focus is extended further to evaluating the chances of crowdfunding campaigns in COVID-19. The unexpected and imposed change in the ways of living and working of people could have also modified their financial behavior. The third hypothesis is that, in situations of uncertain demand and increased supply of projects, the success chances of the standard project should diminish compared to pre-COVID-19 times. This led to formulate the research question as follows.

H4: Has the COVID-19 pandemic impacted the chances for success of crowdfunding campaigns?

The fourth research hypothesis (research

questions H5 and H6) relates only to the projects associated with business and social entrepreneurship, since the research aims to analyze the tangible implications of the COVID-19 pandemic on the success of the crowdfunding campaigns aimed at supporting the business. Several papers have assumed that the level of small business support, especially for local businesses, was quite significant during the pandemic. To that end, a sub-sample was selected including only projects in these two categories. For many small businesses owners and social entrepreneurs, crowdfunding has become a way to ensure survival in the lockdown. In spring 2020, Boomstarter, together with Mastercard, introduced a special project, denoted on social media as #SupportBusiness. This campaign made it possible to buy a service or product from companies in the area most affected by the pandemic. Consumers bought services with a discount and the right to use them immediately or in the future after the withdrawal of lockdown restrictions. This project attracted almost 2,000 backers, with turnover in excess of RUR 2.6 million (US\$36 thousand equivalent). Customers were ready to support local brands, coffee shops, and beauty salons as examples of places they wanted to return to after the lockdown. Thus, the hypothesis is that small businesses enjoy better conditions of crowdfunding due to COVID-19 and growing support from consumers and locals. The research questions are formulated as follows.

H5: Has the COVID-19 pandemic impacted the number of crowdfunding campaigns in Business and Social Entrepreneurship categories?

H6: Has the COVID-19 pandemic impacted the chances for success of crowdfunding campaigns in the Business and Social Entrepreneurship categories?

Some authors (e.g., Lome et al., 2016; Hall et al., 2016) provide evidence that, during crisis periods, R&D expenditures are more resilient to the economic downturn. Thus, the next hypothesis is that technology-associated crowdfunding campaigns show better results after

Table 2. Reports a Brief Description of the Variables Used in the Analysis

| Variable Name | Quantitative/ Qualitative | Description |
|--------------------------------|------------------------------|--|
| Covid | Dichotomous | 1 – in pandemic, 0 – not in pandemic |
| Lockdown | Dichotomous | 1 – in lockdown, 0 – not in lockdown |
| Success Rate | Ratio variable | Returns the share of successful campaigns to all campaigns, expressed in % |
| Number of Campaigns Launched | Ratio variable | Characterizes the number of campaigns in the particular period, natural number |
| Number of Successful Campaigns | Ratio variable | Characterizes the number of campaigns in the particular period, natural number |
| Targeted Amounts | Ratio variable | Characterizes the amounts targeted by campaigns launched in the particular period |
| Amounts Raised | Ratio variable | Characterizes the amounts raised by the successful campaigns launched in the particular period |
| Month | Ratio variable | Characterizes the period in which the campaign took place. Varies from 1 to 12. Reflects seasonality of campaigns. |

the pandemic than before. For this hypothesis, projects in the Technology and Innovations category were selected as part of the sub-sample. To test whether these initiatives have become more appealing for investors in the COVID-19 crisis, research question was formulated as follows.

H7: Has the COVID-19 pandemic impacted the success chances of crowdfunding campaigns for the Technology and Innovations category?

It is noteworthy that, in 2020, the most successful category of crowdfunding campaigns on Planeta.ru was the Science and Education category. Out of 30 projects launched, 25 succeeded in raising funds. This translates into an 83% success rate for campaigns launched within this category. Naturally, such success was due to COVID-19; many campaigns in this category in 2020 were dedicated to mitigate the effects of COVID-19. A major project that attracted extensive attention and backers and consequently reached outstanding success in raising funds was a large study initiated by Shiffers Institute dedicated to the potential efficiency of existing drugs in the fight against the new virus. The first stage of the study was financed by Rosnano and the NAEPID fund. However, after the money from the first stage was used up and the second stage, though pre-agreed upon, had not received financing yet, the researchers decided to seek public help. The campaign raised almost RUR 3 million (US\$45 thousand equivalent). It became the largest fundraising attempt for research purposes in the history of Russian crowdfunding. Along with raising funds, the

campaign raised public awareness regarding the research. Forbes, BBC Russia, and many national Russian media outlets made publications about this campaign.

Similarly, the most significant growth in amounts raised in 2020 was displayed in the Health category on Boomstarter platform. Crowdfunded amounts for projects in this category on Boomstarter were 6,389% higher than those initiated a year earlier and set the record for health-related crowdfunding campaigns since the launch of the Boomstarter platform in 2012. The number of projects launched in this category more than tripled in 2020 from 2019. Five projects raised almost RUR 1.7 million (US\$23 thousand equivalent).

Since this paper aims to investigate the impact of COVID-19 on the results of crowdfunding campaigns, the dependent variable is the result of the campaign. Following the hypotheses, this research measures results in several ways: 1) According to the number of campaigns either launched or successful, 2) With the amounts targeted or raised at the end of successful campaign, and 3) According to the success rate of campaigns calculated as the number of successful campaigns to all campaigns launched in the particular category.

In order to answer the research questions and confirm or disprove the hypotheses the research includes the following independent variables: 1) the COVID-19 variable, a dichotomous variable taking the value of 1 if the project was launched during the pandemic and 0 otherwise and 2) the lockdown variable, a dichotomous variable equal to 1 if the project was launched during the lockdown, and 0 otherwise.

Table 3. Summary of the Database

| | Number of Campaigns Initiated | Number of Successful campaigns | Money raised, in M RUR | Money raised, in '000 USD equivalent ¹ |
|-------------|-------------------------------|--------------------------------|------------------------|---|
| Planeta.ru | 6158 | 1813 | 414.4 | 6 072 |
| Boomstarter | 866 | 298 | 79.7 | 1 151 |

Source: Planeta.ru, Boomstarter.

¹ The average RUR/USD exchange rate for 2019 is RUR 64.74/USD 1.00 and for 2020 RUR 71.94/USD 1.00 in accordance with average rates calculated by the Central Bank of Russia.

Table 4. Impact of Covid on Amounts Raised by Campaigns

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|---------------|----------------|-------------|---------|
| Constant | β_0 | 13054668.4614 | 1109317.1728 | 11.7682 | 0 |
| Month | β_1 | 549217.0507 | 144989.0098 | 3.7880 | 0.0011 |
| Covid | β_2 | 1405665.7295 | 1004513.3261 | 1.3994 | 0.1763 |

Table 5. Impact of Lockdown on Amounts Raised by Campaigns

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|---------------|----------------|-------------|---------|
| Constant | β_0 | 13690498.3132 | 1202703.7966 | 11.3831 | 0 |
| Month | β_1 | 561402.2252 | 155763.6677 | 3.6042 | 0.0017 |
| Lockdown | β_2 | -566160.2138 | 1625865.1702 | -0.3482 | 0.7311 |

Consistent with the hypotheses, multiple regression analysis is employed in order to define whether the hypotheses make sense.

The data sources used in the paper are campaign descriptions and the results as presented on two main Russian reward-based crowdfunding platforms, Planeta.ru and Boomstarter. The database contains 7024 campaigns initiated between January 2019 and December 2020 (Table 3). The information on crowdfunding campaigns was gathered from the platforms' websites as well as traditional and social media outlets. The typical collected information on the campaigns includes the fundraising goal, the amount targeted, amount raised, and number of sponsors. The average campaign in our sample raised about RUR 235 thousand (US\$3615) from 134 backers with an average contribution of RUR 1750 (US\$26). 30% of the Russian crowdfunding campaigns were successful, while 70% of them failed.

Planeta.ru is the largest Russian crowdfunding platform. It allows users to fund creative, scientific, social, entrepreneurial, charity, and other projects. It was initially envisaged as a service for music bands to allow new-album pre-orders. The site is similar to English-language sites such as Kickstarter and IndieGoGo. Planeta.ru foundation day is celebrated as the Crowdfunding Day in Russia.

Boomstarter is the second-largest Russian

crowdfunding platform. It was founded in 2012 as well as Planeta.ru. On this site, backers can support creative ideas.

Results and Discussion

The first research question is to investigate the response of the crowd to COVID-19 and whether backers' readiness to support projects was impacted by COVID-19 or if it remained the same.

In order to test the first hypothesis, two interaction matrices (*amounts raised/covid/month* and *amounts raised/lockdown/month*) between two independent variables, month and either *covid* or *lockdown*, and one of our key dependent variables (*amounts raised*). The model for *amounts raised/covid/month* is as follows.

$$\text{Money Raised} = 13054668.4614 + 549217.0507 \cdot \text{Month} + 1405665.7295 \cdot \text{Covid}$$

Table 4 and 5 show the results of the first econometric analysis.

The results show that both dummy variables (*covid* and *lockdown*) do not have statistically significant influence on the amounts raised in the campaign. This means that neither COVID-19 nor lockdown had any direct impact on crowdfunding backers' readiness to finance the projects. COVID-19 neither accelerated nor hindered the flow of funds into crowdfunding.

Table 6. Summary of Overall Fit of Model

| | |
|--------------------------|--|
| R-Squared: | 0.4621 |
| Adjusted R-Squared: | 0.4109 |
| Residual Standard Error: | 2430126.001 on 21 degrees of freedom. |
| Overall F-statistic: | 9.0199 on 2 and 21 degrees of freedom. |
| Overall p-value: | 0.0015 |

Table 7. Impact of COVID on Number of Projects Initiated by Founders

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------|----------------|-------------|---------|
| Constant | β_0 | 256.1038 | 13.4468 | 19.0456 | 0 |
| Month | β_1 | 0.0589 | 1.7575 | 0.0335 | 0.9736 |
| Covid | β_2 | 0.2114 | 12.1764 | 0.0174 | 0.9863 |

Table 8. Impact of Lockdown on Number of Projects Initiated by Founders

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------|----------------|-------------|---------|
| Constant | β_0 | 258.5198 | 13.9247 | 18.5655 | 0 |
| Month | β_1 | -0.1452 | 1.8034 | -0.0805 | 0.9366 |
| Lockdown | β_2 | -7.9388 | 18.824 | -0.4217 | 0.6775 |

Table 9. Impact of Covid on Amounts Targeted by Campaigns

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------------|----------------|-------------|---------|
| Constant | β_0 | 113211035.8472 | 13278084.1538 | 8.5262 | 0 |
| Month | β_1 | 111241.9239 | 1735460.6247 | 0.0641 | 0.9495 |
| Covid | β_2 | 19229453.0493 | 12023623.9062 | 1.5993 | 0.1247 |

The empirical analysis shows a statistically significant positive correlation between the amount of money donated by the backers and the month when the money was donated. Specifically, there is a 4% increase (+RUR 549217) in the amounts raised for every subsequent month during the same year. The analysis provided empirical confirmation that almost 50% of the variations in the amounts raised in crowdfunding can be explained by this monthly seasonality. This finding could be in part explained by the gradual accumulation of savings or passive income revenue earmarked for crowdfunding and similar innovative and venture investments. However, the authors have not yet developed a full theoretical explanation for this phenomenon, as it needs additional research. This phenomenon should be tested further, in terms of both time and geography. At the same time, important advice to Russians and perhaps international project initiators is to defer the start of the campaigns to the year end, especially if they plan to raise significant amounts of money.

Similar to the previous model, matrices were built to confront the second research question. Tests for the correlation both for COVID-19

and lockdown were run separately. The results are presented in Tables 7 and 8 below. The models developed on the basis of the data are as follows.

Projects=256.1038+0.0589·Month+0.2114·Covid

Projects=258.5198–0.1452·Month–7.9388·Lockdown

The analysis shows that neither COVID-19 nor the lockdown have any impact on the number of projects launched on the platforms. By surveying the sample, a statistically insignificant ($p > 0.01$) positive correlation between month, COVID, and the number of projects ($R^2 = 0.0001$) was established. The second test confirmed the statistical insignificance of the month for the number of projects as it showed a statistically insignificant negative correlation between month, lockdown, and number of projects.

It is noteworthy that, while the month variable has a statistically significant positive correlation with the amounts raised, it has no significant correlation with the number of projects started by the campaigns' initiators. This could signify that, while the preparedness of contribu-

Table 10. Impact of Lockdown on Amounts Targeted by Campaigns

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------------|----------------|-------------|---------|
| Constant | β_0 | 109604981.1425 | 13562332.6671 | 8.0816 | 0 |
| Month | β_1 | 1370021.8542 | 1756474.6076 | 0.78 | 0.4441 |
| Lockdown | β_2 | 33899875.7739 | 18334127.132 | 1.849 | 0.0786 |

Table 11. Impact of COVID on the Success Rate of Campaigns

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|-----------|----------------|-------------|---------|
| Constant | β_0 | 2886.7834 | 253.4356 | 11.3906 | 0 |
| Month | β_1 | 12.4154 | 33.1243 | 0.3748 | 0.7116 |
| Covid | β_2 | 23.7634 | 229.492 | 0.1035 | 0.9185 |

Table 12. Impact of Lockdown on Success Rate of Campaigns

| Predictor | Coefficient | Estimate | Standard Error | tt-statistic | pp-value |
|-----------|-------------|-----------|----------------|--------------|----------|
| Constant | β_0 | 2931.3981 | 262.8531 | 11.1522 | 0 |
| Month | β_1 | 9.6156 | 34.0424 | 0.2825 | 0.7804 |
| Lockdown | β_2 | -124.1937 | 355.3358 | -0.3495 | 0.7302 |

tors to the projects vary depending on the month in which the contribution is expected, the initiators of the projects start their campaigns independent of the time or month of the year. This empirical result also needs further theoretical discussion and consideration.

The third research question dealt with the impact of COVID-19 on the amounts targeted by the campaigns' initiators. The results can be found in Tables 9 and 10. The empirical evidence points out that *lockdown* has a positive statistically significant correlation with the campaigns' targeted amounts, though *covid* was not a factor that showed any statistically significant correlation with the campaigns' targeted amounts. Thus, we may assume that campaigns' initiators targeted the amounts in their campaigns without any consideration for COVID-19. However, the amounts they targeted in the lockdown were considerably different from what they would have demanded in normal conditions. Thus, our empirical analysis reveals that it was not the COVID-19 pandemic but the lockdown that modified the campaigns' initiators' behavior in the rewards-based crowdfunding context.

The model for lockdown and month is as follows.

$$\text{Amounts Targeted} = 109604981.1425 + 1370021.8542 \cdot \text{Month} + 33899875.7739 \cdot \text{Lockdown}$$

To test the fourth research question, the analysis of whether the success rate of the crowd-

funding campaigns could be related to *covid* or *lockdown* was carried out. In particular, the tests whether *covid* or *lockdown* increased the success rate of campaigns due to the increased activity of backers surfing the net or, to the contrary, decreased it, were performed. The decrease in the sponsors' activity can be explained by the low engagement of platform users due to the difficult economic and social environment.

Tables 11 and 12 show the results of the regression analyses. Both coefficients of *covid* and *lockdown* variables are not statistically significant, thus offering no support of the fourth research question (H4). The result showed that the COVID-19 crisis seems not to influence the success rate of crowdfunding campaigns.

The models are as follows.

$$\text{Success Rate} = 2886.7834 + 12.4154 \cdot \text{Month} + 23.7634 \cdot \text{Covid}$$

$$\text{Success Rate} = 2931.3981 + 9.6156 \cdot \text{Month} - 124.1937 \cdot \text{Lockdown}$$

As indicated earlier, the influence of COVID and lockdown on Business and Social Entrepreneurship category campaigns was tested separately. In Table 13, the summary of the subset of projects in this category is provided.

Initially, significant influence of COVID-19 on this category of campaigns was expected. However, tests and detailed analysis showed no statistically significant correlation between the number of projects or their success rate and *covid* and *lockdown*. Evidently, the suc-

Table 13. Summary of Business and Social Entrepreneurship Campaigns

| | 2019 | 2020 |
|-------------------------------|----------|----------|
| Number of Projects | 422 | 500 |
| Number of Successful Projects | 37 | 34 |
| Amounts Raised, in RUR | 6 340824 | 4 711164 |

Source: Planeta.ru, Boomstarter.

Table 14. Impact of COVID on Number of Projects in Entrepreneurship

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------|----------------|-------------|---------|
| Constant | β_0 | 32.5942 | 5.8249 | 5.5957 | 0 |
| Month | β_1 | -0.1484 | 0.7613 | -0.1949 | 0.8473 |
| Covid | β_2 | 4.8992 | 5.2746 | 0.9288 | 0.3635 |

Table 15. Impact of Lockdown on Number of Projects in Entrepreneurship

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------|----------------|-------------|---------|
| Constant | β_0 | 32.7711 | 6.1291 | 5.3468 | 0 |
| Month | β_1 | 0.0751 | 0.7938 | 0.0946 | 0.9256 |
| Lockdown | β_2 | 4.9287 | 8.2855 | 0.5949 | 0.5583 |

Table 16. Impact of COVID on Success Rate in Entrepreneurship

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------|----------------|-------------|---------|
| Constant | β_0 | 836.687 | 201.4204 | 4.1539 | 0.0004 |
| Month | β_1 | -16.8979 | 26.3259 | -0.6419 | 0.5279 |
| Covid | β_2 | 53.6889 | 182.391 | 0.2944 | 0.7714 |

Table 17. Impact of Lockdown on Success Rate in Entrepreneurship

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|----------|----------------|-------------|---------|
| Constant | β_0 | 855.2361 | 209.8897 | 4.0747 | 0.0005 |
| Month | β_1 | -15.9233 | 27.1831 | -0.5858 | 0.5643 |
| Lockdown | β_2 | -2.2095 | 283.7376 | -0.0078 | 0.9939 |

Table 18. Impact of COVID on Success Rate in Technology

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|-----------|----------------|-------------|---------|
| Constant | β_0 | 855.2366 | 326.2708 | 2.6212 | 0.016 |
| Month | β_1 | 31.8598 | 42.644 | 0.7471 | 0.4633 |
| Covid | β_2 | -334.5279 | 295.4461 | -1.1323 | 0.2703 |

Table 19. Impact of Lockdown on Success Rate in Technology

| Predictor | Coefficient | Estimate | Standard Error | t-statistic | p-value |
|-----------|-------------|-----------|----------------|-------------|---------|
| Constant | β_0 | 941.7214 | 332.3321 | 2.8337 | 0.0099 |
| Month | β_1 | 7.8531 | 43.0407 | 0.1825 | 0.857 |
| Lockdown | β_2 | -670.1339 | 449.2604 | -1.4916 | 0.1507 |

cess rate for campaigns (about 9%) in this category is significantly (more than three times!) lower than on average for all crowdfunding campaigns. This category remains severely less popular among campaign backers, possibly due to platforms' characteristics described above. Co-financing campaign with Mastercard is also excluded from the analysis. The results are presented below in Tables 14-17.

Regression analysis has not confirmed this hypothesis either. With p-value higher than 0.01, the relation between COVID or lockdown

and dependent variables is not statistically significant. Technology and Innovation has not raised significant interest of campaign backers in the COVID-19 environment. The chances for success of the projects in these categories were not impacted by COVID-19 in any manner.

Conclusion

We witness many discussions today regarding the "new normal" and whether there will

be a return to the previous situation at all (e.g., Torkanovskiy, 2020a, b). This study assesses the impact of a full year of COVID-19 crisis that included lockdowns, travel bans and restrictions, social distancing rule enforcement, and many other unexpected developments on crowdfunding. The paper explores the possibilities of this entrepreneurial funding channel for start-ups and SMEs using empirical evidence from rewards-based crowdfunding in Russia to forecast the possible venues of future development of the platforms as well as to offer advice and recommendations to policymakers, providing important insights as to the evolution of crowdfunding. The present article could be considered a pioneer study regarding the resilience of the crowdfunding sector to the COVID-19 crisis.

By using a unique dataset of 7,024 successful and unsuccessful rewards-based crowdfunding campaigns launched in Russia over the period 2019-2020, the aim of the study was to investigate whether and to what extent COVID-19 has changed the dynamics of crowdfunding.

Although the long-term economic impact of the current crisis remains to be seen, suggestive evidence is provided that the COVID-19 pandemic has not altered the basic dynamics of crowdfunding process. Crowdfunding showed natural immunity to COVID-19. No confirmation was found that COVID-19 itself may be the crowdfunding breaker or catalyst. Probably there has been a change in the key drivers that make one campaign more successful than another in the pre-COVID-19 period and the COVID-19 period. However, the success rate of projects did not show any statistically significant correlation with COVID-19. Such immunity is demonstrated by the crowdfunding sector as a whole and by several subsectors that were researched, in particular, Business and Social entrepreneurship and Technology. In this period of great uncertainty triggered by COVID-19, the empirical analysis shows that the consequences of COVID-19 may be exaggerated and be less remarkable than previously

assumed.

Founders, funders, and policymakers should take this resilience of crowdfunding into account and even in the COVID-19 pandemic concentrate more on traditional issues important for campaigns, like quality of venture, social media use and activity, social networking, and geography. As evidenced by this research, COVID-19 is not a determinant for crowdfunding campaigns. This crowdfunding sector immunity could be considered an early precursor of quick recovery and fast return to normal, especially as this wisdom of crowds is confirmed by the money people risk in the crowdfunding projects both as founders and funders.

The unexpected result of this research which the authors would like to share is that the month of the year may have more significance for the success of the campaign than previously thought.

The results suggest that, in the aftermath of the COVID-19 pandemic, backers remain not inclined to finance business, social entrepreneurship, and technological projects, at least through rewards-based crowdfunding. In this regard, the COVID-19 pandemic has not probably led to a change in the investors' behavior, specifically in the rewards-based crowdfunding sector.

Overall, the results show that crowdfunding could and should play a significant role in supporting measures aimed at helping society and the economy during and in the aftermath of COVID-19. Further venues of research may include research of other sectors of crowdfunding in connection with COVID-19 as well as geographical differences, if any, in response of crowdfunding during COVID-19.

Acknowledgements

The authors would like to thank Natalya Ignatenko of Planeta.ru for her assistance and encouraging support in preparation of this paper as well as Maria Dokshina and Kirill MaskaeV of Boomstarter for their cooperation.

References

- Baker, S. R., Farrokhnia, R. A., Meyer, S., Pangel, M., & Yannelis, C. (2020). How does household spending respond to an epidemic? Consumption during the 2020 covid-19 pandemic. *The Review of Asset Pricing Studies*, 10(4), 834-862. Retrieved from <https://www.nber.org/papers/w26949>
- Bank of Russia (2020). *Развитие альтернативных механизмов инвестирования: Прямые инвестиции и краудфандинг. [Development of alternative investment mechanisms: Private equity and crowdfunding]*. Moscow, August 2020 Retrieved from <http://www.cbr.ru/reports/>.
- Bank of Russia (2021). *Реестр операторов инвестиционных платформ [Register of investment platforms' operators]* Retrieved from <http://www.cbr.ru/registries/infrastr/>.
- Bansal, R., Croce, M. M., Liao, W., & Rosen, S. (2019). Uncertainty-Induced Reallocations and Growth. *National Bureau of Economic Research Working Paper No. 26248*. Retrieved from <https://www.nber.org/papers/w26248>.
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the Right Crowd. *Journal of Business Venturing*, 29(5), 585-609. <http://dx.doi.org/10.2139/ssrn.1578175>
- Berliner, L. S., & Kenworthy, N. J. (2017). Producing a worthy illness: Personal crowdfunding amidst financial crisis. *Social Science & Medicine*, 187, 233-242. <https://doi.org/10.1016/j.socscimed.2017.02.008>
- Block, J., & Sandner, P. (2009). Necessity and Opportunity Entrepreneurs and Their Duration in Self-Employment: Evidence from German Micro Data. *Journal of Industry, Competition and Trade*, 9(2), 117-137.
- Brown, R., & Rocha, A. (2020). Entrepreneurial uncertainty during the Covid-19 crisis: Mapping the temporal dynamics of entrepreneurial finance. *Journal of Business Venturing Insights*, 14. <https://doi.org/10.1016/j.jbvi.2020.e00174>.
- Brown, R., Rocha, A., & Cowling, M. (2020). Financing entrepreneurship in times of crisis: Exploring the impact of COVID-19 on the market for entrepreneurial finance in the United Kingdom. *International Small Business Journal*, 38(5), 380-390. doi:10.1177/0266242620937464.
- Bu, D., Hanspal, T., Liao, Y., & Liu, Y. (2020). Risk Taking, Preferences, and Beliefs: Evidence from Wuhan (December 2020). *SAFE Working Paper No. 301*. <http://dx.doi.org/10.2139/ssrn.3559870>
- Conti, A., Dass, N., Di Lorenzo, F., & Graham, S. J. (2019). Venture capital investment strategies under financing constraints: Evidence from the 2008 financial crisis. *Research Policy*, 48(3), 799-812.
- Cowling, M., Liu, W., and Ledger, A. (2012). Small business financing in the UK before and during the current financial crisis. *International Small Business Journal*, 30(7), 778-800.
- Crowdfunding Market (2021). *Growth, Trends, COVID-19 Impact, and Forecasts (2021-2026)*. Retrieved from <https://www.researchandmarkets.com/reports/5239562/crowdfunding-market-growth-trends-covid-19#rela2-5031186>.
- Cumming, D., & Hornuf, L. (2018). *The Economics of Crowdfunding: Startups, Portals and Investor Behavior*. Palgrave Macmillan, Cham. <https://doi.org/10.1007/978-3-319-66119-3>
- Davididi, M., Bianchi, R., & Arlacchi, F. (2019). *Real Estate Crowdfunding. Introduction to an Alternative Way of Investing*. EY. Retrieved from <https://ru.scribd.com/document/464265145/EY-Real-Estate-Crowdfunding-March-2019-1-pdf>.
- Deloitte & World Economic Forum (2017). *Beyond Fintech: A Pragmatic Assessment of Disruptive Potential in Financial Services*. Retrieved from http://www3.weforum.org/docs/Beyond_Fintech_-_A_Pragmatic_Assessment_of_Disruptive_Potential_in_Financial_Services.pdf
- Demirgüç-Kunt, A., Peria, M. S. M., & Tressel, T. (2020). The global financial crisis and

- the capital structure of firms: Was the impact more severe among SMEs and non-listed firms? *Journal of Corporate Finance*, 60, 101-114.
- ECB (2020). *Economic Bulletin*. Retrieved from <https://www.ecb.europa.eu/mopo/develop/html/index.en.html>
- ECN report (2020). *Early Impact of Covid19 on the European Crowdfunding Sector*. Retrieved from <https://eurocrowd.org/2020/04/14/early-impact-of-covid19-on-the-european-crowdfunding-sector/>.
- Elmer, G., Langlois, G., & McKelvey, F. (2012). *The permanent campaign: New media, new politics*. New York: Peter Lang.
- Gehring, D. (2016). The depoliticized politics of crowdfunding: A critical examination of the Darren Wilson crowdfunding campaign. *First Monday*, 21 (10). <http://dx.doi.org/10.5210/fm.v21i10.6957>
- Global Crowdfunding Market Research Report (2020). *Global Crowdfunding Market Research Report*. Retrieved from <https://www.marketdataforecast.com/market-reports/crowdfunding-market>.
- Global Newswire (2020). *Global Crowdfunding Market (2020 to 2024) — Players include Kickstarter PBC, Patreon & Teespring among others*. Retrieved from <https://www.globenewswire.com/news-release/2020/06/10/2046114/0/en/Global-Crowdfunding-Market-2020-to-2024-Players-Include-Kickstarter-PBC-Patreon-Teespring-Among-Others.html>.
- Hall, B. H., & Lerner, J. (2010). The financing of R&D and innovation. In *Handbook of the Economics of Innovation* (Vol. 1, pp. 609-639). North-Holland.
- International Monetary Fund (2020). *World Economic Outlook report: A Crisis Like No Other, An Uncertain Recovery*. June 2020. Retrieved from <https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>.
- Jones, M. M. (2010). The American Red Cross and local response to the 1918 influenza pandemic: A four-city case study. *Public Health Reports*, 125(3), 92–104. doi: <https://doi.org/10.1177/00333549101250S312>
- Kiruba, A., & Vasantha, S. (2021). Determinants in Investment Behaviour During The COVID-19 Pandemic. *Indonesian Capital Market Review*, 13(2). Retrieved from <http://journal.ui.ac.id/index.php/icmr/article/view/13351/67546918>
- Lee, N., Sameen, H., & Cowling, M. (2015). Access to finance for innovative SMEs since the financial crisis. *Research Policy*, 44(2), 370-380.
- Manetti, G., Bellucci, M., & Bagnoli, L. (2017). The management of the plague in Florence at the beginning of the Renaissance: The role of the partnership between the Republic and the Confraternita of Misericordia. *Accounting History*, 22(4), 510–529. <https://doi.org/10.1177/1032373217720779>
- Marres, N. (2017). *Digital sociology: The reinvention of social research*. London: Polity.
- Mason, C. M., & Harrison, R. T. (2015). Business angel investment activity in the financial crisis: UK evidence and policy implications. *Environment and Planning C: Government and Policy*, 33(1), 43-60.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132-152.
- Mollick, E. (2014). The Dynamics of Crowdfunding: An Exploratory Study. *Journal of Business Venturing*, 29, 1–16. <https://doi.org/10.1016/j.jbusvent.2013.06.005>.
- OECD (2020). *Policy Responses to Coronavirus (COVID-19): Keeping the Internet up and running in times of crisis*. 4 May. Retrieved from <https://www.oecd.org/coronavirus/policy-responses/keeping-the-internet-up-and-running-in-times-of-crisis-4017c4c9/>.
- Ortmann, R., Pelster, M., & Wengerek, S. T. (2020). COVID-19 and investor behavior. *Finance Research Letters*, 37, <https://doi.org/10.1016/j.frl.2020.101717>.
- Packard, M. D., Clark, B. B., & Klein, P. G. (2017). Uncertainty types and transitions in the entrepreneurial process. *Organization Science*, 28(5), 840-856.
- Predanie (2015). *Как собирать деньги [How*

- to Collect Money]. Retrieved from <http://www.diaconia.ru/tag-kak-sobirat-dengi>.
- Rogers, R. (2013). *Digital methods*. Cambridge, Mass.: MIT Press.
- Rossiyskaya Gazeta (2021). За год почти 5 миллионов человек стали инвесторами на Московской бирже [Within a year almost 5 million people became investors on Moscow Exchange]. *Российская газета*, 13.01.2021. Retrieved from <https://rg.ru/2021/01/13/zagod-pochti-5-mln-chelovek-stali-investorami-na-moskovskoj-birzhe.html>.
- Shneor, R. and Vik, A.A. (2020). Crowdfunding success: a systematic literature review 2010–2017. *Baltic Journal of Management*, 15(2), pp. 149-182. <https://doi.org/10.1108/BJM-04-2019-0148>
- Snee, H., Hine, C., Morey, Y., Roberts, S., and Watson, H. (2016). *Digital Methods for Social Science*. London: Palgrave Macmillan <https://doi.org/10.1057/9781137453662>
- Torkanovskiy, E. (2016). Non-Equity Crowdfunding as National Phenomenon in Global Industry: Russia Case. In D. Brüntje & O. Gajda (Eds.), *Crowdfunding in Europe – State of the Art in Theory and Practice*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-18017-5_8
- Torkanovskiy, E. (2020 (A)). National Competitiveness in the Era of Industry 4.0 and New Individual Freedoms. *World Futures*. Vol 4(1). <https://doi.org/10.1080/02604027.2020.1755213>
- Torkanovskiy, E. (2020 (B)). Автаркия 2.0: Глобальная экологическая повестка, пандемия COVID-19 и новая нормальность [Autarky 2.0: Global Ecological Agenda, COVID-19 Pandemic and New Normality]. *Экономические отношения*, 10(3), 43-68. <https://doi.org/10.18334/eo.10.3.110600>
- Voinov, A. I. (2018 (A)). Проблемы и перспективы венчурного инвестирования в России [Problems and Perspectives of Venture Investment in Russia]. *Страховое дело*, 7, 9-16. Retrieved from <http://ankil.info/lib/1/234/2061/>.
- Voinov, A. I. (2018 (B)). Акселераторы России в цифровой экономике: возможности и риски [The accelerators of Russia in the digital economy: opportunities and risks]. *Управление риском*, 4, 60-66. Retrieved from <http://ankil.info/lib/3/245/2152/>.
- Wenzel, M., Stanske, S., & Lieberman, M. B. (2021). Strategic responses to crisis. *Strategic Management Journal*, 42, O16-O27. <https://doi.org/10.1002/smj.3161>.
- World Bank (2020). *The Global Economic Outlook During the COVID-19 Pandemic: A Changed World*. 8 June. Retrieved from <https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>
- World Economic Forum (2015). *The Future of FinTech: A Paradigm Shift in Small Business Finance*. Retrieved from <https://www.weforum.org/reports/future-fintech-paradigm-shift-small-business-finance>.