European Commission

JRC SCIENCE AND POLICY REPORT

Understanding Crowdfunding and its Regulations

How can Crowdfunding help ICT Innovation?

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2015

Report EUR 26992 EN

Joint Research Centre

European Commission
Joint Research Centre
Institute for Prospective Technological Studies

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JRC92482

EUR 26992 EN

ISBN 978-92-79-44666-5 (PDF)

ISSN 1831-9424 (online)

doi:10.2791/562757

Luxembourg: Publications Office of the European Union, 2015

Abstract
This report offers an overview of crowdfunding using the current literature on the topic. It explains how crowdfunding campaigns and crowdfunding platforms function. It next explains how start-ups can benefit from crowdfunding: start-ups can gain access to finance not otherwise available; but crowdfunding can also lend legitimacy to projects and can help these projects access traditional financing. This report also discusses potential drawbacks, such as the risk that crowdfunding might lead entrepreneurs to disclosure requirements that destroy the value of their ideas and might expose investors to fraud, incompetent managers, and investment lock-ins. Finally, this report highlights how current equity crowdfunding regulations have regulated platforms, participating crowds, and fundraising companies. We conclude by offering further avenues of investigation to assess how crowdfunding and these regulations will impact the funding of ICT innovations.

Acknowledgements

This analysis was produced in the context of the European innovation policies for the digital shift (Euripidis) project, which is jointly funded by the Directorate-General (DG) for Communications Networks, Content and Technology and the Joint Research Centre-Institute for Prospective Technological Studies (JRC-IPTS) of the European Commission ([1]).

I want to thank my colleagues for their valuable input and comments during our seminars: Clara Centeno, Marc Bogdanowicz, Daniel Nepelski, Annarosa Pesole, Ibrahim Rohman, and Martin Christensen. I would like to thank Patricia Farrer and the PUBSY team for their editorial suggestions. I would also like to thank and acknowledge the support provided by Federico Biagi and Paul Desruelle.

([1]) The IPTS is one of the seven research institutes of the European Commission's Joint Research Centre (JRC).

Preface

This report was prepared in the context of the three-year research project on European innovation policies for the digital shift (Euripidis) jointly launched in 2013 by the Joint Research Centre-Institute for Prospective Technological Studies (JRC-IPTS) and the Directorate-General (DG) for Communications Networks, Content and Technology of the European Commission in order to improve understanding of innovation in the information and communication technology (ICT) sector and of ICT-enabled innovation in the rest of the economy (2).

The purpose of the Euripidis project is to provide evidence-based support to the policies, instruments and measurement needs of DG Communications Networks, Content and Technology for enhancing ICT innovation in Europe, in the context of the Digital Agenda for Europe and of the ICT priority of Horizon 2020. It focuses on the improvement of the transfer of best research ideas to the market.

Euripidis aims are:

1. to better understand how ICT innovation works, at the level of actors such as firms, and also of the ICT 'innovation system' in the EU;
2. to assess the EU's current ICT innovation performance, by attempting to measure ICT innovation in Europe and measuring the impact of existing policies and instruments (such as the seventh framework programme (FP7) and Horizon 2020); and
3. to explore and suggest how policymakers could make ICT innovation in the EU work better.

The present report contributes to point 1 by looking at one barrier to ICT innovation: financing. This report looks at how crowdfunding can be used to encourage the financing of ICT innovation.

(2) For more information, see the project website: http://is.jrc.ec.europa.eu/pages/ISG/EURIPIDIS/EURIPIDIS.index.html

Executive summary

As part of the European innovation policies for the digital shift (Euripidis) project, a joint project between the Institute for Prospective Technological Studies (IPTS) and DG Communications Networks, Content and Technology, we investigate the barriers to ICT-enabled innovation. In previous surveys, entrepreneurs and innovators have complained that access to finance was one of the most pressing issues for small and medium-sized enterprises (SMEs) as well as start-ups. Thus, we are investigating how to address financing as a barrier to ICT-enabled innovation.

We therefore turned our attention to sources of financing beyond the traditional form of financing. Traditional methods of financing usually come from funds from friends and family, bank loans, business angel and venture investments. We identified crowdfunding as a potential way to go beyond the traditional methods of financing businesses and innovation and as a potential way to address this barrier to innovation.

This report offers an overview of crowdfunding using the current literature on the topic. It explains how crowdfunding campaigns and platforms function. Crowdfunding is the raising of small funds from a large number of individuals. In its current form, crowdfunding involves intermediaries, which are called funding portals. These funding portals are usually web-based.

Four declinations of crowdfunding exist: donation crowdfunding involves contributors giving (altruistically) money to a campaign and getting in return, at most, an acknowledgment; reward crowdfunding involves contributors giving to a campaign and getting in return a product or a service; lending crowdfunding involves investors offering a loan to a campaign and getting back in return their capital plus interest; and equity crowdfunding involves investors buying stakes in a company and getting in return company stocks.

Innovators or entrepreneurs can use a crowdfunding platform, i.e. a web-based funding portal, to campaign and raise funds from a broad crowd including their social networks and the network of the portal. Entrepreneurs enjoy the obvious benefits of being able to access new funds that might not be otherwise available but they also enjoy non-pecuniary benefits such as feedback about their idea from the crowd and access to the skillset of contributors, who are often willing to lend a hand. The crowd enjoys access to products before they become widely available and become engaged and involved in the production process.

Crowdfunding does not come without its drawbacks. Entrepreneurs must disclose information, which may affect the value of their companies and they may not receive funding because they fail to send the correct signals (instead of failing because they do not have a valuable idea). The crowd is also exposed to potential fraudulent schemes, since most transactions are conducted over the Internet.

After discussing these benefits and drawbacks of crowdfunding for entrepreneurs and investors, the report focuses on equity crowdfunding because they involve higher funds: donations/reward campaigns usually involve campaign raising under €20 000, on average; lending campaigns usually involves under €100 000, on average; and equity crowdfunding usually involves over €300 000, on average. Equity crowdfunding also usually involves higher risks: donation/reward campaigns have traditional consumer law remedies at their disposal; lending campaigns involve individuals with a track record; and equity campaigns involve start-ups, which fail frequently. Equity crowdfunding, hence, is part of the broader ecosystem of financing start-ups and innovation.

Consequently, this report highlights the current equity crowdfunding regulations in the European Union as of 1 October 2014. Even without new regulations, equity crowdfunding has emerged in Europe. Yet Italy, the United Kingdom, and France have adopted new regulations. The report compares these regulations to the proposed regulation in the United States of America, where the majority of worldwide crowdfunding takes place.

All the new regulations have required that platforms be licensed. All the new regulations have limited companies to fundraise a specific amount over a 12-month period. However, each regulation has set different limits: Italy and the United Kingdom have a €5 million limit; France has a €1 million limit; and the USA has a $1 million limit. The United Kingdom and the USA have limited how much each non-qualified investor may invest to 10 % of their net assets (with some other thresholds depending on income/assets in the USA) whereas in Italy and in France, investors may invest at will. However, Italy has set further limits requiring the fundraising company to be a small and young innovative start-up and requiring 5 % of the funds to come from professional investors.

This diversity of regulations opens the door to potential regulatory arbitrage: currently, citizens of one European Union Member State may invest in another Member State. In comparison, the United States has limited regulatory arbitrage between its states. In the EU, harmonisation may offer some advantages to avoid a concentration of funds and crowdfunding. This equity crowdfunding phenomenon remains new and monitoring the effect of the current regulations may shed light on further benefits and drawbacks of crowdfunding. This report concludes by offering further avenues of investigation to assess how crowdfunding and these regulations will impact the funding of ICT innovations.

Contents

1. Introduction

The European innovation policies for the digital shift (Euripidis) project, a joint project between the Institute for Prospective Technological Studies (IPTS) and the Directorate-General (DG) for Communications Networks, Content and Technology, investigates the barriers to information and communication technology (ICT) innovation. Among these barriers, we pay special attention to the financial barriers that negatively impact innovative companies and to the same extent ICT innovation.

Entrepreneurs cite 'access to finance' as the second most pressing problem for small and medium-sized enterprises (SMEs) (3). Start-ups face the same financing problems as SMEs (4). The financial crisis has made this fund shortage even more problematic (5). Crowdfunding may offer an alternative method of funding for SMEs and start-ups (6), and a stop-gap solution (7).

SME and start-up entrepreneurs can finance their company internally or externally. An entrepreneur finances his/her company internally when he/she uses retained earnings and personal equity. The majority of SMEs, however, do not use internal funds and instead prefer external financing (8). Start-up entrepreneurs have limited options because they do not have retained earnings, and if they do not have personal equity either, they must turn to external financing.

External financing takes multiple forms, for instance equity raised from external sources, bank loans, bank overdrafts, leasing, and trade credits. The most common external funding methods are borrowing funds from friends and family, loans from banks, investments from business angels or venture capitalists, and funds raised through crowdfunding campaigns (9). All these types of external financing have their benefits and shortcomings.

First, friends and family lend funds to start businesses but also throughout the life of most SMEs (10). Next to personal equity, friends and family remain the most commonly tapped source of start-up financing (11). Loans from friends and family have benefits: they do not suffer from the same information asymmetry as bank loans because friends and family know the entrepreneurs, their skills and experience; these entrepreneurs may be more candid about their business; and friends and family may create more social pressure on entrepreneurs relative to other forms of external financing and make the business succeed (12). Yet entrepreneurs who exclusively borrow from friends and family to start their business remain a minority (13). These loans require wealthy relatives and hence may generate a class bias.

(3) According to a recent joint European Commission and European Central Bank report, 15 % of entrepreneurs questioned cite access to finance as a problem behind finding customers, which was cited in 22 % of the answers (Ipsos Mori, 2013) (Henceforth 'Joint Report').

(4) (Moncada-Paternò-Castello, Vezzani, Hervás, & Montresor, 2014).

(5) (Moncada-Paternò-Castello, Vezzani, Hervás, & Montresor, 2014).

(6) This report uses SMEs and start-ups as proxy for innovative companies because SMEs represents 99 % of all companies and they are '[c]ritical to such a culture of innovation' (European Commission, 2000).

(7) Collins & Pierrakis (2012) argue that crowdfunding will help fill the financing gap but also help finance start-ups that present returns which are too low to attract venture capitalists and risks which are too high for bank loans.

(8) The Joint Report quotes 74 % of SMEs did not use internal financing in the last six months.

(9) (Collins & Pierrakis, 2012).

(10) The Joint Report quotes that 15 % of SMEs have used 'a loan from related companies, shareholders, family or friends' in the last six months and 17 % of SMEs did not but have done so in the past.

(11) Colombo & Grilli (2007) find that 97.9 % of 386 Italian new technology-based start-ups use personal capital (savings or family/friends' funds), 22 % resorted to banks loans, while 3.9 % received private equity (business angels and venture capitalists). Robb & Robinson (2012) find that 77.9 % of 3 972 US start-ups used owner equity, 12.1 % used friends' and family loans, 5.2 % received outside equity investment, 36.2 % used any type of loans from banks (includes credit cards, bank lines, and personal bank loans).

(12) Åstebro & Bernhardt (2003) find that having a loan from either friends, family, spouse, former owner, or home mortgage increases the probability of a business survival four years later in a statistically significant way, pp. 312–313.

(13) In 1987, between 9.8 % and 15.8 % of US start-ups used family loans (Åstebro & Bernhardt, 2003).

Second, bank loans can help entrepreneurs start their business ([14]). However, banks can be reluctant to provide start-up entrepreneurs with extensive loans because these entrepreneurs often lack the track record, the collateral, and they venture in risky business ([15]). These limited bank loans force entrepreneurs to complement their funds from other sources if they are to reach an optimal size for their business ([16]).

Third, business angels and venture capitalists can also help finance SMEs and start-ups ([17]). Business angels may provide entrepreneurs with funds. Business angels are often parts of networks and browse projects on websites ([18]). While data are often limited about the funds provided, they often provide limited funds estimated between €100 000 and €200 000 ([19]) but have a positive impact upon the survival of companies ([20]). Venture capitalists focus on larger start-ups in specific sectors of the economy ([21]). They often require high returns for the high risk of investing in private equity companies ([22]). Venture capitalists also need a way to cash in on their investment that can provide these high returns ([23]).

([14]) Colombo & Grilli (2007) find that 22 % of new Italian technology-based start-ups used a bank loan. This rate may be culture-related and varies over time. Åstebro & Bernhardt (2003) find that between 16 % and 22.4 % of US start-ups in 1987 used bank loans; more recently, Robb & Robinson (2012) find that 16 % of start-ups used a bank loan and 6 % used a personal bank loan in 2004. Some banks such as

([15]) (Carpenter & Petersen, 2002).

([16]) Colombo & Grilli (2005) find that access to external financing beside bank loans has statistically significant positive effects upon the the size of start-ups a year after its incorporation. One recent unpublished study (Brown, Degryse, Höwer, & Penas) shows that German start-ups that use access loan banks have more funds than start-ups that do not; that German high-tech start-ups are less likely to have access to bank loans than low-tech firms — this problem worsens with the company's age; and that local banks are more likely to lend to companies than large conglomerates for high-tech companies. A Barclays report, written by The Economist Intelligence Unit, states that seed stage will remain the realm of social loans because banks focus on whether entrepreneurs 'can pay back' and if not, 'what assests can be claimed in its stead.' (*The Economist*, Intelligence Unit, 2014, p. 18). Yet this report suggests alternative methods to finance start-ups while other banks have programmes that target start-ups specifically, e.g. the Bank of Ireland developed a fund that specialises in offering seed and early stage funds (http://businessbanking.bankofireland.com/credit/business-loans/seed-and-early-stage-fund/ (last visited 28 August 2014).

([17]) (Collins & Pierrakis, 2012) Even though they function in similar ways, they are often distinguished because of the size of their contributions: business angels bring more capital than friends and family yet less than venture capitalists. Start-ups that receive private equity injection from investors are larger, on average, than their counterparts financed through family/friends or bank loans. Colombo & Grilli (2007) find that start-ups that use personal capital have a mean starting capital of €107 000, whereas start-ups that use private equity have a mean starting capital of €274 500.

([18]) '[D]eals tend to find business angels rather than angels seeking out businesses' (Collins & Pierrakis, 2012, p. 26).

([19]) A report prepared for the European Commission estimates that there are about 170 000 to 240 000 business angels in Europe; each angel provides between €18 000 to over €150 000; the total amount provided by angels in Europe is about €660 million; each funded firm receives between €100 000 and €200 000. This means that in Europe, between 3 300 and 6 600 firms receive business angel funds (Centre for Stategy & Evaluation Services, 2012).

([20]) (Kerr, Lerner, & Schoar, A Regression Discontinuity Analysis) found that because business angels tend to be more hands-on, they increase the likelihood of company survival but do not impact whether companies are more likely to gain access to other sources of financing.

([21]) Some venture capital funds specialise in seed-stage start-ups such as Accel Partners (http://www.accel.com/) and Beringea (http://www.beringea.com/) — both with operations in the United Kingdom. These venture funds provide up to €25 million and €10 million respectively and specialise in ICT and biotechnology.

([22]) (Collins & Pierrakis, 2012, p. 29). Bank debt is negatively correlated to venture capital funding, but venture capital-backed firms have much higher growth rates than debt-backed young innovative firms on the German Neuer Market (Hall, 2010). 'Overall, 19.1 percent of all first-round investments earn a value multiple of five or more, whereas 43.7 percent return nothing' (Metrick & Yasuda, 2011, p. 144).

([23]) (Czarnitzki & Hottenrott, 2010). By definition, venture capital funds do not invest in public companies and

Finally, crowdfunding, as a form of microfinance, has been around for years; however, the emergence of the Internet has broadened its use ([24]). Unlike venture capital, crowdfunding raises small amounts from a large number of investors instead of a large amount from a few investors. Crowdfunding can help entrepreneurs fund one product or a whole company. However, the crowdfunding fees can be large, the regulation unclear and burdensome, and the payoff can be insufficient for certain investors ([25]). These benefits and drawbacks are discussed in more detail below.

In spite of these shortcomings, crowdfunding has widely spread ([26]). The large majority of crowdfunding platforms are found in the USA and Europe ([27]). Crowdfunding carries hope of helping bridge the financing gap between (small) loans from friends, family, and banks and (large) investments from venture capitalists ([28]).

The European Commission has been exploring crowdfunding. The Commission recently ended a consultation period ([29]) and released a communication on crowdfunding in March 2014 ([30]). This communication touches upon the types of crowdfunding, its shortcomings, and the applicable regulations. It identifies concerns that consultation respondents flagged as important — including regulation obscurities for cross-border transactions, the tax treatment of contributions among others.

This report explores the crowdfunding literature to build upon two points that this communication makes. First, the communication highlights that crowdfunding has the 'potential … to complement traditional sources of finance.' ([31]) Second, the communication mentions that crowdfunding can help start-ups along the funding escalator where '[c]rowdfunding can be followed by other forms of financing, such as bank financing, angel or venture capital, or an Initial Public Offering (IPO).' ([32]) This report investigates both the complementarity and escalator arguments. Both arguments have value because crowdfunding is flexible enough to allow fundraisers to fit the campaign to their financial needs; at the same time, as shown by existing laws in France, Italy, the

'23.3 percent of all first-round investments eventually had an IPO' (Metrick & Yasuda, 2011, p. 144).

([24]) (Hemer, 2011)

([25]) Business angels and venture capitalists may not partake in crowdfunding because of the fees and the lack of personal contact — particularly if they want to take part in the business process.

([26]) Crowdsourcing.org has 939 sites listed in its directory as of 8 January 2014 up from 452 in April 2012; Massolution reports that the crowdfunding industry has grown worldwide from $530 million in 2009 to $2.8 billion in 2012; Kickstarter reported the website helped raise $27 million in 2010 to $529 million in 2014 (Kickstarter.com, 2014) (Kickstarter.com, 2012) (Kickstarter.com, 2013) (Kickstarter.com, 2015).

([27]) '85 % of the crowdfunding platforms are founded in the USA and Europe, and 15 % in the rest of the world with Brazil (20 platforms), Canada (12) and Australia (7) ranking in the highest positions' (Ramos, Crowdfunding and the Role of Managers in Ensuring the Sustainability of Crowdfunding Platforms., 2014).

([28]) Collins & Pierrakis (2012) argue that crowdfunding will help bridge the financing gap but also help finance start-ups that present returns too low to attract venture capitalist but risk too high for bank loans (p. 17).

([29]) From 3 October 2013 to 31 December 2013, the European Commission launched a consultation to explore the added value of potential EU action entitled 'The consultation by the European Commission on crowdfunding in the EU — Exploring the added value of potential EU action' http://ec.europa.eu/internal_market/consultations/2013/crowdfunding/docs/consultation-document_en.pdf (last visited 8 April 2014). A summary of responses is available at: http://ec.europa.eu/internal_market/consultations/2013/crowdfunding/docs/summary-of-responses_en.pdf and http://ec.europa.eu/yourvoice/ipm/forms/dispatch?userstate=DisplayPublishedResults&form=CROWDFUNDING&lang=en (last visited 8 April 2014).

([30]) http://ec.europa.eu/internal_market/finances/docs/crowdfunding/140327-communication_en.pdf (last visited 8 April 2014).

([31]) (Communication from the Commission to the European Parliament, the Council, the European Economica nd Social Committee and the Committee of the Regions, 2014, pp. 2, 9).

([32]) (Communication from the Commission to the European Parliament, the Council, the European Economica nd Social Committee and the Committee of the Regions, 2014, pp. 2, 9).

United Kingdom, and the USA, regulations can influence how crowdfunding is used as a complement to traditional financing or as escalator financing.

This report uses the current literature to draw future research questions on how crowdfunding can help entrepreneurs, in ICT-enabled fields, finance their innovations and overcome the financial barriers to innovation ([33]). The first section presents the main types of crowdfunding and how they function. The second section focuses on the benefits and risks associated with crowdfunding. The third section investigates the crowdfunding-specific legislations in France, Italy, the United Kingdom, and the United States and how these different countries have attempted to counterbalance the shortcomings of crowdfunding.

2. Describing the functioning of crowdfunding

Crowdfunding, for the purpose of this report, is defined as the collecting of resources (funds, money, tangible goods, time) from the population at large through an Internet platform. In return for their contributions, the crowd can receive a number of tangibles or intangibles, which depend on the type of crowdfunding.

Crowdfunding involves three participants: the crowd (or contributors); a crowdfunding platform; and the crowdfunding campaign creator. This section focuses on the crowdfunding platform and the crowdfunding campaign. Section 3 of this report addresses campaign creators. Section 4 discusses the benefits and risks of investing in crowdfunding projects. Finally, section 5 addresses how all three of these participants are regulated and limited with regard to one type of crowdfunding.

2.1. Crowdfunding campaigns

Crowdfunding campaigns can raise funds for not-for-profit and for-profit projects or organisations. Campaign creators can organise their campaign in one of four ways: donation-based, reward-based, lending-based, and equity-based ([34]).

First, contributors to donation-based crowdfunding campaigns do not receive anything for their contributions ([35]). These types of donations can support any projects. The contributors can receive tax deductions for their participation depending on the nature of the project ([36]). For instance, the Germany-based website FriendFund is a donation-based platform that was funded in 2010 and allows campaigners to collect money for anything from their friends or the broader crowd ([37]).

([33]) IPTS is also investigating how crowdfunding may offer an alternative means of funding scientific research as part of an exploratory study on digital science 2.0 http://is.jrc.ec.europa.eu/pages/EAP/Science2.0.html.

([34]) An in-depth discussion of reward-based crowdfunding can be found in (Collins & Pierrakis, 2012) and in (Hemer, 2011). Others have divided reward-based and pre-sale-based crowdfunding into different categories and made the distinction because rewards offer greater profit margins for the fundraisers on the goods or services the contributor gets in return as compared to pre-sale of those goods or services. See, for example, (De Buysere, Gajda, Kleverlaan, & Marom, 2012, p. 10). However, the distinction is marginal and those two categories of crowdfunding are often grouped together.

([35]) Donation-based crowdfunding campaigns are also referred as philanthropic campaigns when they raise funds for non-profitmaking campaigns and sponsorship campaigns if contributors receive publicity in exchange for their participation.

([36]) For example, Daniel M. Satorius and Stu Polland (2010) discuss some of the pitfalls associated with creating a tax deductible crowdfunding campaign in the USA. They highlight the importance of setting up the project correctly as well as how the project will be carried out. Setting the organization as non-profit has other benefits. For instance, Schwienbacher & Larralde (2010) argue that 'not-for-organisations tend to be more successful in achieving their fundraising targets as compared to for-profit organizations and project-based initiatives,' possibly because not-for-profit put more emphasis on quality and less on profit making.

([37]) 'friendfundFriendfund was founded July 2010 with the aim of building a funding platform which would combine the two of Internet's most progressive aspects: the social web and ecommerce. Our goal is to

Second, contributors to a reward-based crowdfunding campaign receive goods or services in exchange for their contributions: reward-based crowdfunding is comparable to preselling (38). As such, reward-based crowdfunding has not been regulated to the extent that lending- and equity-based campaigns often have. For instance, the France-based website Ulule is a reward-based platform whose participants receive the rewards as described by the project owner (39).

Third, contributors to a lending-based crowdfunding campaign receive interest payments in exchange for financing a project. Lending-based crowdfunding is a form of micro-lending, where contributors can select a project with an associated rate of return and maturation date (40). For instance, the United Kingdom-based website Funding Circle is a lending-based platform where people lend directly to small British businesses: the contributors get higher returns than in traditional savings accounts and business owners get funds at lower costs (41).

Finally, the contributors to equity-based crowdfunding campaigns receive shares in the venture in exchange for their contributions. Since equity-based crowdfunding platforms emit shares, they fall under the authority of individual state financial authorities. Most of the equity crowdfunding currently occurs in Europe, but most platforms choose a business model that avoids falling under these financial authorities (this point is discussed in more detail below) (42). For instance, the Finland-based website Invesdor is an equity-based platform, which funds companies in Finland, Sweden, Denmark, and Estonia (43).

2.2. Crowdfunding platforms

Platforms for all four campaign types exist in Europe (44). Donations remain the predominant source of fundraising: a survey of platforms showed that 49 % of the $575 million raised globally in 2011 came from donation campaigns, 11 % of funds came through reward-based campaigns, 22 % of funds came through lending-based campaigns, and 18 % came through equity-based campaigns (45).

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provide the online community with financial tools which utilize the power of popular social networks like Facebook and Twitter in a fun, simple and transparent way.' http://www.friendfund.com/en/aboutus (last visited 28 August 2014).

(38) Reward-based campaign requires that the campaign creator can offer some product or service for rewards. This creator can offer various rewards depending on the contribution level; however, they may also offer multiple identical products — possibly combined with a volume discount.

(39) 'On Ulule you can discover and make wonderful projects happen. Projects are successfully financed only if they reach (or exceed!) their funding goal' http://www.ulule.com/about/faq/ (last visited 28 August 2014).

(40) Some variations in lending models allows the contributors to pick the project (peer-to-peer model, in which lenders and debtors can contact each other); in other models (the micro-finance model), lenders and debtors can remain completely anonymous (altruistic endeavours in third world countries often use this model). See, for example (Hemer, 2011, pp. 15-17); (De Buysere, Gajda, Kleverlaan, & Marom, 2012, p. 11).

(41) 'Funding Circle was created with a big idea: to revolutionize the outdated banking system and secure a better deal for everyone. Thousands of loans later, we've helped businesses expand, investors prosper and the economy grow.' https://www.fundingcircle.com/about-us (last visited 28 August 2014).

(42) (Securities and Exchange Commission, 2013).

(43) 'Invesdor is a pioneering equity-based crowdfunding platform in N Europe. We provide an online investment matching service where entrepreneurs looking to raise equity financing can easily connect with investors who are seeking to discover and invest in exciting new startups and growth companies from Northern Europe.' https://www.invesdor.com/en/about (last visited Aug., 28, 2014).

(44) An example of a donation-based platform is Onepercent in the Netherlands. Examples of reward-based platforms are Verkami in Spain, Crowdculture in Sweden, Pleasefund.us in the United Kingdom. Examples of lending-based platforms are Leihdeinerstadtgeld in Germany or Zopa in the United Kingdom. Examples of equity-based platforms are Symbid in the Netherlands and Socioinversores.es in Spain.

(45) Charman-Anderson (2012) extracted numbers from (Crowdsourcing.org, 2012). The Massolution report (Crowdsourcing.org, 2012) estimated the funds raised by crowdfunding platforms in 2011: the survey respondents provided the total raised funds ($575 million), the report estimated what large platforms

However, the distribution of platforms is changing: in 2011, the number of platforms supporting donation campaigns grew by 41 %, while the number of platforms supporting reward-based campaign grew by 79 %. During the same year, the number of platforms supporting lending-based campaigns grew by 50 % while that of platforms supporting equity-based campaigns grew by 114 % ([46]). The distribution of platforms according to the type of crowdfunding may further change in 2014 because France, Italy, the USA, and the United Kingdom passed new regulations that facilitate equity-based crowdfunding and these regulations have already been implemented or are to be implemented within the year 2015.

Questions have been raised about the usefulness of an intermediary platform because about 73 % of contributions actually come from the campaigner's family and friends ([47]). However, using a platform serves multiple purposes.

First, crowdfunding platforms facilitate raising funds from friends and family because it removes some of the stigma associated with asking these friends and family for money ([48]).

Second, platforms keep a public webpage about each project. Of course, this public forum gives creators a place to publicise their projects and an opportunity to access the platforms' broader networks. But this public webpage can reassure potential contributors because they can see whether a crowd donated to a project. If others believe in a project, contributors may be more inclined to donate as well. This has been referred as the *wisdom of the crowd*, where individuals take into account the collective opinion in order to make their own decision ([49]). The model the platform uses plays an important role in this wisdom. Most platforms use the all-or-nothing model where they divest the funds collected to the campaign creator only if the target is reached ([50]).

Furthermore, thanks to these public webpages, potential contributors can also see who donates: if contributors see that individuals who know the campaign creator are contributing as well, they may be further encouraged to participate ([51]). This public forum helps campaign creators receive feedback as well.

Third, the use of a platform has a real cost because platforms collect a fee for their services — which the creator must account for in his/her project — and some less tangible costs

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raised according to a model and based on key metrics ($827 million), and the report estimated the average amount of funds raised by small platforms ($68 million) for an estimated total of $1 470 million raised in 2011. The $575 million figure only reports what the survey respondents disclosed.

([46]) (Crowdsourcing.org, 2012).

([47]) In an interview reported in Ridgway (2013), a platform funder confirmed this statistic. One study finds a correlation between the extent of the campaign creator's network and the likelihood of reaching his/her target: 'To take an average project in the Film category, a founder with 10 Facebook friends would have a 9 % chance of succeeding, one with 100 friends would have a 20 % chance of success, and one with 1000 friends would have a 40 % chance of success.' (Mollick, The Dynamics of Crowdfunding: An Exploratory Study., 2014). Interviews conducted on behalf of JRC-IPTS confirm these findings (Green, de Hovos, Barnes, Baldauf, & Behle, 2013). Kickstarter published that of its 2.2 million people who backed projects in 2012, only 570 672 backed two or more (https://www.kickstarter.com/year/2012#repeat_backers). In 2013, Kickstarter published that 3 million people pledge to projects in 2013, however, only 807 733 backed more than one project. Therefore, about 74 % of backers backed only one project in 2012 and 71 % in 2013.

([48]) One survey respondent explained that she opted for crowdfunding because 'it might be a nicer way to ask friends and family to support you' (Green, de Hovos, Barnes, Baldauf, & Behle, 2013, p. 43).

([49]) In his book, James Surowiecki illustrates the power and the danger of online crowds, but argues that under the right conditions, the crowds can make better decisions than individuals (Surowiecki, 2005).

([50]) Some donation-based crowdfunding platforms also use a keep-it-all model, where the platform divests the funds collected regardless of whether the target has been reached. One platform follows the bounty model (www.bountysource.com), where this platform divests the funds raised to the individual from the crowd who completes the open-source software project posted by the campaign creator; the contributor gets a copy of the software as well.

([51]) The 'investments from friends and family, if not identified as such, could be interpreted by other investors as investing primarily based on the perceived financial prospects of the venture. This would lead those receiving the signals to have a positive bias on what the crowd perceives these prospects to be' (Collins & Pierrakis, 2012, p. 25).

such as the time spent running a campaign. These tangible and intangible costs send a signal about the campaign creator's belief in his/her project ([52]).

Finally, platforms lend legitimacy to projects because these platforms check the campaigner, his/her information, his/her projects, and platforms employ various anti-fraud procedures to assure the safety for consumers ([53]). Platforms have a strong incentive to assure that their website does not get a reputation to only attract fraudulent or bad projects because platforms are repeat players into the crowdfunding market. To compete, platforms must offer a valuable product to their consumers — who are the potential campaign creators as well as potential contributors ([54]).

Since platforms have incentives to regulate themselves, it may cast some doubt on the usefulness of regulation. Yet, France, Italy and the United Kingdom have passed crowdfunding-specific laws. While Italian regulators focus on equity crowdfunding, French and UK regulators tackle both lending and equity crowdfunding.

Other EU Member States already have regulations in place that regulate lending and share emissions undertaken by crowdfunding platforms but without facilitating the process for platforms to emit shares. Hence, some platforms have followed these regulations to operate without suffering legal consequences ([55]); some platforms adapt to stay clear of the general banking regulations ([56]); and the rest of the platforms prefer to challenge the unclear financial rules that may apply to crowdfunding ([57]).

([52]) (Ahlers, Cumming, Günther, & Schweizer, 2013) discussing the different costs associated with signals such as going through the due diligence process.

([53]) See, for example, (Ramos, Crowdfunding and the Role of Managers in Ensuring the Sustainability of Crowdfunding Platforms., 2014, pp. 30-31); (De Buysere, Gajda, Kleverlaan, & Marom, 2012, pp. 7, 15).

([54]) See, for example (Ramos, Crowdfunding and the Role of Managers in Ensuring the Sustainability of Crowdfunding Platforms., 2014, pp. 30-31); (De Buysere, Gajda, Kleverlaan, & Marom, 2012, pp. 14-15).

([55]) For instance, in France, WiSeed, funded in 2008, is an equity crowdfunding platform that allowed companies to raise up to €100 000 until 2012 when it associated a financial institution allowing WiSEED to raise up to €1 million. 'WiSEED, supporting projects raising up to €100 000, via investments of not less than €100 per investor, and also projects funded by less than 150 non-qualified investors' (Tax & Legal Work Group of the European Crowdfunding Network, 2013).

([56]) For instance, the holding model creates a holding company where the contributors buy in, and this holding owns the business funded (Hemer, 2011, p. 16). For instance, Symbid (http://symbid.com/pages/how_it_works) investment is done through a cooperative that is established in the Netherlands. http://symbid.com/pages/model (last visited 29 August 2014). For instance, Seedrs acts as a nominee manager and holds the shares for the investor. https://www.seedrs.com/invest (last visited 29 August 2014). In the club model, the platform recruits 'qualified' investors who enjoy less legal protection; the platform also acts as an intermediary and avoids handling money. This type of crowdfunding parallels angel networks (Hemer, 2011, p. 17). For instance, MyMicroInvest (https://www.mymicroinvest.com/en/about) used to operate along this system of only involving professional investors (Collins & Pierrakis, 2012, p. 16); AngelList allows investors to form 'syndicates' of investors, which are similar to investment funds in order for potential contributors to invest together in a project. https://angel.co/syndicates (last visited 29 August 2014). Some crowdfunding platforms do not handle money and only serve as intermediaries to put investors and company owners in contact. 'SociosInversores act as an intermediary between entrepreneurs and investors but do not collect or distribute any money. For their services, the platform charges five per cent of the total amount invested in a project. This model means that the platform is able to avoid legal limitations that other crowdfunding platforms can face, particularly if they take up roles that are in some countries exclusive to banks' (Green, de Hovos, Barnes, Baldauf, & Behle, 2013, p. 60).

([57]) 'In Germany, for instance, the basic assumption until recently was that crowdfunding platforms could only raise as much as € 100 000 per project. The founder of equity platform Seedmatch challenged this paradigm though, by drawing up arrangements between investors and equity-offering companies based on 'a so called 'partiarisches Darlehen' or a profit participating loan' contract. The German financial authority recognized and accepted this bit of innovation, and Seedmatch can now raise equity rounds above the €100 000 limit, but it faces an uncertain future with regards to laws governing the screening of potential investors and fundraisers' (Weinstein, 2013, p. 447).

3. Crowdfunding strategies for innovations and innovative start-ups

Crowdfunding (equity and non-equity-based) can help early-stage and innovative ventures according to industry experts (58); and many innovators use crowdfunding to finance their innovation (59). However, crowdfunding may not be 'a solution for each and every start-up out there.' (60) Understanding how campaigns are implemented helps identify the challenges that entrepreneurs and innovators face; it helps narrow down how these entrepreneurs can appropriately use crowdfunding; and finally, it may help implement policies encouraging crowdfunding-financed innovation.

3.1. Implementing a crowdfunding campaign

The IPTS and DG Internal Market and Services have recently completed two reports on crowdfunding within the context of crowd-employment, i.e. employment created using online communities.

The first report looks at five crowdfunding platforms (61). The five crowdfunding platforms mirror the five types of crowdfunding discussed above: donation, simple reward, pre-sale, lending, and equity. Each platform is the object of a case study in the report (62). Each case study is carried out through interviews with platform managers and dives into the functioning of platforms and campaigns. These managers also echo some of the concerns discussed below and call for a harmonisation of the regulations to allow for cross-border equity crowdfunding and call for a lightening of the paperwork.

The IPTS and DG Internal Market and Services' second report looks at crowdfunding within the broader context of crowd-employment (63). The report looks at two case studies: one reward-based crowdfunding platform in the United Kingdom and one equity-based crowdfunding platform in Spain (64). The case studies are based upon interviews of platform funders, campaign creators, and campaign contributors. The campaign creators express their desire to go beyond raising money and to market their projects but are often surprised by the skills required, the complexities, and the demands of the campaign (65).

The fund-seeker must define their campaign strategy before they start the campaign. The strategy can be divided in two aspects: the static process at the start; and the dynamic process during the campaign and after the campaign.

All the static decisions affect the fund-seeker's chances of success. At the start of a campaign, the campaigner must:

- decide whether to raise money for a one-shot project that offers a product or service, a single product or service offered by a start-up or more established company, or to finance a whole company. This decision drives the type of crowdfunding the fund-seekers may use:

(58) One expert (Hans-Christian Heinemeyer, co-founder and managing director, about their crowdinvesting round at companisto.de) states that '[he] ha[s] experienced myself several times that bank and bankers do hardly and seldom understand startups and new business ideas. Crowdinvesting is therefore a promising approach for financing risky early stage ventures. Hence, [he is] convinced that crowdinvesting will outgrow the financing of startups by traditional banks.' (Schwering, et al., 2013, p. 18).

(59) (Agrawal, Catalini, & Goldfarb, 2013).

(60) (Schwering, et al., 2013, p. 18).

(61) Report entitled: *Crowdfunding and the role of managers in ensuring the sustainability of crowdfunding platforms* (2014) http://is.jrc.ec.europa.eu/pages/Employability-TheFutureofWork.html.

(62) This report looks at Symbid, 1 %CLUB, Verkami, Crowdculture, and LeihDeinerStadtGeld.

(63) Report entitled: *CrowdEmploy Part II: CrowdFunding — An empirical investigation into the impact of crowdfunding on employability* (2013), http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=7243 which is part of the broader *CrowdEmploy: Crowdsourcing case studies — An empirical investigation into the impact of crowdsourcing on employability* (2013) project http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=6814.

(64) This report looks at Pleasefund.us and SociosInversores.es.

(65) For a deeper understanding of platforms and the intricacies of platform-managing, please refer to these studies.

- donation-based and reward-based campaigns usually support a one-shot project or a single project within a start-up or company (66); the fund-seeker may need their product or service to have reached the prototype phase in order to properly campaign and show the crowd what they may receive in exchange for their contribution;
- lending-based and equity-based campaigns help start-ups and more established companies raise funds for a variety of projects — at any level of development (67);

- select the platform: fund-seekers must consider the type of crowdfunding campaign, the quality of the associated signal (e.g. advertising), and the platform's network (68);
- select the thresholds:
  - if a campaigner ask for too little funding, s/he will not be able to deliver because of insufficient funds to reach economies of scale;
  - if a campaigner ask for too much, s/he may not be able to reach the campaign threshold;
  - a campaigner must decide whether the project can be over-funded (69); equity-based crowdfunding struggles with over-funding because extra funding affects the capitalisation the campaigner holds (70);
  - a campaigner must select the duration of the campaign (71);
- select the reward scheme for reward-based and share scheme for equity-based (72) projects;
- design the campaign material and advertise the campaign.

Some platforms allow dynamic decisions: they allow campaigners to modify or adapt their campaign to the crowd's response. For instance, some platforms allow its campaigners to change the capitalisation level and share value within limits (73).

(66) Donation and reward-based crowdfunding usually involve smaller campaigns than lending or equity-based crowdfunding. In 2011, a sample of 25 crowdfunding platforms showed that 90 % of the donation- and reward-based projects raised less than $10 000 whereas a sample of 10 lending- and equity-based platforms showed that 94 % raised over $10 000 (Crowdsourcing.org, 2012).

(67) The company can benefit from investor participation. Some crowdfunding offers opportunities for passive and active investments (Green, de Hovos, Barnes, Baldauf, & Behle, 2013).

(68) (Agrawal, Catalini, & Goldfarb, 2013).

(69) Over-funded projects tend to have more delayed delivery than otherwise (Mollick, The Dynamics of Crowdfunding: An Exploratory Study., 2014).

(70) For instance, a campaigner can decide to offer 100 shares at a €1 000 each. This €100 000 represents 50 % of the business equity and the campaigner keeps the remaining €100 000. If the demand outpaces the supply, then instead of prices rising like in a market solution, the price of the shares remains unchanged. If the platforms and the campaigner allow for overfunding, then the campaigner's interest decreases: assume that the campaign is overfunded by 50 shares or €50 000, then the campaigner is left with 25 % of the business and is no longer the majority owner. The number of total shares cannot legally change without reviewing the charter of the business. However, '[u]nsophisticated' individuals who are acquiring equity in growing companies are likely unaware of the fact that their ownership stake in a successful company can, and probably will, be quickly diluted during successive fundraising round' (Weinstein, 2013, p. 452)..

(71) Mollick (2014) finds that the length of the fundraising period has a statistically significant negative impact upon the likelihood of success of reaching the threshold. A long period may send a negative signal with regard to the campaigner's confidence in reaching the threshold. A short period may not allow enough time to reach the threshold.

(72) This share scheme includes but is not limited to the type of shares (e.g. common or preferred shares), the price of the shares, and the level of capitalisation.

(73) While Seedrs does not allow fund-seekers to alter the price or equity of the campaign, Symbid and CrowdCube allow entrepreneurs to increase the level of equity (Collins & Pierrakis, 2012, p. 16).

All these choices can overwhelm entrepreneurs. Standardising these choices (74) or the way the platform presents their information to campaigners (75) and to the crowd (76) may benefit crowdfunding in the long run.

3.2. The benefits of campaigning

The majority of fund-seekers use crowdfunding after failing to raise sufficient funds in other ways (77): hence fund-seekers may use crowdfunding to close the funding gap. First, fund-seekers can access funds with less strings attached than with banks or venture capitalists: fund-seekers who use crowdfunding keep control of their projects because they may consider or ignore the comments they receive from the crowd, they dictate the repayment period for lending crowdfunding and the share scheme for equity crowdfunding (78).

Second, not only can campaigners fill a financial gap, they can fill it at a lower cost as well (79). Crowdfunding also allows its users to decide on the type of crowdfunding and the level of financing necessary. In other words, crowdfunding platform users have more leverage in their financing because they can tailor the campaign to their needs instead of being restricted to what banks and venture capitalist are willing to offer.

Finally, crowdfunding works as a social insurance for innovation because crowdfunding allows investors to make small contributions; it spreads the risk of investing in new ventures over a larger population of investors (80); fund-seekers do not carry the whole risk of innovating since they do not need to invest all their wealth into their venture. It spreads the financial risk and may close a financial gap by attracting investors with potentially different risk preferences.

Beyond financing, fund-seekers can use crowdfunding to climb up the financial escalator and to get access to other resources. First, crowdfunding can help them raise funds indirectly. For instance, reward crowdfunding is a form of pre-sale and this pre-sale allows an entrepreneur to test his/her product. The fund-seeker can use the reward campaign's results as a market study when attempting to obtain traditional forms of financing (81). The fund-seeker can use the funds raised through an equity campaign to obtain the rest of the required funds from banks (82). In other words,

(74) For instance, the US Securities and Exchange Commission imposes that the platform follows the all-or-nothing model.

(75) For instance, the US Securities and Exchange Commission requires different disclosure levels depending on the amount of funds raised. Campaigners must disclose: their tax returns for offering less than \$100 000; a financial statement reviewed by an independent public accountant for offering from \$100 000 to \$500 000; an audited financial statement for offering over \$500 000.

(76) For instance, the European Commission has legislation on cookies authorisation and it standardises the way the cookies can be authorised (ePrivacy Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002).

(77) In *When firms are Potemkin villages: Entrepreneurs and formal organisation*, Mollick and Kuppuswamy (2014) find that 57.6 % of fund-seekers, who used Kickstarter for crowdfunding, sought prior funding elsewhere from a sample of 158 projects. They also find that 52.5 % of the projects used crowdfunding because they could not get funding.

(78) For instance, Schwartz (2013) discusses how fundraisers can insulate themselves from corporate control, pp. 1 481–86.

(79) Agrawal, Catalini, and Goldfarb (2013) argue that if crowdfunding is a substitute for other forms of investment the cost of financing innovation will decrease.

(80) Mark Shuttleworth, founder of Ubuntu, a company that used crowdfunding for the funding needs of his new smartphone said that 'We got excited about the idea that we could engage with a community with crowd funding. It's a really powerful new way to connect innovators to early adopters and to spread the risk of innovation across people who are really interested.' (Shead, 2013).

(81) (Agrawal, Catalini, & Goldfarb, 2013) describe the experience of Pebble, which started as a reward-based crowdfunding campaign (\$10 million raised) and the company used this success to obtain traditional loans (\$15 million raised).

(82) (Mollick & Kuppuswamy, After the Campaign: Outcomes of Crowdfunding, 2014) find that over 20 % of successful crowdfunding campaigns were followed by fundraising from outside sources — from a sample of 223 Kickstarter projects. For instance, Oculus VR raised \$250 000 through Kickstarter in

crowdfunding can dissipate some of the information asymmetry associated with the entrepreneur knowing the market better than financiers.

Next, crowdfunding helps campaigners gain access to other non-financial resources. Campaigners often receive feedback and comments during crowdfunding campaigns about the product and they may use this information to ameliorate the product (83). Campaigners may also tap into the skillset of contributors. Campaigners may contact some investors who are willing to share their experience and expertise in this new project (84) because contrary to a traditional IPO, equity campaigners know the identity of their investors or contrary to traditional retail sales, reward campaigners know the identity of their customers.

In many respects, crowdfunding helps complement traditional forms of financing but also helps gain access to these traditional forms of financing.

3.3. The drawbacks of crowdfunding

Crowdfunding comes with drawbacks as well. Crowdfunding may not be a valid complement to traditional financing options because crowdfunding suffers from some of the same issues as these traditional sources of funds. First, equity campaigners may face the same information-asymmetry issues with potential investors that they face with banks because they still understand the value of their project better than outsiders. To overcome these issues, they must disclose enough information to obtain funds from the crowd, but they may also fear that disclosing too much information can detrimentally impact the value of their project. A public forum like a crowdfunding website may deter fund-seekers because these forums do not lend themselves to non-disclosure agreements (while these agreements may be easier to enforce with banks) (85).

Next, campaigners may suffer from the crowd mentality because 'investors use the decisions of others as an informative signal of project quality.' (86) The *wisdom of the crowds* and the all-or-nothing model may thus lead to a few projects herding capital. Consequently, innovative entrepreneurs may still suffer if their initial network is not wide or wealthy enough to jumpstart the project — leading to some of the same class bias as traditional financing. Some experts suggest putting 'upper limits on' elements such as the investment per project or investors per project or maximum share per investor per project in order to avoid such hoarding issues (87).

Crowdfunding may not allow fund-seekers to climb the financing escalator because it suffers from crowdfunding-specific problems. Crowdfunding may suffer from an adverse selection bias since investors may believe that fund-seekers use crowdfunding because they could not obtain funding in a different way (88). In other words, campaigners may send a negative signal by using

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2012, than obtained $90 million from venture capitalists by 2014, and is about to be acquired by Facebook for $2 billion (Luckerson, 2014).

(83) (Collins & Pierrakis, 2012, p. 26).

(84) (Schwienbacher & Larralde, 2010) use a case study on Media No Mad/Benoot (however, the site has not been updated since 2010). 'Overall, the aim of this investment was to raise money, obviously. But they ended up raising something more valuable and sustainable than money, namely skills. So it looks like angel or venture capital funding, with the difference that this time 81 people put their skills and abilities together in order to provide optimal thinking and services', p. 17. Helping to find skills has also been attributed to traditional financing methods like venture capitalism (Metrick & Yasuda, 2011, p. 5).

(85) Intellectually property (IP) disclosures as well as non-IP protected idea disclosures projects may also suffer from these early disclosures (Agrawal, Catalini, & Goldfarb, 2013).

(86) (Agrawal, Catalini, & Goldfarb, 2013).

(87) 'The experts interviewed suggested to create exceptions from the Prospectus directive for start-up crowdfunding projects. The exceptions could be applied to all crowdfunding platforms certified by a central agency or a similar mechanism, with upper limits on one or all of the following criteria: a) Total volume of the investment per platform b) Total volume of the investment per project c) Total number of investors per platform d) Total numbers of investors per project e) Maximum share per investor per project f) Total numbers of projects on a platform' (Röthler & Wenzlaff, 2011, p. 47).

(88) (Agrawal, Catalini, & Goldfarb, 2013, p. 21). Any investment involves an asymmetric information problem (Hall, 2010).

crowdfunding and (some) investors may believe that crowdfunding mostly offers bad investment opportunities [89].

Next, campaigners often struggle to set the appropriated price for shares of their new venture [90]. In traditional IPOs, intermediary investment banks and the market eventually set the price because they can better estimate future earnings of established products [91]. Similarly, novel (innovative) products and services may not be appropriately priced because markets do not exist and have not worked to set their value yet.

Finally, campaigners may lack competence to organise a successful campaign. They must master the crowdfunding platform functioning [92], they must answer questions from the crowds, and generally, they must take advantage of social media. The campaign can be so consuming that it takes campaigners away from the creative and innovative process [93].

4. Risks associated with crowdfunding for investors

Investors usually want to participate in crowdfunding ventures because they gain access to new products before they are widely commercialised; because they gain access to new investment opportunities; because they participate and feel part of a bigger community; or because they build a network with other co-investors [94].

These investors, however, do not participate without being exposed to risks. This section investigates five types of risks or complications associated with crowdfunding in the following order: first, projects may be schemes to take advantage of investors; second, projects might be led by incompetent entrepreneurs; third, crowd investors might not be able to resell the shares they purchased; and fourth, unclear regulations and tax laws may apply to crowdfunding.

4.1. Fraud

Fraud constitutes the biggest threat to crowdfunding campaigns [95]. Traditional reputational and legal enforcement methods may not work with such campaigns. First, sellers traditionally want to protect their reputation and goodwill because they often want repeat customers; however, the incentives to not receive a bad review or a bad reputation may not work within the context of crowdfunding because of the anonymity of the Internet and because they do not repeatedly fundraise [96].

While fund-seekers may not be repeat players, platforms are. To succeed, these platforms have incentives to avoid a reputation as a bad marketplace, to avoid attracting fraudulent schemes and to perform due diligence for each project and throughout the campaign [97]: platforms may associate with banks that have experience evaluating fraudulent projects [98]; platforms can stagger

(89) This markets are referred to as 'market for lemons' because participating in the market signals that the product is not what it seems. See (Akerlof, 1970). Tomboc (2013) discusses in more detail the potential information assymetry issues in crowdfunding.

(90) (Davis & Webb, 2012).

(91) Innovestment (http://www.innovestment.de/ (last visited.on 2 September 2014) uses an auction to decide on valuation (Collins & Pierrakis, 2012, p. 16).

(92) Mollick (2014) finds that having a video has a statistically significant positive impact upon the likelihood of success of reaching the threshold.

(93) (Agrawal, Catalini, & Goldfarb, 2013).

(94) See, for example (Agrawal, Catalini, & Goldfarb, 2013); (Schwienbacher & Larralde, 2010).

(95) See, for example (Collins & Pierrakis, 2012) (Securities and Exchange Commission, 2013) (Ramos, Crowdfunding and the Role of Managers in Ensuring the Sustainability of Crowdfunding Platforms., 2014).

(96) (Weinstein, 2013, p. 437).

(97) For instance, Kickstarter cancelled a crowdfunding campaign that showed potential signs of fraud during the campaign, after 80 % of the threshold was already reached (Crowdsourcing.org, 2013).

(98) In the Netherlands, 'Symbid has an EU banking licence, through its finance partner Intersoft. This allows EU investors to invest in Dutch companies. Foreign entrepreneurs must set-up a legal entity in the Netherlands' (Ramos, Crowdfunding and the Role of Managers in Ensuring the Sustainability of

the fund release to limit the size of the funds affected (99); etc. The IPTS has investigated in more detail the role of platform managers in helping prevent fraud. (100) Markets, accordingly, have a place to play to prevent fraud.

Second, legal enforcement may also fail because each individual investor does not have enough incentive to sue for fraud or breach of contract, because crowdfunding relies on small investments from many investors instead of large investments from a few investors; hence, these small amounts do not provide each individual investor with enough incentive to investigate and report fraud. Consequently, crowdfunding investors can become targets for fraudulent activities including fraudulent and pyramid schemes (101).

Overall, fraud seems, however, to remain rare (102) and investors may be willing to invest despite these fraud risks because of limited exposure and risk diversification (103). Investors can invest small amounts in crowdfunding projects to diminish their risk exposure. Investors can also invest in multiple projects and diversify their risks. Beyond the *wisdom of the crowds* and all-or-nothing model anti-fraud features, the crowd plays a role as well in fraud prevention. Individual investors also send signals about projects because the broader crowd can generally see who invest and whether people with personal knowledge of the campaigner (such as friends and family) participate and donate to the project.

Fraud is a real risk but platforms and the crowd have their place to play in preventing fraud.

4.2. Incompetence

Apart from intentional fraud, projects may unintentionally fail because entrepreneurs are incompetent or have miss-calibrated their projects. The w*isdom of the crowds* and the all-or-nothing model temper issues of incompetence because the crowd gravitates towards projects that send the correct signals and enough investors must perceive the same signals for the project to become viable (104). Much like with fraud, the level of investment from friends and family sends signals about the quality of the entrepreneur.

4.3. Lack of efficient secondary market for equity-based crowdfunding

Investors, much like campaign creators before them, may struggle to price their investment when they exit if they cannot use market mechanisms. For equity-based crowdfunding, the slow development of a secondary market (105) also slows the development of the primary market (106). While investors join a project for different reasons, the majority participates with the expectation to break even (107). In order to recoup their investments, they must sell their shares back to the entrepreneur or to other investors (108).

Crowdfunding Platforms., 2014, p. 30).

(99) (Collins & Pierrakis, 2012) When asked, some experts recommend certain minimum requirements to avoid fraud including escrow account and other disclosure requirements involving disclosing a detailed business plan and ownership (Röthler & Wenzlaff, 2011).

(100) On top of discussing the role of platform managers in helping prevent fraud, this IPTS report also addresses how platform managers guide campaign creators along the way (Ramos, Crowdfunding and the Role of Managers in Ensuring the Sustainability of Crowdfunding Platforms., 2014), http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=7243.

(101) Another potential issue with crowdfunding is that it might also be used to launder money. While money laundering is distinguishable from pyramid schemes, platforms as well as investors may need to be aware of this issue.

(102) In a sample of 381 Kickstarter products, 3 issued refunds and 11 stopped responding to backers: 3.65 % of the projects were incomplete (Mollick, The Dynamics of Crowdfunding: An Exploratory Study., 2014).

(103) Rational economic theory should dictate that investors implicitly add these risks to their valuation of any project.

(104) (Agrawal, Catalini, & Goldfarb, 2013).

(105) (Agrawal, Catalini, & Goldfarb, 2013).

(106) (Collins & Pierrakis, 2012); (Securities and Exchange Commission, 2013).

(107) (Schwienbacher & Larralde, 2010) 'For most of [investors in Media No Mad], the concept of investing in

If an entrepreneur offers to purchase the shares back, investors cannot know whether the offer is appropriate (109). If investors sell the shares to subsequent investors, the original investors may struggle to set the price. Individuals with experience in assessing companies (like venture capitalists and business angels) (110) may not want to participate in crowdfunding because they may prefer to be active in the process or worry also about the exit issues (111).

4.4. Taxation

Platforms and campaigners face numerous issues related to tax and donations. First, many countries provide tax credits for donations to non-profitmaking ventures. Campaigners argue that contributors should receive the same tax deductions for the funds they donated through crowdfunding platforms (112). However, they may not be able to do so because crowdfunding platforms are often profitmaking organisations and take fees (113). These tax deductions impact which projects and innovations get funded.

Second, in many countries, tax relief currently varies depending on whether companies finance their research and development through earnings, equity or debt (114). These diverging tax treatments may influence the demand for funds, how crowdfunding evolves, and how investors as well as fund-seekers frame their campaigns (115).

4.5. Regulations

On the one hand, reward-based crowdfunding receives little attention from regulators because it is a form of pre-sale and enjoys traditional consumer protection (e.g. breach of contract if a product is not delivered). Consumer groups, however, have expressed concerns about certain projects and product safety (116): these groups argue that, without proper supervision, reward-based

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a company in order to make a later profit by reselling the shares was not the most important reason for investing. Indeed, when asked if they were expecting to make high profits from the deal, 78 % answer that they are not planning to earn from it neither do they want to make a loss.'

(108) (Ahlers, Cumming, Günther, & Schweizer, 2013) study 104 equity crowdfunding projects in Australia and find 'that start-ups that signal their intention to seek an exit by either IPO or a trade sale are more likely to attract investors than those planning to use other forms of exit.'

(109) (Securities and Exchange Commission, 2013).

(110) A wide range of literature discusses how venture capitalists evaluate start-ups. See, for example (Miloud, Aspelund, & Cabrol, 2012); (Block, De Vries, Schumann, & Sandner, 2014).

(111) Cumming finds that 'the probability of acquisition is … more likely when the [venture capitalists] have effective contractual control rights.' Thus, revealed preferences suggest that venture capitalists prefer acquisitions to public offerings as a means of exiting when given the opportunity to force an acquisition instead of a public offering (Cumming D. , 2008). 'The [venture capitalist] will typically retain its shares at the date of the public offering, selling shares into the market in the months or years following the [initial public offering]' (Cumming & MacIntosh, 2003, p. 513). Therefore, venture capitalists may not want to participate in equity-based crowdfunding.

(112) (Ramos, Crowdfunding and the Role of Managers in Ensuring the Sustainability of Crowdfunding Platforms., 2014).

(113) (Wheat, Wang, Byrnes, & Ranganathan, 2013).

(114) (Hall, 2010).

(115) (Communication from the Commission to the European Parliament, the Council, the European Economica nd Social Committee and the Committee of the Regions, 2014); (European Commission; Directorate General Internal Market and Services, 2014).

(116) One project, the Polar Pen + Stylus, involving magnets has raised concerns about product safety. The project was successfully financed in October 2013 (https://www.kickstarter.com/projects/1171695627/polar-pen-both-tool-and-toy-pen-stylus-made-from-m). However, one consumer group (Consumers Union Policy & Action from Consumer Reports) has raised these concerns with the US Consumer Product Safety Commission (Consumers Union, 2013). Health Canada, the Canadian Consumer Protection Agency, quashed the product for safety reasons (Mertl, 2013). Another project, Sprayable Energy (http://www.indiegogo.com/projects/sprayable-energy), that was successfully funded, has raised concerns that the product could have dangerous side effects. See, for

crowdfunding may put dangerous products in the stream of commerce and that a larger section of the population may be put at risk because of the wider (Internet) reach of crowdfunding.

On the other hand, lending- and equity-based crowdfunding have received more attention from regulators. Lending crowdfunding competes with banks, which are often heavily regulated. Equity-based crowdfunding relies on share emission, which often falls under the local national financial authorities. Regulations of lending and equity-based crowdfunding can be convoluted. Therefore, some platforms are organised in ways to stand clear of these regulations (117) while other platforms prefer to challenge the unclear financial rules that may apply to crowdfunding (118).

5. Current regulations control all three actors

This section focuses on equity-based crowdfunding because it can be used to finance start-ups (119), and it has spawned the current crop of crowdfunding-specific regulations. Equity-based crowdfunding also presents the biggest risks for fraud and failure (120). The three crowdfunding actors (the crowd, the crowdfunding platform, and the campaigner) have been regulated: this section analyses how regulations in France, Italy, and the United Kingdom have addressed each actor, and compares regulations in these EU Member States to the US regulations.

At the European Union level, the European Commission has already in place a number of directives that can apply to equity crowdfunding (121). Some EU Member States such as France, Italy, and the United Kingdom are passing equity- (and sometimes lending-) based crowdfunding regulations (122). Other Member States such as Germany are currently considering their own

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example (Hamblin, 2013) (Zimmerman, 2013).

(117) See, for example SociosInversores discussed in footnote 56.

(118) 'In Germany, for instance, the basic assumption until recently was that crowdfunding platforms could only raise as much as €100000 per project. The founder of equity platform Seedmatch challenged this paradigm though, by drawing up arrangements between investors and equity-offering companies based on 'a so called 'partiarisches Darlehen' or a profit participating loan' contract. The German financial authority recognized and accepted this bit of innovation, and Seedmatch can now raise equity rounds above the €100 000 limit, but it faces an uncertain future with regards to laws governing the screening of potential investors and fundraisers' (Weinstein, 2013, p. 447).

(119) Specifically, donation/reward campaigns involve small amounts: Kickstarter, the leading platform for donations/rewards, has reported that the average raised is $18 800. Lending campaigns are larger but remain similar. Companisto, a German-based lending crowdfunding platform, limits loans to €25 000 and loans average about €5 000 (https://www.auxmoney.com/infos/statistiken) and Funding Circle, a UK-based lending crowdfunding platform, does not limit the amount but had loans averaging about £60 000 in 2013 (https://www.fundingcircle.com/blog/2013/12/2013-a-year-in-numbers/). In comparison, Wiseed, a French-based equity crowdfunding platform, helped fund 11 projects in 2013, raising, on average, €327 000 (http://www.journaldunet.com/ebusiness/le-net/2013-crowdfunding-bilan/wiseed.shtml) and CrowdCube, the UK leader in equity crowdfunding, helped fund 54 projects in 2013, raising, on average, £226 000 (http://www.crowdcube.com/2013/) (last visited 8 October 2014).

(120) Equity crowdfunding also usually involves higher risks: donation/reward campaigns have traditional consumer law remedies at their disposal; lending campaigns involve individuals with a track-record — much like bank loans; and equity campaigns involve start-ups, which fail frequently (according to a Eurostat Business Statistic, one out of two new companies fail within three years of its creation and two out of three fail within five years of its creation).

(121) Directive 2003/71/EC as amended by Directive 2010/73/EC (Prospectus Directive) impacts how companies raise funds. Directive 2009/65/EC (Undertakings for Collective Investment in Transferable Securities Directive) impacts how investment companies can raise funds. Directive 2006/48/EC (Capital Requirements Directive) and Directive 2009/110/EC (E-Money Directive) impacts how crowdfunding platforms can hold funds. Directive 2011/61/EC (Alternative Investment Fund Manager Directive) can impact how crowdfunding platform function if they deal with investment companies. Directive 2004/39/EC (Market in Financial Instrument Directive) can impact how crowdfunding platform are regulated.

(122) In France, *Le ministre des finances et des comptes publics et le ministre de l'économie, du redressement productif et du numérique* (finance minister) presented the *Ordonnance* No 2014-559 of 30 May 2014, which tackles lending and equity crowdfunding. The *ordonnance* was completed with Décret n° 2014-

position ([123]). These individual regulations regulate equity crowdfunding differently and crowdfunding in the EU may benefit from a harmonisation effort to avoid inconsistencies between Member States.

5.1. Crowdfunding platforms

Currently, crowdfunding platforms are regulated in a number of ways:

- regulatory registration with the national licensing authority;
- institutional requirements — including capital requirement for platforms;
- limiting the models of crowdfunding.

The new equity-crowdfunding-specific regulations in France, Italy, the United Kingdom, and the United States require that funds are raised from the crowd through a crowdfunding platform and that this platform is registered as broker. The respective regulations have recently come into play in France (1 October 2014) ([124]) and the United Kingdom (transition period ended 1 October 2014) ([125]) but in the United States (expected in 2015) the regulations have yet to come into play.

In the United Kingdom, the platforms must be registered ([126]) whereas the US regulator requires equity crowdfunding platforms to hold a broker licence and comply with these broker-dealer regulations ([127]). In France, the platform managers must obtain a newly created licence as an investment-crowdfunding adviser after successfully passing tests and evaluations ([128]). In Italy, the law was passed in December 2012, and eight platforms have registered in Italy as of September

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1053 du 16 septembre 2014 relatif au financement participatif, JORF n°0215 du 17 septembre 2014 page 15228 texte n° 11, Art. 2, 2°, http://www.legifrance.gouv.fr/affichJO.do (last visited Septembre 17, 2014). In Italy, lending crowdfunding is not regulated by specific laws whereas equity crowdfunding is regulated by Law No 221 of 17 December 2012 (Law 221/2012) and by Commissione Nationale per le Società e la Borsa (CONSOB) Regulation of 26 June 2013 No 18592 (CONSOB regulation). In July 2013, the British government passed the Amendment to the Financial Services and Markets Act 2000 to address the exemptions that lending and equity-based crowdfunding have exploited (Tax & Legal Work Group of the European Crowdfunding Network, 2013).

([123]) Since early 2014, Germany has been looking into equity crowdfunding regulations that would potentially tighten the current set of regulations. See, for example (AltFi News, 2014); (Hobey, 2014); (Aschenbeck-Florange, 2014). Current regulations in Germany, Ireland, and the Netherlands allow for equity crowdfunding under these current non-crowdfunding-specific regulations but these general fundraising regulations limit the amount which may be raised (€100 ,000 — in compliance with Directive 2003/71/EC as amended by Directive 2010/73/EU (Prospectus Directive)). Under Dutch financial regulations, crowdfunding campaigns may be able to raise up to €2.5 million. Switzerland and Australia are the other OECD countries which allow crowdfunding.

([124]) 1 October 2014, Ordonnance No 2014-559, Art. 37.

([125]) (Financial Conduct Authority, 2014). For an example of a UK platform that has received such certification, such as CrowdCube please visit the Financial Services Register at http://www.fsa.gov.uk/register/firmBasicDetails.do?sid=290368 (last visited July 24, 2014). The crowdfunding platform Crowdcube also specifies on its website that it received the appropriate status to emit shares (http://www.crowdcube.com/pg/accreditations-and-associations-80) (last visited 24 July 2014).

([126]) The lending platforms in the UK are also required to abide by a 'conduct of business rules…, minimum capital requirements, client money protection rules, dispute resolution rules and a requirement for firms to take reasonable steps to ensure existing loans continue to be administered if the firm goes out of business' (Financial Conduct Authority, 2013, p. 7) (emphasis added).

([127]) Section II.C.1 (Securities and Exchange Commission, 2013). In the past, the United States has sanctioned individuals who were attempting to perform a crowdfunding campaign without the proper registration. http://www.sec.gov/news/press/2011/2011-122.htm (last visited 24 July 2014).

([128]) *Conseillers en investissements participatifs.* Titre I, Chap. VII, Section 1, Art. L. 547-1. Note that traditional advisers (*prestataire de services d'investissement*) may also serve as intermediaries for these crowdfunding efforts.

2014 [129] and platforms like Stars Up [130] and Assiteca Crowd [131] have already successfully funded projects.

Such licensing and registration requirements impose costs on platforms. These licensing requirements create barriers to entry. These barriers impact the number of platforms, the cost of crowdfunding, and grant platforms some oligopoly power. Therefore, licensing requirements involve a delicate balancing act [132].

Alternatively, regulators in Italy require the platform to be attached to a financial institution [133]. Attaching platforms to banks limits companies that can enter the platform market and hence raises costs; however, it may decrease the chances of fraud as discussed above. [134] In the United Kingdom, platforms that perform lending crowdfunding are subject to minimum capital requirements [135]. These requirements impose higher barriers to entry because they require further capital before the platform creation.

Platforms may have to perform their due diligence on the fund-seekers or may have to access the investor's understanding of the risks involved. For instance, in the USA, the platforms have the onus of performing a minimum (undefined) due diligence about the fund-seeker to assure that the project is not a fraudulent scheme [136]. In the United Kingdom (and in France as well), platforms must ask the investing crowd to pass an 'appropriateness test,' where the investors must certify that he or she understands the risks involved with investing [137].

Platform business models have also been regulated. For instance, US regulators have imposed that platforms must employ the all-or-nothing model because it has considerable upsides and has proven to help limit the number of fraudulent projects [138]. Standardising or limiting the model employed by crowdfunding platforms may also benefit contributors because it saves these contributors from having to learn the specifics of each platform.

An additional issue addressed by regulators is overfunding of projects.

Over-funding presents an issue for crowdfunding [139] and how innovations are going to be financed. Crowds often herd around projects and hence the investment tends to concentrate around a few projects instead of maximising the number of projects funded. Limiting overfunding may

(129) The law was passed in December 2012, rules implemented in June 2013, the first platform was registered in October 2013 and the fifth was registered on 16 July 2014. One platform was automatically registered under the special section of CONSOB regulations (http://www.consob.it/mainen/documenti/intermediari/portali/gestori_portali.xml?xsl=gest_ord_en.xsl&symblink=/mainen/intermediares/portali/os.html) (last visited 22 July 2014).

(130) http://www.starsup.it/

(131) http://www.assitecacrowd.com/

(132) For instance, these requirements need to be easy enough to obtain to avoid creating a monopoly; they need to be hard enough to obtain for platforms to gain enough market shares to survive; they need to be easy enough to lose to make incentive platforms perform their due diligence; they need to be hard enough to lose to avoid filtering welfare-improving projects.

(133) One platform was automatically registered under the special section of CONSOB regulations (http://www.consob.it/mainen/documenti/intermediari/portali/banche_iv.xml?xsl=gest_spec_en.xsl&symblink=/mainen/intermediares/portali/ss.html) (last visited 22 July 2014).

(134) (Tax & Legal Work Group of the European Crowdfunding Network, 2013).

(135) (Financial Conduct Authority, 2014).

(136) (Securities and Exchange Commission, 2013, p. 143).

(137) (Financial Conduct Authority, 2013, p. 64).

(138) The proposed rules require that the offering specifies a minimum amount — the threshold — as well as a maximum offering (Securities and Exchange Commission, 2013, pp. 183-84).

(139) As explained by UK-based Seedrs, projects may become overfunded; but the project can only be overfunded if the entrepreneurs can offer the additional equity; the equity offered cannot in any case be diluted during a specific round of crowdfunding (http://www.seedrs.com/faq/items/89_what_is_overfunding_of_campaigns). One success story involves AoTerra (https://www.seedmatch.de/startups/aoterra (last visited 24 July 2014)), which involved a crowdfunding campaign that originally intended to raise €100 000 but raised €1 000 000 — a 1 000 % of its goal. The company was able to set these different goals because it had the adequate capital to adjust.

assure that fewer projects herd capital. This limit can be expressed as a percentage of the threshold at which point a project must stop raising funds.

Without regulation, a dominant platform may emerge, much like eBay and Amazon emerged in their respective sectors, through the competitive process and may set industry standards ([140]). Some industry observers believe that some form of regulations may be required to enforce certain aspects of equity crowdfunding "such as a centralized database containing information relating to whether particular investors were in compliance with the investment limits" ([141]) until markets can regulate themselves.

5.2. The investing crowd

As defined earlier, crowdfunding aims at collecting resources from the population at large through an Internet platform; it usually aims at raising small sums from a large crowd. Regulations can limit who can invest and how much they can invest and this decision impacts the quantity of available funds to finance innovation; this decision may also impact the direction of investment and innovation.

Current regulations have limited the investing crowd through addressing the following questions.

- Who can invest?
- How much can one party invest overall?
- How much can one party invest on each project?
- How frequently can one party invest?

Current national regulations have different approaches on these questions.

France does not currently have limits on who can invest and how much they can invest.

Italian regulation requires that 'at least 5 % subscription of the share capital is made by a professional investor' before an offer can be executed and processed ([142]). Italian regulation relies on the wisdom of the professional investors to protect the non-professional investing crowd from filter fraudulent or doomed projects. Since professional investors are likely better equipped to filter bad projects, Italian regulations rely on platforms and professional investors to perform two levels of due diligence. This requirement also means that the investments from the crowd compete with the professional investor funds because these two types of investors have to gravitate toward the same projects ([143]).

Instead of complementing traditional financing, this requirement in Italy means that crowdfunding in Italy most likely acts as a substitute for early seed venture capitalists. This may not, however, prevent crowdfunding to be used as an escalator to financing. This requirement also means that projects that struggle to get traditional funding will also struggle to get crowdfunding, and that crowdfunding may end up financing essentially the same type of projects that would have been financed by professional investors ([144]).

UK regulators have limited who can invest and the amount they can invest. Platforms can only accept contributions from retail clients that are certified ([145]) or self-certified ([146]) as

([140]) 'The expectation of a high reward motivates firms to compete aggressively to become dominant. While consumers may pay a price for market dominance, they also benefit from the intense competition that occurs in the battle for dominance' (Gilbert, 2012).

([141]) Nicholas Tommarello, CEO Wefunder, *Improving regulation crowdfunding to attract high-quality start-ups*, comment to the Securities and Exchange Commission (https://www.sec.gov/comments/s7-09-13/s70913-179.pdf) (last visited 29 July 2014).

([142]) (Tax & Legal Work Group of the European Crowdfunding Network, 2013).

([143]) If 5 % is reached, it sends a signal that the project is safe to invest in to other professional investors as well as non-professional investors. This may intensify herding.

([144]) For instance, Cantiere Savona, a solar yacht project registered on the platform StarsUp, had reached 100 % of its threshold target but had to wait 10 more days before the 5 % professional investor threshold was reached (http://www.starsup.it/project/cantiere-savona-srl/?lang=eng) (last visited 10 August 2014).

([145]) A certified sophisticated investor must: (1) have an independent certificate — at most 36 months old —

sophisticated investors; retail clients who are certified as high net worth investors; (147) retail clients who confirm they receive investment advice; and restricted investors who will not invest more than 10 % of their net investible portfolio within a 12-month period (148). In other words, anyone can invest 10 % of their net worth as long as they sign the requested statement but professional investors can invest without limits.

US regulators elected instead to limit how much and how frequently people can invest (149). All individuals can annually invest up to a threshold: if the investor's net worth plus income is less than $40 000 (about €29 000), then he/she can only invest up to $2 000 (about €1 450); if his/her net worth and income combined are less than $100 000 (about €72 500), then he/she can invest 5 % of his/her income; if his/her income or net worth is greater than $100 000, then the limit is 10 % of his/her income (150).

Professional investors already invest by definition. Limiting crowdfunding to these traditional investors may allow these investors to invest more cheaply. It, however, does not necessarily increase the amount of funds available and consequently the number of funded innovative projects. Opening crowdfunding to a wider crowd likely increases the available funds to finance-innovative companies; but this approach increases the risk exposure of non-professional investors.

Additional issues that are currently not regulated include:

- maximum investable capital;
- investment per project — in monetary or proportion of acquisition.

Some regulations have considered some form of cap on investment. The United Kingdom caps at 10 % of an investor's portfolio how much an investor can invest in crowdfunding. The USA has a similar limit as well. These limits force investors to diversify their investment and hence lessen the impact failed or fraudulent (151) projects can have on a single investor.

Except for the previously discussed limits, current regulations in France, the United Kingdom, Italy and the USA, do not explicitly limit how much an investor can invest in a single project. Limiting how much can be invested in a single project would limit how deeply an investor can be impacted as well because it also forces diversification.

5.3. Entrepreneurs' fundraising

All four current national regulations also tackle the following questions related to fundraisers differently.

- Who can crowds fundraise?

proving they understand the risks associated with investing; and (2) have signed within 12 months a statement that specifies that investing involves risks and they are willing to take these risks (COBS 4.7.9R; COBS 4.12.7).

(146) A self-certified sophisticated investor is an individual who has signed, within the period of 12 months ending with the day on which the communication is made, a statement that acknowledges the risks involved with investing, and have worked in the financial sector with a company with at least a £1 million turnover (COBS 4.7.9R; COBS 4.12.8).

(147) The investor 'had, throughout the financial year … an annual income … of £100 000 or more;' (about €120 000) or 'held, throughout the financial year … net assets to the value of £250 000 or more' (about €300 000) (COBS 4.7.9R; COBS 4.12.6). Converting values into US dollars, British pound sterling, and euros using the Federal Reserve Board exchange rate data on 31 December 2013 ($1.6574 to £1 and $1.3799 to €1) (http://www.federalreserve.gov/releases/h10/hist/dat00_uk.htm) (last visited 14 August 2014).

(148) COBS 4.7.10. (Financial Conduct Authority, 2013, p. 38).

(149) See the United States Jumpstart Our Business Startups Act (JOBS Act) H.R. 3606 (2012).

(150) The Securities and Exchange Commission is still in consultation on the interpretation of these thresholds.

(151) Fraud is likely inevitable regardless of who can invest since fraud like pyramid schemes existed before crowdfunding and will continue to exist.

- How much can they raise?
- How often?

The Italian regulations restrict who can fundraise. In Italy, regulations allow equity crowdfunding only for innovative start-ups. To qualify as innovative, the start-up may not be older than 48 months, with a yearly turnover value not exceeding €5 million; it must aim to develop, produce, and market innovative products and services of high technological value, and invest a minimum level in research and development. The Italian regulations limit also the amount raised to €5 million in a 12-month period (152).

France limits fund-seekers to raising €1 million every 12 months (153). The UK regulation also limits the amount raised to €5 million in a 12-month period to avoid having to abide by the prospectus requirement (154). The US legislation allows fund-seekers to raise up to $1 000 000 (about €725 000) in a 12-month period (155). In the USA, depending on the amount raised, the fundraiser has different filing requirements (with an initial cost (156) as well as yearly compliance cost) (157).

All these regulations allow multiple crowdfunding efforts and the maximum limits are cumulative over all the different crowdfunding. These regulations have also all elected a 12-month period before fund-seekers can organise new rounds of fundraising. Beside these two common points, the other limits vary greatly.

5.4. Other regulations

French, Italian, UK and US legislators have also regulated other aspects of equity crowdfunding and its instruments. Italian regulations further prohibit the emission of 'debt, subordinated securities and hybrid instruments not representing the share capital.' (158) The US regulations allow the emission of debt, but the USA has prohibited the shares from becoming tradable for a 12-month period. Further regulations with regard to the types of shares and their tradability offer opportunities to alleviate some of the risks associated with crowdfunding.

To protect the investors who are the most susceptible to fraud, both US and UK legislators have also limited advertisement and promotion campaigns creators can disseminate about their public offering in the hope of limiting their undue influence. This includes the prohibition of social media use to promote offerings (159) whereas social media is a cornerstone to other forms of crowdfunding. This regulation of promotion follows other regulation on traditional stock offerings (160).

(152) (Tax & Legal Work Group of the European Crowdfunding Network, 2013).

(153) Ordonnance No 2014-559 of 30 May 2014. Titre I and Titre I, Chap. II, Art. 11, L. 411-2; Décret No 2014-1053 du 16 septembre 2014 relatif au financement participatif, JORF No 0215 du 17 septembre 2014 page 15228 texte No 11, Art. 2, 2° (http://www.legifrance.gouv.fr/affichJO.do) (last visited 17 September 2014).

(154) (Tax & Legal Work Group of the European Crowdfunding Network, 2013).

(155) This can be spread over smaller fundraising campaigns and is distinguished from funds raised in other ways such as loans, equity, etc. (Securities and Exchange Commission, 2013).

(156) For instance, the US disclosure requirements have an estimated initial cost of between $18 560 and $152 260 — depending on the size of funds raised — as compared to an estimated $1.5 million for IPOs (Securities and Exchange Commission, 2013).

(157) For instance, the US disclosing requirements have an estimated annual cost between $600 and $33 600 — depending on the size of funds raised — as compared to an estimated $2.5 million for IPOs (Securities and Exchange Commission, 2013).

(158) (Verna, 2013).

(159) (Hurley, 2014).

(160) See, for example, 15 US Code § 77d–1 (2012).

5.5. The different goals of the new crowdfunding regulations

Crowdfunding can exist without a new crowdfunding exemption or regulation. For instance, WiSeed (161) in France is an equity crowdfunding platform that allowed companies to raise up to €100 000 from its creation in 2008 to 2012 taking advantage of an exemption to the prospectus requirement (162). German crowdfunding still uses this exemption to help start-ups raise seed funds. Alternatively, crowdfunding methods have been used to raise funds through more traditional business angel networks (163). Figure 1 represents the current state of crowdfunding without exemptions.

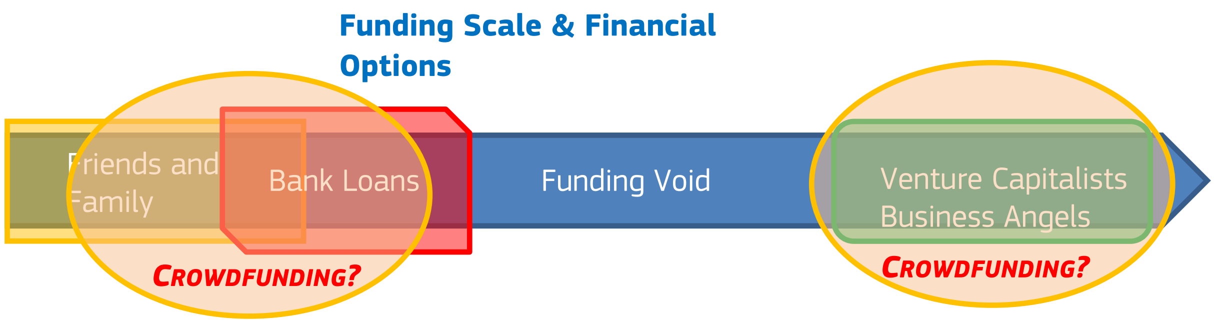

Figure 1. Funding void under the current EU regulatory framework

As Figure 1 shows, without new exemptions, crowdfunding methods may facilitate raising small funds from the general crowd or may decrease the cost of raising large funds from traditional venture capitalists or business angels. While this version of crowdfunding may be used to bridge the funding void, some legislators, like the US Congress (164), believe that there is a void that needs filling between the finances provided by banks and the ones provided by venture capitalists (165) and the current system does not allow for this void to be addressed. (166)

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(161) https://www.wiseed.com/ (last visited 13 August 2014).

(162) France adopted Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC (OJ 31.12.2003, L 345/64). Directive 2010/73/EC of the European Parliament and of the Council of 24 November 2010 amending Directives 2003/71/EC on the prospectus to be published when securities are offered to the public or admitted to trading and 2004/109/EC on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market (OJ L 327/1, 11.12.2010). This directive has exemptions, one of which is the exemption directive (2003/71/EC). Article 3.2(e) allows companies to raise up to €100 000 without having to comply with the prospectus requirement, which requires expensive audited documents.

(163) For instance, in the exemption directive (2003/71/EC), Articles 3.2(c) & (d) of the prospectus requirement allows companies to raise up to €5 million without a prospectus if each of the funds come from qualified investors and each investment is at least €100 000. Another exception allows companies to raise up to €5 million without a prospectus if each of the funds come from qualified investors and at most 150 non-qualified investors.

(164) In France, the Finance Ministry also hope that crowdfunding will help start-ups. '*Ce nouveau mode de financement est ouvert aux sociétés par actions simplifiées, ce qui va permettre aux jeunes sociétés d'en bénéficier*.' Press release (http://www.gouvernement.fr/gouvernement/financement-participatif) (last visited 3 September 2014).

(165) The JOBS act intends to 'increase American job creation and economic growth by improving access to the public capital markets for emerging growth companies.' Jumpstart our business start-ups act, H. R. 3606. The SEC 'understand[s] that Title III was designed to help alleviate the funding gap and accompanying regulatory concerns faced by start-ups and small businesses in connection with raising capital in relatively low dollar amounts.' (Securities and Exchange Commission, 2013, p. 11) (quoting the Congressional debate).

(166) For instance, companies on WiSeed have raised €220 000 per campaign: 46 companies raised €10.1

Therefore, these legislators use these new equity crowdfunding exemptions to fill the gap between these two types of investors also known as the funding void or valley of death.

Figure 2 attempts to represent what legislators have been trying to accomplish.

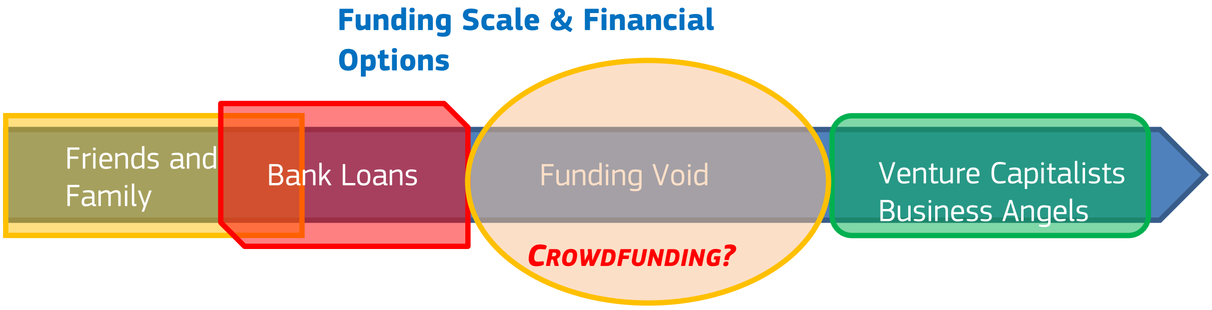

Figure 2. Addressing the funding void

To address the funding void, regulators may focus on certain aspects of or individual participants in crowdfunding:

- the duty placed on the platforms;
- the limits imposed on the crowd; and
- the limits imposed on the crowdfund-seeker.

Limits on one actor may allow relaxing some limits on another actor so that legislators and regulators may compensate one aspect or participant limits with regard to the other.

These regulations aim at decreasing the costs of investment for innovators seeking seed funds and who likely struggle to get funds otherwise by either expanding the pool of qualified investors (United Kingdom/USA) or by creating a new prospectus exemption (Italy/France). These regulations have the potential to impact entrepreneurs and innovators.

The extent of this impact remains to be seen, however. At present, this policy may have the following impacts:

- The French/US models offer an opportunity for a wide range of projects to get seed funding (up to €1 million/$1 million).
- The UK model offers an opportunity for companies to get seed and more substantial funding (up to €5 million).
  - The French/US/UK regulation may provide contributors with a wide range of returns.
- The Italian model offers an opportunity for more young innovative companies (up to 4 years old) to raise funds (up to €5 million).
  - These projects may offer similar returns to traditional forms of financing because professional investors may leverage crowdfunding with their traditional investments.

million between 2008 and September 2014. This amount is superior to the €100 000 exemption amount. Note that since 2012, WiSeed operates as a licensed financial advisor thanks to a partnership with an already licensed financial advisor; thus WiSeed can help raise about €100 000 as an exemption amount. This supports the fact that without an exemption, a number of companies may not gain access to the desired fund through crowdfunding.

While each regulation may have an impact at the national level, the impact may likely ripple to other Member States. Member States, like the United Kingdom ([167]), allow foreign crowds to invest in their markets.

This global movement of funds means that platforms and projects compete worldwide for funds. This increased competition provides incentives to platforms to perform due diligence and avoid attracting fraudulent projects and to fund-seekers to present the correct signals to attract contributors.

This global movement of funds also means that platforms, fund-seekers, and contributors might be able to take advantage of the most advantageous regulations through regulatory arbitrage. As part of broader governance policies, crowdfunding regulations may further individual comparative advantages of individual Member States with regard to their innovation and start-up ecosystem.

Arbitrage may be avoided. The United States provides such an example where regulations prevent the movements of funds and start-ups across States. The USA, as a federation of states, has multiple layers of regulations: and the SEC regulations at the federal level have been so delayed that a number of states have passed their own equity crowdfunding acts and regulatory exemptions ([168]). However, these individual efforts have limited impacts because states offering laws (known as 'Blue Sky laws') ([169]) require that the corporation must be incorporated within the state where the shares will be sold and only sell shares to residents of that state ([170]). Individuals are not likely to move to be able to invest but individuals may start their companies in the most favourable ecosystem.

Differences between models exist already and may widen ([171]). EU Member States may identify different funding problems and solutions on how to use crowdfunding as Italy, France, and the United Kingdom have already done. For instance, these three Member States have identified different funding void ranges: France sees the gap at €1 000 000 while the United Kingdom and Italy see the gap at €5 000 000. In order to avoid further concentration of start-ups because of crowdfunding regulations ([172]), the next logical step is to raise the question of a possible harmonisation of crowdfunding laws and regulations at the EU level.

([167]) The UK-based CrowdCube provides the following disclaimer: 'The investment opportunity is not directed at persons located in the United States, Canada or Japan. Any person resident outside the United Kingdom who wishes to view these materials must first satisfy themselves that they are not subject to any local requirements that prohibit or restrict access.' This disclaimer implies that investors originating from other countries will be able to invest — depending upon their home country's regulations (http://www.crowdcube.com/) (last visited 9 September 2014).

([168]) For instance, Michigan legislature passed Public Act No 264 of 2013, House Bill No 4996, 97th Legislature, Regular Session of 2013 (26 December 2013) known as the 'Michigan Invests Locally Exemption, which allows to raise up to one million in a 12-month period without providing audited documents (§ 202a (1)(c)(i)) and up to two millions in a 12-month period if the fund-seeker provides audited documents (§ 202a (1)(c)(ii)). Fund-seekers can access up to $10 000 from each investor (§ 202 (1)(y)(iv)).

([169]) Securities and Exchange Commission, *Crowdfunding Proposed Rules*, 17 CFR, Parts 200, 227, 232, 239, 240 and 249, pp. 323-24 (2013) (quoting the Congressional debate) [SEC Rule Interpretation henceforth]. The Commerce Clause combined with the Securities Act of 1933 limits how state entities can emit shares across state lines.

([170]) SEC Rule Interpretation pp. 322-24 (discussing Blue Sky laws — State Securities Laws — that limit companies formed within that state to form equity offerings to residents of that state). For instance, the first successful such crowdfunding efforts in Michigan involved Tecumseh Brewing Company and raised $175 000 from 21 investors http://www.lenaweenow.org/michigan-investment-crowdfunding-campaign-tecumseh-brewing-success/ (last visited 8 September 2014). This constitutes the first successful intrastate fundraising effort.

([171]) As the Commission's March 2014 communication pointed out, '[s]everal Member States have sought to address concerns around crowdfunding with financial return through guidelines (e.g. in Germany, the Netherlands, Belgium). Others (Italy, the United Kingdom, France and Spain) are considering or have already taken regulatory action.'

([172]) For further discussion on the concentration of start-ups, see the IPTS report entitled the *European ICT*

6. Future research and conclusions

This report intended to explain the current potential and limitations of crowdfunding. (173) Two conclusions, linked to potential benefits of crowdfunding mentioned in the Commission's March 2014 communication, seem to follow from the report.

First, the communication mentions that crowdfunding has the potential to complement traditional forms of financing innovation. Whether crowdfunding fulfils this potential depends on the chosen regulation and the limits imposed on the different actors of crowdfunding (174). The UK crowdfunding model attempts to make it a complement to traditional financing whereas the Italian crowdfunding model seems to make it more of a substitute for seed funding of innovative companies.

Second, the communication mentions that crowdfunding has the potential to act as an innovation-funding escalator. A study showed that about 25 % of successful campaigners raised additional funds from another source (venture capitalists, business angels, other companies or banks); however, 8 % were unsuccessful in raising more funds (175). Therefore, some projects did succeed in using reward crowdfunding as an escalator.

Equity crowdfunding remains novel in that it remains to be seen whether it can be used as an escalator. The current set of equity crowdfunding regulations impact which innovation or innovative companies (176) (e.g. Italy) are able to fundraise and how much they can fundraise (e.g. France). Equity crowdfunding could be the boost needed to help bridge the financial gap for new projects or start-up companies. It could also be a way to decrease the costs for companies to obtain some financing.

Whether equity crowdfunding bridges the gap may depend on some aspects of equity crowdfunding that remain uncertain. Future studies should focus on two of these aspects: some intrinsic aspects and some regulatory aspects. First, empirically investigating the following questions will help further understand the advantages of crowdfunding.

- Competing finance: How does equity crowdfunding influence the rate of innovation?
  - If crowdfunding competes strongly with other sources of financing, then crowdfunding may reduce the cost of financing innovation but not necessarily improve the rate of innovation.
  - If instead crowdfunding complements other sources of financing, then crowdfunding may encourage innovations that would not have otherwise existed.
- Direction of innovation: Will equity crowdfunding influence the direction of innovation?

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poles of excellence (EIPE).

(173) On this question, DG Communications Networks, Content and Technology is financing a currently ongoing study entitled *Crowdfunding: Regulatory framework in EU Member States and perspectives for the EU,* SMART No 2013/0074. This study addresses crowdfunding regulations in more detail.

(174) A study found that 15.8 % of reward crowdfunding campaigners sought prior funds from family and friends and 14.6 % sought prior funds from external companies. Mollick and Kuppuswamy, *When firms are Potemkin villages: Entrepreneurs and formal organisation*, Table 1 (2014). This study suggests that reward-based crowdfunding serves as a complement or an escalator.

(175) Mollick and Kuppuswamy, *After the campaign*, Figure 1 (2014).

(176) On this question, DG Research and Innovation is launching a study in the autumn of 2014 to assess empirically how crowdfunding can impact research and innovation. *Horizon 2020, Work programme 2014–15*. Chapter 6: Access to risk finance, Section 9: Understanding the nature and impact of angel and crowd-funding in research & innovation. http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-finance_en.pdf (last visited 9 April 2014). This study seeks to draw 'a more comprehensive picture of the potential for angel and crowd-funding investors to improve access to risk finance in the EU for, in particular, SMEs and small midcaps, together with recommendations for action at EU, national and regional levels.'

    - If the crowd has different tastes/objectives to those of traditional financiers, crowdfunding will finance different type of innovations.
- Fears of adverse selection: Does crowdfunding risk funding low quality projects or companies that were unsuccessful at raising money through traditional means?

The first question deals with campaigners' preferences and why they choose to crowdfund instead of using traditional means of financing. The second question deals with the investors' preferences and why they choose to invest in specific projects. The third question addresses the fear that crowdfunding may attract projects that are bound to fail.

Second, future studies should consider the regulatory impacts of equity crowdfunding:

- licensing requirements and duty of due diligence;
- limits on who can invest and how much they can invest;
- limits on the company types and quantities they can raise.

Since current regulations are very recent and only a few countries have started regulating equity crowdfunding, little data are available yet to allow for a cross-country comparison. But monitoring these regulations and empirically investigating them may help further support future regulatory decisions. Answering the follow questions can help better narrow efficient regulation supporting a successful innovation ecosystem.

- How does each regulatory decision impact the success rate of crowdfunding campaigns?
- How does each regulatory decision impact the likelihood that a campaign supports a fraudulent scheme?
- How does each platform decision impact these rates as well?

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European Commission
EUR 26992 EN – Joint Research Centre – Institute for Prospective Technological Studies

Title: Crowdfunding and its Regulation. How can Crowdfunding help ICT Innovation?

Author: Garry A Gabison

Luxembourg: Publications Office of the European Union
2015 – 36 pp. – 21.0 x 29.7 cm

EUR – Scientific and Technical Research series – ISSN 1831-9424 (online)
ISBN 978-92-79-44666-5 (PDF)
doi:10.2791/562757

LB-NA-26992-EN-N

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ISBN 978-92-79-44666-5

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