Nontraditional Business Investment: An Examination of Investor Risk Perception and Regulation

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Abstract

The expansion of nontraditional equity investing platforms and peer-to-peer lending platforms has created a financial disruption the private sector's financial services industry. As the practice and number of platforms continue to expand, so do the associated concerns and reservations about supply-side investor risk, fraud, and money laundering. This paper is written for the purpose of conceptualizing and scrutinizing online equity crowdfunding and peer-to-peer lending utilizing data about investor perception of risk. This analysis quantifies investor risk perception about the different conceptual spaces within the business life cycle in addition to the ease of entry and convenience associated with the practices. Also, it explores the current regulatory environment and use the critical application of accounting principles for an examination of fraud and culpability concerns within online equity crowdfunding and peer-to-peer (P2P) lending structures. This paper intends to promote academic and pragmatic discussion around the topic of online equity crowdfunding and peer-to-peer (P2P) business lending, especially as it pertains to investor risk, funded company accountability, and potential gaps in federal regulatory compliance and oversight.

Keywords: accountability, crowdfunding, equity, fraud, investment, peer-to-peer, regulation, risk

Chapter I

Introduction

"For centuries, attracting outside seed capital to finance a project or entrepreneurial initiative has mostly depended on the conventional fund providers, such as banks, venture capitalists, government agencies, and foundations" (Cowling et al. 2015, p. 489). Due to rapid advances in technology, however, crowdfunding has emerged as a viable means of funding an enormous variety of endeavors, ranging from capital operation corporate funding, to research and development, to social and humanitarian causes such as offsetting the cost of medical bills, and even sending students from low-income areas to universities.

In a similar manner, and up until recently, the traditional vehicles for consolidating debt, receiving small business loans, financing home improvement, and other types of debt were typically banks and credit unions. "However, the development in information technology (IT) and e-business brought overwhelming changes to the structure and operations in this world of business. Emerging IT developments promised improvements in productivity in a wide range of activities in many dimensions of the economy" (Keh-Wen et al. 2016). This included the introduction of online peer-to-peer (P2P) lending platforms.

However, many questions remain about the origin, regulatory environment, and investor risk perception associated with these nascent phenomenons.

This paper intends to address those questions by further conceptualizing equity crowdfunding and peer-to-peer business lending, presenting the historical and technological background that prefaced the creation of these different platforms, investigating the legal and regulatory conditions that such a platform must comply with, and analyzing supply-side perceptions of risk among investors.

The remainder of this paper is systematized as follows: in the following section is an more specific literary overview of the conceptual space of equity crowdfunding within the business lifecycle, followed by a literature review examining of the advent of crowdfunding from a historical, social, economic, legal, and technical perspective. Succeeding this is a similar examination of peer-to-peer business lending platforms, including analysis of literature pertaining to their role within the business life cycle, the technological and historical context which saw the creation of such platforms, the current regulatory environment surrounding them, and some major companies in the space.

Chapter II

Literature Review

It comes as no surprise that there is a considerable amount of academic literature on the processes of investing, investor risk, the business lifecycle, and the environment surrounding investing. In the past decade, the emergence of crowdfunding has garnered considerable attention from academics who seek to examine the varying proponents of the practice, including its history and regulation (Hossain and Oparaocha. 2017).

The European Commission's *Crowdfunding From an Investor Perspectiv*e (European Commission. 2015) represents the interest in the quantitative examination of the intersection of investor risk and crowdfunding. This study examined awareness, participation, and risk assessment in Germany, Poland, and Spain and found, amongst other factors, that concerns about regulation and reliability drove respondents who were aware of the practice to not invest through crowdfunding platforms.

Equity Crowdfunding

The expansion of equity crowdfunding as a practice has garnered the interest of academic researchers for the past decade and a half. Examinations of the conceptual space for crowd equity (e.g., Cumming and Johan, 2009; Tomczak, 2013), have demonstrated the entrepreneurial need for such a practice. Other works, such as David Freedman's and Matthew Nuttings' book, *Equity Crowdfunding for Investors: A Guide to Risks, Returns, Regulations, Funding Portals, Due Diligence, and Deal Terms*, published by Wiley and Sons for their Finance Series, have detailed the sociopolitical, economic, and regulatory background which led to proliferation of equity crowdfunding platforms and its rise from obscurity to prominence.

Before proceeding, it is critical to define certain key terms and separate equity crowdfunding from the broad generalization of crowdfunding. Crowdfunding is, “The use of small amounts of capital from a large number of individuals to finance a new personal or business venture” (Picardo 2015). While this definition is perfectly adequate for defining the concept of crowdfunding as an aggregated practice, it does little to distinguish the varying types of crowdfunding in use currently. “There are several types of crowdfunding in practice: namely, donation-based, equity-based, lending-based and reward-based crowdfunding” (Hossain and Oparaocha, 2017, p.21). This paper focuses primarily on equity-based and lending-based crowdfunding, as it is a method on investment utilizing the equity or debt of the business, respectively.

Equity crowdfunding, also synonymous with the terms crowd equity, crowd investment, and investment crowdfunding, can be further elaborated on the previous definition with the addition of the offering of private company securities to a group of people for investment. Due to the fact that equity-based crowdfunding necessitates investment into a commercial enterprise, it is being eyed by regulators as subject to securities and financial regulation, placing it in sharp contrast from the other variations of crowdfunding listed above.

Both anecdotes of entrepreneurs and research reveals that one of the most difficult endeavors for a small-scale entrepreneur is the procurement of start-up capital. There are two primary reasons for this. “First, most entrepreneurs don't qualify for venture capital since they can't scale fast enough, nor do they have the potential for a large enough exit. And second, there are too few venture capitalists versus the masses of entrepreneurs who need money.” (Lavinsky 2010).

Fittingly, acquiring initial capital from banks or credit unions is also a difficult task. The

2016 Small Business Credit Survey by the Federal Reserve found that financing shortfalls were markedly more common among smaller firms with 67% of applicants obtaining less cash than the amount sought. Additionally, the study found that 44% small business of respondents noted that their largest financial challenge was credit availability. (Mills et al., 2017, p.6).

Due to this difficulty to obtaining preliminary funding through conventional means, i.e. venture capitalists or banking institutions, the remaining option is through angel investment. Angel investors are typically wealthy individuals who were former entrepreneurs themselves and are interested in investing in startups in a particular region or industry. “These investments generally take place once the founding members of a startup have exhausted their personal funds as well as tapped out capital available from friends and family.” (Tomczak, 2013, p.336). Typically, crowdfunding occurs during the seed capital and early stage of the entrepreneurial firm development chart (Appendix A). Equity crowdfunding provides the ability for initial seed capital acquisition once founder(s), friends, and family capital reserves have been exhausted and encompasses initial expansion endeavors as credit from traditional lenders would be scarce due to poor credit worthiness. Noteworthy as well, is the usage of crowdfunding not only during the seed capital stage of development, but also during the early stages of the business.

Recognizing gains in the development of information technology coupled with call for increasing the ease of small business capital acquisition, the Jumpstart Our Business Startups (JOBS) Act was passed through Congress with strong bipartisan support and enacted by President Obama in 2012. The purpose of the JOBS Act “was to make it easier and less costly for entrepreneurs, startups, and small business [issuers] to raise capital from investors and lenders. The act accomplishes that objective mainly by loosening some of the ‘most onerous’ restrictions on the ability of small companies to raise capital in the private securities markets”

(Freedman, 2015, p.51). This increased both the supply and demand of capital flow by enabling growing companies to reach more investors and increasing the number of investors to examine these smaller companies. This is done through equity crowdfunding portals which display thousands of private offerings which were previously inaccessible to millions of investors.

Of the many provisions in the JOBS Act, Title III is the most significant. “Title III is the only part of the JOBS Act - and indeed the only piece of legislation before the Securities Act of 1933 - that unequivocally opened the floodgate for masses of non-accredited investors to participate in the private equity markets” (Freedman, 2015, p.53). This provision forms the regulatory basis for the “microinvestor,” and allows the nearly unfettered accessibility of average, small-scale investors to equity crowdfunding portals.

As per the JOBS Act and the Securities Act of 1933, the Securities and Exchange Commission (SEC) oversees and regulates the funding portals. This is only further complicated by the presence of the Financial Industry Regulatory Authority (FINRA) which operates as an enforcement, arbitration, and regulatory institution for financial entities. FINRA examines the portals within twelve months of their inception and then performs periodic reviews to ensure compliance with SEC rules and FINRA guidelines (Levine 2017).

While there are an ever growing number of crowd equity portals being approved and inspected by FINRA and the SEC, WeFunder, StartEngine, Indiegogo (Microventures), and NextSeed are among the most prominent in the space (FINRA).

Peer-to-Peer Lending

Similarly to equity crowdfunding, the rapid expansion of peer-to-peer (P2P) lending services has attracted the attention of researchers and regulators alike. Increased capital restrictions following the Great Recession placed strains on smaller business to have access to credit. This, coupled with rapid advances in IT spawned the P2P sector in the United States. Legal examinations like the Yale Journal on Regulation's *Square Pegs in a Round Hole: SEC Regulation of Online Peer-To-Peer Lending and the CFPB Alternative*, by Paul Slattery and *Marketplace Lending Developments: A Survey of Federal and State Issues Confronting the Industry* (Savoie & Hoffman 2017) offer considerable insight on the regulatory challenges of the marketplace lending industry. Other works like *The Evolving Role of Peer-to-Peer Lending: A New Financing Alternative* (Keh-Wen et al. 2016) analyze the inception and sociopolitical climate surrounding the industry's rapid growth.

There are two primary components associated with P2P lending, it "...occurs directly between individuals and organizations without the direct intermediation of a traditional financial institution... (and also involves) individuals and organizations pooling their money to support the efforts of borrowers, while generating a rate of return for themselves" (D'Costa 2017). Thusly, P2P lending operates in a similar vein to crowd equity, leveraging the "crowd" to lower barriers to entry by decreasing individual capital requirements and disseminating risk over groups of people. However, unlike crowdinvesting, these are debt securities as opposed to equity securities, making P2P lending a form of lending-based crowdfunding. The vast majority of these transactions are done online, with Lending Club, Prosper.com, and Social Finance Inc. having the majority of the market share, serving both investors and borrowers (D'Costa 2017).

A reexamination of the 2016 Small Business Credit Survey revealed the increasing prevalence of online lenders in the small business credit market place. In 2016, the study found that 26% of small businesses applied to an online lender. This is further reinforced by the approval rate for small businesses by online lender, which was a comparatively high 84% (Mills, 2017, p.15-16). Furthermore, a horizontal analysis of the surveys from 2014, 2015, and 2016 indicates that the percentage of firms applying to online lenders for credit is increasing annually at a 1.5% rate (Appendix B).

As such, and considering the increased stringency on behalf of traditional lending institutions, it follows logic that small businesses specifically have turned to P2P platforms for credit. "For instance, online P2P lending does not normally require collaterals and attracts borrowers who are not qualified for traditional bank loans" (Keh-Wen et al. 2016, p.33). These business are typically small but established, requiring capital for growth or to survive the early stages of development (Appendix A). Therefore, like equity crowdfunding, lending-based crowdfunding occurs in the early stages of development. This is not to say that no businesses utilizes peer-to-peer lending for capital in the later stages, but the available data suggests that it occurs predominantly amongst younger, smaller businesses (Mills, 2017, p.4).

Regulatory Environment

The regulatory environment of peer-to-peer lending is substantially more controlled than that of crowd equity as platforms and lenders are subject to more laws. "These include the Federal Trade Commission (FTC) Act, the Truth in Lending Act (TILA), the Electronic Fund Transfer Act (EFTA), the Fair Credit Reporting Act (FCRA), the Gramm-Leach-Bliley (GLB) Act, the Equal Credit Opportunity Act (ECOA), and the Fair Debt Collection Practices Act (FDCPA). These govern market activities from loan disclosures to credit reporting to privacy practices to debt collection" (Pozza & Wong. 2016). As the names of the regulations suggest, these laws are designed to protect consumers, typically through mandatory disclosures, ensuring that their lending practices are not deceptive. The FTC and, to a lesser extent, FINRA has investigative and prosecutorial power to reprimand and if necessary, remove platforms that do not comply to the laws that typically affect all lenders.

There are several peer-to-peer lending platforms that operate in the United States, but Lending Club, Prosper.com, and Social Finance Inc. comprise 52.9% of the market (D'Costa 2017).

Statement of the Problem

The micro-investors who comprise the majority of the market for both crowd equity investments and P2P debt investments are likely unaware of the risks they take by investing through such vehicles. Currently, there is limited quantitative data on investor perceptions of risk within the nontraditional business investment space. Therefore, conducting a study which examines said risk perceptions and risk environment surrounding the space can serve to inform potential investors and provide a more comprehensive view of the sector.

Purpose of the Study

The purpose of the study is to investigate the perceptions of risk of micro-investors on non-traditional business investment platforms. Research was conducted using a modified risk assessment survey to evaluate perceptions of risk among investors and potential investors (Appendix C).

Significance of the Study

This research study is intended to add to the literature examining investor perceptions of risk of smaller, non-traditional business investments. While there is existing literature about these topics individually, the only other study, to this researcher's knowledge, examining both of these practices from an investor's perspective is the European Commission's *Crowdfunding From an Investor Perspective*, (conducted in Germany, Poland, and Spain), it is important to note that it does not examine the role of the business life cycle in investor risk perception within the nontraditional business investment space. In spite of the recent attention examining the history and regulation of both equity crowdfunding and P2P lending, there is a glaring lack of quantitative data examining investor risk perception. As such, the results of this study will add to the growing body of research about supply-side risk perceptions in the equity-based and lending-based forms of crowdfunding.

Chapter III

Methodology

Hypotheses are presented below and then discussed, linking the constructs and variables to the theoretical and conceptual model.

The overall research questions guiding this analysis are:

1. Does ease of access/convenience of nontraditional business investments relatively decrease risk aversion among microinvestors?

   Hypothesis 1: As comparative value of ease of access/convenience increases, risk aversion amongst mircoinvestors relatively decreases.

2. Does regulatory oversight have a positive effect on nontraditional business potential microinvestor and microinvestor risk assessment?

   Hypothesis 2: As the perceived presence of regulatory oversight increases, a positive risk assessment amongst mircoinvestors increases.

3. Does the stage of the business development lifecycle affect potential microinvestor and microinvestor perception of risk?

   Hypothesis 3: As the business moves through the business development lifecycle, the perception of risk amongst mircoinvestors and potential microinvestors decreases.

Measures

Primary study demographic measures are defined below:

1. Age (*age*).This is the age of the person in years at the time the survey was taken. Level of measurement is ratio. Age is used as a continuous measure for the adult group (age 18 to ≥ 65 years). Category 0 = 18-25, Category 1= 26-35, Category 2 = 36-45,

Category 3 = 46-55, Category 4 = 56-65, Category 5 = 66-75, and Category 6 = Older than 75.

2. Gender (*gender*).This is the gender of the respondent listed as Male or Female. Level of measurement is binary. Category 0= Female and Category 1= Male.

3. Education Level (*education*). This is the education level of the respondent listed as: Less than a high school diploma , High school degree or equivalent (e.g. GED) , Some college, no degree, Associate's Degree, Bachelor's Degree, Master's Degree, Professional degree, and Doctorate. Level of measurement is ordinal. Category 0 = Less than a high school diploma, Category 1= High school degree or equivalent (e.g. GED), Category 2 = Some college, no degree, Category 3 = Associate's Degree, Category 4 = Bachelor's Degree, Category 5 = Master's Degree, Category 6 = Professional degree, and Category 7 = Doctorate.

Research Design

This is an explanatory study examining investor risk perception. The utilized research design for this study was survey-based research. This method enabled investor perceptions of risk of nontraditional business investments to be quantified and aggregated. The survey questionnaire was be distributed via professional networks and email to respondents. The survey was open for 15 days, from October 16th, 2019 to October 31st, 2019.

Sampling

The population of the survey was actual and potential microinvestors examining peer-to-peer lending and/or equity crowdfunding as a means to obtain a financial return. As such, the sample was a convenience sample.

Instrumentation

This study utilized a research questionnaire adapted from the European Commission Financial Services User Group computer-assisted web interview (CAWI) online survey (Appendix D), developed and validated by Oxera, an economic research consulting firm in Europe (European Commission, 2015). The survey had a brief, three question demographic section followed by a series of four to nine conditional questions depending on previous responses. Most of these ancillary questions used a Likert scale to gauge risk perception. Due to the nature of the study, as an examination of investor risk perception, the data collected was aggregated in order to ascertain the perceptions of risk environment surrounding these particular investment spaces while protecting the privacy of the participants. Face validity was established for the aforementioned research questionnaire by several business, finance, and accounting academic professionals before implementation.

Data integrity was ensured through random sampling of the initial source data. After transposing that data to a format of which software analysis could be used, ten random samples of the initial transposed data were compared to that of the source data, acquired from the survey instrument Upon comparison, there were no discrepancies found between the transposed data and the source data, as such, data integrity was established over the transposed data, which was the basis for analysis.

Inclusion and Exclusion Criteria

Participants had to be eighteen years of age or older to meet the inclusion criteria for this study. Any individual younger than eighteen years of age was, therefore, excluded from the study. Knowledge of the investment vehicles in question was required for participants to answer the majority of the questions within the survey tool. Also, only participants who responded within the established 15 day time frame were considered for inclusion. The inclusion criteria was expansive due to the nature of the study. As barriers to investing in this space are so low, any adult was considered a potential microinvestor, and therefore is within the scope of the study. A visualization of the utilized survey can be found in Appendix E.

Implementation and Dissemination

Upon completion and validation of the adapted survey, the instrument was disseminated through a multifaceted approach. On October 16th, 2019, the tool was launched and promoted on through individual posts on LinkedIn, individual requests on specialized online forums by the researcher, and by an relevant influencer on LinkedIn with a considerable following who were knowledgeable to the topic. Total estimated reach of the combined approaches was approximately two thousand users on the various platforms. This estimation was ascertained by examining the number of unique users on LinkedIn between those that assisted in the dissemination of the tool. Due to the nature of the platform and the individuals who assisted the dissemination, the number of impressions who were counted multiple times (i.e. “Mutual Connections”) had to be subtracted from each subsequent assisting individual. This figure was then added to the indicated metrics of individual users on the forums utilized. The survey remained open for 15 days, opening on October 16th, 2019 and closing on October 31st, 2019.

Protection of Human Rights

All participants were required to acknowledge through a checkbox before beginning the survey providing informed consent before completing the survey. The survey did not proceed unless the participant read the informed consent statement and checked the box confirming that he/she had read it. Additionally, participation was anonymous, voluntary, and the participant could choose to withdraw from the survey at any time, for any reason. All individual data collected anonymously from research subjects was aggregated, kept confidential on an encrypted electronic file with the researcher, and will not be shared, under any circumstance, with anyone outside of the research team.

Chapter IV

Results

This chapter presents the results of the statistical analysis. The first section focuses on the results of the data preparation and the descriptive statistics. The second section presents the results of the hypotheses testing. Three hypotheses were tested; paired sample t-tests were conducted for Hypotheses 1, 2, and 3 to ascertain statistical significance among the independent and dependent testing variables.

Preparation of Data

As a first step, data integrity was ensured through random sampling of the initial source data gathered through a Google Form, which is stored in an encrypted Google Drive. After transposing that data from the Google Drive to Microsoft Excel software, ten random samples of the Google Form transposed data were compared to that of the Excel data. Upon comparison, there were no discrepancies found between the Excel file and the Google Form data and, as such, data integrity was established.

Secondarily, a random sample of cases was selected and each case was reviewed individually to test the categorization accuracy for each studied variable. For example, a male, 18 to 25 years of age with less than a high school diploma would have received a code of *gender category* = 1, a*ge category* = 0, *education level* = 0. The sample review yielded 100% accuracy from a categorization perspective.

Of an estimated two thousand impressions, one hundred and forty-three (N=143) individual responses were recorded. Of these respondents, 65% (n=93) were aware of the either peer-to-peer lending or crowdfunding as a means of getting a financial return, while 34% were unaware. One respondent exited the survey before completion.

Descriptive statistics were derived from the data set specific to those respondents who were aware of the either peer-to-peer lending or crowdfunding as a means of getting a financial return. The following nominal and continuous variables were evaluated: *age, gender, and highest education level achieved*. Table I provides basic descriptive statistics of the nominal variables.

Table I. Distribution of Categorical Variables.

Variable	Percent	N
Gender		
Male	77.42%	72
Female	22.58%	20
Missing	0%	0
Total	100%	93
Age		
18-25	46.24%	43
26-35	19.35%	18
36-45	16.13%	15
46-55	11.83%	11
56-65	4.30%	4
66-75	2.15%	2
Older than 75	0%	0
Missing	0%	0
Total	100%	93
Education		
Less than a high school diploma	0%	0

High school degree or equivalent (e.g. GED)	4.30%	4
Some college, no degree	29.03%	27
Associate’s Degree	10.76%	10
Bachelor’s Degree	29.03%	27
Master’s Degree	20.43%	19
Professional degree	2.15%	2
Doctorate	4.30%	4
Missing	0%	0
Total	100%	93

It is worth noting that the most common age bracket of this subset of respondents was the 18 to 25 category. The average age was 32.5, with the median age being 30.5, demonstrating a slight right skew in the data on the age of the respondents. The majority of the survey respondents were male (78.3%) and from an educational background perspective, 58% of respondents acknowledged having a Bachelor's Degree (29%) or some college but no degree (29%). Approximately 27% of respondents had a postgraduate educational background, with Master’s degree(s) (20.4%) being the most common, followed by a Doctorate degree(s) (4.3%) and Professional degree(s) (2.1%).

Results

Hypothesis 1

The analytical strategy consisted of the utilizing a series of paired sample t-tests of independent and dependent variables to determine the significance of the variables from the data set extracted from the survey.

The first hypothesis, Hypothesis 1, which examined the hypothesized negative relationship between ease of access and risk aversion was tested. An infographic of the relationship between risk aversion and propensity to partake in risk can be found in Appendix F. The results of the statistical testing examined the corresponding responses to Questions 5 and 9 of the utilized survey (Appendix C), analyzing the statistical significance of the comparison between the aggregated responses on the Likert scales utilized.

At the 95% confidence level amongst equity crowdfunding investors (n=30), ease of access was shown to be a more statistically significant factor in decreasing risk aversion than all but two of the other variables. Interest pertaining to specific firms or start-ups and diversification was indicated to be less impactful to risk aversion than ease of access/convenience, ($\alpha \leq 0.001$) and ($\alpha = 0.027$), respectively. No significant difference could be established on the relationship between disappointment/mistrust of traditional finance and the dependent variable ($\alpha = 0.101$). Higher than expected financial returns was the only selection that negatively influenced risk aversion in a more significant fashion ($\alpha = 0.001$).

Amongst investors who use P2P platforms (n=42), at the 95% confidence level, convenience and ease of access was indicated amongst respondents to be the most significant factor. Higher than expected financial returns, interest about certain companies, disappointment and mistrust of traditional finance, and diversification were all less important factors in decreasing a microinvestor’s risk aversion than ease of access ($\alpha \leq 0.001$).

Taken in aggregate, the results of the analysis affirm the alternative hypothesis of the researchers, demonstrating that ease of access/convenience does decrease risk aversion among microinvestors.

Hypothesis 2

The second hypothesis, Hypothesis 2, which postulated the positive effect of regulatory oversight on microinvestor risk corresponds to participant responses on Questions 7 and 11 of the survey instrument (Appendix C). A a regulatory environment, mandating the necessitation of reporting about the ongoing performance of a given investment, was interpreted as such.

At the 95% confidence level, amongst respondents (n=93) who were asked to rate the risks associated with equity crowdfunding (if any), was found to be the least important factor in determining risk assessment. When compared across the other responses to the Likert scales contained within the question, a regulatory environment was ascertained to be the least influential metric in determining risk assessment ($\alpha \leq 0.001$) and actually increasing risk assessment amongst equity crowdfunding investors. The most significant factor amongst respondents was the risk of poor returns or losses on the investment.

Among those assessed on risk in the P2P investment vehicle (n=92) at the 95% confidence level, a regulatory environment was ranked the second least impactful variable to determine risk assessment, but was notably more considered than in equity crowdfunding. Behind the concerns of losses/poor returns and fraudulent investments, the lack of a regulatory environment superseded concerns about fraudulent platforms ($\alpha \leq 0.001$).

The results of this testing yielded a difference in opinion of the potential safety offered by regulation between P2P lenders and crowd equity investors. While certainly not a major portion of risk assessment amongst both forms of microinvestors, it becomes apparent that a regulatory environment has a negative effect on amongst those micro investors interested in equity securities as opposed to those interested in debt securities, who positively asses the presence of a regulatory environment, albeit slightly. As such, there is insufficient evidence to reject the null hypothesis, which indicates Hypothesis 2 is not sufficiently supported.

Hypothesis 3

The third and final hypothesis, Hypothesis 3, which examined the relationship between the business life cycle and risk perception, measured through the likelihood of investing corresponds to Question 1 of the survey tool (Appendix C). This data was extracted from the hypothetical question and is subject to the inherent bias therein. This question did not differentiate between those interested in crowd equity and P2P lending and their investors.

At the 95% confidence level, amongst respondents ($n=143$) who were assessed on their likelihood to invest in a company that had been in business from one to five years, five to ten years, and over ten years, risk perception, as measured through likelihood of investing, was found to decrease as the company moved through the business development lifecycle (Appendix G). Statistically significant differences were determined between all three age ranges tested ($\alpha \leq 0.001$).

Overall the results of this testing confirm the hypothesis in aggregate and the conclusions of other scholarly works. An important note, however, is the leftward skew in the data in the inquiry concerning businesses in the early stages of development, ($\mu=2.52$, $m=3$). This indicates a certain subset of the respondents preferred investments in younger firms. In spite of this, overall, the analysis of the data sets confirms Hypothesis 3.

CHAPTER V

Discussion

This section summarizes the results of the hypothesis testing and presents the potential implications. Lastly, this section outlines the contributions of this study and makes recommendations for furthering research and proactive policy in the area of risk perception of equity crowdfunding and peer-to-peer lending.

As the results of the statistical testing indicated, the first and third hypotheses were largely corroborated, while the second hypothesis lacked sufficient evidence. Microinvestor aversion to risk is decreased by the ease of access and convenience associated to the investment vehicle. Interestingly and perhaps concerningly, the testing of the second hypothesis indicated a difference of mindset between online equity crowdfunding investors and P2P lenders, as their risk assessment split on the presence of a regulatory environment. For the third hypothesis, as indicated by existing literature, both microinvestors and potential microinvestors perceive the risk associated with the business development lifecycle, and are more likely to invest in a more mature firm.

As hypothesized, the analysis of the data indicated that convenience did significantly decrease risk aversion (Appendix H). Given the shifts in the general investing environment involving an ever increasing amount of risk, ranging from technology risk to security risk and beyond, desensitization of risk is an emergent trend. With a seemingly endless onslaught of negative headlines and notifications of data breaches and privacy concerns rampant, a lack of concern emerges. As the value of convenience continues to increase in lockstep with technological development, it would appear, that in these spaces, convenience supersedes risk assessment. This combination of factors, among with many others, such as relative amount, is a well-deserving topic of further academic inquiry, especially in an investment setting, given the considerable risk of loss.

As the results and analysis yield on the second research question, the perception of the regulatory environment abjured the hypothesized impact of the regulatory environment on the nontraditional investment spaces. If anything, the indication was that the presence of regulators deters investment. This difference in mindset may be endemic with the predominantly younger demographic, with a greater risk appetite, who view regulatory intervention not as protective to their investment strategies, but as a hindrance to them. A note as well was the concern over platform fraud when compared to a regulatory environment, this is probably due to the difference in the market share of firms in these two nontraditional business investment spheres. The P2P investment space is much more oligopolistic (e.g. Lending Club and Prosper) than the crowd equity space, which has many more platforms that exist within it.

For the third research question, the notable skew in the data indicating a subset of respondents prefer the businesses that are earlier in the business development cycle, does contradict the hypothesis, but taken in aggregate with the other responses is insufficient. Likely this skew is caused by equity crowdfunding investors, whose investment vehicle primary serves in the initial stages of business development. However, determining this for certain, given the constraints of the survey tool utilized, in not possible.

Given the information gleaned concerning the perceptions of risk, it becomes evident that regulatory action in the form of proactive standards would serve to alleviate some of the problems poised in this space. As the presence of the FINRA and the FTC are lawful administrators over equity crowdfunding portals and P2P platforms, respectively, drafting and imposing a more stringent set of informed standards to reasonably mitigate cybersecurity risk, fraud risk, and overall integrity would be beneficial. This would increase the responsibility of auditors and regulatory bodies to examine weaknesses in security, assessment, and internal controls without unduly straining the portals and platforms themselves.

If replicated, the researchers noted several changes that could be made to the methodology to make improvements in this area of study. A survey construction that separates potential investors to actual investors for the entire duration of responses would serve to compare and contrast the varying risk appetite of both populations. Expanding the implementation window to net a greater number of respondents and thusly a more robust sample is noted. Furthermore, a dissemination method that has the capacity to screen respondents based on the exclusion criteria, as opposed to a heuristic via specialized forums and influencers, would further the representativeness of the sample. Coupled with this, a change in the method of communication utilized would serve to increase the response rate, and further the power and applicability of the sample.

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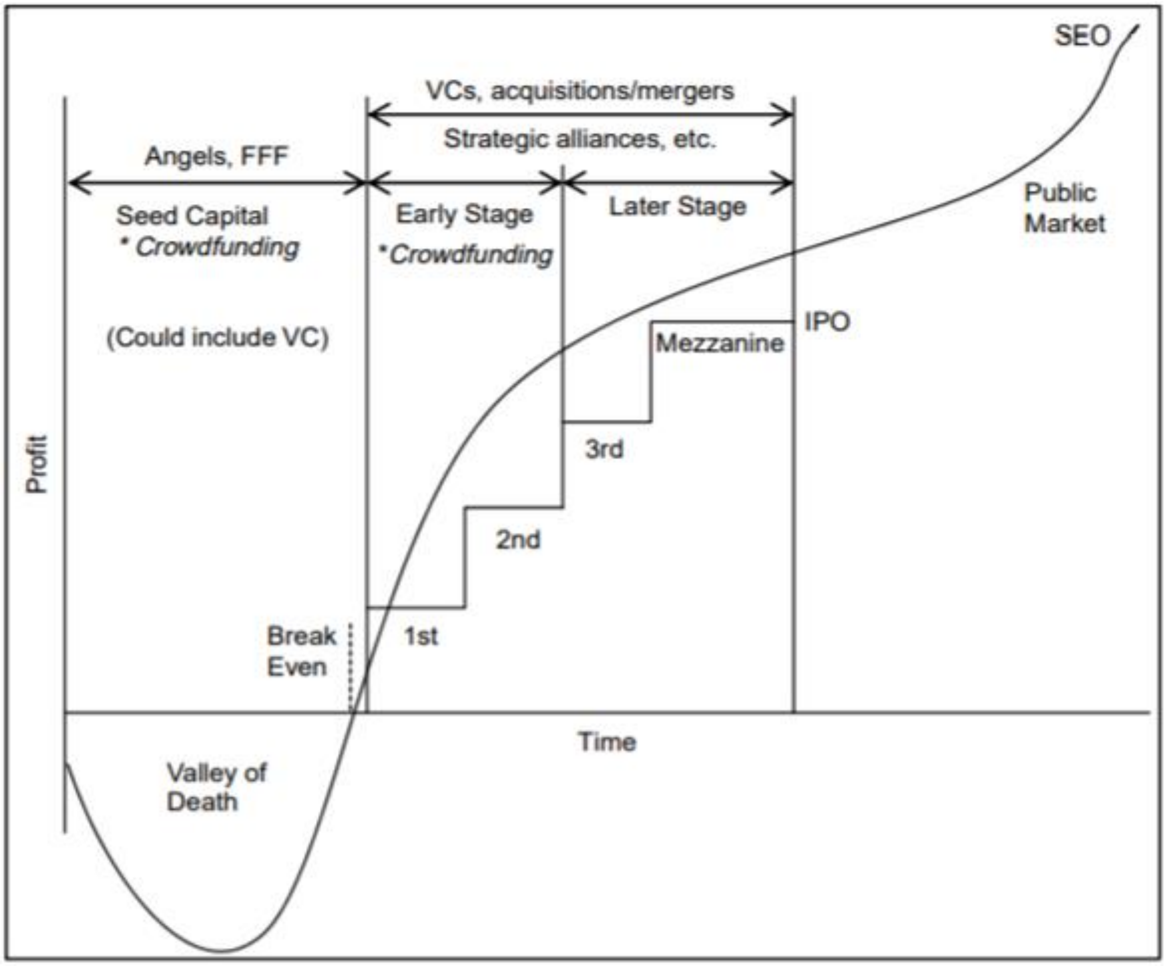
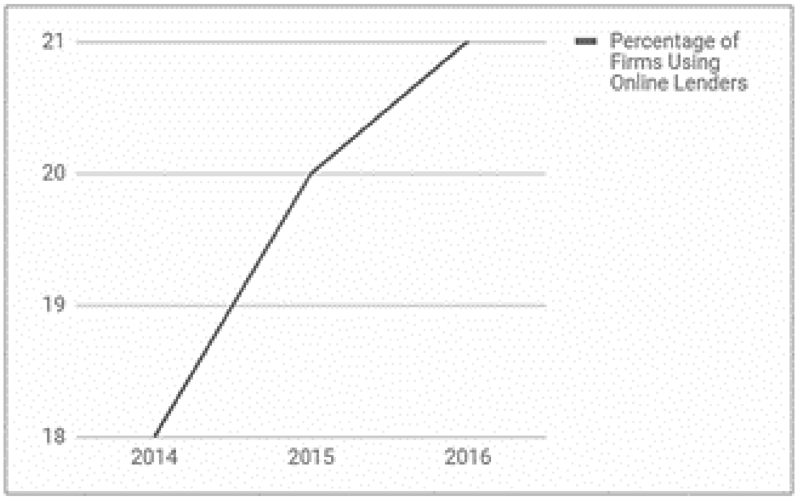
Appendix A

Stages of entrepreneurial firm development. Source: Cumming and Johan (2009, 6)



Appendix B

Online lender growth rate. Source: Authors' configuration based on data from Mills et al. (2014-2016).



Appendix C

Utilized Risk Assessment Survey

Demographics Section

Question 1	**What is your age?** a. *Less than 18* b. *18 to 25* c. *26 to 35* d. *46 to 55* e. *56 to 65* f. *66 to 75* g. *Older than 75*
Question 2	**What is your sex?** a. *Female* b. *Male*
Question 3	**What is the highest level of education you have completed?** a. *Less than a high school diploma* b. *High school degree or equivalent (e.g. GED)* c. *Some college, no degree* d. *Associate degree* e. *Bachelor's degree* f. *Master's degree* g. *Professional degree* h. *Doctorate*

Risk Awareness and Assessment Section

Question 1	**How likely are you to invest in a company that has been in business for...** 1 - 5 years since inception? *Not likely* ◯ ◯ ◯ ◯ ◯ *Very likely* 5 - 9 years since inception? *Not likely* ◯ ◯ ◯ ◯ ◯ *Very likely* Over 10 years since inception? *Not likely* ◯ ◯ ◯ ◯ ◯ *Very likely*
Question 2*	**Are you aware of peer-to-peer lending or crowdfunding as a means of getting a financial return?** *a. Yes*

	b. No
Question 3 **[If NO to Question 2]**	**Do you have an interest to know more about peer-to-peer lending or crowdfunding?** *a. Yes* *b. No*
Question 4* **[If YES to Question 2]**	**Have you actually invested on equity crowdfunding platforms?** *a. Yes* *b. No*
Question 5* **[If YES to Question 4]**	**How would you rate the following reasons, in order of importance, in your choice to invest on these platforms rather than investing elsewhere?** Higher expected financial returns *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ Interest/excitement/curiosity about specific companies or start-ups *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ Disappointment/mistrust of traditional finance *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ Taking advantage of a new form of investment (increased diversification) *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ Ease of entry/convenience of investing *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯
Question 6* **[If NO to Question 4]** **Question 6 (cont.)**	**How would you rate the following reasons, in order of importance, in your choice not to invest on crowdfunding platforms?** I have not had the opportunity to invest in crowdfunding (e.g. lack of funds or lack of time) *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I do not have enough understanding about crowdfunding *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I am concerned about poor financial returns *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I am concerned about the reliability of investing in crowdfunding *No importance* *Very high importance*

	I am concerned about the lack of regulation of crowdfunding platforms *No importance* *Very high importance* I am satisfied with my current investment options *No importance* *Very high importance*
Question 7*	**How would you rate the risks (if any) associated with equity crowdfunding?** The fundraiser may prove to be fraudulent *No risk* *Very high risk* The platform may prove to be fraudulent *No risk* *Very high risk* Poor information about the ongoing performance of the investment *No risk* *Very high risk* Poor returns or losses on the investment *No risk* *Very high risk*
Question 8*	**Have you actually lent on peer-to-peer lending platforms?** *a. Yes* *b. No*
Question 9* [If YES to Question 8]	**How would you rate the following reasons, in order of importance, in your choice to lend on peer-to-peer lending platforms rather than lending elsewhere?** Higher expected financial returns *No importance* *Very high importance* Interest/excitement about specific companies/start-ups or about helping individuals fund specific projects *No importance* *Very high importance* Disappointment/mistrust of traditional finance *No importance* *Very high importance* Taking advantage of a new form of investment (increased diversification) *No importance* *Very high importance* Ease of entry/convenience of lending

Question 9 (cont.)	*No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯
Question 10* **[If NO to Question 8]**	**How would you rate the following reasons, in order of importance, in your choice not to lend on peer-to-peer lending platforms?** I have not had the opportunity to lend (e.g. lack of funds or lack of time) *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I do not have enough understanding about peer-to-peer lending *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I am concerned about poor financial returns *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I am concerned about the reliability of investing in peer-to-peer lending *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I am concerned about the regulatory environment of peer-to-peer lending platforms *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯ I am satisfied with my current investment options *No importance* *Very high importance* ◯ ◯ ◯ ◯ ◯
Question 11*	**How would you rate the risks (if any) associated with peer-to-peer lending?** The borrower may prove to be fraudulent *No risk* *Very high risk* ◯ ◯ ◯ ◯ ◯ The platform may prove to be fraudulent *No risk* *Very high risk* ◯ ◯ ◯ ◯ ◯ Poor information about the borrower *No risk* *Very high risk* ◯ ◯ ◯ ◯ ◯ Poor returns or losses on the money lent *No risk* *Very high risk* ◯ ◯ ◯ ◯ ◯

Appendix D

European Commission CAWI questionnaire from the European Commission (2015).

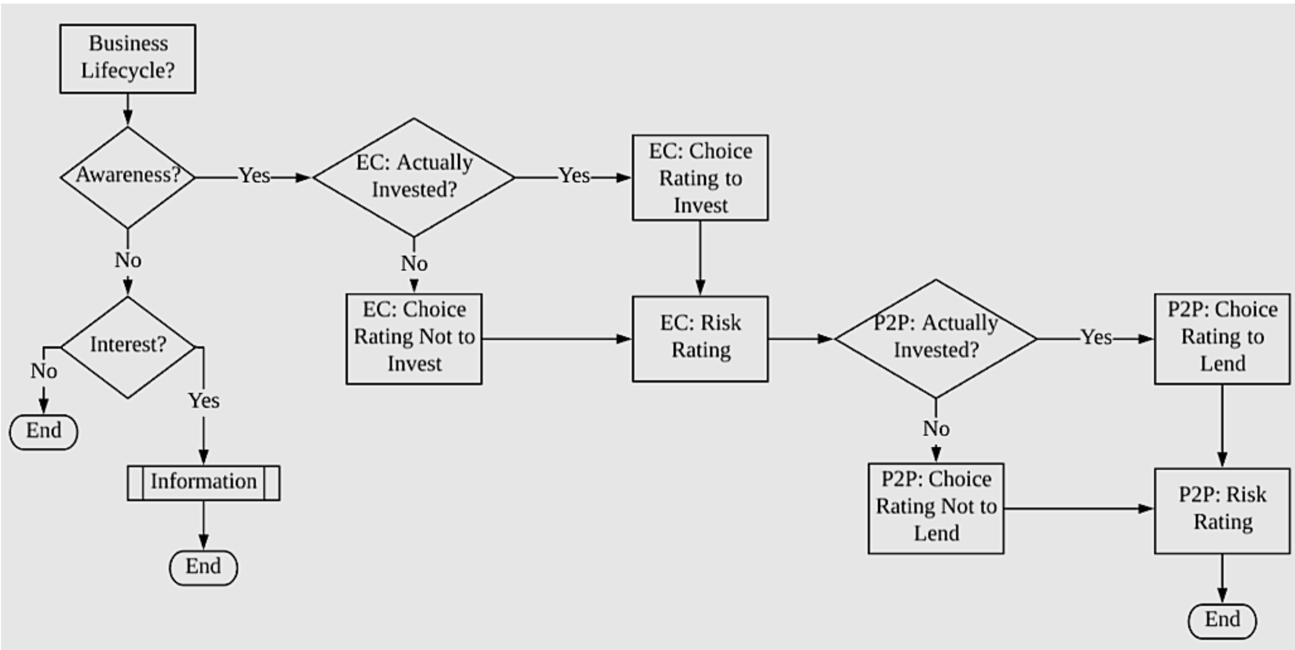
Question 1	**Are you aware of peer-to-peer lending or crowdfunding as a means of getting a financial return?** *a. Yes* *b. No*
Question 2	**Where have you heard about peer-to-peer lending or equity crowdfunding?** *a. Friend/colleague* *b. Relative* *c. Financial adviser* *d. Blog/digital newspaper article* *e. Newspaper article/book* *f. TV* *g. Other*
Question 3	**Have you actually invested on equity crowdfunding platforms?** *a. Yes* *b. No*
Question 4 **[IF YES to question 3]**	**What proportion of your savings have you invested in equity crowdfunding?** *a. Less than 10%* *b. Less than 25%* *c. Less than 50%* *d. More than 50%*
Question 5 **[IF YES to question 3]**	[For each option, record answer on a 1 to 5 scale – 1 = no importance, 2 = low importance, 3 = some importance, 4 = high importance, 5 = very high importance] **How would you rate the following reasons by importance in your choice to invest in these platforms rather than investing elsewhere?** a. Higher expected financial returns *1 2 3 4 5* b. Interest/excitement/curiosity about specific companies or start-ups *1 2 3 4 5* c. Disappointment/mistrust of traditional finance *1 2 3 4 5*

Question 5 (cont.)	d. Taking advantage of a new form of investment (increased diversification) *1 2 3 4 5*
Question 6	**Have you actually lent on peer-to-peer lending platforms?** *a. Yes* *b. No*
Question 7 **[IF YES to question 6]**	**What proportion of your savings have you invested in peer-to-peer lending?** *a. Less than 10%* *b. Less than 25%* *c. Less than 50%* *d. More than 50%*
Question 8 **[IF YES to question 6]**	[For each option, record answer on a 1 to 5 scale – 1 = no importance, 2 = low importance, 3 = some importance, 4 = high importance, 5 = very high importance] **How would you rate the following reasons by importance in your choice to lend on these platforms rather than lending elsewhere?** a. Higher expected financial returns *1 2 3 4 5* b. Interest/excitement about specific companies/start-ups or about helping individuals fund specific projects *1 2 3 4 5* c. Disappointment/mistrust of traditional finance *1 2 3 4 5* d. Taking advantage of a new form of investment (increased diversification) *1 2 3 4 5*
Question 9 **[IF NO to questions 3 and 6]**	[For each option, record answer on a 1 to 5 scale – 1 = no importance, 2 = low importance, 3 = some importance, 4 = high importance, 5 = very high importance] **How would you rate the following reasons by order of importance in your choice not to invest on crowdfunding platforms?** a. I have not had the opportunity to invest in crowdfunding (e.g. lack of funds or lack of time) *1 2 3 4 5*

Question 9 (cont.)	b. I do not have enough understanding about crowdfunding *1 2 3 4 5* c. I am concerned about poor financial returns *1 2 3 4 5* d. I am concerned about the reliability of investing in crowdfunding *1 2 3 4 5* e. I am concerned about the lack of regulation of crowdfunding platforms *1 2 3 4 5*
Question 10	[For each option, record answer on a 1 to 5 scale – 1 = no risk, 2 = low risks, 3 = some risks, 4 = important risks, 5 = high risks] **How would you rate the risks (if any) associated with equity crowdfunding?** a.The fundraiser may prove to be fraudulent *1 2 3 4 5* b. The platform may prove to be fraudulent *1 2 3 4 5* c. Poor information about the ongoing performance of the investment *1 2 3 4 5* d. Poor returns or losses on the investment *1 2 3 4 5*
Question 11	[For each option, record answer on a 1 to 5 scale – 1 = no risk, 2 = low risks, 3 = some risks, 4 = important risks, 5 = high risks] **How would you rate the risks (if any) associated with peer-to-peer lending?** a. The borrower may prove to be fraudulent *1 2 3 4 5* b. The platform may prove to be fraudulent *1 2 3 4 5* c. Poor ongoing information about the borrower *1 2 3 4 5* d. Poor returns or losses on the money lent *1 2 3 4 5*

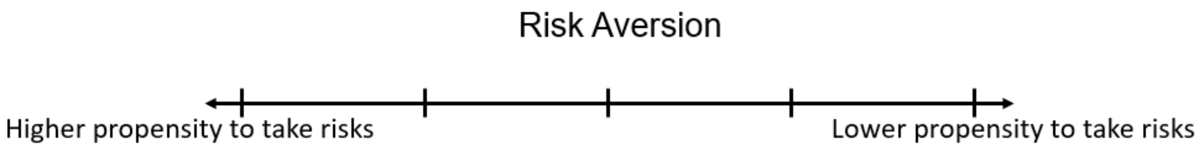
Appendix E

Author's configuration based on implemented survey.



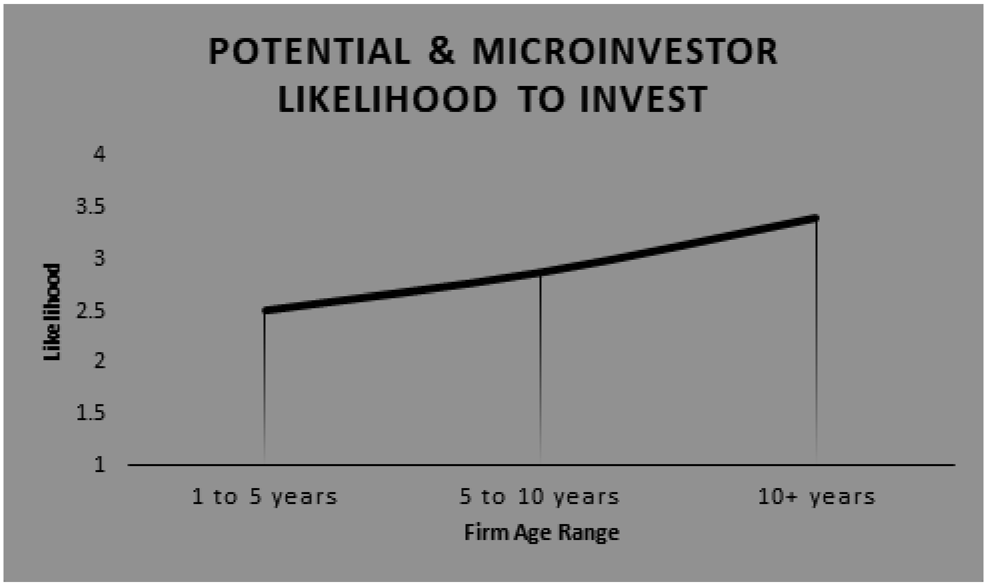
Appendix F

Author’s configuration based on risk aversion conceptual model.



Appendix G

Author's configuration based on aggregated primary source data.



Appendix H

Author's configuration based on conceptual model and data analysis.