

## A conceptualized investment model of crowdfunding

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Crowdfunding is growing in popularity as a new form of both investment opportunity and source of venture capital. This article takes a view on whether crowdfunding is a replacement or an addition to traditional seed capital sources in the early stages of a new venture. With access to angel investment decreasing since the financial crisis of 2008, crowdfunding is of great importance to start-ups seeking starting capital. However, little effort has been made to define the investment model of crowdfunding with both crowdfunder and crowdfundee in mind. Drawing on an in-depth review of current literature on crowdfunding, this article creates an investment model of crowdfunding with various reward models available to investor and investee in mind. This article provides an extensive survey of the environment of crowdfunding based on current literature. It offers a jumping off point and a thorough literature review for researchers of crowdfunding, providing a detailed examination of the current landscape of crowdfunding based on available literary sources.

**Keywords:** crowdfunding; venture capital; entrepreneurship; fundraising; crowdinvesting; investment

### 1. Introduction

Crowdfunding has quickly become a popular avenue of funding for investment, seed money and start-up funding. The growth rates have been astounding over its short life span. However, this article argues that what has been lacking is the construction of a crowdfunding investment model. This is of great importance as almost \$1.5 billion was raised in over 1 million crowdfunding campaigns in 2011 ([Crowdfunding Industry Report, 2012, 14](#)). This sum was projected to double for 2012 ([Crowdfunding Industry Report, 2012, 14](#)). The Daily Crowdsourc, an industry publication, gave \$123 million as the total for 2011 ([Burke, 2012](#)). Although lower than the \$1.5 billion figure, this number is still impressive as the figure given that two years prior it was only \$32 million, making it a quadruple increase in crowdfunding investment in a two-year span ([Burke, 2012](#)). But certain questions have arisen, such as: In what ways can funds be raised? What rewards are offered to investors in crowdfunding? And what factors make up crowdfunding?

This article will review all available rewards offered through crowdfunding to show the theoretical basis for the two-sided market of crowdfunding and crowdfunding investment and to show how all elements of crowdfunding interact through a conceptualized investment model for crowdfunding that is developed by the authors.

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### 1.1. Motivation

The motivation behind this article is the lack of a coherent article in current academic journals showing all relevant options and reward models for crowdfunding. The authors of this article undertook a thorough analysis of the most widely cited research based on number of citations from the period of 2009–2012 from Google Scholar and the EBSCO e-journal database, working papers and industry publications along with other sources. During this undertaking, a need was recognized for one paper that collected all relevant detail regarding crowdfunding investment. This article is an attempt at fulfilling this gap in contemporary literature.

### 1.2. How crowdfunding can fill gaps in capital for new ventures

One of the hardest things for any small entrepreneur to come by is start-up capital. Lavinsky (2010) says:

[...] the vast majority of entrepreneurs have failed to raise venture capital. There are two key 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.

A study by Dutch bank ABN AMRO found that entrepreneurs have difficulty obtaining funding between €35,000 and €150,000 (Voorbraak, 2011, 2). A similar study by the New York Federal Reserve found the denial rate for loans of less than \$100,000 was more than twice as high as it was for bigger loans (Pagliery, 2012).

The best possible option for entrepreneurs seeking capital, especially at the earliest stages of their development, is through business angels or angel investment. Angel investment can be described as '[...] the first round of external independent investment' (McKaskill, 2009, 9). These investments generally take place once the founding members of a start-up have exhausted their personal funds as well as tapped out capital available from friends and family. In a general sense, angel investment follows after or along with the friends, family and fools (FFF) stage of financing. Fools denote the high risk associated with investment in emerging stage firms (Cumming and Johan, 2009). Figure 1 shows the stages of entrepreneurial firm development with crowdfunding added in italics in its applicable areas.

Typically in the seed capital and early stages as represented above, ventures are not developed to the point where they can stand on their own and often are not appealing enough to outside investors to attract venture capital funding. These ventures are in between a stage of potential failure or success. The following are two opportunities that crowdfunding can provide seed capital:

[...] [o]ne is the initial seed money to start a business, where friends and family finance may be unavailable or insufficient, and amounts required are too small for business angels to get involved [and] [...] also the gap above the level where business angles [*sic*] are usually active, but where the capital required is too small for venture capitalists to get involved. (Collins and Pierrakis, 2012, 18)

These phases provide ample opportunity for raising seed capital with crowdfunding to offset the risks of personal guarantees for bank loans from the company's founders and when FFF and personal savings have been drained. This is of special importance today as the rates of angel investment have been steadily decreasing since their roughly 10-year peak in 2008 according to a study by PwC MoneyTree (Rannala, 2013).

Hemer (2011) also draws a parallel between angel investing and crowdfunding:

[...] crowdfunding could be one informal financing alternative to close the early-stage gap which represents one of the major obstacles when getting start-up projects off the ground.

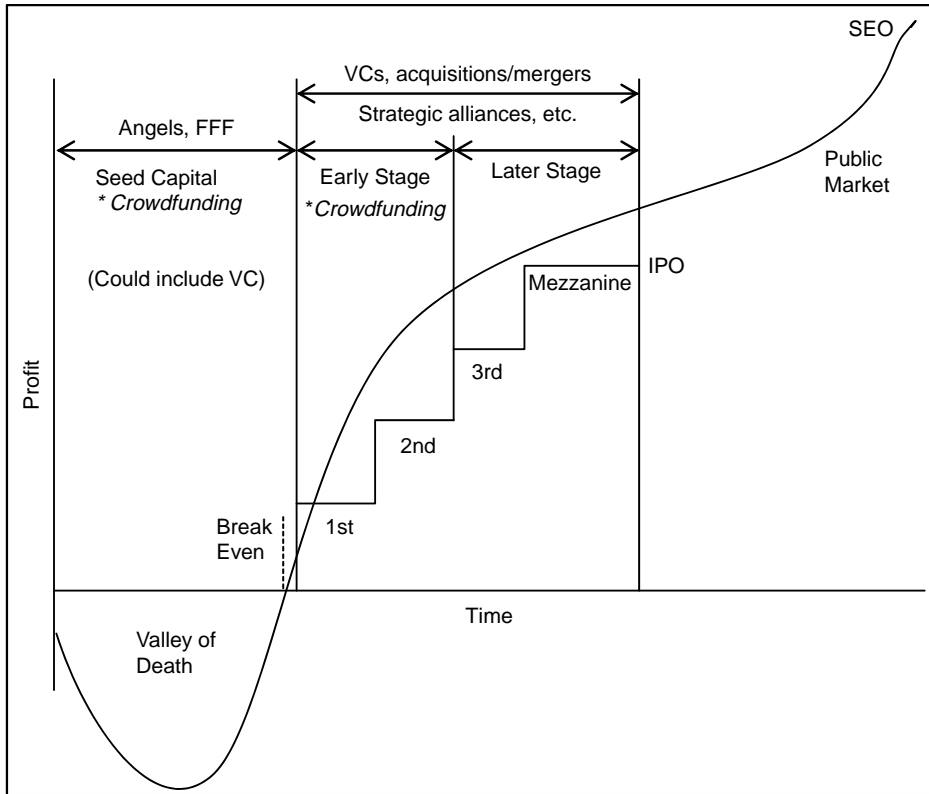


Figure 1. Stages of entrepreneurial firm development.

Source: Cumming and Johan (2009, 6).

Business angel financing is a good reference here and fuels the hope that crowdfunding may also be able to tap into hidden informal capital resources. (28)

Pope (2011) offers crowdfunding as a means to raise funds for micro start-ups. This article will not attempt to convince the reader of the capabilities of crowdfunding for funding entrepreneurs as this has been done many times over by articles such as Burkett (2011), Gennari (2012), Steinberg and DeMaria (2012), Watts (2012) and Wroldsen (2013), to name just a few.

The starkness of the early stage investment environment becomes even stronger when we look to literature. ‘Less than three percent of the thousands of entrepreneurs seeking funding from angel investors actually get funding [...]’ (Pope, 2011, 122–123). In addition, it appears that many angels only consider investing in businesses looking to raise larger amounts of funding with the majority of rounds raised from business angels in 2009/2010 greater than £100,000 (Collins and Pierrakis, 2012, 17). Crowdfunding can also help counter the historically low yield rates of angel investment. The yield rate is ‘[t]he percentage of investment opportunities that are brought to the attention of investors that result in an investment’ (Sohl, 2012, 2). Historically, this average is between 10% and 15% (Sohl, 2012, 2). Crowdfunding provides a potential opportunity to combat this extreme competitiveness.

The potential of crowdfunding is becoming even more pronounced as we are seeing not only decreasing angel investment but also the ‘Series A Crunch’. The Series

A Round is financing that usually occurs after the seed stage of venture capital. The crunch refers to recent drops in available funding for these funding rounds. Although it has been perhaps rightfully suggested that crowdfunding alone will not solve the Series A Crunch (Caldbeck, 2013), it does provide an additional avenue for potentially raising seed capital for very early stage ventures. Additionally, businesses may require a small tranche of funds between seed and Series A in the form of crowdfunding to fill in funding gaps or until the current Series A Crunch ends and liquidity increases. Shontell (2012, 2013) highlights several examples of companies that were effectively killed by the lack of access to Series A financing. It appears there is an overall decrease in risk appetite and liquidity from larger investors. Moreover, the industry is witnessing the very first evidence of a consolidation of some angel investors into angel network-supported crowdfunding platforms. One example of this is MicroVentures, a US-based crowdfunding platform, which advertises itself as ‘connecting angel investors and startups’ (MicroVentures, 2013). There is also Crowdfunder.com which connects local start-ups in the USA and Mexico with select groups of local qualified investors depending on where they are geographically located (Crowdfunder, 2013). Additionally, there is the investment platform, AngelList, which maintains a team of select Silicon Valley investors (AngelList, 2013).

The first step this article will take is defining what crowdfunding is, who the applicable players are and how the crowdfunding market operates. Immediately following each section will be a small piece of the greater crowdfunding investment model, labeled Parts 1–5, along with a description of its individual pieces thereafter. This is then followed by the entire model presented at once toward the end of this article. The article will highlight concepts established in crowdfunding research to create a process model of the investment procedure using flowcharting.

## 2. Definition of crowdfunding

There are numerous definitions of crowdfunding; however, there is no accepted or universal definition. It must be mentioned first that there are several terms used for crowdfunding such as crowdfinancing and crowdinvesting. From this point forward, this article will use the term ‘crowdfunding’. Before various definitions of crowdfunding can be given, one must first define the root word that crowdfunding originates from, which is ‘crowdsourcing’. The term crowdsourcing was originally coined by *Wired* magazine writer Jeff Howe (Unterberg, 2010, 121). Howe defines it as ‘[...] the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call’ (Unterberg, 2010, 122).

One can easily take Howe’s definition of crowdsourcing and replace the word ‘job’ with *loan/funding* to define crowdfunding, ‘the act of taking a *loan/funding* traditionally performed by a designated agent and outsourcing it to an undefined, generally large group of people in the form of an open call’. To begin to get a more well-rounded sense of what crowdfunding is, it is beneficial to look to literature for other definitions.

In the basest sense, crowdfunding is ‘[r]aising funds by tapping a general public (or the crowd) [...]’ (Lambert and Schwienbacher, 2010, 4). Lambert and Schwienbacher go one step further, defining it as ‘[...] an open call, essentially through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes’ (4). There must be some caution and clarification when referring to the ‘open call’ utilizing the internet because ‘[...] making a general solicitation for equity offering is

limited to publicly listed equity' (Belleflamme, Lambert, and Schwienbacher 2010, 5) in the case of an actual security being exchanged for money.

Voorbraak defines it as '[...] the process of one party requesting and receiving money and other resources from many individuals for financing a project, in exchange for a monetary or non-monetary return on investment' (2011, 1).

The consensus by most authors seems to be that crowdfunding is raising money from the general public, or the 'crowd', via an intermediary platform that is typically web-based. This article defines crowdfunding as the act of acquiring third-party financing from the general public via an intermediary, generally in the form of a web-based platform.

### **2.1. Defining user roles in crowdfunding**

There are three roles to fulfill in any crowdfunding effort. First, there is the intermediary '[...] who serves as a matchmaker between promoters and funders' (Burkett, 2011, 68). The central role of the intermediary, also known as the platform, is as '[...] matchmaker between promoters and funders' (Burkett, 2011, 68). Next, there are the fundraisers, entrepreneurs and others, raising funds via a crowdfunding platform. These fundraisers use crowdfunding to '[...] get direct access to the market and to gather financial support from truly interested supporters' (Ordanini et al., 2009, 5). Finally, there are the investors themselves, also defined as the 'crowd' from the term crowdfunding, who '[...] decide to financially support these projects, bearing a risk and expecting a certain payoff' (Ordanini et al., 2009, 5).

### **2.2. Two-sided market dynamics of crowdfunding**

Crowdfunding is the classic example of a two-sided market. Two-sided markets '[...] tie together two distinct groups of users in a network' (Eisenmann, Parker, and Alstyne 2006, 2). They are a direct extension of multisided platforms which aim to '[...] bring together two or more distinct but interdependent groups of customers' (Osterwalder and Pigneur, 2010, 77). In order to perform properly, they must operate under a platform which brings groups of users together (Eisenmann, Parker, and Alstyne 2006). A platform could be either a digital marketplace or website to exchange funds or even an intermediary or broker who connects investors with investees. This article will not discuss the technology behind digital crowdfunding platforms and will not discuss the associated technologies, for instance web programming, behind it because the disciplines involved are outside the realm of its focus. Additionally, there were no references found by this article's authors in literature to the programming architecture of crowdfunding platforms. There are some sources available on the programming behind crowdsourcing platforms, however, such as Aparicio, Costa, and Braga 2012 and Franklin et al., 2011.

The simplest analogy to describe a two-sided market is the real estate industry. There are home buyers and home sellers, served by the same property market. Overseeing the process as an intermediary is the real estate agent (platform) who connects sellers with buyers and vice versa. The fundraiser is comparable to the 'seller', and the 'buyer' to the investors (crowd).

There are three distinct roles in a typical two-sided network. As was previously discussed, there is the role of the platform or intermediary who introduces investor to investee; in the case of this article, a web platform or broker would fulfill this role. The other two roles aside from the intermediary are explained in the following:

[...] two-sided networks have a ‘subsidy side’, that is, a group of users who, when attracted in volume, are highly valued by the ‘money side’, the other user group. (Eisenmann, Parker, and Alstyne 2006, 3)

In the context of crowdfunding, the subsidy side generally consists of the investors who pay no fees to platforms or to fundraisers for investing in crowdfunded projects. The money side is the entrepreneur or organization that is raising funds. For example, [Kickstarter \(2012b\)](#) charges fundraisers a flat 5% fee from the project’s funding total but charges individual investors nothing. Another popular site, [Indiegogo \(2012\)](#), charges fundraisers a fee of 4% of the money raised if a certain fundraising goal is met or 9% if a fundraising goal is unmet and again investors pay nothing. Therefore, the fundraiser, or the money side, are charged a fee based on the amount of money raised on a crowdfunding platform and subsidize investors, or the subsidy side, who pay no fees to invest their money in different projects.

Utilizing [Eisenmann, Parker, and Alstyne’s \(2006\)](#) description of two-sided markets, additional elements from [Osterwalder and Pigneur \(2010\)](#) and additional elements provided by the authors of this article, a modified triangular model of a two-sided market representing crowdfunding was created ([Figure 2](#)).

As seen in [Figure 2](#) and as explained beforehand, a crowdfunding platform would fulfill the role of intermediary or platform provider. Project investors would satisfy the role of the subsidy side as they will be allowed to invest for free since their use of the platform will be financially supported by the money side fundraisers that pay fees based on their raised funds. Between the parties shown in [Figure 1](#), rules are ‘[...] the protocols, rights, and pricing terms that govern transactions’ ([Eisenmann, Parker, and Alstyne 2006, 5](#)). For this model of crowdfunding, the rules would govern and oversee transactions via the platform from both the investor and fundraiser sides. These rules deal, in particular, with how and when funds can be released to the fundraiser, which is discussed later in this article.

Furthermore, ‘[t]he platform creates value by *facilitating interactions* between the different groups’ ([Osterwalder and Pigneur, 2010, 77](#)). These interactions, particularly in the field of crowdfunding, take the form of network effects. [Hendler and Golbeck \(2008,](#)

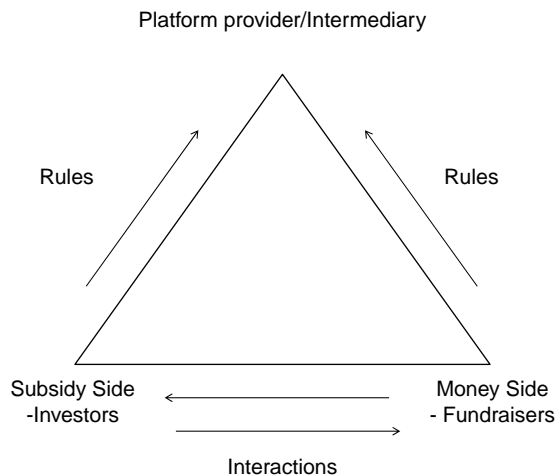


Figure 2. Two-sided market of crowdfunding.

Source: Based on [Osterwalder and Pigneur \(2010\)](#) and [Eisenmann, Parker, and Alstyne \(2006\)](#).

14) define them as ‘[...] the value of a service to a user that arises from the number of people using the service. At its core, it captures that value increases as the number of users increases [...]’. These interactions and accompanying network effects were not a part of Eisenmann, Parker, and Alstyné’s (2006) original hypothetical model; however, Osterwalder and Pigneur (2010, 77) correctly pointed out that ‘[a] multi-sided platform grows in value to the extent that it attracts more users, a phenomenon known as the *network effect*’. This synergetic relationship between investors and fundraisers is extremely important to the model created in Figure 2. In the case of crowdfunding, this means an increase in the number of investors should lead to an increase in the number of fundraisers and vice versa. This is of importance to crowdfunding platforms as they require a sufficiently large crowd from which to draw investment from and enough crowdfunding projects posted to attract an adequate number of investors.

### 3. Process flowcharting

The flowchart this article uses will feature several different symbols to represent different tasks in the investment process. This article will follow Harrington’s (1991) general setup for flowcharting. ‘The rectangles represent activities, and the lines with arrows connect the rectangles to show the direction of information flow and/or the relationships among the activities’ and the rectangles themselves should ‘[i]nclude a short phrase within each rectangle describing the activity being performed’ (88). Furthermore, flowcharting uses ‘[...] circle start and stop symbols to indicate where the flowchart begins and where it ends’ (88). Additional elements will be added where needed from other literary sources and will be properly cited as such.

#### 3.1. Flowcharting for business process modeling

Flowcharting is another way to describe business process modeling, whereas the latter is currently the preferred nomenclature. ‘The current generation of business process analysts prefers the term “process modeling” rather than flowcharting or mapping’ (Rosemann, 2006, 250). Additionally, the benefits of flowcharting must be briefly covered to show its aid in creating the investment model of crowdfunding:

The advantages of flowcharts centre on their ability to show the overall structure of a system, to trace the flow of information and work, to depict the physical media on which data are input, output and stored, and to highlight key processing and decision points. (Giaglis, 2001, 214)

Due to this ability to show the overall structure of a system, this article has chosen to utilize flowcharting to create its investment model of crowdfunding.

Flowcharting is quite often used as the tool to compose business process modeling. Havey (2005, 22) states that ‘[t]he design of a business process is intuitively a flowchart that outlines the steps performed over time in the resolution of a business problem’. Laguna and Marklund (2011, 110) reiterated this by stating that ‘[f]lowcharts are a fundamental tool for designing and redesigning processes’. Nysetvold and Krogstie (2006) said that business process modeling is based on a flowchart technique. An and Jeng (2005, 2069) go a step further, referring to business process modeling as ‘business process flowchart modeling’. They call it one of the ‘[...] most prominent approaches to simulate the behavior of business processes [...]’ (Jeng 2005, 2069).

This article’s flowchart is created from a functional perspective (Giaglis, 2001). ‘The functional perspective represents what process elements (activities) are being performed’ (Giaglis, 2001, 212). In addition, this article applies the top-down approach of flowcharting.

This works as follows: '[a]s each layer of the model is specified, substeps within each process are delineated at greater and greater levels of detail, until sufficient detail is reached [...]' (Kangaroo et al., 1999, 547). This article, as will be seen at the beginning of the model, has created a business process model of crowdfunding investment that will become increasingly more complex toward the end as opposed to the more simplistic beginning. This fits better with the chosen top-down approach as opposed to a bottom-up approach.

### 3.2. *Crowdfunding investment model – flow*

The model will begin with a traditional START and finish with an END terminal. Terminals indicate '[...]' the start or end of a process. The beginning terminal shape generally is labeled "start" or "begin". The ending terminal shape is labeled "stop" or "end" (Mazumder, Bhattacharya, and Yadav 2011, 371). By following the arrows moving away from START, one can work its way through the entire model by following the flow along the arrows.

This article will use the American National Standards Institute standardized flowcharting symbols and elements from Business Process Modeling Notation 2.0 where needed. There appear to be no uniform global standards in flowcharting symbols, or the author of this article was not able to uncover any information pointing toward a universal standard. All symbols, in light of this article, appeared to be standardized and merely separated by some rare symbols that will not be used in its flowchart. The fully constructed model will be presented toward the end of this article. The individual parts of the model will be highlighted and discussed after each of the succeeding sections, immediately following the sections describing the sum of their individual pieces.

## 4. **Direct versus indirect crowdfunding**

There are two different types of fundraising in crowdfunding campaigns, collectively known as direct and indirect. Direct crowdfunding is when the fundraiser makes a direct appeal to a specific audience via their own fundraising platform (for example, the fundraiser's own website) or to their own supporters (for example, a band raising money from its fans). Indirect crowdfunding is, on the other hand, a general appeal for funding to the unknown general public or 'crowd'. This is typically accomplished via an intermediary platform. Numerous platforms have appeared on the crowdfunding scene '[...]' such as Fundable, Kickstarter, Kiva, Sandawe, and SellaBand' (Lambert and Schwiembacher, 2010, 4). Their function is to '[...]' intermediate between entrepreneurs and potential crowd-funders' (4).

The distinction between direct and indirect is important because '[...]' at times entrepreneurs make use of [...]' crowdfunding platforms instead of seeking direct contact with the crowd' (Belleflamme, Lambert, and Schwiembacher 2010, 5). Burkett (2011, 86) reinforces this direct versus indirect distinction as well, describing how a fundraiser can either make '[...]' a pitch directly on its own website or indirectly through a crowdfunding intermediary [...]'.

The purpose of pointing out the distinction is to show that there is an option outside of using established crowdfunding intermediaries. However, if a fundraiser chooses to exploit direct fundraising, they would need to have a large enough crowd to raise funds from. Although there is no established minimum number of participants comprising the crowd in successful crowdfunding found in literature reviewed for this article, Howe mentioned 5000 as the minimum number of contributors for successful crowdsourcing campaigns (Accardi-Petersen, 2011, 211). In the opinion of this article's authors, this number would be too high to associate with crowdfunding. Kickstarter, arguably the world's most popular



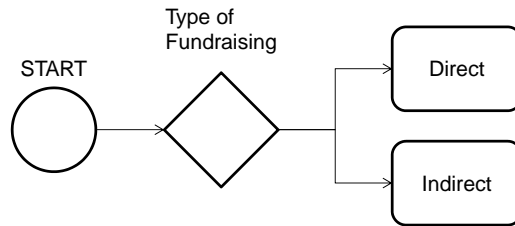


Figure 3. Part 1: crowdfunding investment model.  
 Source: Own illustration.

crowdfunding platform, states that ‘[t]he average pledge is \$71’ and ‘[t]he average project is raising around \$5,000’ (Kickstarter, 2012b). By dividing the average amount raised by the average pledge, we can come to a rough estimation of 70 investors per project on average, far lower than the 5000 users mentioned by Howe for successful crowdsourcing. This is obviously a very loose way of calculating; however, the British crowdfunding platform Crowdcube (2012) claims a similar number of 73 investors per project and German website Seedmatch (2012) asserts 163 as the average number.

#### 4.1. Crowdfunding investment model – Part 1

Figure 3 shows the first part of the crowdfunding investment model. Going to the right from the START terminal on the left, where the crowdfunding process begins, the model comes to a diamond labeled ‘Type of Fundraising’. This is the first decision of the investment model where a choice is made between one of the two types of fundraising: direct or indirect. The diamond shape was chosen to represent decisions that are to be made in the crowdfunding investment process, in this case whether the investor wants to invest directly with the crowdfunder (direct) or through an intermediary (indirect). Mazumder, Bhattacharya, and Yadav (2011, 371) say diamonds are used to indicate decisions signifying ‘[...] a point at which a decision must be made’. In general, flow lines point in indicating that options are given to the user when using decision diamonds (371).

This type of split with a decision diamond and then two alternative choices is called an exclusive choice pattern:

The Exclusive Choice pattern is defined as being a location in a process where the flow is ‘split’ into two or more exclusive alternative paths. The pattern is exclusive in that only one of the alternative paths may be chosen for the process to continue. (White, 2004, 5)

In this sense, the choice is mutually exclusive on either path of direct or indirect and they cannot be combined as an investment opportunity as a crowdfunder can only offer either a direct investment or an indirect investment.

The rectangles labeled ‘Direct’ and ‘Indirect’ represent activities in the model. Activities correspond to ‘[...] any type of process or activity [...]’ (Mazumder, Bhattacharya, and Yadav 2011, 371). These refer specifically to what type of fundraising the crowdfunder can choose to offer in this case.

## 5. Baseline funding models

The two general models of funding at the core of crowdfunding are ex post facto and ex ante. Ex post facto funding is ‘[...] when a product is offered after financing is provided [...]’ (Belleflamme, Lambert, and Schwiendbacher 2010, 10). Kappel (2009, 375)

describes it as a situation ‘[...] where financial support is offered in exchange for a completed product [...]’. In general, this means that the crowdfunder plans on giving the investor a proposed product in exchange for their investment. Often there is an existing prototype, blueprint or tentative design in place for a product that is awaiting manufacture prior to investment. This initial seed funding can then be used toward production costs. A famous example of this was the wildly popular Kickstarter crowdfunding campaign for the Pebble E-Paper watch, which is a watch that can sync with various smart phones using Bluetooth (Kickstarter, 2012e). For their financial support of the Kickstarter campaign to produce the timepieces, investors were to be given the watches in exchange for investments over \$99 (Kickstarter, 2012e).

The other type of funding, *ex ante*, is when ‘[...] investors finance a project that has not been completed’ (Rubinton, 2011, 5). Kappel (2009, 375) says *ex ante* crowdfunding is when ‘[...] financial support is given on the front end to assist in achieving a mutually desired result’. This means that a crowdfunder is not beyond the investigational stage of creating their desired product or service. A popular example of this is the Lowline Park project in New York City. Funding was raised to turn an ‘abandoned New York City trolley terminal into a vibrant community green space’ (Kickstarter, 2012c). It was obviously not possible to make a full-scale prototype park prior to an attempt at creating the actual park. So, money was raised in order to fully fund the project.

By funding before a product is completed, investors have a direct relationship with the realization of the product as opposed to *ex post* funding where a product or trial product has already been completed in advance of receiving funding. In contrast to *ex post* funded projects, *ex ante* funded projects ‘[...] do not require an established track record to work’ (Kappel, 2009, 385), meaning that a fundraiser is less likely to need a certain performance history as a business or organization to receive funding from investors. *Ex ante* funding has been ‘[...] increasingly used in the entertainment industry by independent filmmakers, artists, writers, and performers to bypass traditional keepers of the purse’ (376). It is also frequently used for other as-of-yet unmade creative services and products. Additionally, it appears that ‘[...] most crowdfunding is “*ex ante*”’ (Burkett, 2011, 63).

### 5.1. Crowdfunding investment model – Part 2

The activities, direct and indirect, are a carryover from the aforementioned Part 1 (Figure 4). After the crowdfunder has chosen their fundraising type, the process comes to the next decision marked ‘Investment Type’. Again the choice is mutually exclusive on either path of *ex post* or *ex ante* and cannot be combined as an investment opportunity either *has* an existing product (*ex post*) or *does not* (*ex ante*). The double

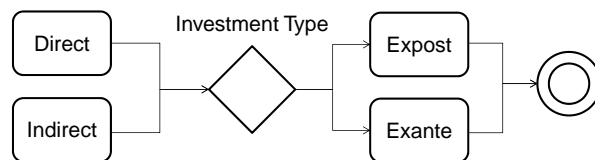


Figure 4. Part 2: crowdfunding investment model.

Source: Own illustration.

circle object immediately following ex post and ex ante is an intermediate event. [Owen and Raj \(2006\)](#) describe intermediate events as such:

[o]ftentimes an event happens while a particular process is being performed, causing an interrupt to the process, and triggering a new process to be performed. Or, a process will complete, causing an event to start, and a new process to be performed. You can model these intermediate events by placing an [intermediate] event symbol directly on the process that it is associated with. (14)

This is essentially a point in which a large piece of the process has been completed and a new portion of the process model will now begin; however, the full process has not been completed at this point. This first portion of the crowdfunding investment model is named ‘Type of Crowdfunding’.

## 6. Payout modes of crowdfunding

From the literature found for this article, there are four payout models of crowdfunding. These ‘Payout Modes’ are the rules regulating how and when crowdfunding platforms release funds pooled from investors to the fundraiser. This can potentially be a serious hurdle when funds are not allowed to be released to the fundraiser and in some cases the investment model can stop at this stage.

Under a normal crowdfunding project, the fundraiser sets a goal or ultimate amount of money they are attempting to raise with their campaign. Many platforms employ the all-or-nothing funding model, whereby the total amount of money set as the fundraising goal by the fundraiser when posting the campaign must be met or exceeded in order for the funds to be released. If this minimum amount of money is not pledged by investors then no money is given to the fundraiser. This is also known as the threshold pledge model ([Belleflamme, Lambert, and Schwienbacher 2010, 15](#)).

The main principle is that:

‘[...] the platform and the project initiator agree on a concrete pledging period (between two weeks and several months) and a so-called threshold, a targeted sum of money that must be reached via the contributions of the backers or crowdfunders before any financial transaction is generated. Below this threshold, there is no flow of funds. ([Hemer, 2011, 15](#))

Perhaps more simply described as the process ‘[...] whereby all pledges are voided unless a minimal amount is reached before some deadline [...]’ ([Belleflamme, Lambert, and Schwienbacher 2010, 11](#)). If the funding goal is not met, then the ‘[...] money is returned to investors’ ([Collins and Pierrakis, 2012, 15](#)).

Typically, pledged investments are held in a special account until the funding minimum is reached and the campaign is over. The money raised on the platform is ‘[...] transferred to and parked in an escrow account, which is managed by either the platform or by a partner bank’ ([Hemer, 2011, 15](#)). For instance Kickstarter uses Amazon Payments to handle all transactions and escrow accounts on its web platform ([Kickstarter, 2012a](#)).

[Kickstarter \(2012a\)](#) described their all-or-nothing process as such:

every project has a funding goal (a dollar amount) and a time limit (from 1–60 days) set by the project creator. When the deadline is reached, there are either of two results: (If Funding Successful: If a project has met or surpassed its funding goal, all backers’ credit cards are instantly charged and funds go directly to the project creator. Project creators are then responsible for completing the project and delivering rewards as promised. (If Funding Unsuccessful: If a project has NOT met its funding goal, all pledges are canceled. That’s it.

One of the most important aspects of the all-or-nothing model, from the investors’ perspective, is that it ultimately protects them from being overzealous investors. ‘The

all-or-nothing condition also protects the most optimistic and foolhardy investors from their own improvidence. Unless the entrepreneur can convince other, more rational, investors to participate, the foolhardy are not at risk' (Bradford, 2012, 140). Moreover, it makes fundraisers carefully choose a realistic goal of financing appropriate for the project. 'Since overreaching could cause the offering to fail, the entrepreneur has an incentive to request only the true minimum amount needed to fund the project. This should lead to more careful budgeting before the funding request is posted' (140).

It is also suggested that the all-or-nothing model also prevents fraudulent campaigns by fundraisers. The minimum funding requirement itself is a sort of pseudo-fraud vetting system. 'The theory here is that the more people that have performed checks for fraud, the more likely a potentially fraudulent proposal will be identified as such' (Collins and Pierrakis, 2012, 24).

The next payout mode is 'holding'. This mode 'involves the platform operator creating a subsidiary company as an individual holding for each of the crowdfunding ventures that are to be funded' (Hemer, 2011, 16). Hemer further clarifies the holding process as when '[e]ach holding owns the above mentioned shares of "its" venture and sells them to the crowd. It acts as a single investor in the crowdfunding venture, alongside other potential investors from the conventional capital market' (16).

Kappel (2009) explains the holding model through British music production crowdsourcing platform Bankstocks. 'Bankstocks [...] is owned and operated in the United Kingdom by Civilian Industries PLC ("Civilian"). Bankstocks is also the name for the securities (loan stocks) offered to investors on terms approved by the Financial Services Authority' (380). Every artist sets a target amount of money, similar to the all-or-nothing model, which is then divided into bandstocks, essentially stock shares which can be purchased by investors (380). Once enough funding is received, '[c]ivilian creates a subsidiary company (Albumco) specific to the recording project' (381).

The next mode is what Gerber, Hui, and Kuo (2012) refer to as the all and more model. In this model of funding, '[...] creators can keep the money they raise even though their funding goals are not achieved' (Gerber, Hui, and Kuo 2012b, 3). It is also referred to as the keep-what-you-raise funding model (Gerber, Hui, and Kuo 2012).

RocketHub employs this fundraising system as well as Indiegogo (Gerber, Hui, and Kuo 2012b). In order to motivate fundraisers to not set arbitrary funding goals, there are different fees based on whether the goal is met, not met or exceeded:

If creators reach or exceed their funding goals, RocketHub will offer an additional benefit, which is to waive the submission fees (4%) for creators' first five projects launched [...] Indiegogo uses the keep-what-you-raise funding model. However, a higher fee will be charged from creators if they don't realize the funding goals. (Gerber, Hui, and Kuo 2012, 4)

This higher fee for partially funded projects seems to be an industry standard: 'a number of platforms charge higher commissions for partially-funded campaigns [...]' (Crowdfunding Industry Report, 2012, 23).

The club mode was created as a way to offer pseudo-securities while avoiding securities regulations. 'A third group of companies has stayed away from offering securities and has offered club membership [...]' (Watts, 2012, 4). This can be done by '[...] recruiting potential funders from the crowd as members of a closed circle, which acts like an investment club' (Hemer, 2011, 17). With a simple change of language being used, saying *club member* instead of *shareholder*, the club mode has been able to avoid any complicated legalities. '[T]he crowdfunding participation is often structured in the form of making the participating crowd a member instead of a shareholder, such as BeerBankroll and MyFootballClub' (Schwienbacher and Larralde, 2010, 12).

A successful example of the club model was the purchase and takeover of British football club, Ebbsfleet United, by MyFootballClub, a members-only club:

[M]embers of MyFootballClub (who own the football club Ebbsfleet United in United Kingdom) are completely involved in the management of the club through their voting right. The contribution of fans (a membership fee of £35) allowed them to complete the takeover of the club and form a community with real decision power. (Schwienbacher, Belleflamme, and Lambert 2011, 7)

Also, another members club, BeerBankroll, raised ‘[...] \$2.5 million from its 5000 members’ to start a community-owned beer company that intended to share profits with its members (Lambert and Schwienbacher, 2010, 2).

Although it must be noted that the line between offering a type of club membership and crossing over into the sale of actual securities can often be blurred. This was proven in 2009 during an attempt to raise money via crowdfunding to purchase American beer company Pabst Blue Ribbon. Forza Migliozi saw that the Pabst Brewing Company was for sale for \$300 million; he launched BuyABeerCompany.com to raise money from the general public, to purchase it (Sacks, 2012, 40). He ‘[...] [promised] investors “certificates of ownership” and beer with a value equal to the amount invested [...] [and] reportedly received \$200 million in pledges from over five million individuals in the six-month period before the Securities and Exchange Commission (“SEC”) shut them down for failing to register’ as a security under the Securities Act of 1933 (Bradford, 2012, 6).

**6.1. Crowdfunding investment model – Part 3**

Part 3 of the model begins with a choice of payout mode (Figure 5). The diamond with four activities directly proceeding is a data-based exclusive choice decision gateway.

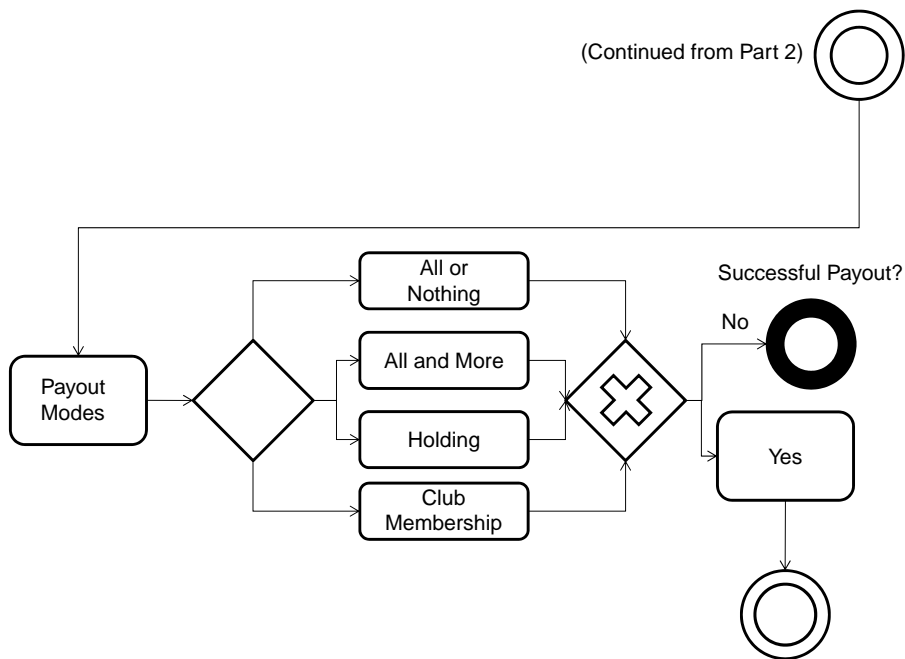


Figure 5. Part 3: crowdfunding investment model. Source: Own illustration.

In this type of gateway there are multiple but exclusive pathways determined by the process itself. White (2004) explains as follows:

[T]he expressions will be evaluated (in a predetermined order) and for the first expression that is determined to be true, the corresponding Sequence Flow will be chosen and the Token will continue down that path. Only one Token will exit the Gateway for each Token that arrives at the Gateway. (5)

The only change this article would make to the preceding quote would be to replace the term *token* with *flow*.

The next decision following the payout modes is an event-driven exclusive decision. In this case, whether or not the crowdfunding campaign is funded or not, this ‘event’ determines which path the process takes. ‘An event-based XOR gateway represents a branching point where the alternatives are based on an event that occurs at that point in the process flow’ (Owen and Raj, 2006, 18). This step is of great importance because if funding is not successful, the entire process stops as represented by the black circle. The black circle is called a final flow node and it signifies that these processes are now finished. The final flow node ‘[...] is an indicator that a particular path has completed [...]’ (White, 2004, 13). However, it is only this particular path where the process is stopped.

For example, Mollick (2013, 4) found in a study that out of 48,526 crowdfunding projects posted on Kickstarter, only 23,719 (or about 48% of those posted) were successfully funded. Kickstarter’s own published statistics show that only 46% of projects were successfully funded in 2011 and 43% in 2010 (Kickstarter, 2012f). In the case of this article’s model, the investment would not be able to proceed forward if, for example, while using the *all-or-nothing model*, the quota or required amount for funds to be release was not reached. In a sense, the investment process is held in queue until this stage is completed. However, if funding is secured, the process continues to an intermediate event and it goes forward from there.

## 7. General modes of investment of crowdfunding

There are three different general modes of investment in crowdfunding initiatives: passive investment, active investment and donation. Both Schwiembacher and Larralde (2010) and Metzler (2011) identified these three modes of investment. In addition to the three modes of investment found in the literature reviewed, this article leaves room open for other modes.

When an investor gives money to a fundraiser but is not active in decisions the company makes, this is known as a passive investment. Passive investment is a situation in which the investing firm is not seeking influence over the activities of the firm that it is investing in (Gilo, 2000). The best example of a passive investment is a regular bank loan. Although the success of the borrower is in the bank’s best interest, banks are not likely to be as actively involved with specific decisions the borrower takes. Most passive investments ‘[...] do not offer any possibility to investors to become actively involved in the initiative, such as voting for selected characteristics of the final product or provide working time to the company’ (Schwiembacher and Larralde, 2010, 13). Therefore, any entrepreneur who is seeking out passive investors is ‘[...] solely interested in raising money but not using the crowd as active consumers or giving up some control’ over the product (Schwiembacher and Larralde, 2010, 13). According to a study from Lambert and Schwiembacher (2010, 9), passive investments account for 60% of total crowdfunding initiatives.

Active investments, on the other hand, '[...]' differ from passive investments by granting investors the ability to directly affect the results of the entrepreneur's project' via their ability to allow investors '[...]' to actively participate in the project' (Rubinton, 2011, 6, 9). The best example of an active investment is a stock purchase whereby the purchaser or investor now actively owns a portion of the company he/she invested in and may have voting rights. In terms of crowdfunding, established companies tend to offer active investment over passive investment as they often have the organizational structures in place to allow investors a more active voice in the direction of their efforts. Active investments account for around 30% of crowdfunding (Lambert and Schwienbacher, 2010, 9).

The third mode of investment is donation-based and as the name implies, this is when an investor donates his or her money to a crowdfunding initiative. In this case, the investor is giving money to a cause without expecting monetary reward and the investment itself does '[...]' not yield the donor any tangible reward' (Rubinton, 2011, 6). In the case of donation-based investments, '[...]' the financial return seems to be of secondary concern for those who provide funds. This suggests that crowdfunders care about social reputation and/or enjoy private benefits from participating in the success of the initiative' (Lambert and Schwienbacher, 2010, 12). Lehner (2012, 3) says when it comes to the subject of social reputation that 'crowd investors typically do not look much at collaterals or business plans, but at the ideas and core values of the firm [...]' and thus at its legitimacy'.

After investors have donated their money to a crowdfunding cause, '[...]' there is no continuing involvement by contributors, but this technique invites larger numbers of contributors to make small contributions, hopefully amounting to a meaningful gift in the aggregate, in part as a show of personal support for the individual' (Hanley and Bork, 2012, 44). In order to achieve donations, fundraisers need to limit monetary incentives to more easily attract donations (Belleflamme, Lambert, and Schwienbacher 2010). By putting more weight on the outcome, fundraisers are indicating to investors that the cause itself is more important than monetary goals. Unsurprisingly, '[...]' the majority of donation sites are for charities and non-profit institutions [...]' (Griffin, 2013, 6). Pure donations constitute about 20% of crowdfunding initiatives (Lambert and Schwienbacher, 2010, 9). Though, this is not as popular a type of funding as active or passive investing, several large crowdfunding platforms offer it including '[...]' RocketHub, Indiegogo, Crowdrise, and Peerbackers' (Fink, 2012, 10).

There is certainly the possibility that other options are not covered in current literature or that other forms will appear in the future. Considering this, a fourth option of 'other' has been added. There are opportunities for hybridization; for instance, a donation could turn into an active investment, if the fundraiser also gives investors the ability to help determine project decisions. Another example of an alternative might be crowdsponsoring. Sponsoring, in this article's opinion, is not to be confused with donation. Sponsoring entails that a fundraiser would need to advertise or represent the product or service of the investing organization or person. Donation typically entails no reciprocation of action, meaning that in the prototypical donation case, the donator gives the money freely without expectation of a return of any sort. Additionally, a further difference in this article's opinion is that sponsorships are typically used to fund nonprofit ventures, whereas donations could be used in profit-oriented ventures.

Kaltenbeck (2011, 8) refers to crowdsponsoring as 'crowdsupporting' and calls it a '[...]' method for sponsorship with a non-financial return'. Hemer (2011) also identifies crowdsponsoring as an extension of crowdfunding. An ongoing example of crowd

sponsoring is the Solar Impulse project. The Solar Impulse project is an effort to make a solar-powered airplane solely through sponsorship money. The project is partially funded through the solicitation of donations in the form of direct sponsorships from the general public through its Angels Program (Solar Impulse, 2011). In addition, they also have several corporate sponsors including Deutsche Bank (Banking on Green, 2012). Since crowdsponsoring is an as-of-yet unestablished form of crowdfunding in the current literature reviewed for this article, aside from the aforementioned references, it is included merely as a potential example of other forms of crowdfunding investment.

### 7.1. Nonequity rewards

One of the most important issues involving the finance model of crowdfunding is how investors are rewarded for their investments. Since crowdfunding is not always operated in the same manner as traditional investments like stock and bond purchases, most investors are looking for tangible, guaranteed rewards, monetary or otherwise, from fundraisers in exchange for their investment in crowdfunded projects. These come in different forms, often inhibited by legal restraints depending on where the fundraisers are based or the type of fundraising.

An important thing to note specifically for entrepreneurs is that:

crowdfunding enables entrepreneurs to more quickly and easily identify supporter-investors who are willing and able to fund their businesses or projects. These investors may be more likely to be engaged with, and even passionate about, the ventures they are funding than repeat players in the seed, angel, or venture capital game. (Heminway and Hoffman, 2011, 931)

First, intrinsic motivation is most readily associated with the donation style of investment whereby investors are not expecting a tangible reward in exchange for their money. Sometimes investors are not wholly motivated by a financial goal but rather want to '[...] participate into [*sic*] innovative projects, be able to say 'I did it', obtain recognition and personal satisfaction. These are intrinsic motivations' (Schwienbacher and Larralde, 2010, 17). Kleemann, Voß, and Rieder (2008, 17) say '[a]n intrinsically motivated person, on the other hand, takes up an activity for its own sake – or for fun's sake' rather than purely for financial reasons. Hemer (2011, 14) identifies the following intrinsic motivations in crowdfunding:

[...] personal identification with the project's subject and its goals; contribution to a societally [*sic*] important mission; satisfaction from being part of a certain community with similar priorities; satisfaction from observing the realisation and success of the project funded; enjoyment in being engaged in and interacting with the project's team; enjoying contributing to an innovation or being among the pioneers of new technology or business; the chance to expand one's own personal network; or the expectation of attracting funders in return for one's own crowdfunding project.

This article will delve no further into the psychology of why people donate as it is outside the scope of its purpose, but it is important to note it as a possible motivation for donation incentive in crowdfunding. Some examples of resources on the reasoning behind donations are Van Slyke and Brooks (2005), Vesterlund (2006) and Aaker and Akutsu (2009).

Patronage style rewards are an alternative form of reward; they are compensation for investment in the form of gifts or products associated with the fundraiser, hence the word 'patron' in the term. Burkett (2011, 64) describes patronage rewards as follows: '[i]n exchange for a contribution, most current crowdfunding sites only allow promoters to reward funders with nominal perks or "thank-you" gifts. Because the contributions are effectively donations, this is called "patronage crowdfunding"'. A popular example of



this type of reward is through German-based website Sellaband, where supporters can fund the production of records for independent musicians. In exchange for financially supporting musicians, users are entitled to items such as '[...] free downloads, signed T-shirts and backstage passes' (Sellaband, 2012). These rewards are also sometimes referred to as patronage perks. In the entertainment industry, for example, they can include things such as '[...] film credits or album liner notes, advanced autographed copies of the work, or backstage access at a performer's show' (Burkett, 2011, 64) in exchange for investment. The advantage of the patronage model is that it is not regulated by securities laws as no equity is being exchanged for funding, merely various perks offered by the fundraisers in exchange for investments. From the investors' perspective they are both supporting a cause they feel is worthy and receiving a tangible reward in exchange for their financial support.

The next mode of reward is the prepurchase or preorder model. This is rather uncomplicated; investors purchase an as-of-yet unproduced product, that is, they preorder it in exchange for an investment of a certain amount as set by the fundraiser. Essentially, investors '[...] receive the product that the entrepreneur is making' (Bradford, 2012, 16). A contemporary example from Kickstarter is the Ouya game console which rose over \$2.3 million of funding from investors in its first 24 hours of offering (Kickstarter, 2012d). The makers of the console promise to give each investor one of the gaming devices before it is released to the general public, in exchange for investments of \$99 or more (Kickstarter, 2012d). In the case of Ouya and most preorder campaigns, the price of the investment is lower than the price the product will sell to the general public once produced, in other words the investment price is '[...] below the planned retail price' (Bradford, 2012, 17).

This is an excellent way for an organization to gauge interest in its potential product and to cover the costs of initial production. One of the associated advantages is signaling which is described by Hemer:

[h]aving found a large number of supporters – which is visible to everybody who consults the CF-website – means, on the one hand, that these already form a core market and, on the other hand, that they can be easily mobilised as multipliers and sales agents within their personal (social) networks. (2011, 28)

The downside of this mode is that the product may never be produced, nor is there any penalty if the product is not produced. Funders might not only lose their money but may also not receive the promised product if a fundraiser is unsuccessful in producing their promised creation. Even given the potential downsides, the prepurchase model is currently '[...] the most common type of crowdfunding [...]' (Bradford, 2012, 16). An additional advantage for prepurchase is that it does 'not involve securities for purposes of federal law' (32) along with the patronage style and donation; these investment perks are merely gifts in exchange for investment.

## 7.2. *Equity-based rewards*

The last type of compensation is equity-based. This is when a fundraiser sells an equity stake, or shares in their company, in exchange for investment from crowdfunders. First, it must be mentioned that investors in the USA will find it very difficult to participate in crowdfunding in exchange for equity. '[I]t is illegal in the United States to offer or sell a "security" without either complying with arduous registration requirements or wading through the difficult process of obtaining an exemption' (Burkett, 2011, 64). Any organization offering the sale of a security in the USA must be registered under the

Securities Act of 1933 (Bradford, 2012). The main issue is that general solicitations to the public for equity offerings are limited to companies that are publicly listed (Belleflamme, Lambert, and Schwienbacher 2010). Crowdfunding in and of itself qualifies as a general solicitation, making it very hard for US-based crowdfunders to list equity-based deals for investors from the general public. It must be noted, however, that recent legislation in the USA is expected to lower requirements for the sale of equity, specifically in regard to crowdfunding, making it possible for crowdfunders to sell securities. This article will not discuss legal issues in depth. There are ample resources dealing with the legal aspects of crowdfunding including Burkett (2011), Heminway and Hoffman (2011), Bradford (2012) and Hazen (2012).

There has been a massive growth in equity-based crowdfunding, particularly in Europe with an increase of 114% in equity-based offerings between 2007 and 2011 (Crowdfunding Industry Report, 2012, 17). This expansion was mainly attributed to ‘growth in the number of European platforms’ (17).

One form of equity-based reward is patronage plus, an extension of the aforementioned patronage model, which takes the patronage model one step further. This is typically when an investor is entitled to not only rewards but also monetary compensation:

[...] [T]he website Bandstocks allows residents in the UK to contribute money to help bands produce new albums. Like with patronage crowdfunding, Bandstocks funders receive certain in-kind perks, such as a copy of the recording or VIP privileges. Unlike patronage crowdfunding, however, Bandstocks’ funders acquire a financial interest in the recording. In other words, they are entitled to a share of the net receipts generated by the album. (Burkett, 2011, 74–75)

Additionally, investors on the Sellaband platform are sometimes ‘[...] rewarded with a royalty on future sales’ (Ordanini et al., 2009, 24). The benefit from this model is that the financial success of the venture has a direct correlation with evangelism from financial backers and vice versa. This means that funders are more likely to advertise the product to the general public when they know that they will benefit monetarily by the increased popularity in the form of increased sales of the product. It is a popular view that the patronage plus model will be more successful in the long term because ‘[...] fans become literally invested in the success [...]’ of the artist or product (Kappel, 2009, 376).

Another reward mode is profit sharing. This is where an investor receives a share of profit from the fundraiser in exchange for investment. Lambert and Schwienbacher (2010, 5) included this in their reward options: ‘[...] cash, bonds, stocks [and] profit sharing [...]’. An example of profit sharing is through Hong Kong-based Grow VC. The platform requires users to ‘pay a subscription fee – between \$25 and \$140 a month, depending on how much equity that member wants [...] [then pools together] [...] 75% of these fees in a community investment fund’ (Burkett, 2011, 75). Subscribers then ‘allocate a portion of the community investment fund to particular entrepreneurial projects that they think have the most potential for return’ (Burkett, 2011, 75). This investment is then held for three years, at which point Grow VC takes ‘25% of profits from the investment [...] [then] [...] those members who invested their portion of the fund into a successful project receive a certain percentage of the profits’ (Burkett, 2011, 76).

In the light of some literature, and in the opinion of this article’s authors, profit sharing is a form of equity-based security. Heminway and Hoffman (2011, 906) said, ‘[c]rowdfunding interests that include revenue-sharing or profit-sharing benefits appear to be equity-type capital investment vehicles’. Securities law also tend to include ‘[...]

any profit-sharing agreement [...]’ (Hazen, 2012, 1740) as a security just like equity-based investments.

An additional type of reward model that is related to equity tenders is private placement offering. ‘In a private placement, an issuer puts out an offer to a select (private) group of qualifying recipients’ (Watts, 2012, 8). This is similar to crowdfunding in that crowdfunding is also limited to a select group of individuals that are engaged in crowdfunding investments; however, in crowdfunding campaigns the crowd is typically unknown to the fundraiser. Qualified recipients, also known as qualified or sophisticated investors, are typically investors that have an existing relationship with the fundraiser and/or are considered to be well experienced in investing. Though they are different, this does not mean that a crowdfunding project cannot qualify as a private placement offering if the crowdfunding offer is only tendered to a select group of crowdfunders.

In the case of private placement, ‘[...] the “crowd” would be comprised of friends and family’ (Burkett, 2011, 77), or more simply put, ‘[...] those [investors] who have a “substantial, pre-existing relationship” with a known fundraiser (77). The reason for this focus on investors with preexisting relationships is that this is a way around existing US and EU law regarding securities regulations. Although fundraisers investing in US-based offers must keep in mind that ‘[...] the SEC’s Division of Trading and Markets warns that anyone finding investors for a company, including venture capital, angel financings, and private placements, may need to register as a broker’ (Bradford, 2012, 55).

An example of this type of scheme is ProFounder, ‘which functions as a matchmaker between promoters seeking capital in the United States and those who have a “substantial, pre-existing relationship” with a given promoter’ (Burkett, 2011, 77). In the case of ProFounder, the crowd is ‘[...] comprised of friends and family [...]’ and is self-described as a ‘[...] “community-based crowdfunding platform,” as opposed to the normal crowdfunding platform where promoters appeal to the masses without the need for a preexisting relationship’ (77).

### 7.3. Crowdfunding investment model – Part 4

The first decision of Part 4 has mutually exclusive paths to follow based on the four general modes of investment (Figure 6). This is a fairly simplistic procedure; each path leads directly to their accompanying reward models on the other end of the arrows. Donation has only one type of reward identified in literature reviewed for this article, intrinsic value, and therefore ends at this point on the final flow node. Since ‘Other’ is nonspecific in terms of rewards, its path also ends here. At this point, all elements of the crowdfunding investment model have been fulfilled for these types of investment modes and the model ends here.

Passive investment and active investment have multiple reward types and as such are succeeded by decision diamonds which represent the multiple reward options available to fundraisers. The diamond after passive investment represents nonequity-based reward options. The diamond after active investment represents equity-based reward options.

Starting with the two rewards on the top, prepurchase and patronage, they all filter into the black final flow node as these reward systems do not have any legal issues associated with them in regard to financial transaction or securities regulations, or at least none that were found in the literature this article reviewed. Hence, the crowdfunding investment model ends for them here. Equity, private placement offer, profit sharing and patronage plus all lead toward an intermediate event that will continue to Part 5 of the model.

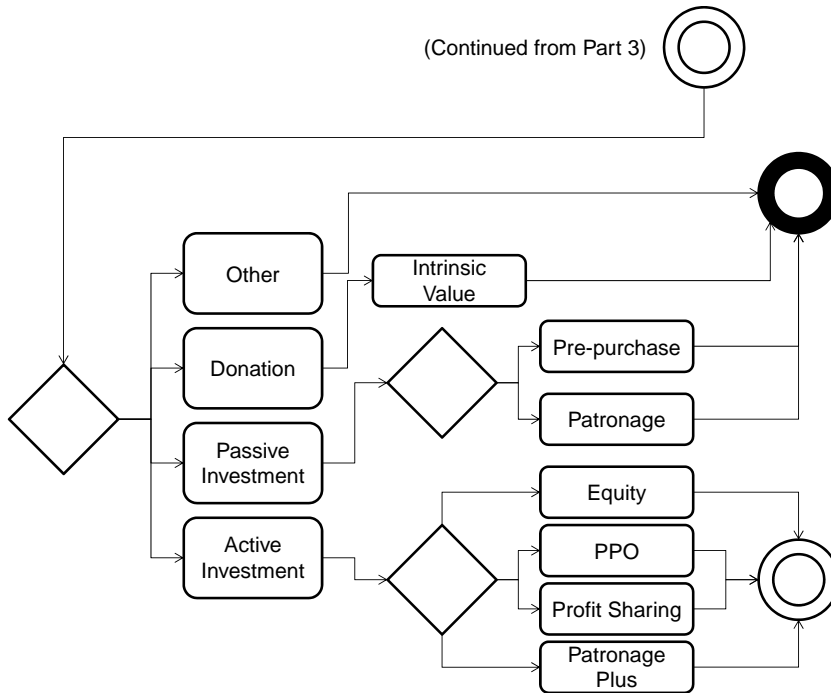


Figure 6. Part 4: crowdfunding investment model.

Source: Own illustration.

## 8. Crowdfunding investment model – Part 5

The first symbol is known as an event-driven gateway (Figure 7). The purpose of this type of gateway is to show that ‘[t]he first Event that occurs will trigger the path that will be taken to the exclusion of any other path from the Gateway [...]’ (White, 2004, 17). For the purposes of this article’s model, it means that when there is an equity-based transaction, sometimes it is known in advance that the transaction was in fact a securities transaction, but not always. ‘The actual decision on which branch is activated is made by the environment and is deferred to the latest possible moment [...]’ (Russell et al., 2006, 4). This means that in the event it is known that a security has been invested in and needs no confirmation, they would continue to the securities exemptions stage to look for applicable exemptions.

The last decision determines whether the equity investment was successful or not due to legal or other issues. If unsuccessful, the process stops here on the final flow node. If successful, the user proceeds to reinvest and determines whether to reinvest; if he/she chooses to reinvest, he/she proceeds back to the START terminal. This final point will be added in the complete flowchart shown in Figure 8.

## 9. Crowdfunding investment model

Here the completed model of crowdfunding investment can be seen with all of the ‘Parts’ mentioned in the previous sections put together. The notable aspects of the completed model are the swim lanes, pools and the reinvestment arrow which was described in the previous section.

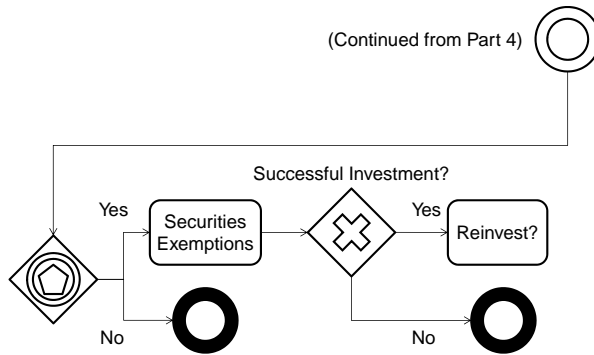


Figure 7. Part 5: crowdfunding investment model.  
 Source: Own illustration.

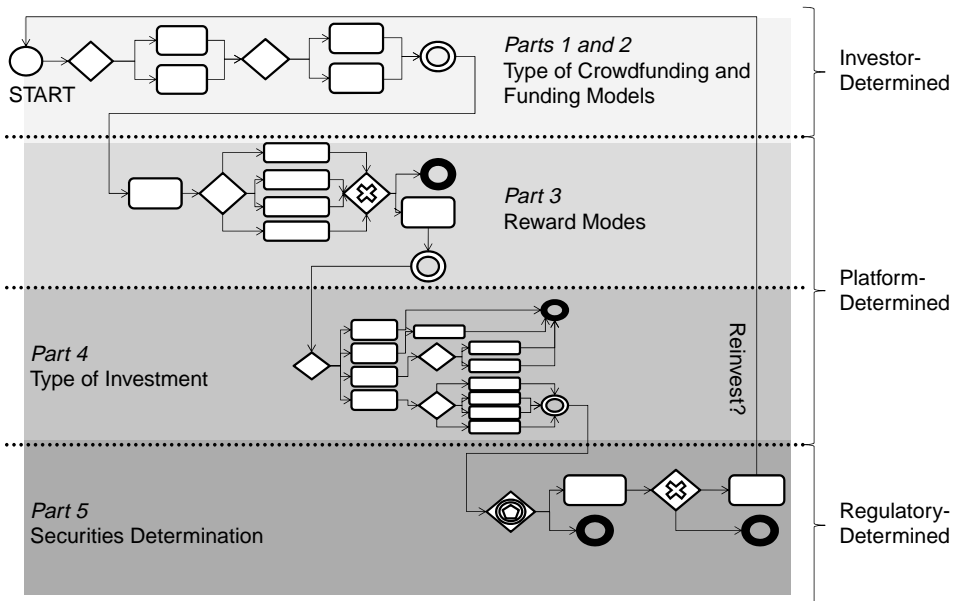


Figure 8. Crowdfunding investment model.  
 Source: Own illustration.

Kosalge and Chatterjee (2011, 518) say that swim lanes are ‘[...] a commonly used visual representation in process flow diagrams, where vertical lines are drawn on paper to demarcate the domain of a person, a group, or an object’. In the model above, they represent the four gray-shaded areas separated with dotted lines. Parts 1 and 2 combine to represent the type of crowdfunding and funding models. They together are represented by the pool called ‘Investor-Determined’, meaning they are noteworthy as areas where investors have the most influence. Pools are used to ‘[...] specify “who does what” by placing the events and processes into shaded areas called pools that denote who is performing a process [...] [a] pool typically represents [...] things such as functions [...]’ (Owen and Raj, 2006, 9). In the model above, they differentiate the crowdfunding investment processes into the relevant players: investors, platform and regulators. The swim lanes are used to further partition pools (Owen and Raj, 2006, 9) as mentioned earlier.

Part 3 in the second swim lane represents the reward modes of crowdfunding. Part 4 in the third lane signifies the type of investment. Both Part 3 and Part 4 represent areas that are platform-determined. In this sense, the platform is representing the interests of the crowdfundee as they have the power to make decisions on the process via the platform. Part 5 represents equity-based crowdfunding as denoted by the swim lane name ‘Securities Determination’. This area is determined by the regulatory structure surrounding the crowdfunding deal.

## 10. Conclusion

This article’s model appears to be the first and only conceptualized crowdfunding investment model, in light of the present literature on crowdfunding. It also seems to be the first attempt at accumulating all relevant subject matter involving the crowdfunding finance process from existing literature.

Two important findings of this article involved the identification of bottlenecks in the investment process that were not recognized in literature reviewed for this article. First, in Part 4 of the model, the delays concerning the payout models are critically important to crowdfunding investment. This is a stage where the entire funding process can stop. Furthermore, in [Figure 5](#), it is also imperative to recognize how varied legal issues can both help and hinder the equity-based crowdfunding offer.

In the opinion of this article’s authors, future investigation should be concentrated on identifying the various legal aspects of the crowdfunding process that impact its model. There are many open aspects on the end of the model, especially in regard to legal issues and reinvestment as well as other gaps that can be filled in. Moreover, the current literature that was reviewed for this article did not focus on elements of successful or unsuccessful crowdfunding from the investor’s standpoint and how that would affect reinvestment rates. It is important that future research focuses on reiterations of the model it proposes as well as filling in the holes that are certainly present.

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