7. Crowdfunding: A Disruptive Technology for Commercial Banks?

Introduction

In May 2013, Google announced an investment of $125 million in the peer-to-peer crowdfunding firm Lending Club. In the same month, Google Ventures (the venture capital arm of Google), together with Union Square Ventures and other VCs, invested $7.5 million in Series A funding for CircleUp, a crowdfunding platform that allows small businesses to sell equity to accredited investors. Does Google's investments in crowdfunding mark the beginning of an era in which tech giants provide financial services? Is crowdfunding a serious threat to commercial banks? Does it have the capacity to displace banks in filling the financial needs of business and individuals? These are some of the questions that motivate this essay.

In the first part, we provide a definition of crowdfunding as well as examples of some of the most popular platforms. This is followed by a description of current trends in crowdfunding including the analysis of the JOBS Act of 2012- a legislation that encourage small business financing through crowdfunding sites. In the second part, we argue that lending- and equity-based crowdfunding are disruptive innovations for commercial banks using the definition of disruptive innovation developed by Clayton Christensen back in the nineties. In the third section, we explore a series of alternatives to cope with disruptive innovation and finish with a list of topics for further discussion.

The wisdom of the crowd

Technological change is transforming the interaction between banks and their clients. Banks have been very successful at integrating on-line and mobile technologies with their regular business. Today, mobile banking is rapidly displacing the bank branch as the main channel for interaction between banks and increasingly empowered consumers. According to the Fed's Consumers and Mobile Financial Service Survey, at the end of 2012, almost two thirds of banked consumers used online banking in a 12-month period, while one third of banked consumers declared having used mobile baking (see *A Discussion on the Consumers and Mobile Financial Services Survey of 2013*, U.S. Outlook 2Q13). Online and mobile banking are examples of sustaining technologies (Christensen, 1997), meaning those that improve a company's processes and products. However, the internet has also brought a new set of disruptive technologies and business models that challenge the common way of doing things: this is the case of crowdfunding.

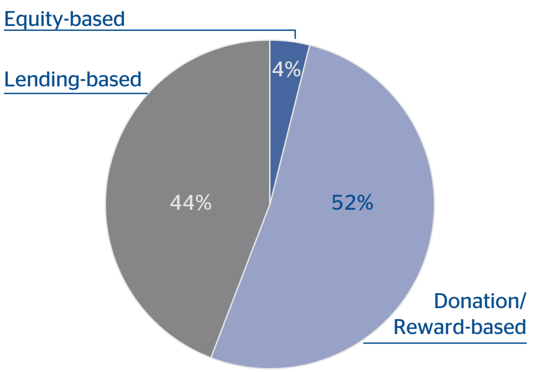
Crowdfunding is the practice of funding a project by raising money from a large pool of people (commonly known as "the crowd"). Financing can take the form of donations, loans, or money in exchange for equity. Crowdfunding is typically done through internet-based platforms.

There are four main categories of crowdfunding: rewards, charity, lending and equity-based. In rewards-based crowdfunding, funds are contributed in exchange for future goods or services. In charity-based crowdfunding, individuals and organizations accept donations from the general public. Reward- and charity-based are the most common forms of crowdfunding and are a good option for non-profit organizations, social causes, artistic projects, and product development. Companies like Kickstarter and Indiegogo are prominent examples of rewards-based crowdfunding. Since their creation, these companies have helped thousands of creative projects to be funded by millions of people through their platforms.

Lending-based crowdfunding allows individuals and businesses to lend money from the "crowd" and repay it with an interest. Peer-to-peer lending sites like Lending Club or Prosper are used to finance small businesses, home improvements, medical treatment, vacations, and purchases of durable goods. Loans are approved based on the borrower's credit score and no collateral is required. On the other hand, equity-based crowdfunding allows companies to get capital from the crowd by selling equity to accredited investors. In general, companies who want to be listed in equity-based platforms have to meet certain requirements like generating certain amount of revenue and passing a series of background checks.

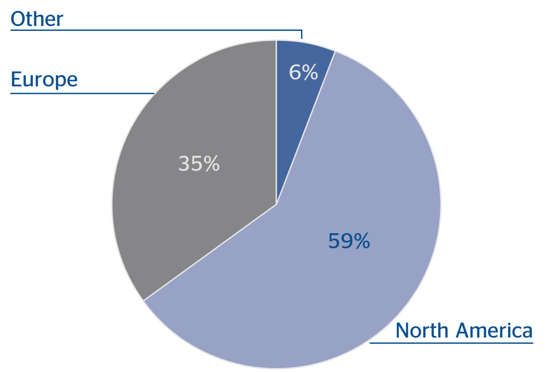
Data produced by the consulting firm Massolution shows that in 2012, the amount of funds raised through crowdfunding platforms worldwide was $2.7bn. From this, 52% or approximately $1.4bn has been raised through donation/rewards-based platforms, another 44% was raised through lending-based platforms and the remaining 4% came from equity-based platforms. In terms of growth, from 2011 to 2012, funds raised through rewards/donation-based platforms increased 85%, lending-based crowdfunding rose by 111%, while equity-based increased 30%. Massolution expects crowdfunding volumes to increase 81% in 2013 to $5 bn. Today, most crowdfunding is done in North America and Europe.

Chart 39
Funds Raised Through Crowdfunding Platforms in 2012 by Type



Source: Massolution. 2013CF The Crowdfunding Industry Report

Chart 40
Funds Raised Through Crowdfunding Platforms in 2012 by Region



Source: Massolution. 2013CF The Crowdfunding Industry Report

Currently, equity-based crowdfunding is restricted to accredited investors, meaning high net worth individuals. It is also constrained by prohibitions on general solicitation and general advertising. This partially explains why equity-based crowdfunding has grown at a lower rate than other kinds of crowdfunding. However, the situation could change.

On April 5 2012, President Obama signed into law, the Jumpstart Our Business Startups Act that encourages small business funding through crowdfunding. The JOBS Act is aimed at facilitating small business access to capital markets. First, it creates a new definition of "small business" called emerging growth companies, firms with annual revenues no higher than $1 bn. Second, it eases some of the rules that govern initial public offerings and allows companies to increase the number of shareholders permitted before they must be registered with the SEC. The JOBS Act also creates a new exception of the Securities Act of 1933 that encourages the use of equity-based crowdfunding platforms. In addition, the law allows individual non-accredited investors to buy equity in small amounts in proportion to their annual income or net worth. As exciting as it looks for small business and individual non-accredited investors, the implementation of the JOBS Act is still on hold because the SEC is still writing the rules needed to make the provisions operable. This is a factor of uncertainty surrounding the future of equity-based crowdfunding.

Government intervention in small business lending is not new. For instance, the Small Business Administration's financial assistance programs are a testimony on government's interest in supporting small businesses. In addition, five years of loose monetary policy have lowered interest rates and eased credit conditions for entrepreneurs. Nevertheless, despite fiscal and monetary stimulus, lending remains subdued. The JOBS Act is a different kind of response to this problem in the sense that it explicitly recognizes the potential of an emerging and innovative business model in meeting the capital needs of a sector that supports 3 out of every 4 jobs in the country.

Table 5

Summary of Key Provisions in the JOBS Act of 2012

Public advertising or solicitation in the Securities Act of 1933	• Instructs the SEC to revise Rule 506 of Regulation D in order to allow general solicitation and advertising for offerings that are exempt from registration under Rule 506. General solicitation and advertising is permitted as long as buyers of these offerings are accredited investors.
Crowdfunding	• A new exception to the Securities Act of 1933, section 4(6), allows securities to be sold in small quantities to large pools of non-accredited investors using crowdfunding platforms. • Securities must be sold through a broker or funding portal that complies with the requirements of the new section of the Securities Act. • Companies can raise up to $1 million per year. • Individual non-accredited investors are permitted to invest according to their annual income or net worth. o The greater of $2,000 or 5% of net income or net worth if these are lower than $100,000. o Up to 10% of net income or net worth if these are greater or equal than $100,000, Investors are subject to a cap of $100,000
IPOs for Emerging Growth Companies	• Creates a new category of issuer called "emerging growth company", an entity with less than $1 bn in annual revenue during its most recent fiscal year. • Emerging growth companies are allowed to file for an initial public offering under softer rules than non-emerging growth firms: o File the registration statement with the SEC until 21 days prior to the start of a road show with only two years of audited financial statements. o Omit certain disclosures required by Sarbanes-Oxley and Dodd-Frank. • Emerging growth companies will not be subject to comply entirely with SEC reporting rules until: o Achieving $1 bn or more in annual revenue. o Raising in excess of $1 bn in non-convertible debt over a three-year period o Being considered a large accelerated filer by having at least $700 million of outstanding shares in the hands of the public o Reaching the last day of the fiscal year in which the fifth anniversary of the pricing date of the IPO falls.
Number of Shareholders	• Under current legislation, companies with at least 500 shareholders and total assets in excess of 10 million are required to register with the SEC. The JOBS Act allows a company to have 2000 total shareholders or 500 who are not accredited investors before being required to registered with the SEC

Source: BBVA Research & Haynes and Boone, LLP

Should banks be concerned about crowdfunding?

After considering how crowdfunding works and how important has become for individuals, investors and the government, the next step is to discuss some of the implications of crowfunding on the banking industry. In the following paragraphs we argue that lending and equity-based crowdfunding are disruptive technologies for the banking industry with the potential to displace banks as the primary source of funding for personal and small business loans.

The term disruptive technology or disruptive innovation was coined by Harvard Business School's Professor Clayton Christensen. It is defined as "a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors."[1] Every certain period of time big companies have to decide what to

[1] www.claytonchristensen.com/key -concepts/

do with disruptive innovations at the bottom of the market. Should they embrace them and make them part of their core business? Or, should they ignore them and keep doing what they do best? Generally speaking, this is the "innovator's dilemma" stated by Professor Christensen back in 1997.

A different value proposition

Disruptive innovations tend to offer different value propositions than the industries they disrupt. Very often, these value propositions are focused on simplicity. Contrary to banks, crowdfunding firms don't offer elaborated financial products such as credit cards, mortgages, insurance or mutual funds. Instead, they limit their offer to a simple product offering either a basic personal loan that can be used for different purposes or brokerage services for companies seeking capital through equity selling. For example, LendingClub offers peer-to-peer loans of up to $35,000 and borrowers may use these loans for a variety of purposes: medical expenses, home renovation, vacations, debt consolidation, pay off credit cards, business expansion, etc. The simplicity of crowdfunding's value proposition rests on two pillars: regulation and technology.

Like banks, lending and equity-based crowdfunding provide financial intermediation services to business and individuals; however, they do it in a different way. Crowdfunding relies on the internet to connect potentially large pools of business and individuals with capital/investment needs. This is different from the traditional banking model that relies on a combination of internet based services, such as on-line and mobile services and traditional services such as branches and ATMs.

Another important difference between crowdfunding and banks has to do with regulation. Crowdfunding platforms do not raise deposits and thus, they are not regulated by the FDIC or the Federal Reserve. Although the SEC is expected to regulate equity-based crowdfunding, it is still unclear who will regulate the entire industry. This sort of regulatory vacuum significantly reduces the cost of compliance and allows platforms to speed up processing times. The combination of no physical location and limited regulatory costs allows crowdfunding firms to keep operating costs low and offer better terms to their clients.

Reaching the bottom of the market

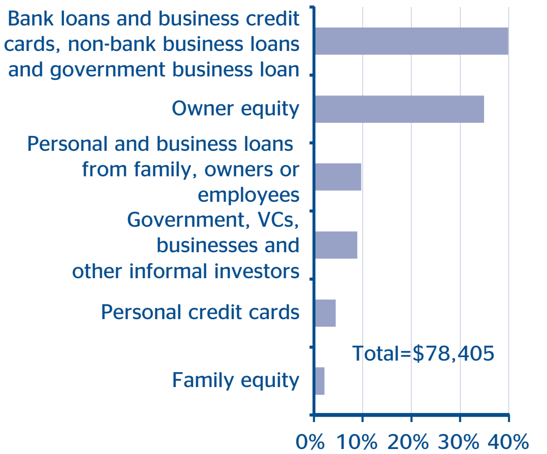
An important characteristic of disruptive innovations is that they start by serving the "bottom of the market", meaning segments that big companies may consider unprofitable. The needs of these segments differ significantly from those of mainstream customers. In the banking industry that bottom includes the de-banked and small businesses, segments that crowdfunding seems to be serving with relative success. Companies like Kiva, for example, make use of crowdfunding to produce micro loans that benefit communities in need across the world. With this kind of platforms, an American lawyer could fund a Zimbabwean peasant to buy seeds. Companies like Kiva are an example of social enterprises with the goal of helping communities to access credit and overcome poverty.

Small businesses tend to be at the "bottom of the market" too. Because it may take a couple of years before new small businesses generate a stable stream of cash flow, they need several capital injections at their early stages in order to expand and operate in a highly competitive environment. This would make them a perfect target for the banking industry except for the fact that failure rates are elevated and it is difficult to assess the ability of small businesses to repay their loans, a situation known as the "informational opacity" problem.[2] This creates a paradox. On the one hand, small businesses still rely on banks as their primary providers of funding (either directly through small business loans or indirectly through personal credit cards), but on the other hand, small business loans represent only a small fraction of depository institutions' assets, especially for large banks.

Not surprisingly, the majority of small businesses lending falls on small community banks that solve the informational opacity problem by establishing a close relationship with local borrowers. In the United States, approximately half of small businesses get none or some of credit they apply for, and almost a third of them don't even apply for fear of rejection.

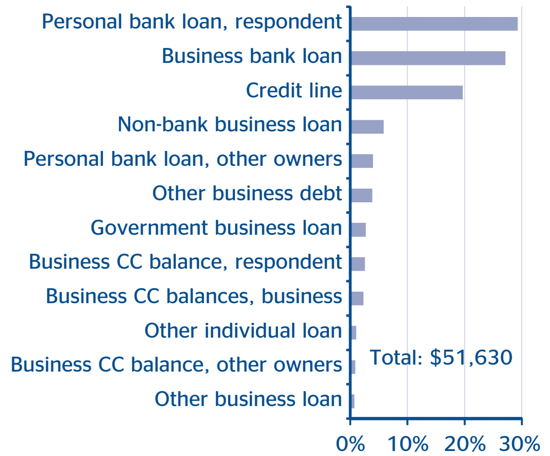
2 Federal Reserve

Chart 41
Sources of Financing for Startups (2008): All Firms Mean



Source: The Kauffman Firm Survey, Kauffman Foundation

Chart 42
Sources of Financing for Startups (2008): Mean Outsider Debt Decomposition, All Firms Mean



Source: The Kauffman Firm Survey, Kauffman Foundation

Lending- and equity-based crowdfunding platforms have become attractive alternatives for small businesses who would find very difficult to get a bank loan. How crowdfunding firms have been able to serve this market has to do with a different approach to risk management. In lending-based crowdfunding the risk of financing a project is not assumed by a single depository institution (and its clients), but by investors who willingly decide which projects to finance based on their tolerance to risk and other considerations such as community involvement, geography, industries or environmental concerns. The informational opacity problem is not solved, but crowdfunding firms bypass it by breaking down the risk into small pieces and sell them to a potentially large group of investors. In other words, risk is passed from the financial institution to the "crowd", where it is diluted.

Table 6
Overall Credit Application Experience 2009-11

	Applied for any credit	Got none or some of credit applied for	Didn't apply for fear of rejection
All firms	56.5	46.9	29.4
Number of employees			
0-1	48.3	26.2	19.5
2-4	53.3	61.4	36.4
5-9	61.3	49.4	35.6
10-19	63.4	38.7	17.7
20-49	67.2	42.7	25.9
50-250	77.2	32.0	20.3

Note: Data are representative of small employer firms with 1 to 250 employees in addition to the owner(s) in the year of the survey.
Source: Federal Reserve with data from the National Federation of Independent Business, annual finance surveys of 2009, 2010 and 2011.

Table 7
Average Small Business Loan and Microloan Holdings as a Share of Assets for U.S. Commercial Banking Organizations of Different Sizes, 2011 (% except as noted)

Asset class	Number of banking organizations*	Small business loans to assets	Microloan holdings to assets
All organizations	5,670	16.0	3.6
$250 million or less	3,785	16.9	4.5
$250 million to $1 bn**	1,418	15.1	2.1
$1 bn to $10 bn**	399	11.5	1.4
More than $10 bn	68	5.5	0.9

Note: Small business loans are business loans of $1 million or less; microloans, a subset of small business loans, are for $100,000 or less. U.S. commercial banking organizations are insured U.S. domestically chartered banks excluding credit card institutions and U.S. branches and agencies of foreign banks.
*Banking organizations include bank holding companies and independent banks.
**Banks with assets of $1 bn are included in the $250 million to $1 bn size class, and banks with assets of $10 bn are included in the $1 bn to $10 bn size class.
Source: Federal Reserve with data from Call Reports (June 30); National Information Center database

In equity-based crowdfunding, entrepreneurs are allowed to sell a portion of their business in the form of equity to accredited investors. This is a strong innovation in small business financing. As startups struggle to become profitable, the credit risk tends to be too high for traditional banking debt, where interest rates must be paid on a regular basis. A higher credit risk is reflected in higher interest rates ad thus, a higher cost of funding. Therefore, it makes sense for small business to engage in an equity-funding structure or a combination of both. Equity-based crowdfunding is particularly attractive for small companies with strong potential.

The future

It is hard to predict if crowdfunding will evolve to a point that it will become an alternative for the mainstream customers of banks. As we mentioned before, these customers may continue to go for banks to satisfy their demand for a more complex array of financial products: credit cards, auto loans, mortgages, HELOCs, Treasury management or merchant services; products that crowdfunding platforms do not offer yet. However, things could change five or ten years in the future. Crowdfunding platforms could naturally evolve to become the primary source of financial services for young generations. Would these hyper connected individuals buy a mutual fund or join the crowd to invest in businesses that go in line with their preferences and concerns? Would future entrepreneurs continue to use their personal credit cards or would they rather go to platforms like Kickstarter or Indiegogo to raise funds? It is reasonable to expect that over time, crowdfunding platforms will increase the complexity of their product offering. This would depend on the pace of technological progress and regulation. Although still tiny, crowdfunding markets could turn big enough to create systemic risk. This would open the door for the kind of intricate and dense regulation that currently afflicts the banking system. However, overregulating this market at an early stage could end up destroying a new and efficient way to connect savers and borrowers.

What can commercial banks do about crowdfinding?

Crowdfunding platforms are not banks, and yet they offer loans and brokerage services to individuals and small businesses like any other bank would do. They currently serve the “bottom of the market”, but that doesn’t mean they cannot reach upper segments. In fact, by the time crowdfunding platforms appeal to mainstream costumers it will be too late for banks to catch up with the new trend. And there is a real risk that banks stop being the primary source for personal and small businesses loans. Therefore, it is important that commercial banks devote resources to understand and potentially benefit from this kind of disruptive technologies.

The dual transformation model, developed by Gilbert, Eyring and Foster (2012) provides a guideline for businesses seeking to cope with disruptive innovation. In the first part of the model (transformation A), banks should seek to strengthen their core business. This makes sense, since it is hard to think that the disrupted firm will suddenly stop doing what it does best. Transformation A requires banks to be introspective, assessing what are the things that they do better than the disruptor and what are the things they cannot.

In the second stage (transformation B), banks should actually invest resources in the disruptive model and keep the new project isolated from the main business. In the crowdfunding space, banks could develop their own platform that would allow them to understand how the crowdfunding environment works and what are the needs of this market that they haven’t been able to fulfill. Both transformations should allow for a capabilities exchange that is aimed at sharing leadership, human capital, and best practices between the two businesses without interfering with each other’s operations. The dual transformation model allows disrupted firms to save as much as the core business as they can while nurturing the new venture and prepare it to become the next source of growth.

Ultimately, implementing this model is not an easy task. First, managers should be convinced that crowdfunding is disruptive and that it represents a real threat to the core business. Second, the company should decide if investing in the disruptive model is worth doing. This is challenging because banks, as is the case with many large firms in different industries, work with investors' money. Thus, convincing investors to put money into ventures with low profitability in the short-run but with strong potential in the future is something that only few companies are able to do.

Conclusion

Crowdfunding is a disruptive innovation that commercial banks cannot ignore. Perhaps, for the first time in history, business and individuals have access to an unprecedented source of capital created from the small contributions of millions of individuals around the world. This is good news for individuals and entrepreneurs, who may never have to worry about not being able to access traditional lending sources or using more expensive funding solutions to finance their projects. It is also good news for small investors seeking a higher return than conventional investment products. For banks, crowdfunding poses a challenge. From here on, they will face a new competitor with lower operating costs, a different approach to risk management and a simpler product offering. To what extent crowdfunding platforms will displace commercial banks in the retail and small business segments remains to be seen. However, banks should be prepared for this trend and make it work to their advantage.

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