Evaluating the financing needs of construction sector SMEs in the Colombian context

by

Juan Carlos Sandoval Klevens

Submitted to OCAD University
in partial fulfillment of the requirements
for the degree of
Master Of Design
in
STRATEGIC FORESIGHT & INNVOATION

Toronto, Ontario, Canada, December, 2018

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Abstract

External financing solutions have served an important role in helping companies grow and develop, but there is a well-documented gap in accessibility to these services between Small and Medium Enterprises (SMEs) and large companies. Although this gap is a global issue, this research project sets out to investigate the barriers and limitations for SMEs in the construction sector in Colombia as they try to access financing solutions from both formal and informal financing entities. The study begins with a literature review of the financial landscape in Latin America (LATAM), to establish a general context of the environment, as well as characteristics of the region. The literature review then dives more specifically into the Colombian context, where it first outlines the history of the country's financial system. This review aims to shed light on Colombia's unique characteristics and why the informal financing sector has become a strong player in the overall financing system.

The following section focuses on the research methodology used to uncover deeper insights about the financing system in Colombia and the needs of its users. The methods used are briefly described in this section to provide context of the methodology, as well as an extensive analysis of the findings. This section also contains a reflective portion, in which the researcher acknowledges and discusses the range and limitations of the chosen research methods. Lastly, the study's conclusions highlight valuable insights drawn from the whole research project, which could be used to create innovative solutions to the challenges SMEs face in accessing adequate formal financing mechanisms in Colombia.

Acknowledgements

I would like to thank my principal advisor, Sarah Tranum, for her time, patience, and continued guidance and advice throughout the whole process. These past months have flown by, but her continued support and dedication kept me on the right track until the end. To my secondary advisor, Kevin Morris, for his advice since this project was just an idea among others. To the faculty staff at OCAD University who I had the pleasure of meeting and sharing a classroom with, thank you for your dedication and teachings. To OCAD University, for giving me the opportunity to experience this incredible journey.

Finally, I would like to dedicate this to my parents. Without your unconditional love and support since the start all of this would have never happened. Thank you for letting me be the master of my own fate.

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1.INTRODUCTION

1.1 Rationale

A direct relationship exists between the growth of businesses and the development of a country's economy. Creation of new jobs and employment opportunities, in addition to the development and supply of valuable products and services, are major contributors to the increase in national economic growth (Abdulsaleh & Worthington, 2013). An important characteristic that highlights the business market share in the Latin American context is the high presence of Small and Medium Enterprises (SMEs). Currently in Colombia there are over 2.5 million businesses that can be categorized as SMEs, which represent more than 90% of the total businesses in the country. Additionally, these SMEs are generating more than 65% of total employment in the country (Revista El Espectador, 2018). However, these companies are also characterized by a short lifespan and a high mortality rate (Cámara de Comercio, 2009). According to Rosmary Quintero, president of the Colombian Association of Small and Medium Enterprises (ACOPI), half of the total number of SMEs fail after their first year of operation, and only 20% make it past the third year (Revista El Espectador, 2018).

The lack of access to capital and appropriate financing solutions that can spearhead growth is one of the most significant factors leading to the high failure rate and short lifecycle of SMEs in Colombia. Like other countries in Latin America, the Colombian government imposed high barriers within its financial system, which drastically limit access to capital for smaller companies. These obstacles exist due to severe measures taken as a result of the economic crisis from 1989 through the 1990s (Ferraro, Goldstein, Zuleta, & Celso, 2011), as well as the surge in money laundering through financial institutions during the time that the drug cartels of Medellín and Cali dominated the country a few decades ago. The residual effects of these measures are still felt in the current Colombia financial system. Evidence of this are the strict regulations put in place by the government, as well as rigorous processes for access to credit and other financial solutions. Evidence of this include the requirements for companies to provide an exhaustive business and financial history and the need to provide high collateral used as guarantees, mostly in the form of real estate, when applying for credit with banks and other formal institutions.

These measures have significant impact on SMEs, which lack sufficient assets to provide as collateral and have poor or no financial and business history. However, these conditions do not impact large companies, as they have sufficient assets to use as collateral and solid business history. Larger companies also have a good grasp of the financing system and its requirements, which SMEs lack. Large companies can also resort to self-financing -- something developing SMEs cannot do, due to their restrictive cash flow generation (Peñaloza, 2015). The inability for SMEs to meet these unattainable conditions often forces SMEs to resort to alternative financing services, mostly from informal financing sources outside the regulated formal financing market, in order to access needed capital. It is clear that Colombia's current financial system needs to better serve SMEs and level the playing field to ensure

SMEs have the same ability as large companies do to access and obtain capital. This will increase SMEs chances of surviving beyond their first year, which in turn could boost national economic growth.

Hometuls is a company that was started in 2015 and aims to facilitate access to financial solutions for SMEs in the construction industry. Through a digital platform, it works as an intermediary between three key actors: buyers, suppliers, and companies offering financing services. As a member of the founding team, the researcher plans to use this research project to determine the current landscape of the platform’s main users (buying SMEs). The goal is to fully understand their needs and pain-points within the financial system in order to create a better, more viable solution.

1.2 Context

Before diving into the literature review and subsequent chapters covering this research, it is important to define several key terms related to this study. Due to the nature of these terms, they may be defined differently depending on the country or region in which they are used. It is also important to note that throughout the literature review these terms will be used generally, but for consistency in the primary research stage (research in which participants were involved outlined in section 4.1), only one definition for each term is used.

The first item that needs to be clearly defined is Small and Medium Enterprises, or SMEs. Each country has a slightly different definition of what makes up an SME. However, after conducting the literature review, it is clear that the general rule is that SMEs are defined by the size of the company. The range of the parameters used to 'measure' size do change, including~~:~~ the number of employees and assets the company has. The Comisión Económica para América Latina y el Caribe or CEPAL [1] (Valenzuela, 2014) based their study on the World Bank's definition of SME: small companies ranging from 5 to 19 employees; medium companies, from 20 to 99 employees; and big companies, from 100 employees and over (Ferraro, Goldstein, Zuleta, & Celso, 2011). This definition is slightly different from the one adopted by the Colombian government on their Ley MiPYME[2], a law approved by the Colombian government in the year 2000 as an aid measure for SMEs. This law states that small companies are those that range from 11 to 50 employees, while medium companies have a range from 51 to 200 employees. This law also states that small companies are those with total assets from $0.1 to 1.1 million USD, while medium companies have assets that range from $1.1 to 6.7 million USD. This discrepancy demonstrates the lack of a homogenous definition of what SMEs are across different countries and entities, both public and private.

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[1] *Economic Commission for Latin America and the Caribbean.*

[2] *The 'Ley MiPyme' (micro, small, and medium enterprises) or Law 590 was created on July 10, 2000 as a way to aid these types of companies. The Law included the creation of two Superior Councils, one for Micro enterprises and one for Small and Medium Enterprises. It also established multiple fiscal and tax incentives for the creation and formalization of SMEs.*

For the purpose of this study, the exact definition each country gives to SMEs is not as important as the context in which these companies are conducting business. The differences in definition therefore do not significantly alter the quality of the study. The way data is collected and interpreted from the literature is similar to the approach used by de la Torre, Martínez Pería, & Schmukler (2010). In their paper, when conducting a cross-analysis between countries, they ignored the heterogeneity in the definition of the term 'SME', and made a case-by-case analysis of the information, using the definition each country gave to SMEs. However, when conducting research with participants, a clear, single definition of an SME was provided in order to have congruence across the participants' answers.

A second item is the difference between 'sector' and 'industry', and why, in this research project, both are used to describe the landscape in which the actors being investigated have a role. Although they are sometimes used interchangeably, these two terms have slightly different meanings. According to Chad Langager (2005), *"both terms describe groups of companies that operate in the same segment of the economy, or share a similar business type".* The difference, however, is in their scope: while 'sector' refers to a segment of the economy, 'industry' refers to a much more specific grouping of companies. Consequently, industries may be a subgroup of a larger sector, which is usually the case when describing the economy of a country or region. Because of this, a sector may be comprised of different industries. Throughout this document, both terms will be used keeping in mind their difference.

Industry will be used when wanting to focus on a smaller, more concrete subgroup within the two major sectors this report discusses: financial, and industrial.

A third item that must be clarified before continuing with the report is the difference between account-holding SMEs and credited SMEs. Account-holding SMEs are those that currently have an active account in a traditional financial institution and can make use of services such as savings and checking accounts as well as the use of debit or credit cards. Credited SMEs also have access to basic services such as savings and checking accounts but differ from account-holding SMEs through by their ability to access other financing mechanisms from banks such as credit lines and loans. Although market penetration of banks and traditional financial entities in developing countries is low compared to that of developed countries (Zuleta), there is a significant difference between these two types of SMEs and their access to capital. A 2010 survey by the World Bank (Valenzuela, 2014) shows that of all the Colombian small companies surveyed, 94.3% answered that they did have bank accounts (either checking or savings accounts), while 95.8% of medium companies answered in the same manner. On the contrary, when asked about credit lines or loans, only 50.6% of the small companies answered that they had access to these financing services, while 64.2% of medium companies answered the same. Although it is expected that medium companies have a higher percentage of credit lines or loans than smaller companies, this percentage is still low as compared to those having bank accounts. This study focuses on account-holding SMEs, meaning SMEs that have access to certain bank services (accounts) but lack access to credit lines and other financing services.

Lastly, this research explores a key market found inside the financial system called the Alternative Finance Market. This market encompasses all of the different mechanisms, companies, and tools developed as an alternative to the traditional finance industry (banks and other formal financial entities). Because access to capital from the traditional banking industry is a global issue, this market is also present around the globe in a bigger or lesser scale depending on the characteristics of the economy of the region like banking market size. This research also details a subgroup within this market called the Online Alternative Finance Market, which is made up technology-led businesses that offer their services entirely through digital platforms. Hometuls, for example is part of this market, and is the main reason why this research takes a more detailed dive into it. Another important relationship that should be discussed is the one between the fintech field and the Online Alternative Finance Market. Financial Technology, or fintech, is a term used to denote the field in which different services, mechanism, and tools developed to aid the Financial System (both formal and informal) are grouped. Therefore, the Online Alternative Finance Market is part of the fintech field. Figure 01 below illustrates the relationship between the different industries and markets analyzed within this research document.

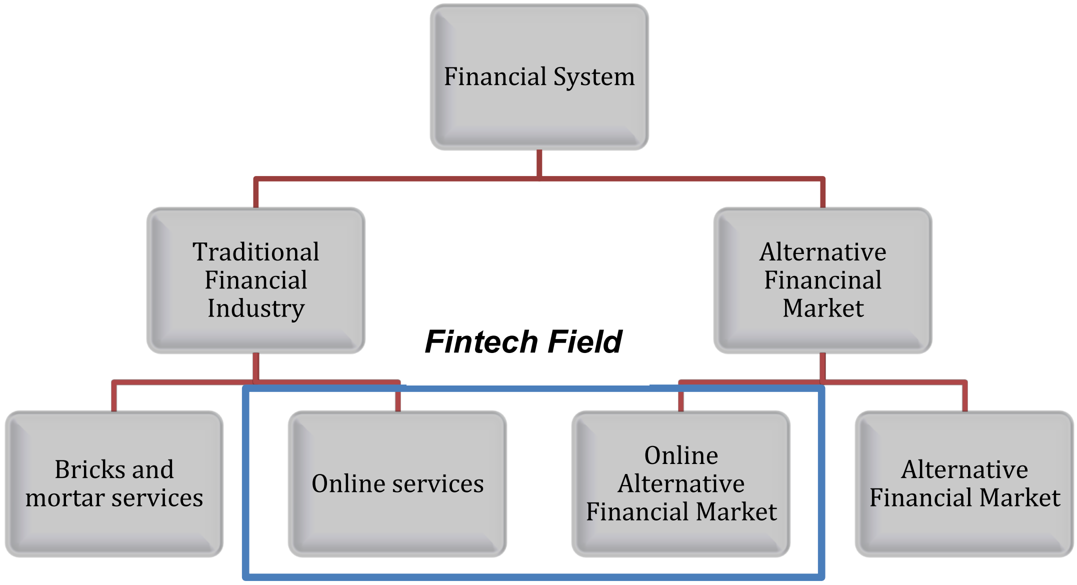

Figure 01: *Hierarchy of the financial System presented in the research. The Fintech Field is a part of the Financial System (blue).*

2. LITERATURE REVIEW

2.1 LATAM's Financial System Landscape

In this chapter, the financial system for the Latin American region is outlined, to establish sufficient context before going into a more detailed description of the Colombian context. It is naïve to think that the Colombian financing system is unaffected and independent from the regional system. With that in mind, it is important for the researcher to first identify the general characteristics of the financial system of Latin America. It also details the existence and characteristics of an alternative finance industry in the region and its size compared to the traditional financing industry. Special focus is also placed on the digital segment of the alternative finance industry, which includes companies that offer their financing tools and services entirely through digital platforms. This is an area that has been growing substantially over the past five years. The businesses encompassed in this digital segment provide a whole new way to present and deliver services, changing the clients' experience overall. Additionally, the role of SMEs in the financial system of the region are outlined, and the lack of access to credit and other financing services for smaller businesses in Latin America are discussed.

2.1.1 History and Characteristics of the Financial System

SMEs in the Latin American region play an important role in the economic development (de la Torre, Martínez Pería, & Schmukler, 2010). This can be easily appreciated by looking at how much market share these companies have versus larger companies in Latin America. SMEs make up 95% of the total, and are responsible for more than 85% of employment in the region. Despite these facts, the way the financial system has been established in the Latin American context has limited the access SMEs have financial services.

Traditional financing policies in the region were based on a loan system with interest rates subsidized by the government and channeled through first-floor financial institutions. First-floor institutions are those that are authorized to offer different financial products, such as checking and savings accounts and mortgages. In this system, second-floor private financial institutions then acted as intermediaries that provided funding to first-floor institutions. The principal characteristic of a first-floor institution is being able to have direct contact with clients. Second-floor institutions, on the other hand, have the main purpose of serving as an intermediary, providing funds for first-floor institutions[3].

This system changed with market liberalization reforms that were introduced by governments in Latin America at the beginning of the 1990s to help integrate the country into the global economy and boost the development of the private sector. This policy change also aimed to decrease the financial risk taken by the government (Ocampo, n.d.). Law 100 in Colombia, privatized not only the banking industry but also healthcare and social security. These reforms created a shift in the roles of private and public institutions and led to a decrease in the government's participation in the economy. At the same time, these changes increased private sector participation, which included the privatization of many financial institutions and a preference for private domestic and foreign banks. Ultimately, this led to a shift in financial policy and previous funding aimed at SMEs, with the most significant change being the elimination of subsidized interest rates for these smaller companies.

In his writings, Pavón (2010) describes how the liberalization reforms affected the banking system in Mexico. The economic crisis there in 1994 led to a majority of domestic banks being bought by foreign institutions. The increase in foreign-owned banks further intensified the flow of international businesses into the country, and by

[3] If a second-hand institution wishes to provide loans or credit lines to a client, it must do so using a first-floor institution as an intermediary. Unlike first-floor banks, these do not have any direct contact with clients.

2009, foreign banks in Mexico controlled more than 80% of assets in the sector (Ferraro, Goldstein, Zuleta, & Celso, 2011). Argentina experienced a very similar situation as Mexico. Also beginning in the 1990s, after the “Plan de Convertibilidad” law was approved by the Argentinian government to alleviate the country’s hyperinflation problem[4], the selling of the domestic banks to foreign private stakeholders began to unfold. By 1996, of a total of 122 banks in the country, only 20 remained public, and 15 previously held public banks were now owned by private stakeholders (Burdisso, 1998).

In contrast to the Mexican case, in recent years, there has been a movement in Argentina to revert the situation with respect to financing services for SMEs. According to Bleger and Rozenwurcel (2000), while private national banks were offering the majority of credit to SMEs during the 2005-2007 period, in 2008 and 2009, public banks took over and became the number one providers of credit to these types of companies (Ferraro, Goldstein, Zuleta, & Celso, 2011). Argentina is a clear example of how, despite reforms to the economic policy that gave a certain advantage to private financial institutions, the government still understood the importance of public banks and their role in supporting SMEs.

[4] The “Plan de Convertibilidad” or Law Of Convertibility was a law proposed by the Minister of International Relations Domingo Cavallo in 1991. Its principal objective was to return the convertibility status to the country’s national currency, allowing it to be freely exchanged for other currency. The law came as a response to the hyperinflation Argentina suffered from 1989 through 1990. (Carrino, 2017).

2.1.2 SMEs' Access to Credit And The Alternative Finance Market

The low presence of smaller companies accessing credit from the private sector is a problem that persists in the majority of modern and emerging economies (Abdulsaleh & Worthington, 2013). One of the main factors exacerbating this problem is a flaw in how these private financial institutions evaluate and conduct risk assessment for SMEs. Traditionally, banks use a one-size-fits-all approach for all companies, regardless of their individual characteristics, such as their strategic plan or business model. This results in smaller and younger companies experiencing more difficulty demonstrating their worth because of a lack of financial information[5] to show when applying for credit. This greatly reduces the chances of SMEs to be eligible for credit or other financial services.

A common practice among banks is to increase interest rates for companies that are approved for credit or other financial solutions, but are still deemed "high-risk' due to the lack of information and other requirements the companies fail to demonstrate. Higher interest rates means that banks have a higher cushion to safeguard their investment in case these companies fail. Because of high interests, some businesses are reluctant to even try to apply for credit from traditional banks and look for other ways to fund their operations.

Lack of financial literacy is another perceived barrier for SMEs to access credit. The report authored by Ferraro, Goldstein, Zuleta and Celso discusses the lack of

[5] Sales, traction, balance sheets, etc.

financial literacy among SMEs made evident when these companies submit credit applications, which require: articulating project structure, showing a clear strategy and submitting complete financial documentation (Ferraro, Goldstein, Zuleta, & Celso, 2011). Furthermore, SMEs lack of payment guarantees and collateral (e.g, capital, infrastructure) presents another barrier that impedes their credit applications from going any further. Even if their application is initially approved, businesses have to forfeit the loans due to the lack of properties or real estate available to use for collateral.

Low success rates in obtaining credit from banks and other formal sources has created a reluctance among SMEs to apply to these institutions. SMEs in Latin American countries have shown some recurrent practices to cope with this resistance to work with traditional financing mechanisms. These practices are part of what studies have identified as the Alternative Finance Market (Ziegler et al., 2017) and include all of the mechanisms, businesses and tools that help smaller companies access financing services outside of the traditional banking system. This market has developed at a global level, complementing the financial services offered by the traditional banking system.

Two of the most common practices in the Latin American region that are part of the Alternative Finance Market are internal financing and provider financing. Internal financing refers to the use of personal (friends and family) or a company's own resources to operate their business, whether it is working capital or funds for investments. Valenzuela (2014) shows that in 2010, Latin American SMEs were using internal resources to finance 63.2% of their investment activities, and 65.9% on working capital. Companies in Panama and Nicaragua are both extreme cases, with 93% and 80.4% of financing for investment (respectively) coming from internal financing (Enterprise Surveys, World Bank).

Provider financing, on the other hand, is a practice in which the same service/product provider extends a credit line to the buying business. In Brazil, this method covers 70% of the resources needed by SMEs, while in Mexico, it amounts to 60% (Ferraro, Goldstein, Zuleta, & Celso, 2011). In Latin America, provider financing has proven to be a very useful alternative to traditional banks. In countries like Mexico, where account-holding SMEs are particularly low (Ferraro, Goldstein, Zuleta, & Celso, 2011), it provides an opportunity for buying companies to access products and services from providers, while paying for them at a rate they can afford and without needing a financial institution intermediary.

Although proving valuable alternatives to traditional banks, these mechanisms previously described are not able to completely fulfill SMEs financing needs. First, both internal financing and provider financing cannot be accessed by all SMEs. For internal financing, the company must have enough cash flow to be able to afford daily expenses, while having enough resources left to use for investment or significant working capital requirements. On the other hand, provider financing can only be done if both SME and the supplier have a good working relationship, and if the later one has enough resources to be able to extend a line of credit to its SME client. This means that only a few suppliers are able to provide provider financing, and not all of a buying SMEs' suppliers are able to provide credit. Secondly, although both mechanisms provide a short-term solution, they are not sustainable in the long-term and are not permanent solutions. Since one supplier is not going to finance the transactions between its client SME and other suppliers, buying SMEs would need to have all of its suppliers providing credit to cover the totality of their expenses. Even if all suppliers extend credit to an SME, this type of financing does not account for working capital (salaries) or investments (technology) to better the business. In the case of internal financing, SMEs often lack sufficient cash flow to use company resources continuously, and borrowing from friends and family puts significant stress on the company's personal network.

It is clear that SMEs have found alternatives to traditional banks to fund their operations, but these methods are not sustainable and only provide short-term solutions. There is a real need to develop sustainable financing services that smaller companies will not have trouble accessing because of their characteristics or their limitations (financial literacy, guarantees). Being that said, in the next two sections, research is focused on the digital mechanisms that have been created as an alternative to traditional financing services and may prove key to bettering all financing services to date.

2.1.3 Where Finance Meets The Digital

Financial technology (fintech) is a term that has been historically used to denote the back-end technology operations in the financial sector. With the continuous rise of digital technologies, this field has now expanded to include new technologies and tools across the financial sector that are independent from back-end operations and that have direct engagement with users. Likewise, the term ‘fintechs’ is also used to denote companies that offer financial services outside of the traditional banking system. For example, the Colombian company *Mesfix* is an established digital financial entity that allows SMEs to sell their invoices to investors to obtain money instantly. Investors get their money back once the invoices are ready to be collected. This mechanism of financing is called Factoring. Although not a new mechanism, historically banks were the only ones providing it. Similarly to Mesfix, more and more fintechs have been making their way into the financial sector, catching the eye of investors. Over the last five years, more than $23 billion USD of venture capital and growth equity have been channeled to fintechs, predominantly in the United States (Dietz, Khanna, Olanrewaju, & Rajgopal, 2016).

The banking and technology sectors have a long history of successful cooperation. Since the 1950s banks had tried to launch a credit card that would allow clients to pay for anything with a simple plastic device and eliminate the trouble of carrying around bills and coins. In 1960, Bank of America developed BankAmericard, which although achieving small success in the local context, became a problem when trying to scale operations. The problem came from the developer bank’s proprietary technology. Because the technology that made the Bank Of America's card work was different from other bank's technology and infrastructure, banks were having trouble incorporating BankAmericards. This led to the birth of Visa in 1970, a bank-independent technology company in charge of developing the first mass-scale credit card. This is one example of the tremendous value of cooperation between financial institutions and technology companies.

Despite the success of this interaction between financial services and technological innovation, the financial sector is arguably one of the most resistant to disruption by technology. In Finnovista's 2018 Trend Report, large traditional banks are compared to dinosaurs. On one side, the dinosaur symbolizes their size and power. Banks have dominated all of the industry's value chains, billing in millions of dollars every year. In 2014, for example, Axa Bank's revenue was the equivalent to Finland's GDP, JP Morgan Chase to Colombia's GDP, Bank of America to Poland's GDP and Wells Fargo to South Africa's (Dávila, 2018). On the other hand, and despite the astronomical revenue numbers, they are also in danger of extinction due to their slow pace to react and adapt to new disruptions. Because of their size, it is harder for these institutions to implement fast changes in their operation or processes (Dávila, 2018).

Banks have historically been the go-to for the majority of credit requests because of their robustness and well-established nature. However, with the coming of the digital era and new technologies like smartphones that enable paradigm shifts in areas like transactions and payments, traditional institutions are losing their monopoly over their long-held clients. Furthermore, because of fintech's fast rise within a short time span, banks have started to pay close attention to this sector looking at how they can adapt these innovations to their own historically "untouchable" business models. For example, BBVA, a Spanish bank with presence in several Latin American countries has had an active acquisition of fintechs in the last five years to supplement its traditional banking operations. The bank has made acquisitions in areas such as online banking and payments. Among the startups it has acquired, three are located outside of the US: Madiva Soluciones from Spain, Holvi Payment Services from Finland, and OpenBay from Mexico (CB Insights Research, 2018).

2.1.4 A Digital Alternative To Banks In Latin America

Because of the well-documented barriers to SMEs in the Latin American region for accessing financing services from traditional financial institutions, as well as an increase in usage of digital products and services, an Online Alternative Finance Market developed to cover their needs. This segment is part of a much larger market, the Alternative Finance Market, which was discussed previously. The Online Alternative Finance Market is made up of technology-enabled platforms that act as intermediaries between buying companies and funding entities outside of the traditional banking sector.

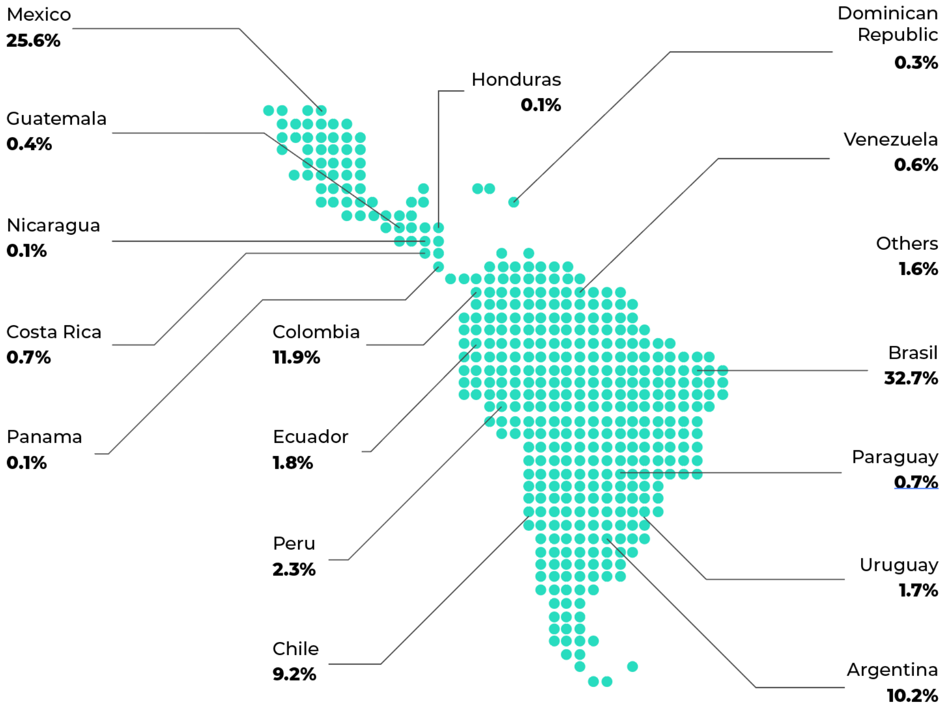

Figure 02: *Percentage of the Latin American Online Alternative Finance Market t size by country.*

Across Latin America, the Online Alternative Finance Market has slowly been making its way into the mainstream. According to a report carried out by the University of Cambridge's Center for Alternative Finance, the overall market volume for the Americas[6] in 2016 was $35.2 billion USD (Figure 04), a 23% increase from 2015. Although the United States (U.S.) makes up the majority of this market, the Latin American region is showing a rapid expansion in a relatively short period of time (Ziegler et al., 2017).

[6] The Americas Region is comprised of Canada, Latin America and the Caribbean and The United States of America.

It is important to note that in Latin America, the largest segment in the Online Alternative Finance Market is alternative finance platforms, which further evidences the fact that the traditional finance industry is not fulfilling the population's needs of financing services. As seen in Figure 03, alternative finance platforms make up slightly more than one quarter of the total Online Alternative Finance Market, followed closely only by payment platforms. This clearly shows its fast growth and reception.

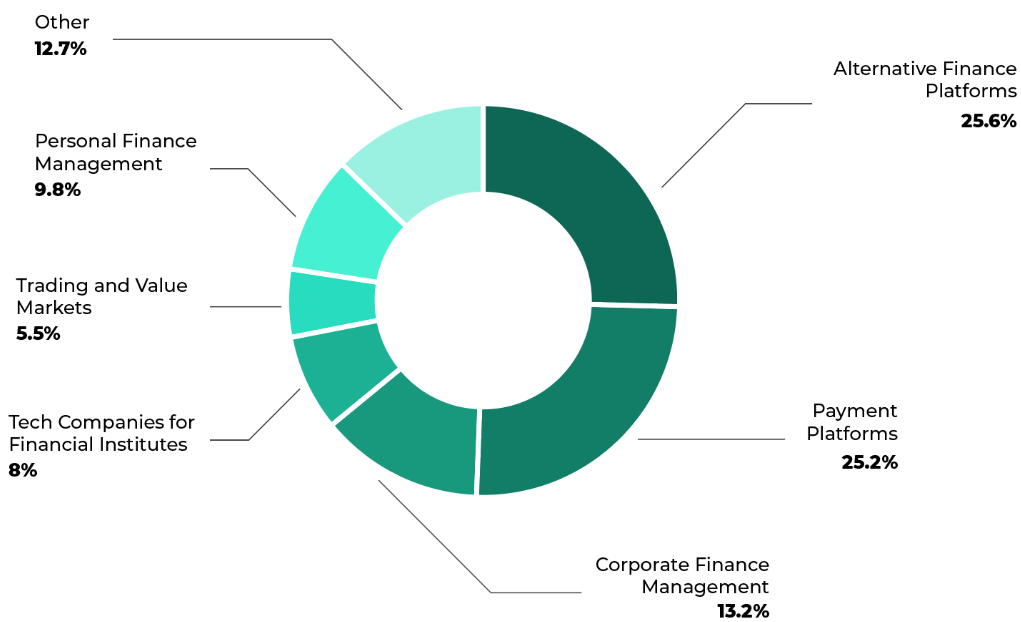

Figure 03: *Distribution by segment of the Latin American Online Alternative Finance Market. Source: Finnovista, International Bank of Development, 2017.*

The Online Alternative Financing industry has been on the rise, achieving a total market volume in the realm of $35.2 billion USD in 2016 across Canada, Latin America and the United States (Ziegler et al., 2017). In the Latin American region alone, the alternative finance market grew to $342.1 million USD in 2016 (Figure 05), representing an increase of over 209% in 2016 as compared to the previous year.

This astounding growth has been led by Mexico, Brazil and Chile, which are the highest volume markets in the region.

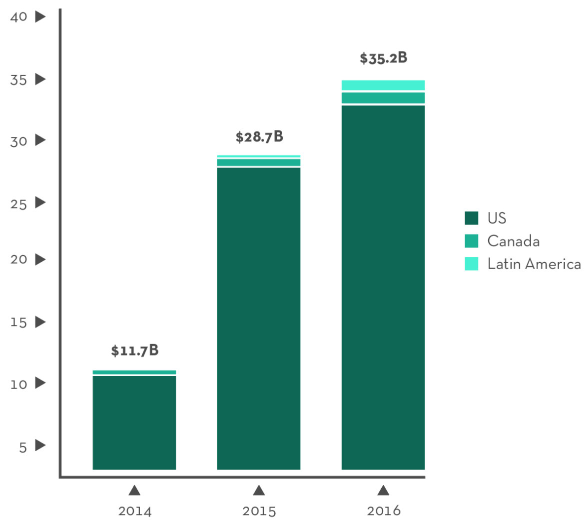

Figure 04: *Americas Online Alternative Finance Total Volume, 2014-2016 (USD). Source: Ziegler et al., 2017.*

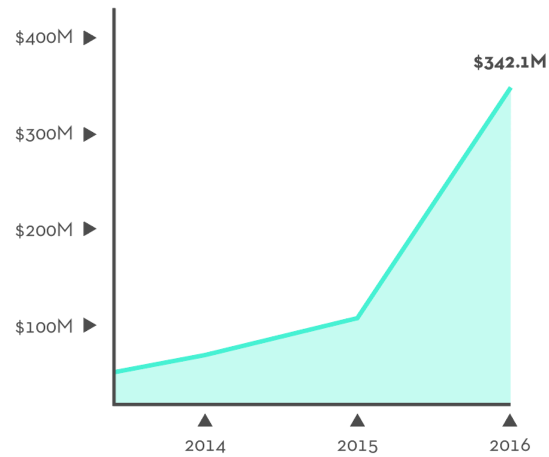

Figure 05: *Latin American Region Online Alternative Finance Total Volume, 2014-2016, in USD. Source: Ziegler, et al., (2017).*

Mexico stands out even further, being the first country in the region to actively pass the Fintech Law, creating a legal framework for businesses in the Alternative Finance Industry. This comes as no surprise, however, when we look at some of Mexico's banking market penetration numbers. According to the World Bank, in 2010, the number of Mexican businesses that had either checking or savings accounts was around 61% (way below the Latin American region average of 92.9%). Still, when asked about their biggest barriers to growth, only 12.4% of the Mexican businesses thought financing was their biggest one -- a low number, when compared to other countries in the region like Colombia (28.8%) or Costa Rica (26.1%) (Valenzuela, 2014). It seems reasonable to assume, then, that Mexican businesses were finding alternatives to the traditional banking industry for their financing needs. Even before the fintech industry had become mainstream, Mexican businesses were among the first ones in the Latin American region to embrace it. According to a report done by the Cambridge Center for Alternative Finance and the Polsky Center for Entrepreneurship and Innovation, peak market growth for the Online Alternative Finance Industry in Latin America happened in 2015. Despite this fact, Mexico was already showing huge growth (229%) of this market years before, having its highest levels from 2013 to 2014 (Wardrop et al., 2016).

There are different finance models that fall under the umbrella of the Online Alternative Finance Market. Ziegler et al., (2017) summarizes in a simple manner the various models found within the Online Alternative Finance Market, which have been recorded in Table 01. It is important to note that all of these methods rely on a platform that acts as an intermediary, through which funds are channeled between a funded individual or business and a group of funders.

ALTERNATIVE FINANCE MODEL		DEFINITION
INVESTMENT-BASED MODELS	Marketplace/P2P Consumer Lending	Funders provide a loan to a consumer borrower.
	Balance Sheet Consumer Lending	The company owning the platform provides a loan directly to a consumer borrower.
	Marketplace/P2P Business Lending	Funders provide a loan to a business borrower.

	Balance Sheet Business Lending	The company owning the platform provides a loan directly to a business borrower.
	Marketplace/P2P Property Lending	Funders provide a loan secured against a property to a consumer or business borrower.
	Real Estate Crowdfunding	Funders provide equity or subordinated-debt financing for real estate.
	Equity-based Crowdfunding	Funders purchase equity issued by a company.
	Other	Categories not presented individually due to small sample size. They are Revenue-sharing/Profit-sharing[7], and Debt-based Securities/Debentures.[8]
NON INVESTMENT-BASED MODELS	Rewards-based Crowdfunding	Backers provide funding to individuals, projects or companies in exchange for non-monetary rewards or products.
	Donation-based Crowdfunding	Donors provide funding to individuals, projects or companies based on philanthropic or civic motivations with no expectation of monetary or material return.

Table 01: *A Taxonomy of Alternative Finance Models. Source: Ziegler et al., (2017).*

Marketplace/P2P (peer-to-peer) finance models operate by means of providing a loan, regardless of whether the funded actor is an individual or a business. In terms of funding the loans, the majority of platforms in this segment act only as intermediaries or channels, establishing a link between buyer and donor, and thus eliminating the financial risk. The funding mostly come from individual funders, that look at these lending operations as an investment, receiving the original amount they

[7] Individuals or institutions purchase securities from a company, such as shares or bonds, and share in the profits or royalties of the business.
[8] Individuals or institutional funders purchase debt-based securities, typically a bond or debenture, at a fixed interest rate. Unsecured retail bonds, in the form of mini-bonds, are included in this sample.

invested plus interest. Platforms rely on transaction fees or commissions paid by either the funded or funders. In 2016, marketplace or P2P lending had a total market volume of $188.5 million USD in the Latin American context -- a 239% increase over 2015 (Ziegler et al., 2017). This service helps borrowers gain access to funding in a quicker manner than through traditional credit services, often with lower interest rates than traditional banks. It is also easier to obtain financing through these services since more than one lender can be assigned to a borrower, decreasing the risk a single lender might have to assume. On the other hand, balance sheet finance models take on more of a banking role, directly funding the loans originating on their platforms and, consequently, taking on the financial risk. In both segments, there is a screening process done by the platform that analyses the creditworthiness of the individual or business looking for a loan.

Though the industry is proven to be growing, some companies have stopped their operations and transitioned into performing back-end technical services for traditional finance institutions, recognizing the business opportunity to incorporate their technical knowledge with these institutions to better their loan operations. In their report, Ziegler et al., (2017) also note that there has been a decrease in entry of new companies into the Online Alternative Finance Market, having hit peak entry for the Latin American region in 2015. The main reason for the success in cooperation between fintechs and traditional financial institutions lies in the strengths and weaknesses of both parties.

Financial institutions have a well-established name in the industry, an efficient and largely scaled operation, and a solid technological infrastructure. However, they also lack the speed and flexibility to take advantage of new and disruptive technologies and innovations to advance their customer experience and business opportunities. On the other hand, fintechs have technology at the center of their strategic plan, culture and operation. They are built around the possible opportunities that come with new emerging technologies and are nimble enough to react to changes quickly. However, fintechs do not have a well-renowned name, and this limits their client acquisition process, which is costly for new companies. Fintechs also lack the infrastructure needed to scale their products or services to reach the masses, which significantly impedes agile growth.

2.2 Colombian Financial System Landscape

After describing the major characteristics of the financial system of the Latin American region, the scope of the literature review now focuses on the Colombian landscape. In this chapter, a summary of the most important factors in the country's history that led to unique qualities in its financial system is provided. Also, as done with the Latin American region, a walkthrough of both the formal financial industry and the informal market is provided, and a detailed analysis of the Online Alternative Finance Market present in the country is presented.

2.2.1 The History of Colombia's Financial System

After the banking crisis in 1998, Colombia's financial system underwent a very notable reshaping. Excessive loan growth, combined with an economic slowdown in the late 1990s, caused severe harm in the loan portfolio quality and coverage ratios, which brought liquidity problems for banks. To counter this, the Colombian government introduced emergency measurements between 1999 and 2001, which led to a decrease in the number of financial institutions. Starting with 148 banks in 1999, there were only 64 remaining banks after mergers and liquidations in 2001 (Manroth & Solo, 2006). Additionally, in 2009, the government approved Law 1328[9] which allowed commercial banks to provide leasing and credit operations, but restricted them from any stock operations, fiduciary activities, or factoring. As a result, these operations now needed to be conducted through a bank's subsidiary. Due to these measures, the heterogeneity of financing institutions decreased drastically since public banks now became second-floor institutions (thus losing direct contact with clients), leaving commercial banks to supply most of the financing needs to clients.

The traditional banking industry has slowly been recovering following this crisis, but it has taken a toll on its market penetration. The financial system market penetration in Colombia, interpreted as the ratio of credit versus GDP is at around 34% (Valenzuela, 2014), making it one of the lowest when compared to other

[9] Ley 1328 is a financial reform approved by the Colombian government in 2009. It set rules and norms to protect financial consumers and their relationship with the diverse financial institutions under the watch of the Superintendencia Financiera.

countries in the region. This is a clear problem since it shows that the majority of the Colombian people are not being served adequately by banks and other traditional financial institutions, directly cutting off their possibility to access credit and other financing services. One of the main reasons for the low market penetration by the financial system is the risk-averse behavior adopted by commercial banks (Valenzuela, 2014).

Following the crisis, commercial banks preferred a 'safer' less risky client: the public sector. In the period from 1998-2003, the relationship of commercial banks with the public sector -- in the form of bonds and loans -- increased by 166%, as opposed to a mere 6% increase in the relationship with the private sector. Additionally, as of 2003, public bonds accounted for over 70% of banks' total securities portfolio. Due to attractive interest rates and low-to-zero risk from the public sector side, it is no wonder why commercial banks lack incentives to increase lending to the private sector.

In response to this lack of lending to the private sector over the last two decades, there has been a shift from subsidized credit placement to the development of tools and systems that guarantee access to credit. The Ley MiPyme and Law 1328, described earlier on, are both examples of the government's attempt to increase credit allocation to SMEs to boost the private sector's overall involvement in the financial system. Due to this shift, however, credit allocation was now decided based on the businesses' capacity to present guarantees and make loan repayment terms (Ferrero, et al., 2011).

Despite the introduction of new measures to boost SMEs' access to financing services, the new system is more supportive of large companies than small or medium ones. An example of this can be shown in the use of standardized credit scores: by using a 'one-size-fits-all' approach, the market is not taking into consideration the special characteristics of smaller business. Instead, it is scoring a company based on size. Recognition of the limitation of the current methods for evaluating businesses has led the government to take a more supportive stance with respect to SMEs through the implementation of public policy[10].

For example, the *Sistema Nacional de Apoyo a las PYMES* (National System to Aid SMEs) was created to develop policies and regulations to help SMEs grow. Among its different areas of support, the *Sistema Nacional de Apoyo a las PYMES* focuses its efforts in helping SMEs access credit from traditional financial institutions, aid companies that lack sufficient collateral to present as guarantees, and deliver financial and business education to SMEs (Mincomercio, n.d.). Despite these efforts by the government, there are still many SMEs that remain unserved by the traditional financial industry, which limits their access to credit. To get a better understanding of why this industry is underserving SMEs, the Colombian formal financial system is

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[10] Public Policy regarding SMEs is coordinated through the *Sistema Nacional de Apoyo y Promoción de las Mipyme, created in 2004.*

reviewed in the following section to uncover which barriers and limitations are impeding access to credit.

2.2.2 The Formal Financial System

As mentioned previously in the research, the financial system has a low reach within the general population in Colombia, particularly among SMEs. In a report submitted by the *Banco de la República* (National Republic Bank of Colombia), the percentage of financial market penetration for the country was between 25% to 33% during the 1996-2006 period. In a 2017 report for the Semana Económica, Asobancaria published their hypothesis "Too Much Finance", in which they calculated the ideal percentage of market penetration for Colombia at 58.5%. The report also stated that market reach surpassing 116% would become detrimental for the economy. Currently, it is sitting at 47%, which is an improvement from the 1996-2006 period and shows a steady increase, but is still low compared to the ideal projected number (Montoya, 2017).

In Colombia, support for SMEs has come mostly from three main actors: *Bancoldex*[11], a public bank; the FNG[12], a public-private owned second-floor financial institution; and the *Banca de Oportunidades*[13], an economic fund composed of various public and private institutions. Bancoldex is in charge of funneling credit lines towards SMEs, which mostly stem from the role previously held by the liquidated IFI

[11] Bancoldex (Bank of Exterior Commerce of Colombia) is a second-floor public financial institution.
[12] FNG (National Guarantees Fund) is a mixed economic second-floor institution, linked to the Ministry of Commerce, Industry, and Tourism.
[13] Created in 2006, The Banca de Oportunidades is an economic fund managed by several institutions.

(Institute for Industrial Development). As a leading public sector financial institution for SMEs, it has started offering new financing mechanisms like factoring, in which Bancoldex buys invoices from small companies that are due shortly in exchange for credit. It also promotes private capital funds to create new solutions for SMEs. Still, Bancoldex acts as a second-floor institution, meaning that it needs a bank to act as an intermediary to be able to allocate credit lines and loans for SMEs. In coordination with the FNG, these two institutions help SMEs have access to credit via traditional banking institutions.

The FNG's main goal is to facilitate SMEs' access to credit by granting them guarantees, thus making them less of a risk to traditional banking institutions. Again, as any second-floor institution, it does not have direct contact with the SMEs soliciting credit. Instead, it works through the financial institution giving out the loan. This institution only grants guarantees to SMEs which, according to the Colombian government's definition, refers only to companies with assets below approximately $8.3 million USD. The FNG is able to guarantee 50% of the total loan granted to the SME, utilizing existing resources from Bancoldex.

Finally, the *Banca de Oportunidades* is an investment program that manages a fund which channels its resources specifically to SMEs and low-income individuals looking to start a business. The program developed from the need to increase market penetration of the formal financial system in the country. This program has had a significant impact on the development of SMEs, along with the importance of cooperation with different actors like the FNG and Bancoldex.

As evidenced by the roles of these three government actors (Bancoldex, the FNG and the Banca de Oportunidades), there is clear will by the Colombian government to increase the support to SMEs. Because of the policies currently in place, all these public sector actors still need to go through commercial banks to reach their potential customers, which drastically limits their operation. It also demonstrates good cooperation between the public and private sector. For example, Bancoldex is an institution managed and owned by both public and private entity.

It is clear that the limitation of second-floor institutions to deliver credit to SMEs because of the first-floor intermediaries. The risk-averse mentality of first-floor institutions and inefficient assessment of their clients results in many loan solicitations being dismissed or deemed ‘too risky’ to fund even if there are sufficient resources to allocate to them (that come from second-floor institutions). Banks may even decide to give out a partial loan because of some perceived risk, even if the business has been initially approved from the public intermediary, like Bancoldex. This pushes SMEs to look for alternate sources for financing to continue and grow their businesses, either to fund their operations completely or to supplement the partial loan from a bank.

2.2.3 Access To Traditional Finance: Barriers and Limitations

Across many studies, access to finance has been cited as a major problem for SMEs in Colombia. According to a Fundes survey summarized in Rodriguez (2003), it was ranked as a high constraint for creation, development or diversification of the economic activities of SMEs (Stephanou & Rodriguez, 2008). Additionally, in a study done by ACOPI, 60.7% of SMEs believe the conditions for access to working capital are suboptimal, while only half of SMEs believe that credit lines in the country are enough to operate their business. (Montoya, Montoya, & Castellanos, 2010).

The Colombian context echoes the situation experienced by other countries in the Latin American region. Due to the low market penetration of banks and financial institutions in the country, few individuals and small businesses are able to access financing services. Additionally, inefficient risk assessment done by the traditional finance institutions further restricts access to credit. This represents a significant disadvantage for SMEs, since these types of companies have different needs and characteristics that do not align well with the current assessment metrics.

Furthermore, the need for guarantees is also a major factor that limits access to credit. According to Enterprise Surveys in 2010, 60.5% of total credit operations in Colombia involved the need for some sort of guarantee (Valenzuela, 2014). As previously mentioned, the use of collateral as payment guarantees in these types of operations is meant to address the lack of information and credit history that SMEs are able to present when soliciting credit. Not only is the presence of collateral a limiting factor, but when compared to the total value of the credit loan, the amount of collateral required can often be significantly larger. A World Bank survey (2010) showed that, in Colombia, the value of collateral equated to 189.5% of a solicited loan. This means that, for any given loan, the value of the collateral had to amount to almost double the value of the loan. This is especially hard for smaller companies to accomplish since their collateral-worth assets are relatively small compared to larger companies.

2.2.4 The Colombian Alternative Financial Market

The traditional finance system in Colombia is heavily reliant on credit as its main mechanism for offering financing services. However, due to the low market penetration of traditional financial institutions in the country, along with the high barriers to access credit, a significant amount of the population is left out of this system, which includes SMEs. This segment has been historically forced to find alternative sources for financing their projects and businesses. In a survey done by ACOPI[14], approximately one-quarter of Colombian SMEs use alternative financing services to finance their activities (Stephanou & Rodriguez, 2008).

In addition to Colombian businesses having a high need for financing services that fall outside of the traditional banking industry, it is important to note that they have a surprisingly low dependence on the company's own resources or from within a

[14] The Colombian Association of Small and Medium Enterprises is an organization that groups all the small and medium sized formal companies in Colombia. It includes companies from all of the different economic sectors, and its primary focus is to help them develop and grow.

personal network like friends or family (internal finance), as opposed to other countries in the region. As noted in the previous section on Latin America's Alternative Finance Market, SMEs have a significant reliance on internal financing, because they do not need a bank to act as an intermediary or as the revenue source. According to Valenzuela (2014), 43.9% of Colombian SMEs rely on this source for financing their investments, and 45.4% for working capital. These percentages are below the average for the Latin American region, which stand at 63.2% for investment and 65.9% for working capital (Valenzuela, 2014). When comparing the statistics of internal financing by firm size, a reasonable homogeneity exists in Colombia in regards to the percentage of all companies, including small and medium ones.

That being said, Colombian SMEs depend more on external alternative solutions for financing their projects and businesses. In Colombia, a very popular mechanism used by companies is provider credit. This mechanism consists of having a direct line of credit with a provider or supplier, receiving goods and products instantly, but paying for them over a period of time, often ranging from 30 to 90 days. Typically it is only used for financing working capital. Provider credit is directly dependent on the provider's cash flow, and the strength in the business relationship between provider and buyer. According to the data collected by Presbitero y Rabellotti, 21% of Colombian companies, which as it has been previously noted is made up almost entirely of SMEs, use banks to fulfill their financing needs, while 35% depend on provider credit (Correa & Vasco, 2017).

Authors Correa & Vasco (2017) summarized different theories explaining why provider credit is so popularly used. The first theory has to do with financial information provided by SMEs (Presbitero & Rabellotti, 2016). Unlike banks, which require SMEs to present this information, providers are first-hand witnesses of how the company works and its transactional history, since they are on the supplying end. Therefore, providers have a clearer picture of the company's finances and history. Another theory is that this mechanism could also be a way to introduce new companies to products and services, which they would likely be hesitant to try if the payment has to be presented upfront. This creates a good incentive for providers that are entering a new market and looking for clients (Liberman, 2014) to promote and grow their business. Lastly, the authors indicate that credit in the form of goods and services is perceived by providers as less risky than providing credit in cash (Correa & Vasco, 2017). Suppliers provide credit in the form of products only to companies they trust, alleviating the need for risk assessments, while also gaining a channel to sell new products. This allows providers to gain new clients, as well as retaining existing ones. This creates a win-win situation for providers and buying SMEs. Providers provide an incentive to attract new customers and retain old ones, and buying SMEs obtain the products they need to operate their businesses and pay for them when their cash flows allows it.

2.2.5 The Colombian Online Alternative Financial Market

As is the general case for the Latin American Region, in Colombia there has been the development of a sizeable market of technology-led businesses that aim to increase financial accessibility for the general population, especially the ones that cannot afford to use services offered by traditional banking institutions. This market is known as the Online Alternative Financial Market, and has been growing substantially since 2014. According to a report on alternative finance by Ziegler et al, in 2016 Colombia became the third largest country in the Latin American region in terms of the size of its Online Alternative Finance Market, with 12% of the total market being Colombian businesses. Additionally, in terms of total volume, Colombia ranks third in the region, with its Online Alternative Finance Market earning $11.2 million USD in 2016 (Ziegler et al., 2017). This underscores the substantial growth of this market, having only made $334,000 USD in 2015 and demonstrates the success of the online segment within the Alternative Finance Market in Colombia.

The fact that this market segment in Colombia is becoming so successful not only points to the inefficiencies of the traditional banking industry and the need for alternative services in Colombia, but also illustrates the benefits of using technology-led mechanisms to increase accessibility to financing solutions for SMEs. For example, a Colombian technology-led financing company specialized in servicing SMEs has become highly successful in the local context. Due to their proven success, Sempli was able to raise $5.7 million USD investment capital in 2017 from social impact investor Oikocredit and from the IDB Lab, an innovation laboratory that helps to catalyze innovation for inclusion in the Latin American region (Rebecca & Pérez, 2018). Sempli's success is attributed to its user-friendly online platform that allows the company to conduct specialized and automated risk assessment and information analysis on their clients and to disburse loans in as short as 72 hours. Felipe Llano, co-founder of Sempli, emphasizes the vital role of technology in improving the lending service:

> *"Technology plays an important role in helping us define and understand a customer's personality, integrity and their decision making process (Rebecca & Pérez, 2018).*

The need for efficient and accessible alternative loan services is further evidenced if we take a closer look at the business focus companies in the Online Traditional Financing Market take. Lending is the second largest segment in this market, with 17% of the total companies dedicated to offer lending services, following closely to the largest segment, which is payment platforms with 22% of the total segment size. This demonstrates the significant size of the need for lending services in Colombia.

2.3 Literature Review Conclusions

Colombia's financial system seems to have several commonalities with its regional counterparts. First, the economic policy approaches taken at the beginning of the 1990s had a significant effect in most Latin American countries. These policies led to the inclusion of foreign financial institutions into the national context. Although they did improve the country's global presence and international interest in the local context, this shift decreased the number of public national institutions and relegated them to handle second-floor responsibilities. This course of action led to a standardization of procedures in the matter of credit placements and loans, of which risk assessment has had the most impact on these smaller businesses. Additionally, this shift also limits the important role and reach of second-floor institutions.

Secondly, the economic crises that have taken place on an international and national scale have pushed governments to take more risk-averse positions, increasing the barriers for accessing credit. This has helped them to address the issue of liquidity in the short term, but has created a negative impact on SMEs and individuals in general who are not able to meet such high requirement standards. A robust financial history and a sizeable amount of company assets, which SMEs generally lack, are some examples of these standard requirements for traditional banks to extend full loans, which SMEs generally lack.

On the other hand, SMEs have issues of their own that hinder their potential to obtain financial solutions. Lack of information and technical knowledge in areas such as project structuring and accounting, as well as providing transaction history, prevent them from presenting a more compelling case to financial institutions. Because of this, traditional financial institutions react in a risk-averse manner, increasing collateral or guarantee requirements and raising interest rates.

The way that the financial system currently operates in Colombia (See Appendix 5) has left a large segment of the population with a need to find alternative sources of financing from traditional banks. In response to this situation, different businesses and mechanisms have developed to help this segment of the population with their financing needs, which have escalated into becoming a full-sized market, known as the Alternative Finance Market. It is also important to note that while in the US and Canada this industry's focus has been on individuals, in the Latin American region it has been more focused towards small businesses. In fact, of the $342 million USD the alternative finance industry made in 2016, more than $230 million USD came from business financing (Ferraro, Goldstein, Zuleta, & Celso, 2011). According to an analysis conducted by Colombia Fintech, over 45% of the clients that resort to the Online Alternative Finance Market in Colombia for financing services are SMEs and underserved individuals of the traditional banking sector ("Fintech Companies in Colombia," n.d.) . This is clear evidence of the lack of specialized products and services offered by the traditional banking system for SMEs.

With the use of new technologies such as smartphones and the Internet, the Alternative Finance Market provides new ways to obtain financing services that do not need the intermediation of traditional banking institutions. This has allowed businesses in the Alternative Finance Market to address the gaps left by the traditional banking sector and give clients better solutions to their financing needs. However, instead of becoming competitors, some of these new actors have found a valuable opportunity in working with traditional institutions by aligning their strengths and weaknesses for mutual benefit (Dávila, 2018). This allows them to improve their service offerings and increase access to financing for their existing and potential clients. As part of these partnerships, the new actors can benefit from having access to a bigger market, while being backed up by a robust institution that gives them credibility. According to German Pugliese-Bassi, CMO at Technisys[15], banks are looking at fintechs (technology-led companies that are part of the Alternative Finance Market) because of the new perspectives the digital age has brought to its customers:

"Now the big change is that the customers are the ones who lead the disruption," Pugliese-Bassi said. "They are forcing banks to create services that they want. They want the same experiences in banks as they have in many other services like Netflix, Uber, Amazon and Google." (Groenfeldt, 2018.)

[15] Technisys is a digital banking technology company, that helps banks deliver the best digital experience for their clients.

3.CASE STUDIES: A PRACTICAL DISCUSSION

Regulated Banks	Non-for-profit Org	Fintechs
Bancolombia Largest national commercial bank in Colombia offering a specialized platform for SMEs.	**Opportunity International** Non-profit Organization that funds small business owners through solidarity-group lending.	**Hometuls** Digital marketplace that offers financing solutions for buying SMEs.
Bancompartir Microfinance Institution focused on the financial literacy of its clients, and fast loan approvals.		**Sempli** Digital financing services with a niche customer target.
Bancamía Microfinance Bank specialized in rural agricultural SMEs, and focused on building customer relationships.		**Aflore** Company that uses counselors from the community to engage 'unbanked' family and friends and help them secure a loan through the platform.

Table 02: *Summary of the reviewed case studies and their business type.*

After a thorough examination of the general context of the financial landscape in Colombia, it is necessary to take a closer look at what specific entities are currently doing to address the issue of lack of access to financial solutions for SMEs. The following case studies demonstrate how different actors/entities are currently delivering financing services in the Colombian context. Although this MRP focuses more specifically on SMEs in the Construction sector, there are sufficient commonalities with SMEs in different economic sectors that makes their cases relevant and important to discuss. By conducting an analysis of these related cases, conclusions can be made on how present financial entities are responding to the current financial landscape (as outlined within this literature review) and help unearth new findings related to their clients' met and unmet needs.

3.1 Case Studies

3.1.1 Bancolombia - Negocios Pyme Platform

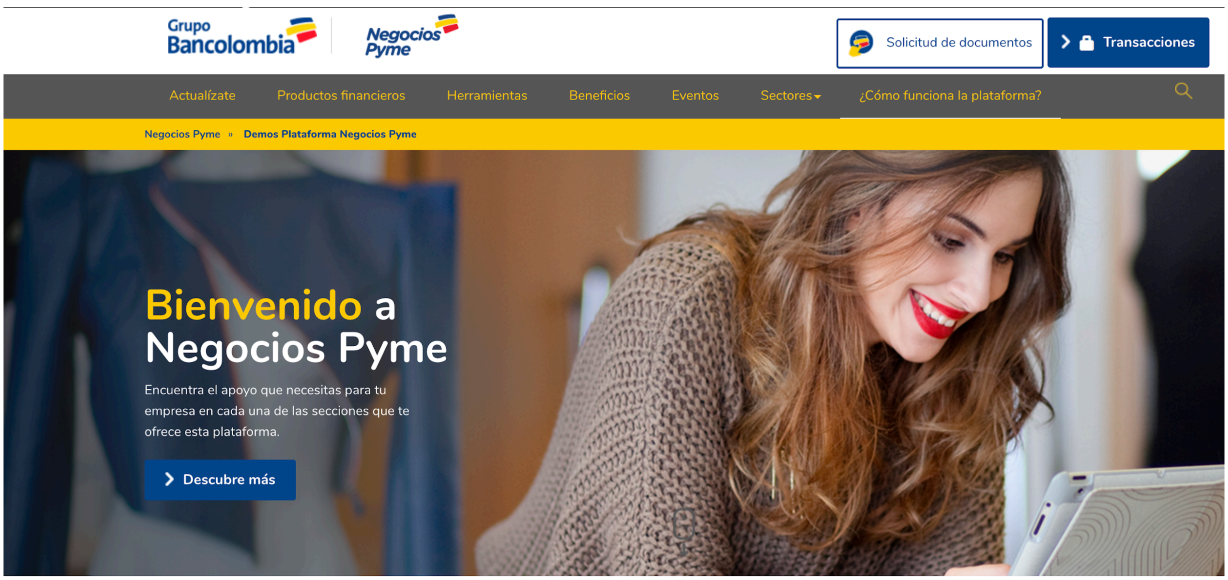

Figure 06: *Home page of 'Negocios Pyme', the new online platform by Bancolombia catering specifically to SMEs.*

Earlier this year (2018), Bancolombia, one of the biggest banks operating in Colombia decided to launch a platform dedicated to SMEs through its main webpage. Named 'Negocios Pyme', the platform acts as an aid for starting companies. Though created to help expose the different products and services the bank offers to SMEs, the platform also serves as a knowledge hub. A section called 'Actualízate Pymes' , users can find relevant articles across very distinct themes, but all relevant to these types of companies, like trends, economic reports, and general information.

The platform also contains a section called 'Beneficios Pyme' which acts as a community hub where SMEs can find relevant commercial and more strategic allies to help their business operate and grow. It also displays offers especially made for

SME clients. The platform also contains an in-house consultancy service, dedicated strictly to its SME clients. As a registered user, clients can also access a database of events, both virtual and on-site, to share among other SME clients knowledge to improve their business. Lastly, through its ‘Herramientas Pyme’ (Tools for SMEs) section, clients can access different tools to help with everyday business operations, such as credit simulators, application forms and other relevant documents.

Negocios Pyme’s main section is ‘Productos Financieros Pyme’ (Financial Products for SMEs), which gathers all the bank’s product offerings specially designed for SMEs. SMEs can access the entire list of product offerings, or filter them by responding two simple questions: *What do you need?* And *For what are you needing it?* It also has additional filters like the economic sector the SME belongs to, and the size of the business.

3.1.2 Bancompartir - Responsive Microfinance

Figure 07: *Bancompartir office in Colombia. Source: https://medium.com/accion/responsive-microfinance-for-a-changing-economy-colombias-bancompartir-e2647189f8c0*

Bancompartir is a Colombian Microfinance institution (MFI) that was established shortly after the eruption of the Nevado Del Ruiz in 1985. This eruption left thousands of individuals needing assistance to rebuild their homes, and Bancompartis, formerly known as Actuar, was created to form solidarity groups for collective savings and lending for the individuals affected by the eruption. In 1988 this organization partnered with Acción, and consolidated into a non-profit microcredit foundation. Despite becoming a financial institution with similar processes to banks, Bancompartir is still able to act quickly and change their service offering when needed. For example, it was able to restructure their group lending service and change to individual loans, when they noticed that solidarity-group lending was not sustainable in a country where social trust has been eroded.

Bancompartir also differs from other MFI's in the emphasis they put on financial education and their relationship with their borrowers. Bancompartir understands that most of their clients are financially vulnerable and have a limited understanding of the financial system. Because of this, Bancompartir accompanies their clients throughout the whole process, and offers them personalized help with any of their needs. Moreover, their credit officers are trained on how to effectively encourage, not harass, any client that defaults in their payment. They even have posters in their call centers reminding employees that "Recoveries happen with a handshake, not with a net".

Additionally, the bank uses innovative processes to serve their borrowers in a fast and efficient way. When a new solicitation for a loan arrives, a team of over 96 specialists analyze and compare the loan application with all other applications they have received in the past, combining approved, rejected and successfully repaid. This allows the bank to have a comparable "credit score" within hours, often letting borrowers know if they have been approved for a loan within a day. The disbursement process has also been made more efficient, with some loans being paid out within a day of approval.

3.1.3 Bancamía - Microfinance bank

Figure 08: *A Bancamía office in a town near Medellín. Source: https://www.compromisoempresarial.com/innovacion_social/finanzas-sociales/2015/08/bancamia-ofrecera-productos-y-servicios-financieros-a-exreclusos-de-colombia/*

Bancamia is a Colombian microfinance banks formed in 2008 by the merge of two charities, which emphasizes its service offerings on small businesses dedicated to agriculture. Unlike other economic sectors, agriculture is more focused on distant rural areas, with small, low-tech farms making up most of the business. Normal banks perceive these type of customers as too high risk, and often do not have the proper knowledge and tools to correctly assess these businesses. Though the 33% annual interest rate might sound high, Oscar, one of Bancamia's Vice Presidents argues that it is an average percentage for microfinance institutions. He backs this figure by stressing how dispatching credit officers to remote rural areas is a very costly operation.

Oscar also stresses out the importance that trust is for the business. The relationship between the borrower and the credit officer is crucial, and it is this relationship that helps keep the default rate low. However, the last measure is also using the borrower's property as collateral.

Diego is a quail farmer that lives north of Colombia's second largest city, Medellín. He owns a small farm, but wants to expand to grow his business. He applied to the Banco Agrario (Agrarian Bank), a state owned bank for a loan, but was turned down because of insufficient guarantees. He found out about Bancamia by word-of-mouth, and contacted the bank. Immediately after applying for the loan, Diego received a call for a meeting with one of Bancamia's credit officers. Because of the remote location and precarious tertiary roads, it is not easy for Diego to reach one of Bancamia's offices. Instead, Bancamia dispatches their credit officers to meet Diego in his farm. The meeting takes place a few days after it was scheduled. In this first meeting, the credit officer conducts a very detailed inspection of the operation, complimenting it with a very detailed questionnaire, that combines business with Diego's personal life. Though it seems like a long tedious process, the questionnaire has actually a more qualitative than quantitative process, because it helps render a detailed persona of the would-be borrower. The credit officers will even meet with neighbors to ask for character references of Diego. After all the information needed is collected, the credit officer will bring this information back to the office for a bank executive to assess it.

3.1.4 Opportunity International - Microfinance Trust Group

Figure 09: *Elizabeth Abella preparing the food she sells in Barranquilla, Colombia. Source: https://www.marketplace.org/2016/05/02/world/using-microfinance-escape-loan-sharks-colombia*

Opportunity international is a global network of organizations dedicated to helping individuals overcome poverty, with a strong support of donors from Canada, United States, the UK, Germany and Australia. It offers opportunities to individuals living in averse conditions through access to capital. Opportunity International also stimulates the strengthening of the individual’s competences, which helps them grow beyond simple financial matters and become self-sufficient even after the economic help from the organization. Its unique micro loan offering service bases of the power of group support. Individuals are placed into groups or ‘trust groups’. Apart from the money, they receive financial education they get to put into practice, such as planning, budgeting, and saving. Individuals feel empowered in a group setting, but also feel accountable to the other members of the group, which helps decrease defaulting.

Elizabeth Abella is a middle-age woman living in Barranquilla, Colombia. For a living, she prepares typical Colombian food, which she sells to food stalls located near the Central Market. In order to grow her business she went to Opportunity International for help. Elizabeth got a microloan of $150 USD. Abella had been denied credit from other financial institutions for lack of collateral, but Opportunity International “waived off” her collateral through a concept known as Trust Group. Its strength lies in creating a strong support group of individuals in need of a microloan. If someone defaults in the payment of their debt, the rest of the group is in charged of picking up the tab. The feeling of being backed up by a group, as well as not wanting others to have to pay for one’s default is what has made this service so successful. This type of mechanism is far more appealing than dealing individually with loan sharks, which can often have daily interest rates of over 20%, and rely on intimidation and sometimes violence to get their payment.

3.1.5 Hometuls - digital procurement and financing platform

Figure 10: *Neftaly Ramírez, Co-founder of Hometuls at the SeedStars Summit in Bogotá, Colombia. Source: https://pulsosocial.com/2018/10/03/seedstars-elige-a-hometuls-como-la-mejor-startup-de-colombia/*

Hometuls is a platform that started operations in May 2018. It is a digital platform in which three main players interact: Buyers, suppliers, and financing companies. It aims to facilitate the procurement of products for SMEs, by offering payment plans that best fits their cash flow. By doing so, these SMEs are able to access the different products they need instantly, while paying for them up to 180 days later.

One of Hometuls' first clients was company X[16], a small company from Quindío, a small department East of Bogotá, Colombiá's capital city. Company X needed products that were estimated around $43,000 USD. The company had no capital to

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[16] Real name of the company is not used as per privacy arrangements.

pay the cost of the material upfront but were getting paid in a few weeks by a buyer. Through the platform, they were able to submit all required information and documents to acquire the products they needed, but had to request assistance several times from the Hometuls support staff. The completed documentation was then sent to the financing company (in this case, a Colombian fintech specialized in factoring) for approval of the loan. When the loan was approved, the supplier was contacted to arrange delivery of the products.

Company X had agreed on paying 60 days after the products had been delivered, (by then they would have sufficient capital to pay off the loan) but when the 60 days passed, they had not yet been paid. Company X contacted Hometuls, to explain the situation, and arrange a new date to pay off the loan. Between Hometuls, the financing company, and Company X, they agreed on a 30-day extension period to pay the loan. Despite the extension, however, after the 30-day period they still were unable to pay, and had accumulated $1,500 USD in interest. Currently the company is on a second extension period, but the financing company has given notice to take legal action against the company if they default again (by seizing corporate bank accounts).

3.1.6 Sempli – Digital lending services for SMEs

Figure 11: *Sempli co-founders Felipe Llano (left) and Esteban Velasco. Source: http://www.financecolombia.com/colombian-digital-lending-fintech-sempli-receives-5-7-million-usd-in-funding-from-bid-lab-oikocredit/*

Sempli is a fintech from Medellín, Colombia which specializes in providing financing services to SMEs. Their co-founders recognize the special and unique characteristics of SMEs and the people behind them: most SMEs they have served are family run or rely on one person to do multiple jobs. Because of these, they understand the need to assess each company individually, instead of using a one-size-fits-all method. Thanks to Sempli's proprietary risk assessment software and a substantial number of analysts, they are able to deliver unique assessments to SME, through a simpler and friendlier process than that of traditional banks. The whole process from loan application to disbursement and payment is done and monitored through Sempli's digital platform, which eliminates time-consuming actions such as going to a brick-and-mortar office, and eliminate additional and complex paperwork.

Due to this, Sempli is able to process client applications much faster, usually approving or declining a client in up to 72 hours, which is for vital value for SMEs.

3.1.7 Aflore – lending through community engagement

Figure 12: *A group of Aflore financial advisors. Source: https://www.kiva.org/lend/1099654*

Aflore is a company form Medellín, Colombia that offers financial services (microcredit) to individuals that have no access to traditional financing institutions. Their uniqueness comes from their use of trusted individuals within the community to act as financial advisors throughout the loan process. Aflore founders found that while there is a segment of the population that cannot access traditional financial services, they are always able to get a loan either from close friends and family, or trusted members of the community (internal financing).

By identifying and recruiting these trusted member already operating within a community, Aflore builds up a networks of financial advisors, supporting them with professional finance training, tools to better operate and economic incentives These trained counselors are able to refer quality candidates for loans with Aflore, which offer microcredit solutions (up to $2,000 USD) and affordable payment plans to up to 12 months. Aflore also encourages individuals with a successful loan history with them to also become financial advisors, thus growing their network continuously, while giving these individuals an additional income source and professional training.

3.2 Relevant Commonalities from Case Studies

After conducting a careful scan of some of the different entities currently operating in the Colombian landscape, there are some points worth discussing that relate to access to credit for SMEs. First, the importance of financial literacy and general knowledge of the financial system has proved a crucial need for SMEs and is something alternative businesses are integrating to their product/service offerings. Almost all the cases studies discussed have a knowledge component, including Bancolombia, a regulated bank, whether through a digital platform or from in-person assistance. By having the access to relevant information in an opportune manner, the whole financing process can run smoother and faster and can decrease the chances of clients defaulting on their payment.

A second important point to take from the case studies is the need for specialization. The services explored in the case studies have abandoned the one-size-fits-all model and focus on a detailed analysis of each client. Also, they have all incorporated a technology-led component (a digital platform) which makes the process simpler and more efficient by eliminating the need for office appointments and unnecessary paper documents. Some businesses also incorporate a human element to their risk assessment. Staff members of these organizations conduct on-site visits to see the business and meet clients for themselves. This allows them to have a better judgement instead of basing it entirely on the documents submitted by SMEs. While this is easier for smaller services, these principles could still be applied to more complex services (such as the one delivered by Bancolombia, one of the biggest banks in Colombia).

Finally, guarantees have always been a requirement as part of the range of financing mechanisms, whether traditional or alternative. But four of the case studies explored present an interesting perspective on the subject. Both Bancamía and Bancompartir focus on their relationship with the client, going beyond collateral assessments to decrease the need of guarantees. Additionally, Aflore relies heavily on their counselors to help keep their clients on track and Opportunity International uses group support as a way to keep individual members accountable for their loan repayments. While there is still the use of guarantees, in these cases they are left as a last resort.

Below is a table (Table 03) that outlines the most important characteristics from each case, as well as the key elements that can be studied and can inform other organization's offerings. This table also summarizes the areas in which these entities can further improve from their services.

	Positive Elements To Learn From	Elements Needing Improvement
Bancolombia	- Services catered to SME needs. - Knowledge component. - Helps build community.	- Uses collaterals as guarantee. - Fully accountable to government regulation.
Bancompartir	- Importance in financial education component. - Personalized help throughout entire loan process and repayment. - Credit officers trained to encourage, not harass clients. - Big analysis team with innovative assessment process. - Fast approve/deny process and disbursement of funds.	- Uses collaterals as guarantee. - Fully accountable to government regulation.
Bancamía	- Niche market focus (agricultural sector). - On-site visits from Credit officers for specialized risk assessment. - Focus on trust between credit officer and client.	- High interest rates. - Uses collaterals as guarantee. - Fully accountable to government regulation.
Opportunity International	- Collateral need waived off by using Trust Groups. - Groups receive financial training applicable to everyday tasks.	- Is only capable of offering micro-loans, being unable to serve bigger (but still very needed) clients.
Hometuls	- Acts as an intermediary between buying SMEs, provider, and financial company supplying the loan.	- Subjected to financing company's terms of operation. - Still needs extensive digitized paperwork.
	- Services provided solely for SMEs.	- Uses collaterals as guarantee.

Sempli	- Proprietary risk assessment software: simpler, friendlier process for clients. -whole process (application through disbursement and repayment) monitored through digital platform. - Eliminates complex paperwork process. - Fast approve/deny process and disbursement of funds.	
Aflore	- Use of trusted community members with "financial counseling" experience. - Fast scalability of business (clients can become financial counselors). - Improves community relationships.	- Uses collaterals as guarantee. - Clients do not have access to the company directly, only through financial counselors.

Table 03: *Summary of the cases positive elements and the ones that need improvement.*

4. RESEARCH DESIGN

4.1 Proposed Research Methodology

The literature review offered important background context on the financial climate of the Latin American region and, in more detail, the Colombian context. It provided an initial understanding of the problem and information to move into the next step of the research process. This chapter begins with a brief description of the proposed methodology and the research tools employed, as well as a detailed analysis of the findings and the outcomes that resulted from it. Qualitative and quantitative tools for gathering and analyzing data were chosen for this research project, by having the qualitative methods build upon the data gathered from the quantitative ones. This process not only allows the gathering of significant amounts of data, but turns the qualitative stage into a pre-analysis and corroboration stage, allowing the final outcome to be further enriched, transforming gathered data into valuable insights.

4.1.2 Questionnaire

Questionnaires are a very effective method to obtain qualitative data on a given issue or topic. Its versatility lies in its fast and easy distribution, allowing the researcher to retrieve large amounts of data in a specific timeframe. Although usually questionnaires tend to use shorter, one word answers, the one used in this project was designed to obtain deeper, more illustrative answers. The questionnaire was divided into two sections, one that helped gauge the targeted demographic and retrieve certain aspects and characteristics of the participants, and a second one that pressed for deeper answers on the lack of access to capital and alternative methods of financing.

In the first section, for example, questions were asked to determine the number of years of experience participants worked in the construction sector. This helped provide more information about the experience level of each participant. The second section included the longer, more inquisitive questions to the subject at hand. It aimed to help illustrate the current needs and pain points of participants, both in their experience in the previously mentioned sector and with traditional and alternative methods of financing. Rather than just asking if participants had or did not have had any experience with these methods, the questions in this section dug deeper, asking for a more extensive explanation of their interaction with them.

The questionnaire (see Appendix A) was intended to be as inclusive as possible, without turning down participants because of age, gender, or sexual orientation. However, since the research is context specific, it was limited to participants with professional experience in the Colombian context. To reach the intended demographic, several digital channels of distribution were employed. Social media platforms like Facebook and LinkedIn were used to reach the researcher's network of professional contacts. In addition to this, various groups within this platform were contacted and were asked for provisional allowance to post the questionnaire. The groups were chosen after reviewing their characteristics and deeming them in alignment with the topics of the questionnaire and the research project.

Although more of a professional networking than a strictly social platform, LinkedIn was used in a similar manner as the one described previously. Through the researcher's account, a posting of the questionnaire was sent out two times, within 15 days of each other. Aside from posting in the researcher's account, individual profiles were sought through a personal message (See Appendix 4), with the link to the questionnaire embedded within it. The individuals chosen for this approach were ones that matched the demographic characteristics needed for the research project, but were outside of the researcher's network within LinkedIn.

4.1.3 Structured Dialogic Design-based Workshop

To complement and further develop the findings and areas in need of clarification from the quantitative method described previously, a workshop was devised following Structured Dialogic Design (SDD)[17] methodology. This workshop was held in Colombia in order to have access to participants from the geographical context being researched. SDD is a dialogue and decision-making approach based on the effective interaction between different actors and is structured around seven main principles, which are summarized in Table 04. The core of SDD lies in leveling all participants equally, giving each one individual autonomy in the dialogue group. Because of this, participants are able to transcend their own knowledge and cultural barriers and create what is commonly known as community wisdom (D&D Resources, 2008).

Another reason to utilize SDD principles is that they can effectively overthrow groupthink, a phenomenon that occurs in group settings, in which the desire for harmony and conformity leads to suboptimal results. Moreover, SDD creates a safe space for all participants to communicate their ideas while being received and respected by the rest of the group. This keeps participants engaged and encouraged and feeling that their ideas are being heard and valued.

Requisite Variety	An appreciation of the diversity of perspectives and stakeholders is essential in managing complex situations.
Requisite Parsimony	Structured dialogue is needed to avoid the cognitive overload of stakeholder/designers.

[17] Structured Dialogic Design SM is a computer-supported collaborative design methodology equally suited for root cause analysis and visioning work (“Structured Dialogic Design,” n.d.).

Requisite Saliency	Observations can only be understood by comparisons in an organized set of observations.
Requisite Meaning	Meaning and wisdom are produced in a dialogue only when observers search for relationships of similarity, priority, influence, within a set of observations.
Requisite Autonomy & Authenticity	Protect the autonomy and authenticity of each observer in drawing distinctions.
Requisite Evolution of Observations	Learning occurs in dialogue as people search for relationships in a set of observations.
Requisite Action	Action plans must be designed in authentic engagement of those whose futures are influenced by the change.

Table 04 *Dialogic Design Principles. Source: https://www.slideshare.net/SoCoDesign/structured-dialogic-design*

Participants were recruited following the same criteria as the questionnaire:

- Experience or currently working in Colombia.
- Professional experience in the construction sector.
- Founded or has worked in an SME.
- Experience with traditional or alternative mechanisms of financing.

To be able to keep a clear, controlled dialogue, ten participants were recruited. The number of participants was decided through consensus among the primary researcher, who led the workshop, and two workshop facilitators, who aided the researcher. Among the three facilitators, it was decided that ten participants was the number that would allow for good, efficient dialogue and sufficient heterogeneity in ideas, concepts, and discussion while keeping the group focused and organized. Since SDD is about having different stakeholders represent different points of view in the dialogue, the goal of this workshop was for all sides of the issue to be represented. In that manner, participants were chosen that represented SME founders, experienced professionals from the construction sector, and participants involved with alternative finance platforms.

A two-hour session was conducted in a working space in Bogotá, Colombia in October, 2018, with a structure adapted from SDD principles. Because of the difficulty in managing the participants' very different and busy schedules, a weekday slot during lunch break was decided for the workshop to take place. Since lunch breaks are usually up to one hour, participants were asked to take an additional hour to be able to participate in the full workshop. Also, to have a more efficient use of time, participants were previously briefed on the matters taking place in the workshop, and were given "thought provoking" questions to come better prepared to discuss in the workshop. Additionally, participants were briefed on information disclosure, withdrawing from the workshop, photo and video recording and other matters summarized in the consent form (see Appendix B).

4.2 Analysis of Findings

The preceding description of the research methodology sets up the following section in which the gathered data is presented, distilled, and analyzed. The section begins with a walk through of some of the general limitations that were present while conducting research and how these played a role in the process. Afterwards, an overview of the data gathered from both methods is presented individually and their relevance to the project is discussed. To conclude, the outcomes of the research are presented in a summarized matter.

4.2.1 Research Limitations

There were some limitations to the Design-led research portion of this project, which will be discussed in the following section in two different sections: one exclusively for those pertaining to the questionnaire and the other for the workshop. Apart from the general project limitations concerning time, there were several factors that also influenced the data gathering process of both methods detailed in the previous section.

Regarding the questionnaire as a research method employed in this project, the main issue with it was the number of participants answering it. Since questionnaires are a quantitative tool used to gather data, the number of participants directly influences the output. Even though the projection of participants for this method was conservative[18], getting to that number was a difficult task. Two reasons can explain this difficulty.

First, there was no incentive involved for the individuals answering the questionnaire, apart from the benefit of improving the quality of a service that could help them with their companies in the future. This issue was addressed in a later stage of research during the deployment of the questionnaire through digital

[18] The project had an initial estimate of 20 responses, when submitted to the REB (Research And Ethics Board - OCAD University).

platforms. An incentive was introduced by including a tangible benefit: receiving a summarized booklet of the findings that resulted from the research project. While this incentive was initially considered only for participants of the workshop, it proved a valuable asset to increase the number of questionnaire responses.

Second, the channels used to recruit participants may have not been the most appropriate. Public groups and forums in social platforms such as Facebook have usually low response rates to the content being posted, especially as the number of users increases. In addition, interest and response is even lower when it comes to surveys or any posting that requires time and action from members. This was evidenced by the fact that nearly all responses came from smaller sized groups (between 500 and 2000 members), as opposed to no responses when posting to 2000+ member groups and forums.

Aside from the number of participants, the heterogeneity of participants responding to the questionnaire was also an important factor worth mentioning. Since the issue being addressed in this project was in Colombia, it was important to have answers coming from different places in the country. Even though SMEs in the construction sector are focused on three major cities[19], there is still a considerable number of companies operating outside of these cities. A valuable question to have asked in the questionnaire was the city in which the participant worked in or where his/her business was located. This would have proven valuable when comparing

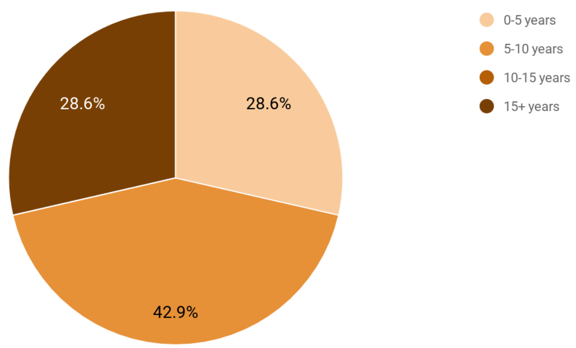
[19] According to the data found by the Ministry Of Development in 2004, more than 75% of SMEs are located in Bogotá, Medellín, and Cali.

answers to observe the differences and similarities from different geographical locations.

The issue in this case with running a regular SDD workshop was time. A regular SDD workshop may take various multi-hour work sessions to complete. After reaching out and recruiting participants for the workshop, a two-hour session was established during lunch hour. Because of this, the workshop had to be adapted to this limited time frame. Certain aspects that would normally require more time were shortened. This required the researcher and facilitators to switch the analysis portion of the workshop from a collaborative process to a brief discussion and the full analysis left solely to the researcher.

4.2.3 Data Analysis - Questionnaire

It is important to note two characteristics of the respondents: their years of experience in the construction sector and if they are part of the founding team of the business. Of the total number of respondents, 28.6% have between 0 to 5 years of experience, and the majority (42.9%) have between 5-10 years of experience in the aforementioned sector. However, there is a considerable number of respondents with 15+ years of experience. When asked if they are part of the founding team of the business they are currently working in, 57.1% of the total number of respondents said they are. While not detrimental to the research, it was expected to have at least 75% of respondents be part of the founding team.



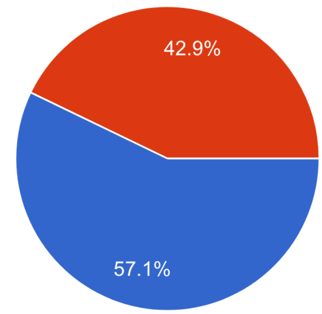


Figure 13: *Respondents' years of experience in the Construction Sector in Colombia.*

Figure 14: *Percentage of respondents who are part of the founding team of the business in which they currently work (blue).*

As expressed in the previous section when introducing the methodology, the aim of the questionnaire was to gain initial insight into the current state of businesses in terms of their financing needs. Through the questionnaire, it was clear that the need for external sources of financing are high within the Colombian context. Over 71% (Figure 16) of respondents answered that SMEs are highly dependent on external sources of financing, as opposed to the use of their own resources (internal financing). This supports the findings of Valenzuela (2014), which show that Colombian SMEs depend less on internal financing than other countries of the region: 45.4% of Colombian SMEs depend on internal sources to finance working capital needs, as opposed to a regional average of 65.9%.

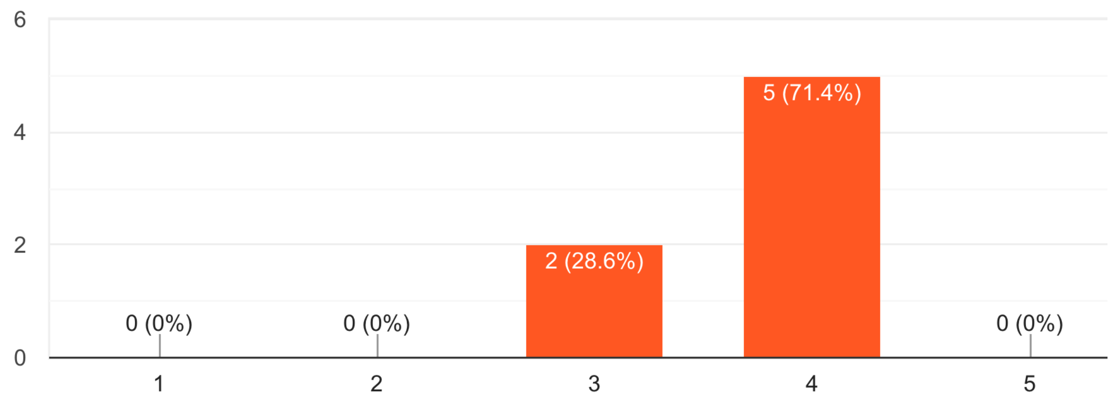


Figure 15: *Responses to the question: How much are SMEs dependent on external sources of finance to operate their business? (Scale from 1 to 5: 1 being none, 5 being entirely dependent).*

The low dependence on internal resources to finance SME operations can also be backed up by the fact that over 70% of respondents answered that they have to resort to external financing to operate. When asked to provide more detail about the sources for external finance and why these sources were chosen, respondents answered that even though they initially asked a bank for a loan, they had to resort to other financing mechanisms. Almost all of the respondents expressed that banks, due to their risk averse nature, asked for too many guarantees that the businesses were unable to meet. Moreover, a few also stated that even though they had solid financial records, the lack of credit history was a major barrier to access credit from a bank. Lastly, some respondents stated that the legal framework and bank policies were the main reason they needed to look for alternatives to bank loans and credit. Respondents explained that documentation that was required to be submitted to bank authorities took too much time to put together, and the process of approval was longer than expected on the project timeline.

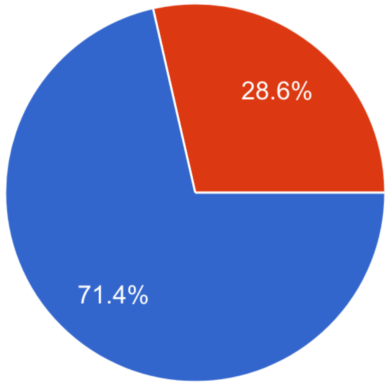


Figure 16: *Chart showing percentages of respondents who have had to solicit external finance (blue) contrasted with those who have not accessed external sources for financing (red).*

Respondents also had relevant observations when prompted about advantages or disadvantages between SMEs and larger businesses. There is an evident perception that SMEs are at a disadvantage when it comes to financing solutions through banks and financial institutions. Out of all the responses, only one stated there is no disadvantage between SMEs and larger businesses. When cross referencing this response with the ones submitted about years of experience, this answer came from the respondent who answered that he has over 25 years of experience in the construction sector.

Among the reasons given to explain the disadvantages SMEs face when soliciting credits through traditional financing entities as opposed to large companies, there are certain common factors through all responses:

- Lack of belief in new business models
- Too much documentation needed
- Lack of case-by-case analysis

- Guarantees that are hard to achieve for smaller companies
- Higher interest rates

Also, when prompted about pain points they have had when soliciting financial services from banks, respondents again expressed the limiting mindset they perceive that banks have in their approach to SMEs as opposed to larger companies. All the issues were addressed again when asked about how these banks and traditional finance entities can improve their services. Respondents' answers were very focused in four areas:

- Specialized services tailored for SMEs
- Reduced paperwork and documentation
- Reduction in response time
- Unclear or non-transparent use of personal data

Lastly, when asked about alternative methods of financing, only 33% of the respondents answered 'yes' to having used a different method other than a bank or financial institution. When inquiring further about which methods they have used, answers were divided. Some respondents resorted to predatory lenders, individuals that work outside the control of Superintendencia Financiera, the government agency in charge of overseeing financial regulation and market systems in Colombia. A few others stated having used fintechs to finance their projects, but found them being a little confusing and not very user friendly. Lastly, the majority of respondents who answered 'yes' to using methods different from banks stated that provider credit was the best alternative they had used so far because of the flexibility it can give them. For example, one respondent said that sometimes because of cash flow difficulties, he has needed to ask for an extension in the repayment period with their provider. Because of the good relationship between both parties, the provider will agree to an extension without recurring to legal matters, like lawsuits, or charging higher interests.

4.2.4 Data Analysis - Workshop

In the beginning of the SDD Workshop, the facilitators asked participants to share their experiences with the group as a way to break the ice while allowing participants to get to know each other and have a context of who was in the room. During this initial step, conversation amongst participants revealed key issues related to the financial system and the barriers that limit SMEs' access to credit and other financial services. As the group continued their discussion, facilitators took notes about these different issues and posted them along the wall.

The main activity of the workshop asked participants to individually write down as many solutions to the question *"How can you facilitate access to financing solutions for SMEs in the construction sector in Colombia?"* The issues previously written down and posted across the room by facilitators helped the group move through the initial inertia of coming up with answers and prompted new ideas when stuck. Participants were then asked one by one to read out loud one of their answers and clarify what they meant. When the room reached consensus that the answer was clear, participants were asked if they had the same or similar answers. Then these were grouped together and handed over to the facilitators, who placed them to the wall. By doing this, it showed which answers held the most significance for the participants. This exercise was repeated with each participant around the table and was repeated several times until all participants had submitted and clarified all of their responses.

With all the answers posted on the wall, participants were then asked to group the different solutions they had found to the initial question. After doing so, they gave a title to each group or cluster. Participants were also asked to give a brief description of the title and why they had chosen it. Giving the different clusters titles was a method that aimed to categorize similar issues within a larger frame. Consequently, by addressing this root problem, the smaller issues within the cluster would be partially or completely addressed. A summary of the clusters and their respective description are shown below (Table 05).

Alternative capital resources	Different methods and mechanisms to obtain financial resources as an alternative to the traditional financial system.
Business model & project presentation	Business model structure and project presentation that resonates with the current assessment methods used by banks.
Policy	Changes to current policies regarding the financial system, and increase support to SMEs.
Operation	Improvements in businesses’

	operations to better the flow of capital resources.
Education	New or improved educational sources to improve businesses understanding of the financial system.
Information channels	Improving the medium through which valuable information is communicated
Networking/community	Creating a healthier community between SMEs and strengthening network capabilities.
Guarantees	Improvements regarding more adequate guarantees/collateral for SMEs.

Table 05: *Clusters created by the participants of the SDD Workshops.*

Out of the eight clusters participants discovered during the workshop session, only one was directly related to using alternatives methods to traditional banking. The majority of the categories (five) aimed to better the customer-end of the issue, while two looked at how the system in general could be changed (policy reforms).

The next step in the process was to rank the resulting categories by influence. In this exercise participants were asked to determine which category has impact over another, and lay their conclusions on a diagram that evidenced the clusters they had previously identified ranked from least to most influence. The concept of influence is that by addressing a cluster ranked high in the influence diagram it will help address partially or completely any other category below it on the diagram. In this sense, participants helped to uncover the root issue regarding SMEs' access to financial services (which cluster should be addressed first as the main issue). The ranking was developed by pairing one category with another and asking *"if address category A, will category B get addressed as well?* According to SDD principles, by comparing issues in pairs, it alleviates the stress of having to remember more than two categories, and forces participants to pick only one answer. This process was repeated until all categories were paired with each other.

Based on the ranking, an influence diagram was sketched, in which Network/Community ranked first, followed by Education. Policy came next, followed by two that ranked on the same level: Information Channels and Alternative Capital Resources. Guarantees came in next, followed lastly by both Business Model & Project Presentation, and Operations (Figure 17).

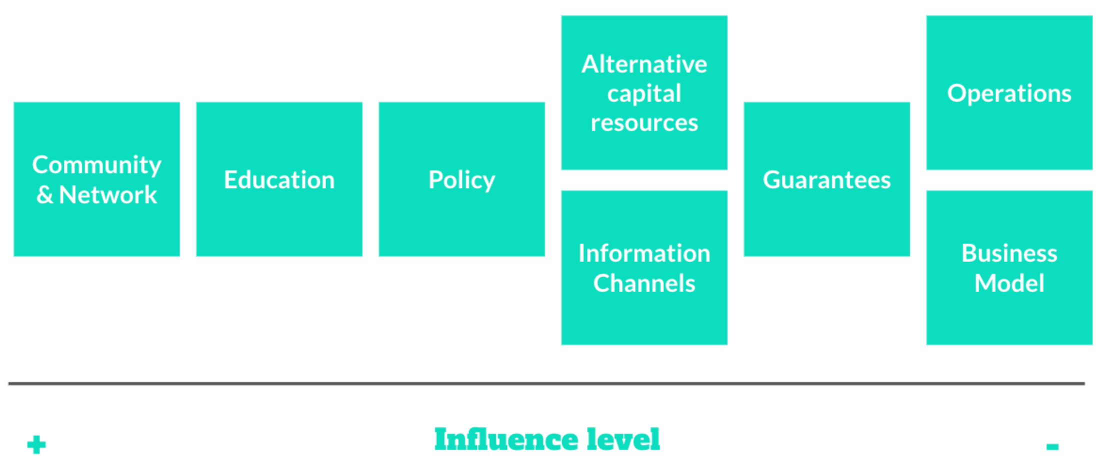


Figure 17: *Responses to the question: How much are SMEs dependent on external sources of finance to operate their business? (Scale from 1 to 5: 1 being none, 5 being entirely dependent).*

5. OUTCOMES OF THE RESEARCH

The different research methods uncovered some interesting findings individually, but these are even more so when analyzed together. It is important to see how some issues kept coming up through the different research methods used in this project. As stated before, the questionnaire helped the researcher gather data to get a better understanding of the background context presented in the literature review and the case studies. Moreover, this initial process aided in providing a pathway to structure the questionnaire. Because of this, the data gathered from the questionnaire backed up the general findings taken out of the literature review.

In a similar process, the workshop served as a method used to dig deeper into the findings from the previous method (questionnaire), and helping to fill any gaps that had surfaced and were in need of clarification. After analyzing and cross-referencing the data and information acquired between the two methods, as well as the initial literature review, six main insights arose that illustrate the most significant issues for construction sector SMEs trying to access credit in Colombia.

5.1 Eroded Trust of the Traditional Financial Industry

The initial literature review shed light on the history of the financial system in the Latin American region and in Colombia, and why traditional financial institutions behave and operate the way they do. The policy changes that were made in the beginning of the 90s may have solved problems in the short term, but on the long run they have had a notable negative effect in the way traditional financial institutions are perceived. Their inefficiencies in assessing businesses, risk averse behavior, and the inadequate requirements for small businesses have created a negative image of the traditional financial institutions in the eyes of these unbanked companies. This issue goes even further, not only with SMEs that now need to find other ways to finance their operations, but it also discourages newer companies to even try to access financial services from traditional financial institutions. The perception that credit from banks and other traditional financial institution is out of reach keeps SMEs from even submitting applications and recurring to other financing services and mechanisms.

5.2 Acknowledging The Informal

As a response to a traditional financial industry that is unable to respond to the needs of a significant segment of businesses, over the years, alternative mechanisms and businesses developed to cover the gap in accessibility to credit. This trend evolved into an informal market, called the Alternative Finance Market. Although not perfect, these businesses and mechanisms have been able to provide SMEs with access to credit. Growth of this market has been significant, showing its success and its importance in the overall financial system. Traditional financial institutions have noticed this success and are now reacting to the growth of this market. There have been cases of banks, like BBVA, that have started buying fintechs to improve their service offering. In a similar way, some companies dedicated to providing alternative financing services have now pivoted to become providers of back-end technologies for banks. Hence, it is important that the government acknowledges the value of this informal market, and it is the government's responsibility to legitimize the services provided by these companies through the creation of laws and policies. One example to learn from is Mexico's Fintech Law, currently the only country in Latin America with a clear, official regulation for these companies.

5.3 More than a Loan

Throughout this research project, the importance of education and financial literacy for SMEs has been evident. A clear grasp of how the financial system works is key to SMEs having a better chance for obtaining a loan. The case studies show how new companies offering financing services are focused on not only lending out money, but delivering assistance from credit solicitation to successful repayment of the loan. This assistance includes helping SMEs comprehend the financing system and even grow their expertise to help other clients in the future, as in the case of Aflora, the financing company from Medellín, Colombia. The workshop participants also stressed the importance of financial education. They said that by integrating financial education services to the banking experience, the loan process could be smoother and it could positively impact the approval rate. So rather than just lending out the money, new financial companies are focusing on helping the client understand every step of the way, which facilitates access to credit on future loan applications.

5.4 The Value of Human Relationships

The overview of the Online Alternative Finance Market both in the Latin American region and in the Colombian context have made evident the success of technology-led financing businesses with the unbanked population. However, as evidenced in the case studies of Bancompartir, Bancamía, Sempli, and Aflore, the human component of the service has proven of great value for both the company and the client. In each of these examples, the value of the human components (client interaction with staff, on-site visits, and an interview with credit officers regarding unique business needs and goals) is evident, from the support through every step of the process, to on-site visits to get a better judgement for the risk assessment. Information gathered from workshop participants also evidenced the value of human components. Some of the older participants stated that sometimes they prefer to handle some banking needs directly with an operator or at an office, rather than using their website or online support, because they feel it is easier and are able to communicate issues easier than through a digital channel.

5.5 Simplicity is Key

The financing industry has always had its level of complexity, due to the nature of its business. But with passing time, this industry has increased its level of complexity. Because of the risk-averse nature of banks, the whole process, from the initial loan application to the disbursement of money, has become an exhausting task for SME clients. Additionally, contracts and other important documentation has become so complex that having one or a team of lawyers is a requirement for businesses to be able to operate. Processes that used to run more smoothly before are now slow and arduous because of the reliance on legal teams to review documents. Through the use of technology, fintechs focused on financing services have been able to decrease processing times. An easy to use platform allows all paperwork (now digital) to be uploaded at once, which helps streamline the process and gives clients the possibility to apply through their own computer. The survey answers also clearly evidenced the complexity of the process to be one of the major pain points. Some participants from the workshop stressed as well how vital to their operation it is to speed up the entire loan process.

5.6 Communities are stronger

Research uncovered the need for SMEs to have a tighter community, in order to be able to cooperate between them and benefit from shared knowledge and skills. This, if channeled correctly, can lead to SMEs having a better chance to obtain financing services and better their access to credit. Reviewing the case studies, there are examples like Opportunity International, who use Trust Groups to help minimize defaulting from clients, or Aflore that recruits trusted members of a given community to help spread the company's services. In a similar manner, workshop participants also believed that access to capital could be improved if construction sector SMEs could work together on loan applications or go up to traditional financing companies as a group rather than as individual companies. Therefore, it is important for the different players in the financial system to pay attention to how they, through their varied channels and services, enable the creation of a stronger network of construction sector SMEs, improving their community engagement and the possibility to share knowledge for communal benefit.

These insights that have surfaced from the analysis of the information gathered through research; they aim to pave the way for more actionable recommendations to several players in the financial system outlined in the following section. Because of the size and the complexity of the issue regarding the lack of access to credit for SMEs, specific recommendations have been outlined for each of the major actors in the overall financial system.

6. RECCOMENDATIONS: OPPORTUNITIES FOR A BETTER SERVICE

Today, the financial industry is more complex than what it used to be decades ago. New technologies and services are constantly flooding the industry and alternative mechanisms are becoming available for businesses. In the construction sector, new companies are being born every day, some with different operating models than its predecessors. As has been noted in this MRP, these companies are suffering from the limitations of the financial system that has been historically inaccessible to SMEs. As a result of barriers that exist in the traditional financial industry, alternatives have emerged that have helped fill the gap and offered SMEs additional options for accessing credit. However, the issue of access to financing solutions for SMEs will not be solved just by the appearance of new actors. For it to be solved, it needs interventions on all levels, from micro to macro and an involvement of all the stakeholders that are present and interact within this system.

6.1 For Policy-makers

At a governmental level, there are changes that must be adopted to level the significant advantage larger companies have over SMEs regarding access to credit from the financial system. So far, the Colombian government has shown a desire to help SMEs through the creation of different mechanisms and networks such as the *Sistema Nacional de Apoyo y Promoción de las Mipyme,* created in 2004. But there is still much that can be done to help SMEs if the government looks at how the SMEs unserved by the traditional finance entities get loans. The number of fintechs dedicated to offer financing services to SMEs and other unbanked clients in the Colombian context has been growing.

But without a clear regulatory framework and policies that formalize their activities, these companies are not going to be able to survive the long run. In the past years, the *Superintendencia Financiera* has had to stop some fintechs from operating in Colombia due to the lack of clear policies that regulate their activities. Edwin Zacipa, director of Colombia Fintech, a union made from more than 80 technology-led companies dedicated to providing finance services in Colombia, is pushing for a law that incentivizes transparent competition between fintechs and traditional financial entities. The current policies applicable to financial entities favor banks, since there is no clear legal framework for fintechs. Taking Mexico as an example, other Latin American governments should push for a fintech law, that regulates their activity so fintechs can operate freely and legally in the country and without the constant limitations from government controls (Superintendencia Financiera).

6.2 For Traditional Financing Entities

In the construction sector, as in with any other economic sector in Colombia, SMEs constitute the majority of the businesses, but the limitations they have to endure during their first years of operations limits their ability to grow and develop into bigger, sustainable companies. A major problem that these SMEs have stressed is the lack of access to financing services, especially from the traditional financial industry. The way that banks and other traditional financial institutions are structured and operate give an advantage to larger companies. Through the research outlined in this MRP, it was found that inefficient assessment tools and processes used by banks, coupled with the demand for collateral and high interest rates, limit access to financing services for smaller companies. Banks can adapt some of the approaches that fintechs are putting into practice to level their current inefficiencies and therefore increase access to credit for SMEs.

First, banks must switch their one-size-fits-all approach to risk assessment, to a more qualitative, case-by-case approach. For example, on-site visits could help give a better assessment of a business rather than scoring them based on their financial history. This can also have a huge impact on customer experience and the overall relationship between banks and their SME clients. The research outlined in this MRP showed that some customers do not bother even applying for a loan, because of the negative perception that has been created around banks. Improving their risk assessment tools and customer relationships can shift this negative perception, thereby increasing SMEs access to capital.

Second, financial education is a crucial element that has an impact on SMEs getting a loan approved. Because these companies sometimes do not have a clear grasp of business financials, they struggle when applying for a loan. Additionally, founders and members of these companies need assessment in different areas, to be able to handle the learning curve and the interaction with the general financial system. Banks should pay more attention to their client's lack of financial education, and take measures on this matter. For example, banks can create acceleration programs that SMEs can be part of and which gives them tools and knowledge in financial matters. The way SMEs advance through this acceleration process can even be used as a complementary assessment tool, and at the end, SMEs will have better competences to apply for a future loan or even be eligible to receive one as an incentive to be part of the program.

The final approach that traditional financing entities can take that gleans from the successes of fintechs and other alternative lenders is the process of applying for a loan. Traditional financial institutions should explore how they can streamline the entire process for obtaining a loan in order to make it simpler and easier for SMEs to navigate. Fintechs have been able to upload the majority (or almost all of) the process to a digital, user friendly platform. This eliminates unnecessary actions that can slow down the process, like going into a bank office to drop-off extensive paperwork. Additionally, through their digital platforms, fintechs have been able to decrease the amount of paperwork needed, reducing the need for legal teams and cutting down on response times. These process efficiencies have proven to be of great value to SMEs.

6.3 For Fintechs

The need for fintechs in the financial system is evident by the growth of the Online Alternative Finance market. By focusing on bettering the elements that make the traditional finance industry inefficient (assessment tools, faster, simpler processes, and financial education for their clients), these companies have had a positive impact in increasing access to credit for SMEs. However, they are still lacking a crucial element with which banks have a significant advantage: recognition.

In the current context, the majority of fintechs have not yet established a strong , trusted, recognizable name. Banks, on the other hand, through years of work and experiencehave achieved mass recognition throughout the market, even if it is underserving a significant portion of this market. Fintechs have the difficult task to create a name for themselves and develop a strong enough brand that can help them reach a wider segment of the population. Successful collaborations, as shown in this MRP, between these types of companies and traditional finance entities provide a great model for more fintechs to follow. These partnerships allow both entities to benefit from the strengths and advantages of one another. On one hand, banks can better their technology components, improving their current services, while fintechs can be backed up by a strong, highly recognized, brand. In this sense, it is important for fintechs to look for possible collaborations with recognized traditional financial institutions to help them break the initial inertia of client acquisition and be able to grow.

Furthermore, another way to accelerate brand recognition and awareness is through the creation of communities. This MRP's research process showed an important element highlighted by the SDD Workshop participants, which is community creation and the need for a stronger network. Participants stressed the need for construction SMEs to have a tighter community that would allow to connect, cooperate and benefit from other's knowledge and expertise in order to grow. Hence, fintechs have a clear opportunity to become enablers of community creation and knowledge sharing. One way this can be done is through the development of engaging spaces within their digital platforms that are dedicated to give voice to their clients and the opportunity for them to interact.

7. MOVING FORWARD

Improving accessibility to credit for smaller construction sector SMEs in Colombia is a complex issue that requires actions from the different actors that interact within the financial system. The Colombian government needs to acknowledge the value being brought by fintechs to solve this issue and help these companies grow and maintain their operations through policies that turn them into formal and legal players in the financial system. On another level, banks need to start looking into what are the valuable actions taken by fintechs that has made them become such a powerful market. Banks could also acknowledge the value in cooperating with these companies, which would greatly benefit them both and their SME clients.

It is interesting to observe how the great majority of fintechs are SMEs themselves and how these share commonalities with the needs and pain points identified for SMEs in this MRP. The research in this paper has demonstrated how SMEs' growth positively impacts the general countries financial health and economy through the creation of jobs and the revenue that moves into the country's economy. The recommendations outlined in this document are intended to help construction sector SMEs grow and survive, but in doing so, can help fintech SMEs develop and thrive. The potential outcome is creating stronger economic activity for both the construction sector and the financial system, and thus benefitting the overall economy of the country.

Through this paper, it has been the researcher's goal to understand and present the complex ecosystem that is the financial landscape of Colombia, in order to provide greater context to the needs of construction sector SMEs in terms of access to credit. By using a research methodology that combines quantitative data and qualitative information, a broad range of insights from the financial system and its different players were studied and explored. The resulting recommendations serve to inform the stakeholders outlined in this MRP. These insights are also useful for the researcher's startup, Hometuls, to use to improve its service offerings.

This paper is the starting point for a much more demanding and extended project. It uncovers where the needs and issues of construction SMEs lay, which can be used to better inform decisions made by the founders of Hometuls. Deeper examination and further research with participants is needed to create a concrete strategy that can be implemented. Additional planning and redesigning needs to be put in place with the Hometuls team in order to develop a comprehensive strategic plan and a digital platform that better aligns with the company's core operation and values. This work will be informed by the insights and recommendations presented in this paper. There is great complexity in trying to improve accessibility to credit for smaller companies, but it presents the perfect environment for all the different stakeholders (government, fintechs, traditional financing institutions) to work together to develop innovative solutions to support SMEs and help improve the overall health of the Colombian economy.

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9. APPENDIX

Appendix A: Questionnaire sample sent out to participants

Financiamiento para PYMES (Questionario)

Has sido invitado a participar en un proyecto de investigación que busca descubrir las necesidades en términos de financiamiento para las PYMES en el sector de construcción/industrial en Colombia, y las soluciones/alternativas presentes en el contexto colombiano.

Este proyecto de investigación hace parte del proyecto de grado "Evaluating the financing needs of construction sector SMEs in the Colombian context" (Evaluando las necesidades de financiación de las PYMES del sector de construcción en el contexto colombiano), liderado por Juan Carlos Sandoval, para completar la maestría en Diseño: Strategic Foresight & Innovation de la Universidad OCAD en Toronto, Canadá.

El objetivo de este cuestionario es poder recaudar información cualitativa frente al sector industrial y de construcción que enfrentan las PYMES colombianas, así como sus necesidades, oportunidades y barreras en el ámbito de financiamiento de proyectos.

¿Cuánto tiempo ha trabajado en los sectores de construcción y/o industrial?

Short answer text

¿Hace parte del equipo fundador de la compañía para la cual trabaja actualmente?

- Si
- No

¿Ha tenido experiencia previa a su posición dentro de su actual compañía en alguno de los dos sectores (construcción/industrial) mencionados? Por favor explicar detalladamente su respuesta.

Long answer text

Basado en su experiencia, ¿Qué tan dependiente de financiamiento externo* cree usted que son las PYMES para poder operar?

Entiéndase financiamiento externo como cualquier método de financiación a excepción de préstamos por parte de familiares o conocidos o de recursos de la misma empresa.

	1	2	3	4	5	
Nada	○	○	○	○	○	Completamente

Según su experiencia y conocimiento, ¿cuáles cree que son las barreras/limitaciones al acceso a financiamiento externo para las PYMES?

Long answer text

¿Se ha visto usted en necesidad de solicitar financiamiento externo en el pasado o en su actual posición?

Necesidad de financiamiento para su empresa o para la empresa para la que trabaja, no para usted como persona natural.

- Si
- No

Si ha respondido 'si' a la pregunta anterior, ¿Puede describir detalladamente la(s) experiencia(s) vividas? En caso de responder 'No', ¿Puede describir alguna situación de la que tenga conocimiento?

Long answer text

Desde su perspectiva, ¿siente que hay alguna ventaja o desventaja para las PYMES en la búsqueda de financiamiento a comparación con las grandes compañías? Por favor explique su respuesta.

Long answer text

¿Cuál ha sido su experiencia con las entidades financieras tradicionales* (ejemplo: bancos) al buscar financiamiento? Indique por favor a que entidad se refiere en su respuesta.

*Se entienden como entidades financieras tradicionales a todas las instituciones dentro de la regulación de la Superintendencia Financiera.

Puede por favor describir sus gustos/disgustos al trabajar con estas entidades financieras tradicionales?

Long answer text

Desde su perspectiva, ¿cree usted que hay puntos a mejorar en los servicios prestados por estas entidades? Por favor explicar su respuesta.

Long answer text

¿Ha usted utilizado servicios alternativos de financiamiento*?

* Servicios alternativos de financiamiento son aquellos prestamistas que hacen parte del mercado extrabancario, y que no son regulados por la Superintendencia financiera (como por ejemplo, los 'prestamistas').

- ○ Sí
- ○ No

En caso de responder 'si', ¿Cuál fue la entidad que le prestó el servicio? En caso de responder 'no', por favor responder N/A

Short answer text

¿Puede describir su experiencia con estos servicios alternativos? En caso de no tener experiencia con servicios alternativos de financiamiento, escriba por favor N/A.

Long answer text

Desde su perspectiva, ¿Siente usted que hay inconvenientes/situaciones negativas con estos servicios? Por favor, explique detalladamente su respuesta.

Long answer text

Appendix B: Consent form for Workshop

Consent Form - MRP

Date: ________________

Project Title: Evaluating the financing needs of construction sector SMEs in the Colombian context.

Principal Investigator:
Juan Carlos Sandoval, Graduate student
OCAD University

Faculty Supervisor (if applicable):
Sarah Tranum
Faculty of **Design, Graduate Studies**
OCAD University

INVITATION

You are invited to participate in a study that involves research. The purpose of this study is to uncover the needs of SMEs in the construction sector in Colombia, more specifically regarding the financing and micro-financing solutions available for them. This research project is intended to help inform the founders of the fintech startup Hometuls about the landscape it plays in and the clients it wants to address. It is important to note that the researcher is part of the founding team of Hometuls, but the research project will be conducted as a separate, individual project. Only the report resulting from it will be shared with the other founders.

WHAT'S INVOLVED

As a participant, you will take part in a Workshop along with other participants to discuss and work together to uncover potential solutions for the barriers involving financing solutions for SMEs in the construction sector. Participation will take approximately 3 hours of your time.

POTENTIAL BENEFITS AND RISKS

Benefits of participation include improvements to Hometuls' service offering to its clients (SMEs) by identifying their real needs. There are no known or anticipated risks associated with participation in this study.

CONFIDENTIALITY

All information you provide will be considered confidential and grouped with responses from other participants. Given the format of this session, we ask you to respect your fellow participants by keeping all information that identifies or could potentially identify a participant and/or his/her comments confidential.

Data collected during this study will be stored in a cloud-based drive by Google. Data will be kept for the duration of the Thesis Project development (December 12) after which time the information will be securely disposed of. Access to this data will be restricted to the main researcher. In the release of the data, anonymity will be ensured in the way that no personal identifiers will be used in the written report. All information cited or mentioned on the report that directly relates to findings from the research will be written in a way that it cannot be traced back to any participant in particular.

PUBLICATION OF RESULTS

Results of this study may be published in the Thesis document that arises from this research. In any publication, data will be presented in aggregate forms. Quotations from interviews or surveys will not be attributed to you without your permission. A digital copy will be stored in the digital library at OCAD University https://www.ocadu.ca/services/Library.htm.

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact the Principal Investigator *Juan Carlos Sandoval* using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at OCAD University [insert file 101364]. If you have any comments or concerns, please contact the Research Ethics Office.

PHOTO RELEASE

Throughout the workshop, audio, video, and photographic evidence will be collected. Audio and video evidence will be solely used by the researcher for analysis. Some photos might be used to illustrate the report. If any individual **has an issue** with appearing in photos, please check the box labeled “No Photographs” below. If you appear in any of the photos used for the report, your face will be blurred out.

CONSENT FORM

I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name: ______________________________ No ☐ Photographs

Signature: ______________________________ Date: ______________________________

Mail: ______________________________

Thank you for your assistance in this project. Please keep a copy of this form for your records.

Appendix C: Consent form for Questionnaire

Consent Form - MRP

Date: ____________________
Project Title: Evaluating the financing needs of construction sector SMEs in the Colombian context.

Principal Investigator:
Juan Carlos Sandoval, Graduate student
OCAD University

Faculty Supervisor (if applicable):
Sarah Tranum
Faculty of **Design, Graduate Studies**
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INVITATION

You are invited to participate in a study that involves research. The purpose of this study is to uncover the needs of SMEs in the construction sector in Colombia, more specifically regarding the financing and micro-financing solutions available for them. This research project is intended to help inform the founders of the fintech startup Hometuls about the landscape it plays in and the clients it wants to address. It is important to note that the researcher is part of the founding team of Hometuls, but the research project will be conducted as a separate, individual project. Only the report resulting from it will be shared with the other founders.

WHAT'S INVOLVED

As a participant, you will be asked to answer a series of questions through an online questionnaire. Participation will take approximately 15 minutes of your time.

POTENTIAL BENEFITS AND RISKS

Benefits of participation include improvements to Hometuls' service offering to its clients (SMEs) by identifying their real needs. There are no known or anticipated risks associated with participation in this study.

CONFIDENTIALITY

All information you provide is considered confidential; your name will not be included or, in any other way, associated with the data collected in the study. Furthermore, because our interest is in the average responses of the entire group of participants, you will not be identified individually in any way in written reports of this research.

Data collected during this study will be stored in a cloud-based drive by Google. Data will be kept for the duration of the Thesis Project development (December 12) after which time the information will be securely disposed of. Access to this data will be restricted to the main researcher. In the release of the data, anonymity will be ensured in the way that no personal identifiers will be used in the written report. All information cited or mentioned on the report that directly relates to findings from the research will be written in a way that it cannot be traced back to any participant in particular.

VOLUNTARY PARTICIPATION

Participation in this study is voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time, or to request withdrawal of your data (up to 48 hours after completing the questionnaire).

PUBLICATION OF RESULTS

Results of this study may be published in the Thesis document that arises from this research. In any publication, data will be presented in aggregate forms. Quotations from interviews or surveys will not be attributed to you without your permission. A digital copy will be stored in the digital library at OCAD University https://www.ocadu.ca/services/Library.htm.

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact the Principal Investigator *Juan Carlos Sandoval* using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at OCAD University [insert file 101364]. If you have any comments or concerns, please contact the Research Ethics Office.

CONSENT FORM

I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name: ______________________________

Signature: ______________________________ Date: ______________________________

Thank you for your assistance in this project. Please keep a copy of this form for your records.

Appendix D: Consent form for Workshop

E-MAIL & MESSAGE TO LINKEDIN CONTACTS

Dear _________,

My name is Juan Carlos Sandoval. I am a graduate student from the Strategic Foresight & Innovation Masters program from OCAD University in Toronto, Canada. I am currently working in my Thesis project, titled *'Evaluating the financing needs of construction sector SMEs in the Colombian context.'* In the Colombian context, SMEs represent an important part of the country's economy. They represent approximately 96% of the total of the enterprises and more of the 35% of the GDP, generating almost 65% of the labor. Despite this fact, SMEs are having a hard time developing and staying operational after their first year of operation. One of the main reasons that have been identified is the lack of financing opportunities for SMEs, which hinders their operation at a very early stage and the lack of trust in digital transaction channels.

With this project I wish to uncover the needs of SMEs in the construction sector in Colombia, more specifically regarding the financing and micro-financing solutions available for them. I was hoping you could help me out with a brief interview to talk about your experience in the sector and the constraints you have experienced regarding financing solutions and alternatives. The interview can be held via Skype. If you don't feel comfortable doing an interview, but still wish to participate, there is an electronic questionnaire I can email to you.

If you wish to participate in an interview, please respond to this message agreeing so, along with some available times you may have next week. Note that the interview process might take up to an hour. If you prefer to respond the questionnaire, please indicate so in your response. **Prior to either two options**, I would send you a consent form, where there is more detail to my Thesis Project, along with important information regarding your participation, how the information will be used, and the anonymity of you and your answers. It is very important for me that you understand all the terms established in the consent form, and must ask you to sign it as an acceptance of the terms.

Thank you for your time, and hope to hear from you soon.

Best Regards,

JUAN CARLOS SANDOVAL
MDes Candidate,
Strategic Foresight & Innovation
OCAD UNIVERSITY

Appendix E: Visual representation of bank's current operation and its relation with the clients.

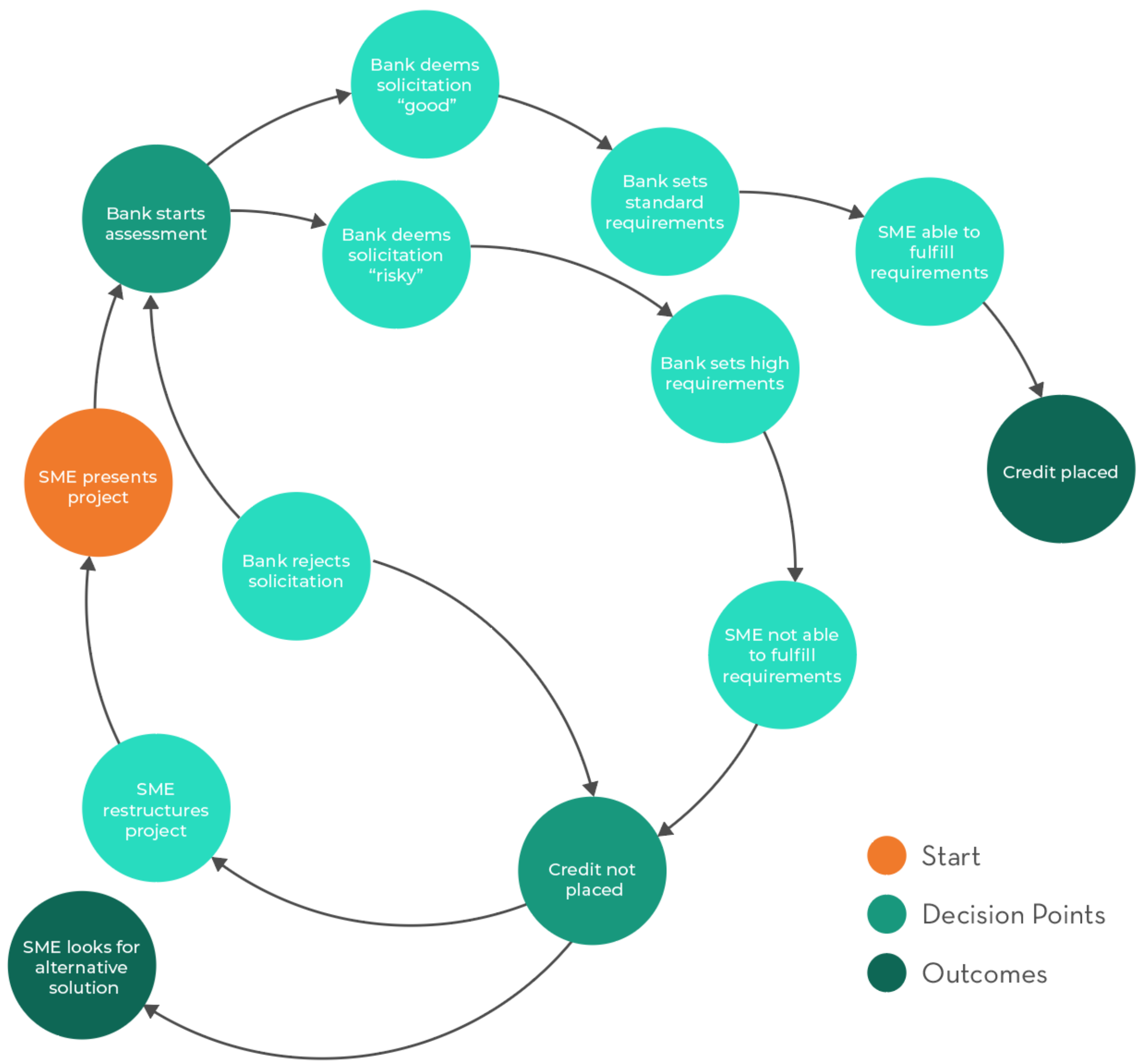

Figure 18: *Visual representation of bank's current operation and its relation with the clients.*